# ENVIRONMENTAL ASSESSMENT GAMBLE ISLAND BRIDGE REPLACEMENT PROJECT

# MALHEUR COUNTY, OREGON AND PAYETTE COUNTY, IDAHO



April 13, 2020

U.S. Coast Guard District Thirteen Seattle, Washington

#### **USCG**

#### **ENVIRONMENTAL ASSESSMENT FOR**

## **Gamble Island Bridge Replacement Project**

This U.S. Coast Guard (USCG) Environmental Assessment (EA) was prepared in accordance with Commandant's Manual Instruction M16475.1D and is in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Council of Environmental Quality Regulations dated 26 November 1978 (40 CFR Parts 1500-1508).

This EA serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an environmental impact statement or a finding of no significant impact.

This EA concisely describes the proposed action, the need for the proposal, the alternatives, and the environmental impacts of the proposal and alternatives. This EA also contains a comparative analysis of the action and alternatives, a statement of environmental significance of the preferred alternative, and a list of the agencies and persons consulted during EA preparation.

Date	Preparer/Environmental Project Manager	Title/Position
Date	Environmental Reviewer	Title/Position
_	y decision/recommendation on the USCG's proposentained in this EA on the potential for environmental in	
Date	Responsible Official	 Title/Position

## **EXECUTIVE SUMMARY**

The United States Coast Guard (USCG) as the lead federal agency, in coordination with Alscott Farms, LLC., Collins Engineers, Inc., and Bionomics Environmental, Inc., has prepared this environmental document pursuant to the National Environmental Policy Act (NEPA) of 1969. This Environmental Assessment (EA) examines the potential environmental effects of the proposed Gamble Island Bridge Replacement Project.

The purpose of the project is to provide a new Gamble Island Bridge crossing that meets safety needs and operational requirements. The project is needed as the current bridges are approximately 60-year old deteoriating structures that are nearing their expected service lives. According to the bridge inspection findings, both bridges are in poor condition with various cracks, corrosion, and scour issues, which led to the proposal to replace the structures.

The project will replace and widen the existing bridges and approaches with prefabricated steel bridges. The new Main Channel Bridge structure will be 400 feet long and 16 feet wide with seven piers and two abutments. The Side Channel Bridge will be 150 feet long and 16 feet wide with two piers and two abutments. Minor approach work will be necessary to tie into the existing road. The bridges will be constructed adjacent to the existing structures as access to Gamble Island needs to be maintained during construction. Construction of the bridges will require the use of either a barge or temporary platform. Staging for the project has yet to be determined; however, the property owner has identified several areas which are currently farmed/open land that may be used.

This EA evaluates a No Action Alternative and a Proposed Action Alternative. The No Action Alternative does not fulfill the project purpose and need to replace the existing structures. The Proposed Action Alternative would prevent possible future life, health, and/or environmental impacts by replacing the existing structures. It is anticipated that the project would have no significant impacts to health or human resources, and result in short term disturbances during construction. Measures to minimize and mitigate impacts have been incorporated into project plans to further reduce construction related disturbances.

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## ABBREVIATIONS AND ACRONYMS

ACHP Advisory Council on Historic Preservation
ARPA Archaeological Resources Protection Act

BMP Best Management Practices

CAA Clean Air Act

CFR Code of Federal Regulations
CZMA Coastal Zone Management Act

CWA Clean Water Act

DEQ Department of Environmental Quality

dB Decibel

dBA Decibel A-weighted
ESA Endangered Species Act
EA Environmental Assessment

EPA Environmental Protection Agency

EFH Essential Fish Habitat
FIRM Flood Insurance Rate Maps

IDFG Idaho Fish and Game

IFWIS Idaho Fish and Wildlife Information System

MBTA Migratory Bird Treaty Act

NAAQS National Ambient Air Quality Standards
NEPA National Environmental Policy Act
NHPA National Historic Preservation Act

NPDES National Pollutant Discharge Elimination System

NRHP National Register of Historic Places

NWI National Wetland Inventory

ODFW Oregon Department of Fish and Wildlife

OHW Ordinary High Water

ORBIC Oregon Biodiversity Information Center
OSHA Occupational Safety and Health Act

PEM Palustrine Emergent
PFO Palustrine Forested
PSS Palustrine Scrub Shrub
PM Particulate Matter

RCRA Resource Conservation and Recovery Act

SDWA Safe Drinking Water Act

SHPO State Historic Preservation Office SWPPP Stormwater Pollution Prevention Plan

TMDL Total Maximum Daily Load

U.S. United States

USACE U.S. Army Corps of Engineers

USC U.S. Code

USCG U.S. Coast Guard

USFWS U.S. Fish and Wildlife Service WQC Water Quality Certification

## 1 INTRODUCTION

The U.S. Coast Guard (USCG) is evaluating an application for a permit to replace two existing bridges across the Snake River to a privately owned Gamble Island at river mile 386, in Malheur County, Oregon and Payette County, Idaho. This undertaking is known as the Gamble Island Bridge Replacement Project. The applicant for this project is Alscott Farms, LLC., the owner of the bridges and the property on which the bridges are located.

In accordance with federal statutes (Title 33 USC 401), the USCG is responsible for approval of any bridge over navigable waters of the United States. Additionally, in accordance with the National Environmental Policy Act (NEPA, 42 USC 4321), the USCG has assumed the federal lead agency role. This Environmental Assessment (EA) examines the potential environmental effects of the Gamble Island Bridge Replacement project and measures to minimize to minimize effects associated with the action. In addition, in compliance with Section 7 of the Endangered Species Act, a Biological Assessment has been completed for the project which addresses environmental issues.

## 1.1 SITE LOCATION AND EXISTING STRUCTURE

The Gamble Island Bridge Replacement Project is located on Gamble Island Road at the Snake River crossing, northeast of the town of Nyssa, Oregon and within Malheur County, Oregon and Payette County, Idaho (see Figure 1).

The Main Channel Bridge carries Gamble Island Road over the western channel of the Snake River and the Side Channel Bridge carries Gamble Island Road over a braid of the Snake River to a private residence on Gamble Island.

The project area is in Section 31, Township 7 North, Range 5 West, Boise Meridian.

#### Main Channel Bridge

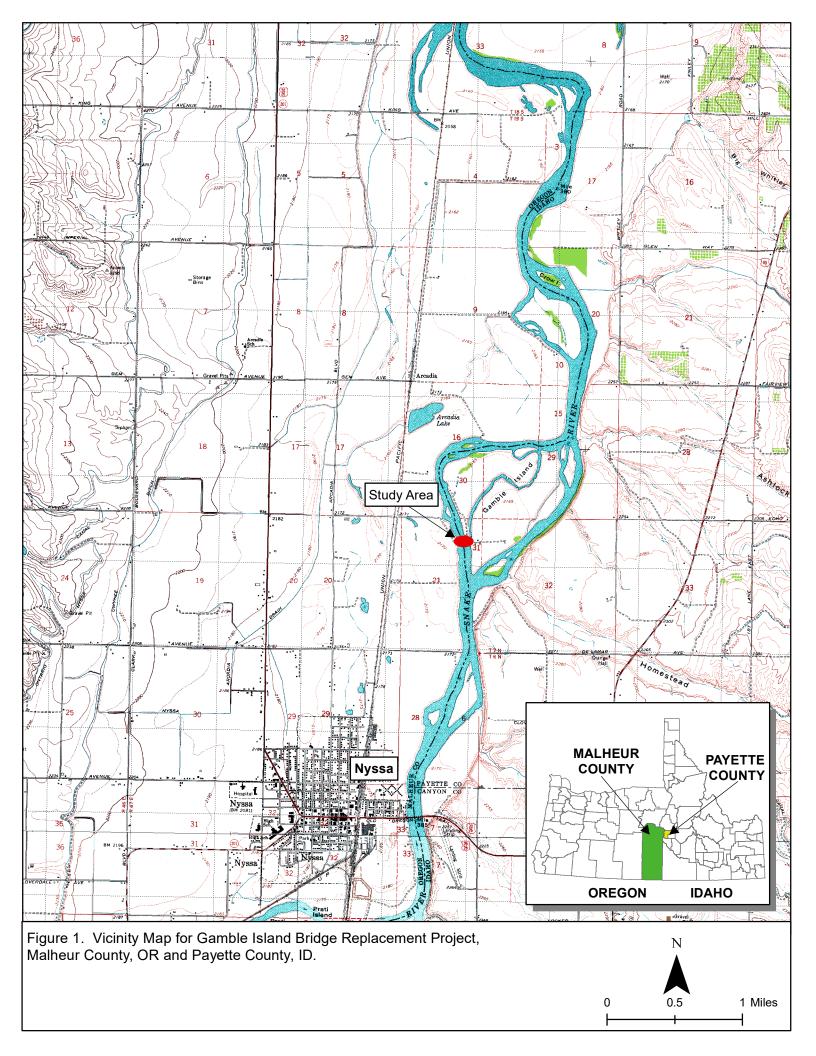
The Main Channel Bridge is a 14-foot wide, nine span steel bridge that carries Gamble Road over the main channel of the Snake River. Each span is approximately 42 feet long for a total length of 378 feet. The eight bents that support the superstructure consist of three steel HP 10x57 piles with horizontal and diagonal cross bracing. The superstructure consists of repurposed railroad flat beds with a timber deck and steel running boards.

#### Side Channel Bridge

The Side Channel Bridge is a 14-foot wide, four span steel bridge that carries Gamble Road over a small braid of the Snake River. Each span is approximately 34 feet long for a total length of 136 feet. The three piers that support the superstructure consist of two circular concrete columns with diagonal cross bracing and a concrete web wall from 0.7 feet above the waterline to the channel bottom. The piers are supported by spread footings resting on the channel bottom. The superstructure consists of repurposed railroad flat beds with a timber deck and steel running boards.

## 1.2 PURPOSE AND NEED

The purpose of the project is to provide a new Gamble Island Bridge crossing that meets safety needs and operational requirements. The project is needed as the current bridges are approximately 60 year old deteoriating structures that are nearing their expected service lives. According to the 2016 bridge inspection findings, both bridges are in poor condition with various cracks, corrosion, and scour issues, which led to the proposal to replace the structures.



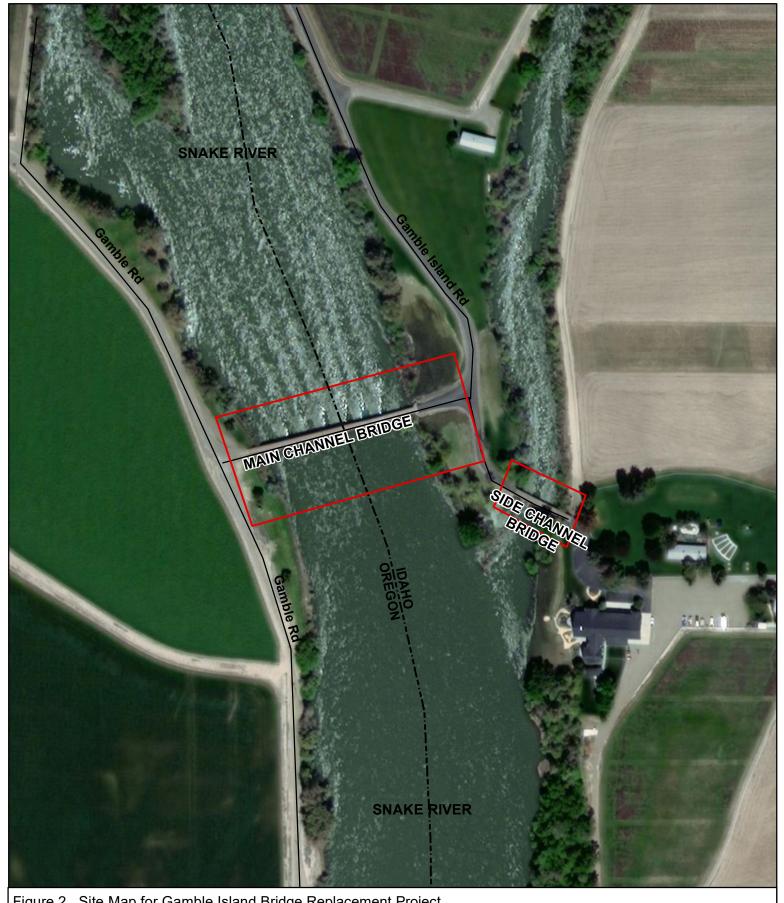


Figure 2. Site Map for Gamble Island Bridge Replacement Project,
Malheur County, OR and Payette County, ID.

Legend

Study Area

Roads

N

150 300 Feet

#### Main Channel Bridge

The cracking and section loss due to corrosion of the steel H-piles of the Main Channel Bridge are significant concerns that could potentially affect the stability of the bridge. HP 10 x 57 piles have a web and flange thickness of 9/16 inch. One pile was corroded all the way through near the waterline, while others had pitting and section loss from 1/16 inch to up to 5/16 inch deep. This corresponds to 12 percent to 55 percent loss of cross sectional area respectively. Due to the welded repair plates on the cracks and the fact that no known repairs have ever been made to bridge after construction; it is assumed that the H-piles have been cracked since the structure was built. However, several of the cracks appear to have grown past the original repairs or are in locations with no repairs. The upstream pile of Bent 7 is fractured and only partially bearing, which could pose a serious threat to the bridge if excess lateral loading such as high flow or debris was applied to it.

## Side Channel Bridge

Because the piers of the Side Channel Bridge appear to be supported by spread footings with no piles observed, the undermining of Pier 1 is a significant defect. While the amount of undermining is not affecting the stability of the bridge at this time, it is very susceptible to failure during periods of flooding or high flow.

The movement of the west abutment of the Side Channel Bridge is also a significant defect because while it is not currently affecting the stability of the bridge, it is visibly causing a shift in the superstructure and could eventually cause major cracking of the abutment and general failure of the bridge. Since this was the first documented inspection of this structure; it is not known how long this movement has been occurring or whether or not this movement has stopped.

## 2 ALTERNATIVES

## 2.1 ALTERNATIVE 1 – NO ACTION ALTERNATIVE

Under the No Action Alternative, the bridges would remain in place and continue to be used to access Gamble Island. The bridges would continue to age and deteriorate which will require extensive rehabilitation of the structures. This would result in numerous smaller actions occurring over an extended time period which would increase the level of local disturbance and level of effort due to the multiple mobilization and demobilization actions. Eventually the bridge structures would need to be replaced.

## 2.2 ALTERNATIVE 2 - PROPOSED ACTION ALTERNATIVE

Each of the following actions is presented in the order in which the work will initiate.

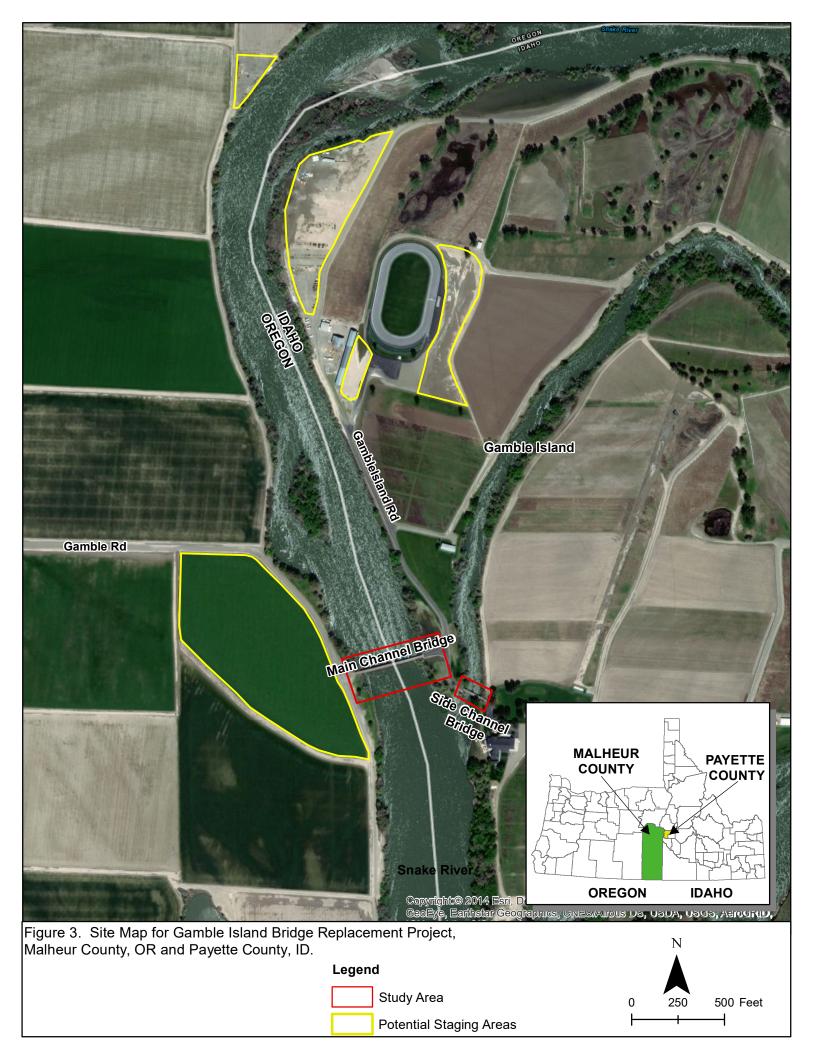
#### **2.2.1 Staging**

#### **2.2.1.1 Dry Staging**

Several areas have been identified as possible sites for staging (see Figure 3).

#### 2.2.1.2 River Access

River access will be from the river bank around the bridge. A temporary access road will be constructed to access the barge or temporary bridge (see below).



## 2.2.2 In-Water Access with Barge or Temporary Work Platforms

Either barges or temporary work platforms may be used to access the river and facilitate construction on the new bridges and demolition on the existing bridges. Construction will be a design-build; therefore, the exact construction methodology is not known. The following is an example of typical construction methodology; however, the actual navigation envelope and dimension of the temporary work platforms or the size and number of the work barges will be provided to and approved by the USCG prior to construction.

## 2.2.2.1 Barge and Boats

A typical barge is 30 feet x 40 feet with two to four spud piles and can operate in four feet of water. Each spud pile is a steel pipe, typically 24 inches in diameter and 40 feet in length, which weighs about 6,100 pounds and is used for anchoring the barge in place. The spuds are attached to the barge with a spudwell, which hydraulically lifts the spud pile when the barge needs to move. The number of spud piles required is dependent on the river velocity, with a maximum of four spuds required for higher velocities. Each spud pile anchors the barge by the self-weight of the spud. It is assumed that all four spuds will be required to anchor the barge for disturbance estimates.

It is assumed that the barge will need to be anchored at each new pier two times to facilitate construction, and once at each existing pier for demolition. The barge will therefore be anchored 18 times for construction of the new bridges, and 10 times at the existing bridge structures for demolition (to accommodate the eight piers on existing long span bridge and two piers on the short span bridge). Total river bed impacts are estimated to be: 28 times to anchor the barge for new bridge construction and existing bridge demolition x four spuds used per anchor event x six square feet of impact per spud placement = 672 total square feet of impact.

If a barge is utilized for construction, boats will be used to transport material to and from the barge and the river bank. These will be launched adjacent to the existing long span bridge at the river bank.

## 2.2.2.2 Temporary Work Platforms

If a temporary work platform is used, it will be considered contractor design-build and will not span the entire channel. The use of temporary work platform may be placed in one of two ways:

Option 1 includes the use of 14-inch H-piles, with three piles per bent, and bents placed every 28 feet. There will be a total of 13 bents placed, with a total of 39 H-piles used to support the temporary work platform.

Option 2 includes the use of two 14-inch H-piles at each bank, and bents composed of two pipe piles. Bents will be placed every 40 feet, with a total of nine bents. A total of 18 pipe piles and four H-piles will be used to support the temporary work platform.

Under both options, all piles will be vibrated into the river bed to the required depth, and tested with an impact hammer to ensure proper placement.

To calculate impacts to the river bed, the work platform Option 1 will be used, as it has the greatest number of anchor points and impact. The placement of 39 H-piles will result in 78 square feet of impact to the river bed, with approximately two square feet of disturbance per H-pile.

## 2.2.3 Bridge Construction

## 2.2.3.1 Main Channel Bridge

The proposed Main Channel Bridge consists of a total of seven piers and two abutments, with all seven of the piers below ordinary high water (OHW) (see Appendix A for Bridge Plans). Each pier will consist of five steel H-piles connected by horizontal and diagonal bracing, and topped with a cast-in-place reinforced concrete pier cap. Prefabricated steel superstructure spans consisting of a girder and floorbeam system with steel deck will be placed on the pier caps. A two-inch wearing surface will be laid atop the steel deck. The H-piles for each pier will be driven to a depth of 50 feet using a vibratory hammer. The vibratory hammer will operate from a barge or temporary platform. The abutments will be constructed by driving six steel HP 14 x 89 H-piles to 50 feet with cast-in-place reinforced concrete caps. Construction of abutments will require up to nine vertical feet of infill. Once the abutments and piers are completed, prefabricated steel superstructure spans consisting of a girder and floorbeam system with a steel deck will be placed on the pier caps and function as simple spans (not connected) along with a steel bridge rail.

#### 2.2.3.2 Side Channel Bridge

The Side Channel Bridge will consist of a total of two piers and two abutments, with both piers below OHW. The remaining portions of the Side Channel Bridge will be constructed as those for the Main Channel Bridge. As with the Main Channel Bridge, the H-piles for each pier will be driven to a depth of 50 feet using a vibratory hammer. The vibratory hammer will operate from a barge or temporary bridge.

## 2.2.3.3 Pier Caps, Bridge Deck

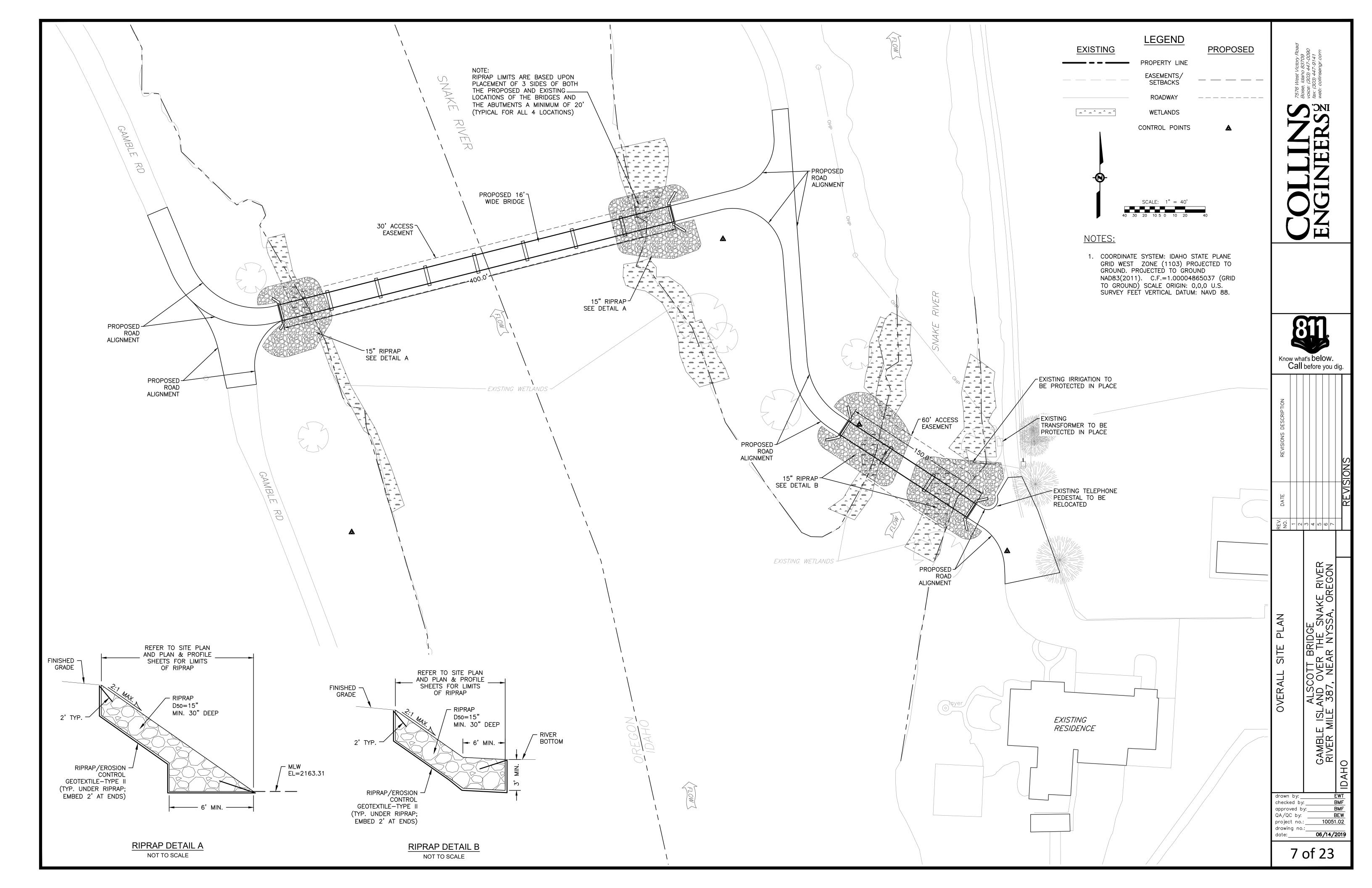
The next step consists of placing the pier cap forms, reinforcing the pier caps, and then placing the concrete within the pier cap forms. The pier cap forms will either be constructed of wood or steel and contain wet concrete until it hardens to prevent it from entering the river. Steel reinforcement, consisting of rebar, will be tied within the forms before placing the concrete.

Once the forms are constructed, the concrete will be delivered on a truck via the temporary work platforms or barge, and pumped to the pier caps via a boom operating off of a pump truck. The concrete will be within a contained pipe, and closely monitored to ensure no leaking occurs. Once the pier cap concrete has hardened, bearing pads for the prefabricated superstructure spans will be placed on the pier cap.

Cranes operating from the barge, temporary platform, or river bank will lift the prefabricated superstructure spans and place them on the bearing pads atop the pier caps. Elastomeric joints will be placed between the spans and the concrete wearing surface will then be applied atop the deck.

#### 2.2.3.4 Bank Stabilization

Bank stabilization will consist of placing filter fabric and rip rap along both sides of the river for both bridges. Prior to placement, dewatering will occur with the use of either a temporary cofferdam (e.g. Super Sacks or Porta-Dams) or sheet piles. Filter fabric and rip rap will be placed across irregularly shaped sections around each new abutment (see Figure 4). The total estimated area to be dewatered below OHW for the long span bridge, which includes the rip rap areas below OHW, is 2,800 square feet on the west bank and 4,000 square feet on the east bank. The total estimated area to be dewatered below OHW for the short span bridge is 1,500 square feet on the west bank and 2,200 square feet on the east bank. The sum of impacts for dewatered areas to place the rip rap will be 10,500 square feet.



## 2.2.1 Bridge Demolition

Once the new bridges are constructed, the existing bridges will be removed. This will be done with a crane on the temporary work platform or barge. The bridges will be saw-cut in sections, with the sections removed by crane. The existing H-pile piers will either be saw-cut at the river bed, or vibrated out with a vibratory hammer, and removed. If saw-cut at the river bed, the portion of each H-pile.

remaining under the substrate will be left in place. No dewatering will occur to remove the H-piles for the existing bridge.

All demolition debris will be contained, collected, and hauled to an upland waste site and disposed of in an appropriate manner.

## 2.2.2 Construction Timing

Bridge construction and demolition is planned to occur in two phases, where the first phase involves building the temporary platforms/barge and constructing the new bridge. The second phase involves demolition of the existing bridge and removal of the temporary platforms/barge. The project duration is anticipated to occur over a one-year time period, during low flows.

## 2.3 ALTERNATIVES CONSIDERED AND DISMISSED

Alternatives to replacing the bridge were limited due to the need to maintain access during construction for residential properties and farming operations/equipment utilizing the bridge which requires a larger turning radius.

## 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

## 3.1 AIR QUALITY

The Clean Air Act (CAA) established a comprehensive program for improving and maintaining air quality throughout the United States (U.S.). The focus of the CAA is to reduce ambient concentrations of air pollutants and toxins that degrade air quality; the reduction of air pollution, in turn, improves the human and biologic environment. The intent of the act is achieved through permitting of stationary sources, restriction of toxic substance emissions from stationary and mobile sources, and the establishment of National Ambient Air Quality Standards (NAAQS) as set by the U.S. Environmental Protection Agency (EPA). The CAA prohibits federal agencies from funding, authorizing, or approving plans, programs, or projects that do not meet or conform to the NAAQS requirements.

#### 3.1.1 AFFECTED ENVIRONMENT

The EPA sets the national air quality standards for six common pollutants emitted by any stationary and mobile source. These standards consist of threshold levels for carbon monoxide, lead, nitrogen oxides, ozone, particulate matter (PM), and sulfur dioxide. The CAA requires EPA to designate areas in Oregon and Idaho as being in attainment (meeting a standard), nonattainment (failing to meet a standard), and unclassifiable (not enough information to classify).

The study area is within Malheur and Payette counties which are within an attainment area for all regulated air pollutants.

#### 3.1.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Under the No Action Alternative, the bridge would continue to deteriorate, resulting in additional maintenance work to the aging structures. Maintenance activities could result in a temporary increase in localized air quality due to the operation of diesel and gasoline powered equipment used for these activities. The potential increase in pollutants would be temporary and would not be considered significant.

#### PROPOSED ACTION

Effects on air quality would be direct and short-term, resulting from construction activities, and are not expected to cause changes in regional air quality. The analysis area for air quality impacts is limited to the local area, which is the vicinity of the project and associated construction activity. Air quality impacts during project construction, including the effects of construction equipment operation, worker transportation vehicles, and fugitive dust would be short-term and would not create long-term or landscape/regional changes in air quality. In addition, air quality related Best Management Practices (BMPs) that comply with local, regional, state, and federal regulations would be implemented.

## 3.2 GEOLOGY, SOILS, AND TOPOGRAPHY

## 3.2.1 AFFECTED ENVIRONMENT

The project is located within the western Snake River Plain, located primarily within the state of Idaho. The western Snake River Plain is a northwest trending graben; both the land surface and the rock layers dip towards the axis of the plain (Shervais, et al., 2005; Bonnichsen and Godchaux, 2002). The rocks that occupy the western Snake River Plain are rhyolitic tuffs and ash flows of the Idavada Volcanic Group (15 to 11 Ma in age), and fluvial and lacustrine sediments with interbedded basalt flows of the Idaho Group (Pierce and Morgan, 1992; Bonnichsen and Godchaux, 2002).

According to the Natural Resource Conservation Service soil survey, soils in the project area are composed of Baldock silt loam and Notus coarse sandy loam. The Baldock soil complex consists of somewhat poorly drained soils on low terraces and bottoms along the Payette and Snake Rivers. A representative profile for the soil complex is gray silty clay loam about 28 inches thick. The substratum to a depth of about 48 inches is light brownish-gray silt loam. To a depth of 60 inches it is light brownish-gray fine sandy loam. The Notus soil complex consists of somewhat poorly drained soils on low stream terraces and river bottoms. These soils formed in moderately coarse textured and gravelly coarse textured alluvium. The representative profile is mainly light brownish-gray coarse sandy loam to a depth of 14 inches. Below this, to a depth of 60 inches or more, it is white and yellow very gravelly sand.

#### 3.2.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

As stated in Section 1.2, both the Main Channel Bridge and the Side Channel Bridge are nearing their structural life expectancies. The existing structures were designed and constructed before modern materials and engineering practices were in place and do not meet current design standards. Minimal earthwork would be required to remove and replace components of the bridges as part of maintenance activities to keep the existing bridges operational. This earthwork would not result in a significant impact on local geology or soils.

## PROPOSED ACTION

The proposed rebuild design utilizes current engineering practices and construction materials which are compliant with construction codes.

Approximately 1,800 cubic yards of soil would be excavated from an area around the bridge abutments. The excavated soil would be disposed of in an upland location, away from wetlands and waters and outside the floodplain, at an approved facility or location. This earthwork would not result in a significant impact on local geology or soils.

## 3.3 WATER RESOURCES AND WATER QUALITY

The Clean Water Act (CWA) governs the release of pollutants into waterways. Four sections of the Act potentially apply to the project: Sections 401, 402, 404, and 303(d).

- Section 401 requires Water Quality Certificates (WQC) from the state where the discharge to
  waters of the U.S. will occur. Typically, this certification is granted by the state certifying that the
  discharge will not violate the state's water quality standards.
- Section 402 authorizes the EPA, or states to which the EPA has delegated authority, to permit the discharge of pollutants under the National Pollutant Discharge Elimination System (NPDES) program. Construction projects that disturb one or more acres of ground are required to obtain an NPDES Construction Stormwater General Permit.
- Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Section 404 requires a permit from the U.S. Army Corps of Engineers (USACE) before dredged or fill material may be discharged into waters of the U.S. The basic premise of the 404 program is that no discharge of dredged or fill material may be permitted if 1) a practicable alternative exists that is less damaging to the aquatic environment or 2) the nation's waters would be significantly degraded.
- Section 303(d) of the CWA establishes that states are to list waters which are not meeting
  applicable water quality standards. The list includes priority rankings set by the states for the
  listed waters. Once the impaired waters are identified, Section 303(d) requires that the states
  establish total maximum daily loads (TMDLs) that would meet water quality standards for each
  listed water body.

The National Wild and Scenic Rivers System was established to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition.

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of American's drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The best way to maintain high-quality drinking water is to prevent contaminants from reaching drinking water sources. The SDWA was amended in 1986 to require states to develop Wellhead Protection Programs.

#### 3.3.1 AFFECTED ENVIRONMENT

The project is located over the Snake River and a side channel of the Snake River. The Snake River watershed includes areas of Idaho, Nevada, Oregon, Utah, Washington, and Wyoming. The Snake River is the 10th longest river system in the United States, extending over 1,000 miles from its headwaters in Yellowstone National Park, Wyoming, to its confluence with the Columbia River near Pasco, Washington. Over its length, the river falls nearly 7,000 feet in elevation. It passes through some of the richest farmland and the deepest canyons in North America. The Snake River is the major tributary to the Columbia River system. It drains about 87 percent of the State of Idaho (roughly 73,000 square miles); approximately 17 percent of the State of Oregon (about 16,900 square miles); and over 18 percent of the State of Washington (approximately 19,600 square miles). The Snake River flows nearly 760 miles

through southern and southwestern Idaho, with about 270 miles of this segment acting as the border between Oregon and Idaho (Idaho and Oregon 2004).

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) map for the project area identifies the Snake River and its side channel as a riverine, upper perennial, unconsolidated bottom, permanently flooded. In addition, along the outer banks of the river a narrow polygon classified as palustrine forested, broad-leaf deciduous, temporary flooded wetland. The Snake River and associated fringe wetlands are considered waters of the U.S. by the USACE.

The Snake River is listed as being a water quality impaired waterbody by the Idaho and Oregon Department of Environmental Quality. This section of the river is listed for the following pollutants: total dissolved oxygen, phosphorus, sedimentation and siltation, temperature, and pesticides.

The Snake River is not considered a wild and scenic river according to the National Wild and Scenic River System. A portion of the Snake River downstream of the project is considered a Wild and Scenic River; however, this portion is located approximately 125 miles away from the project.

Drinking water in the project vicinity is supplied through private water supply. Furthermore, the project isn't located within a sole source aquifer, or wellhead protection area.

#### 3.3.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Under the No Action Alternative, ongoing maintenance and repair of the existing bridges would continue. With each maintenance activity, there is a potential for debris to enter the river or a spill associated with construction equipment. This potential risk would occur until the eventual failure or replacement of the bridge would occur.

#### PROPOSED ACTION

Project actions will result in temporary and isolated increase in suspended sediments during construction due to the removal and installation of existing piles associated with the existing, new, and temporary bridges and bank stabilization. Turbidity monitoring will be conducted by the Contactor during in water work to ensure compliance with Idaho and Oregon State Water Quality Standards. Furthermore, erosion and sediment control BMPs such as silt fences, silt curtains, and fiber wattles will be installed to minimize the amount of sediment from entering the Snake River. A Section 401 CWA permit was issued by Idaho Department of Environmental Quality (DEQ) on July 18, 2019 (NWW-2017-0063) and Oregon DEQ on August 14, 2019. Certification conditions are outlined in each corresponding states permit (see Appendix C).

The project will result in 1.28 acres of ground disturbance with potential discharges to waters of the U.S.; therefore, the Proposed Action would require a Stormwater Pollution Prevention Plan (SWPPP), including an erosion and sediment control plan.

Upon implementation of BMPs outlined in the water quality certification, SWPPP, and CWA 404 permit, potential impacts to water quality during construction are not considered significant.

## 3.4 VEGETATION

Vegetation stabilizes soils, controls erosion, and reduces sedimentation. Upland vegetation also provides habitat and forage for wildlife.

#### 3.4.1 AFFECTED ENVIRONMENT

Within the project area, natural vegetation is confined to the immediate banks of the river consisting of American elm (Ulmus Americana), ash-leaf maple (Acer negundo), black hawthorn (Crataegus douglasii), Pacific willow (Salix lasiandra), narrow-leaf willow (Salix exigua), false indigo-bush (Amorpha fruticose), Russian olive (Elaeagnus angustifolia), rose (Rosa sp.), reed canary grass (Phalaris arundinacea), poison hemlock (Conium L), broad-leaf pepperwort (Lepidium latifolium), climbing nightshade (Solanum dulcamara L.) and hard-stem club-rush (Schoenoplectus acutus). The remainder of the project area is residential landscaped lawn.

## 3.4.2 ENVIRONMENTAL CONSEQUENCES

#### NO ACTION

The No Action Alternative wouldn't result in upland vegetation removal as ground disturbance associated with maintenance activities is minimal.

#### PROPOSED ACTION

Riparian vegetation removal as part of the Proposed Action is considered minimal (0.16 acres, see Section 3.5.2 below). Upland vegetation removal as the result of the project would also be minimal and dominantly consisting of previously disturbed and/or maintained landscaped areas associated with the residential property. Overall, potential impacts to both upland and riparian vegetation would not be significant.

## 3.5 WETLANDS

The USACE defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions".

An assessment of waters of the U.S. and wetlands was conducted in accordance with the USACE 1987 Wetlands Delineation Manual and the 2006 Arid West Region Supplement. The requirements for such delineation are contained in Section 404 of the CWA, which require authorization through the USACE for the discharge of dredged or fill material into all waters of the U.S., including wetlands.

In addition to the USACE regulations, Executive Order 11990 requires agencies to the extent permitted by law, to avoid undertaking or providing assistance for new construction located in wetlands (both jurisdictional and non-jurisdictional wetlands) unless the lead agency finds that there is no practicable alternative to such construction and that the proposed project includes all practicable measures to minimize harm to wetlands which may result from such use.

## 3.5.1 AFFECTED ENVIRONMENT

Review of USFWS NWI of the project area revealed a riverine polygon (i.e. Snake River) and a freshwater forested/shrub wetland along the western bank of the Main Channel Bridge and the eastern bank of the Side Channel Bridge. During field investigation, the riverine and freshwater wetlands were confirmed. However, the wetlands along the western bank of Main Channel Bridge were determined to be scrub shrub and emergent wetland, while the wetlands along the eastern bank of Side Channel Bridge were forested and emergent wetlands. In addition, additional emergent, scrub shrub, and forested wetlands were identified along the eastern bank of the Main Channel Bridge and western bank of the Side Channel Bridge which were not identified on NWI maps (see Table 1 for summary of waters/wetlands identified). A local wetland inventory has not been prepared for this area.

A Waters of the U.S. and wetland survey was conducted within the project area on September 12, 2017. After surveying the study area, the Snake River, a traditional navigable waterway, and associated fringe wetlands were identified. The wetland delineation was submitted to the USACE and the Oregon Department of State Lands, both of which concurred with the findings of the report.

Table 1. Summary of Waters/Wetlands Identified Along the Study Area.

	, , ,					
Juri	Jurisdictional Waters/Wetlands to the USACE					
	Name	<sup>1</sup> Cowardin	<sup>2</sup> Linear Ft. (LF.) /	Acres		
		Classification	Square Ft. (SF.)	(AC.)		
	Snake River	OW	450 LF	-		
	Wetland 1	PEM	1,465 SF.	0.03 AC.		
		PSS	3,017 SF,	0.10 AC.		
		PFO	4,199 SF.	0.10 AC.		
	Wetland 2	PEM	3,058 SF.	0.07 AC.		
		PSS	1,866 SF.	0.04 AC.		
		PFO	5,672 SF.	0.13 AC.		

<sup>&</sup>lt;sup>1</sup>Cowardin classification: OW = Open Water, PEM = Palustrine Emergent, PSS = Palustrine Scrub Shrub, PFO = Palustrine Forested.

#### **Wetland Functions and Values**

The Montana Department of Transportation Montana Wetland Assessment Method was used to assign functions and values to the wetlands impacted by the proposed project. The wetlands were grouped into assessment areas, and categorized by the Cowardin classification type.

Wetlands 1 and 2 were grouped together in one assessment area due to similar characteristics. The wetlands are considered common with moderate disturbance within the assessment area and high disturbance adjacent. The wetland ranked high for sediment/shoreline stabilization, short and long term surface water storage, flood attenuation, and production export/food chain support. Overall, the wetlands were classified as Category III wetlands. The detailed results of the assessment are included in Aquatic Resources Delineation conducted for the project.

## 3.5.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Under the No Action Alternative, ongoing maintenance of the bridges could potentially result in wetland impacts; however, these impacts would be minor as the project actions would be minor.

#### PROPOSED ACTION

The Snake River and associated wetlands will be impacted (temporarily and permanently) through the removal of the existing substructure (i.e. piles, abutments, riprap) and construction of the new bridge substructure (see Table 2 below and Figure 5 for impacts). In addition, temporary impacts will occur through the use of temporary bridges and cofferdams to complete required in-stream work. Impacts associated with these actions were included in the CWA 404 permit which was issued by the USACE on November 15, 2019. In addition to the federal permit, the Oregon Department of State Lands issued their removal-fill permit on January 30, 2020 (see Appendix C). Conditions outlined in those permits will be incorporated into construction documents and adhered to.

<sup>&</sup>lt;sup>2</sup>Drainages are presented in the table as linear feet. Wetlands are presented in the table as square feet/acres.

Best Management Practices will be designed, implemented and maintained to ensure minimization of impacts to waters and wetlands. In addition, the wetlands delineated will be identified on construction plans. Furthermore, adjacent wetlands that were identified but are to be retained and protected from disturbance (i.e. project's action); will be fenced off with temporary orange construction fencing and appropriately signed to retain and protect. In-water work will occur during low flows.

Table 2. Waters of the U.S., including Wetland Impacts

Permanent Impacts					
Name	<sup>1</sup> Type	Impact A	Action	<sup>2</sup> Linear Ft. (LF.)/	Acres (AC.)
Wetland 1	PSS	Clearing and Grubbing t Main Channel Bridge	for Construction of	809 SF.	0.02 AC.
Wetland 2	PSS	Clearing and Grubbing to Side Channel Bridge	for Construction of	6,084 SF.	0.14 AC.
Snake River	OW	Construction of Tempor	rary Platform	120 SF.	0.00 AC.
Snake River	OW	Construction of New H- Channel Bridge	Piles For Main	110 SF.	0.00 AC.
Snake River	OW	Construction of H-Piles Bridge	for Side Channel	20 SF.	0.00 AC.
Snake River	OW	Main and Side Channel and rip rap placement	Abutment Removal	7,856 SF.	0.18 AC.
Snake River	OW	Removal of Existing H-P Channel Bridge	Piles for Main	72 SF.	0.00 AC.
Snake River	OW	Removal of Existing Pie Bridge	rs for Side Channel	126 SF.	0.00 AC.
			Wetland Impacts	6,893 SF.	0.16 AC.
<b>Total Perman</b>	ent Impacts		PSS	6,893 SF.	0.16 AC.
			OW Impacts	8,304 SF.	0.19 AC.
Temporary In	npacts				
Name	<sup>1</sup> Type	Impact Action		<sup>2</sup> Linear Ft. (LF.)/Square Ft. (SF.)	Acres (AC.)
Snake River	OW	Cofferdams for Placement of Rip Rap Around New Abutments of the Main Channel and Side Channel Bridges		8,365 SF.	0.19 AC.
Total Tempor	rary Impacts		OW Impacts	8,365 SF.	0.19 AC.

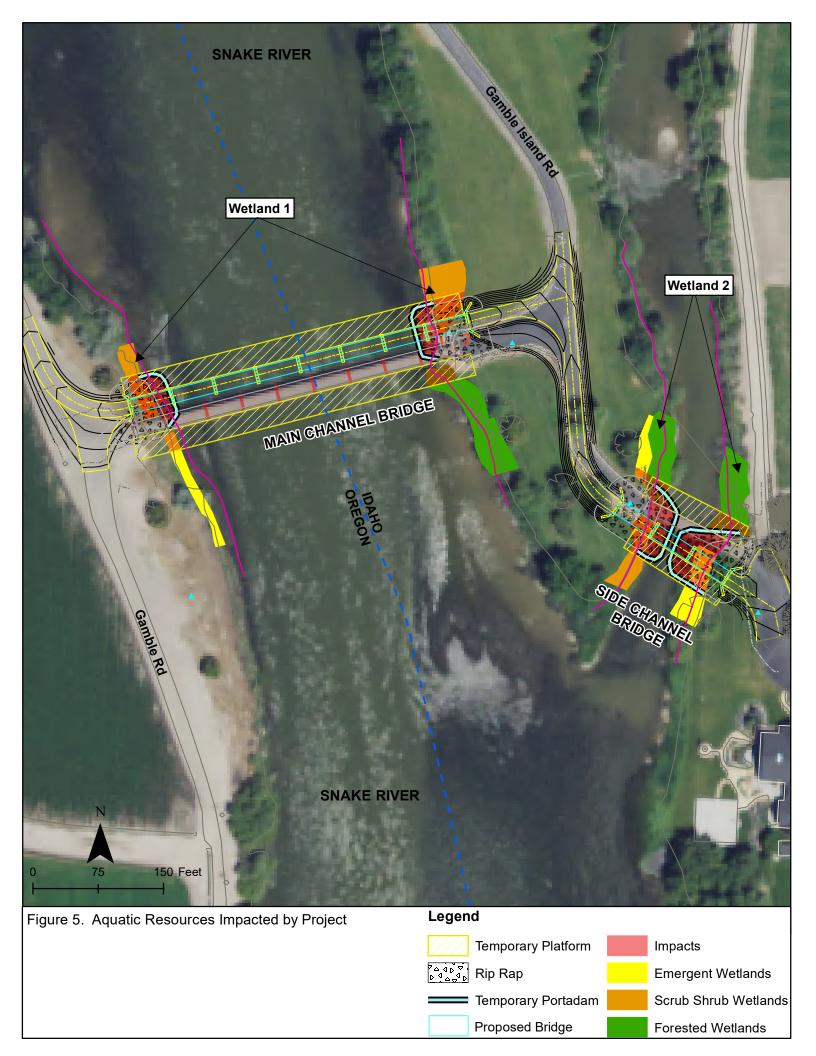
<sup>&</sup>lt;sup>1</sup>Type: OW = Open Water, PEM = Palustrine Emergent, PSS = Palustrine Scrub Shrub

Wetlands impacted by the project will be mitigated and it is anticipated that the original functions and values lost will be restored. Mitigation for the loss of wetland functions and values will be compensated through the purchase of wetland credits for impacts within Idaho (proof of purchase needs to be submitted to the USACE prior to construction) and an in-lieu fee payment has been purchased from the Oregon Department of Lands for impacts within Oregon.

## **WETLAND FINDINGS**

Based on the above considerations, it is determined that there is no practicable alternative to the proposed new construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

<sup>&</sup>lt;sup>2</sup>Drainages are presented in the table as linear feet. Wetlands are presented in the table as square feet/acres.



## 3.6 FLOODPLAINS

Floodplain Management, Presidential Executive Order 11988 directs Federal agencies to avoid to the extent possible adverse impacts associated with floodplains and to avoid direct or indirect support of floodplain development.

#### 3.6.1 AFFECTED ENVIRONMENT

Review of the Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM) of the study area revealed the majority of the project is within the 100-year floodplain of the Snake River (FIRM Panel 4101490675B Malheur County, Oregon unincorporated areas and FIRM Panel 1601980300B Payette County, Idaho unincorporated areas). The floodplain does not extend beyond the ordinary high water mark on the western bank of the river (see Figures 6 and 7).

## 3.6.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Under the No Action Alternative, maintenance activities would not result in floodplain impacts as additional fill or excavation would not occur. The eventual replacement of the bridge may impact the floodplain depending on the pier layout.

## PROPOSED ACTION

The Proposed Action will construct seven piers for the Main Channel Bridge and two piers of the Side Channel Bridge which is a reduction in the number of obstructions in the active river channel. Furthermore, the proposed bridges will be taller in elevation, and longer than the existing bridges, spanning the river channel which will allow for a wider hydraulic opening for flows.

According to the Floodplain Development Permit, the hydraulic clearance under the proposed Main Channel Bridge compared to the ordinary highway is approximately 9.5 feet from the lowest chord elevation on the bridge, while the Side Channel Bridge is approximately 6.1 feet. The hydraulic clearance above the 100-year floodplain elevation is approximately 1.4 feet for the Main Channel Bridge and at the floodplain elevation for the Side Channel Bridge. The existing Main Channel Bridge does not provide any freeboard for the 100-year flood with the existing Side Channel Bridge being under the 100-year flood elevation.

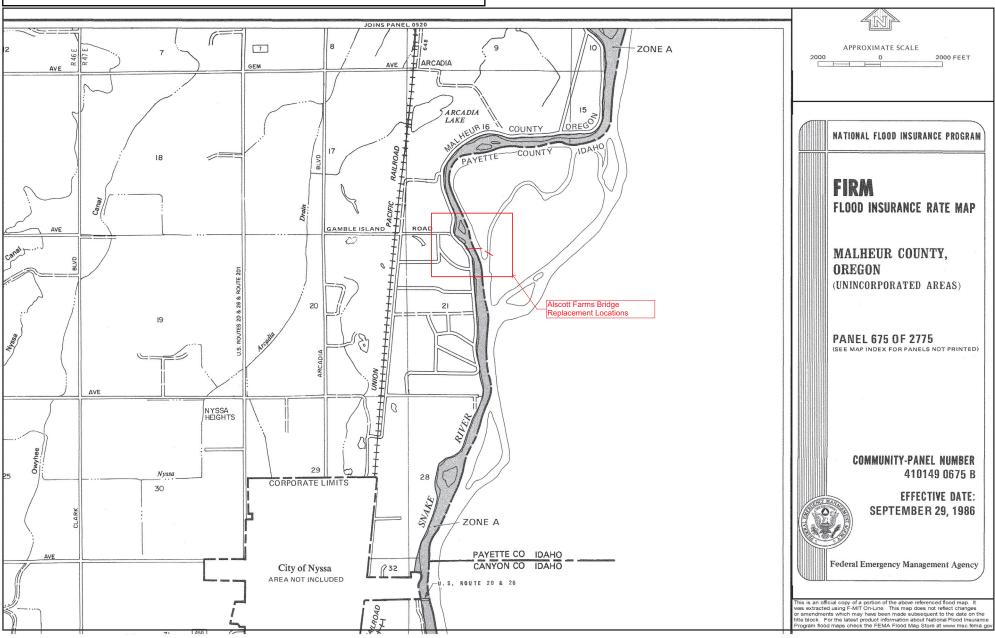
Hydraulic modeling of the existing and proposed base flood elevations shows a slight increase in base flood elevations with the proposed action. However, increases are on the order of a few hundredths of a foot. The de minimis increases in water elevations will not be discernible in a 100-year flood event, are limited to the vicinity of the bridges, and will not produce adverse impacts to existing insurable structures.

A Floodplain Development Permit was issued for project actions from Payette County, Idaho on November 2, 2018 and Malheur County, Oregon on August 7, 2019 (see Appendix D). Conditions for approval from Payette County include:

- Approval of the Floodplain Development Permit will be contingent of permit approvals listed in the narrative and submittal of approved permits to the County.
- Design changes required in obtaining permits, elevation changes, alignments changes, etc., will require a resubmittal with changes noted.

Figure X. FEMA Floodplain Map within Idaho. APPROXIMATE SCALE 26 28 NATIONAL FLOOD INSURANCE PROGRAM FIRM ZONE A FLOOD INSURANCE RATE MAP Alscott Farms Bridge Replacement Locations PAYETTE COUNTY, IDAHO (UNINCORPORATED AREAS) PANEL 300 OF 425 COMMUNITY-PANEL NUMBER 160198 0300 B EFFECTIVE DATE: FEBRUARY 15, 1984 Federal Emergency Management Agency ZONE C PAYETTE CO CANYON CO This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title objects. For the latest product information about National Flood insurance Program tood maps check the FEMA Flood Map Store at www.msc.fema.gov 10 JOINS PANEL 0375

Figure X. FEMA Floodplain Map within Oregon.



Conditions for approval from Malheur County include:

• The Applicant must submit to the Malheur County Planning Department, all other necessary permits prior to the start of construction.

## 3.7 FISH AND WILDLIFE

The Fish and Wildlife Coordination Act (1934) directs federal agencies to prevent the loss and damage to fish and wildlife resources. Consultation with the USFWS is required when activities result in the control of, diversion, or modification to any natural habitat or associated waterbody, altering habitat quality and/or quantity for fish and wildlife.

The Migratory Bird Treaty Act makes it unlawful without a waiver to pursue, hunt, take, capture, kill or sell birds listed therein "migratory birds".

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the Sectary of the Interior, from "taking" Bald and Golden Eagles. Taking is described to include their parts, nests, or eggs, molesting or disturbing the birds.

Wildlife species occurrences are addressed through the use of Idaho Fish and Game's (IDFG) Idaho Fish and Wildlife Information System (IFWIS), Oregon Biodiversity Information Center (ORBIC), wildlife observations made during field visits to the project area, coordination with both the IDFG and Oregon Department of Fish and Wildlife (ODFW), as well as professional knowledge. Both the IFWIS and ORBIC data were received on May 9, 2018, and provide wildlife observations documented within ten miles of the project area.

#### 3.7.1 AFFECTED ENVIRONMENT

#### **BIRDS**

The Snake River provides substantial habitat for numerous bird species for foraging, roosting, and nesting activities, with foraging occurring year-round. Data from the IFWIS database and ODFW Conservation Strategy indicate that over 164 bird species have been observed within 10 miles of the project area (see Table 3). The riparian forests of the Snake River contain a multi-level canopy that allows both foraging and nesting for a large number of bird species.

Birds that could be in the area include waterfowl, herons, raptors, and songbirds. Waterfowl can be found throughout the year foraging and nesting along the river. Bald eagles and osprey use the river for foraging and nesting. However, the IFWIS data show that there are no known osprey nests near the project area, nor any known bald eagle nests within 10 miles of the project area. The nearest known rookery for great blue herons and double crested cormorants is at the Fort Boise Wildlife Management Area, approximately eight miles upriver of the project area.

Table 3. Bird species identified within 10 miles of the project area.

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
American Avocet	Recurvirostra americana	S3B, S3M	-
American Bittern	Botaurus lentiginosus	S1B	-
American Coot	Fulica americana	S4B, S4N	-
American Crow	Corvus brachyrhynchos	<b>S</b> 5	-
American Goldfinch	Spinus tristis	S5	-
American Kestrel	Falco sparverius	S4	-

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
American Pipit	Anthus rubescens	S3B	-
American Robin	Turdus migratorius	<b>S</b> 5	-
American White Pelican	Pelecanus erythrorhynchos	S3B	Sensitive
American Wigeon	Anas americana	S4B, S4N	-
Bald Eagle	Haliaeetus leucocephalus	<b>S</b> 5	-
Bank Swallow	Riparia riparia	S4B	-
Barrow's Goldeneye	Bucephala islandica	S3B, S3N	-
Belted Kingfisher	Megaceryle alcyon	S4	-
Bewick's Wren	Thryomanes bewickii	\$3	-
Black-billed Magpie	Pica hudsonia	S5	-
Black-capped Chickadee	Poecile atricapillus	S4	-
Black-chinned Hummingbird	Archilochus alexandri	S5B	-
Black-crowned Night- Heron	Nycticorax nycticorax	S2B, S2N	-
Black-headed Grosbeak	Pheucticus melanocephalus	S5B	-
Black-necked Stilt	Himantopus mexicanus	S4B	Sensitive
Black Tern	Chlidonias niger	S2B	-
Blue-winged Teal	Anas discors	S2B	-
Bohemian Waxwing	Bombycilla garrulus	S4N	-
Bonaparte's Gull	Chroicocephalus philadelphia	S3M	-
Brewer's Blackbird	Euphagus cyanocephalus	S4	-
Brown-headed Cowbird	Molothrus ater	S5B	-
Brown Creeper	Certhia americana	S4	-
Bufflehead	Bucephala albeola	S1B, S1N	-
Bullock's Oriole	Icterus bullockii	S4B	-
Burrowing Owl	Athene cunicularia	S2B	Sensitive
Bushtit	Psaltriparus minimus	\$3	-
Cackling Goose	Branta hutchinsii	SNR	-
California Gull	Larus californicus	S3B, S2N	-
California Quail	Callipepla californica	SNA	-
Canada Goose	Branta canadensis	S5B, S5N	-
Canvasback	Aythya valisineria	S3B, S3N	-
Caspian Tern	Hydroprogne caspia	S1B	Sensitive
Cattle Egret	Bubulcus ibis	S1B	-
Cedar Waxwing	Bombycilla cedrorum	<b>S</b> 5	-
Cinnamon Teal	Anas cyanoptera	S3B	-
Clark's Grebe	Aechmophorus clarkii	S2B	-
Cliff Swallow	Petrochelidon pyrrhonota	S5B	-

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Common Goldeneye	Bucephala clangula	S5B, S5N	-
Common Grackle	Quiscalus quiscula	S1B	-
Common Merganser	Mergus merganser	\$3	-
Common Nighthawk	Chordeiles minor	S4B	-
Common Raven	Corvus corax	S5	-
Common Yellowthroat	Geothlypis trichas	S5	-
Cooper's Hawk	Accipiter cooperii	S4	-
Dark-eyed Junco	Junco hyemalis	<b>S</b> 5	-
Double-crested Cormorant	Phalacrocorax auritus	S4B	-
Downy Woodpecker	Picoides pubescens	S4	-
Eared Grebe	Podiceps nigricollis	S1N, S1B	-
Eastern Kingbird	Tyrannus tyrannus	S5B	-
Eurasian Collared-Dove	Streptopelia decaocto	SNA	-
Eurasian Wigeon	Anas penelope	S1N	-
European Starling	Sturnus vulgaris	SNA	-
Ferruginous Hawk	Buteo regalis	S3B	Sensitive
Forster's Tern	Sterna forsteri	S2B	-
Franklin's Gull	Leucophaeus pipixcan	S3B	Sensitive
Gadwall	Anas strepera	\$3	-
Golden-crowned Kinglet	Regulus satrapa	<b>S</b> 5	-
Golden Eagle	Aquila chrysaetos	\$3	-
Great-tailed Grackle	Quiscalus mexicanus	S1B	-
Great Blue Heron	Ardea herodias	S5B	-
Great Egret	Ardea alba	S2B	-
Great Horned Owl	Bubo virginianus	<b>S</b> 5	-
Greater White-fronted Goose	Anser albifrons	S4M	-
Greater Yellowlegs	Tringa melanoleuca	S3M	-
Green-winged Teal	Anas crecca	S4B, S3N	-
Hairy Woodpecker	Picoides villosus	S4	-
Harris's Sparrow	Zonotrichia querula	SNA	-
Hermit Thrush	Catharus guttatus	S4B	-
Herring Gull	Larus argentatus	S2N	-
Hooded Merganser	Lophodytes cucullatus	S2B, S2N	-
Horned Grebe	Podiceps auritus	S2N	-
Horned Lark	Eremophila alpestris	S5	-
House Finch	Haemorhous mexicanus	S4	-
House Sparrow	Passer domesticus	SNA	-
House Wren	Troglodytes aedon	S4B	-
Killdeer	Charadrius vociferus	S4B, S4N	-

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Lazuli Bunting	Passerina amoena	S4B	-
Least Sandpiper	Calidris minutilla	S3M	-
Lesser Scaup	Aythya affinis	S3B, S3N	-
Lesser Yellowlegs	Tringa flavipes	S2M	-
Lincoln's Sparrow	Melospiza lincolnii	S5B	-
Loggerhead Shrike	Lanius ludovicianus	\$3	-
Long-billed Curlew	Numenius americanus	S2B	Sensitive
Long-billed Dowitcher	Limnodromus scolopaceus	S4M	-
Long-eared Owl	Asio otus	S5	-
Mallard	Anas platyrhynchos	S4B, S4N	-
Marsh Wren	Cistothorus palustris	S5B, S5N	-
Merlin	Falco columbarius	S4	-
Mountain Chickadee	Poecile gambeli	S4	-
Mourning Dove	Zenaida macroura	S5	-
Mute Swan	Cygnus olor	SNA	-
Nashville Warbler	Oreothlypis ruficapilla	S4B	-
Northern Flicker	Colaptes auratus	S5	-
Northern Goshawk	Accipiter gentilis	\$3	-
Northern Harrier	Circus cyaneus	S4	-
Northern Mockingbird	Mimus polyglottos	S1B	-
Northern Pintail	Anas acuta	S4B, S4N	-
Northern Rough-winged Swallow	Stelgidopteryx serripennis	S4B	-
Northern Saw-whet Owl	Aegolius acadicus	S4	-
Northern Shoveler	Anas clypeata	S4B, S4N	-
Northern Shrike	Lanius excubitor	S3N	-
Orange-crowned Warbler	Oreothlypis celata	S4B	-
Osprey	Pandion haliaetus	S4B	-
Pacific Wren	Troglodytes pacificus	S5	-
Pectoral Sandpiper	Calidris melanotos	S2M	-
Peregrine Falcon	Falco peregrinus	S2B	Sensitive
Pied-billed Grebe	Podilymbus podiceps	\$3	-
Prairie Falcon	Falco mexicanus	S4	-
Red-breasted Nuthatch	Sitta canadensis	S4	-
Red-tailed Hawk	Buteo jamaicensis	S4	-
Red-winged Blackbird	Agelaius phoeniceus	S5	-
Redhead	Aythya americana	S4	-
Ring-billed Gull	Larus delawarensis	S2B, S2N	-
Ring-necked Duck	Aythya collaris	S4B, S4N	-
Ring-necked Pheasant	Phasianus colchicus	SNA	-
Rock Pigeon	Columba livia	SNA	-

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Ross's Goose	Chen rossii	S3M	-
Rough-legged Hawk	Buteo lagopus	S4N	-
Ruby-crowned Kinglet	Regulus calendula	S4	-
Ruddy Duck	Oxyura jamaicensis	S2	-
Rufous Hummingbird	Selasphorus rufus	S4B	-
Sandhill Crane	Grus canadensis	S3B	Sensitive
Savannah Sparrow	Passerculus sandwichensis	S5B	-
Semipalmated Sandpiper	Calidris pusilla	S1M	-
Sharp-shinned Hawk	Accipiter striatus	S4	-
Snow Goose	Chen caerulescens	S5M	-
Snowy Egret	Egretta thula	S1B	Sensitive
Song Sparrow	Melospiza melodia	S5	-
Sora	Porzana carolina	S1N, S4B	-
Spotted Sandpiper	Actitis macularius	S3B	-
Spotted Towhee	Pipilo maculatus	S4	-
Swainson's Hawk	Buteo swainsoni	S5B	Sensitive
Townsend's Solitaire	Myadestes townsendi	S5	-
Tree Swallow	Tachycineta bicolor	S5B	-
Trumpeter Swan	Cygnus buccinator	S1B, S4N	Sensitive
Tundra Swan	Cygnus columbianus	S4M, S4N	-
Turkey Vulture	Cathartes aura	S5B	-
Vesper Sparrow	Pooecetes gramineus	S5B	-
Violet-green Swallow	Tachycineta thalassina	S5B	-
Virginia Rail	Rallus limicola	S2N, S3B	-
Western Grebe	Aechmophorus occidentalis	S2B	-
Western Kingbird	Tyrannus verticalis	S5B	-
Western Meadowlark	Sturnella neglecta	S5	-
Western Sandpiper	Calidris mauri	S3M	-
Western Screech-Owl	Megascops kennicottii	S1	-
Western Wood-Pewee	Contopus sordidulus	S5B	-
White-crowned Sparrow	Zonotrichia leucophrys	S5	-
White-faced Ibis	Plegadis chihi	S2B	-
Wild Turkey	Meleagris gallopavo	SNA	-
Willet	Tringa semipalmata	S3B	-
Willow Flycatcher	Empidonax traillii	S4B	Sensitive
Wilson's Phalarope	Phalaropus tricolor	S4B	-
Wilson's Snipe	Gallinago delicata	S3N, S4B	-
	Guilliago acticata		
Wood Duck	Aix sponsa	S4N, S4B	-
Wood Duck Yellow-billed Cuckoo	_	S4N, S4B S1B	-

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Yellow-headed Blackbird	Xanthocephalus xanthocephalus	S4B	-
Yellow-rumped Warbler	Setophaga coronata	S5	-
Yellow Warbler	Setophaga petechia	S5B	-
Total Species = 164			-

<sup>&</sup>lt;sup>1</sup> S: State Rank; G: Global Rank. S/G1: Critically imperiled; S/G 2: Imperiled; S/G3: Vulnerable; S/G4: Apparently secure; S/G5: Secure. B: Breeding population; M: Only applies when migrant occurs in an irregular, transitory, and dispersed manner—Occurrences cannot be defined from year-to-year; N: Nonbreeding population. SGCN: Species of Greatest Conservation Need. Idaho state ranks are statewide and were obtained from the IDFG website. The Oregon state ranks are specific to the Northern Basin and Range ecoregion and were obtained from the Oregon Department of Fish and Wildlife Conservation Strategy website.

#### **TERRESTRIAL MAMMALS**

Due to the relatively high level of active agriculture in the vicinity of the project, only a few disturbance-tolerant terrestrial mammals are expected to occur within or near the project area. Deer, coyotes, skunks, raccoons, rats, mice, and voles may occur within or near the project area. Additionally, the data obtained from the IFWIS database indicate eight species of terrestrial mammals have been observed within 10 miles of the project area (see Table 4). Idaho state ranks are statewide and were obtained from the IDFG official website. Oregon state ranks are specific to the Northern Basin and Range ecoregion and were obtained from the official Oregon Department of Fish and Wildlife Conservation Strategy website. None of these species are "species of concern" in Idaho or Oregon wildlife conservation plans for this ecoregion.

Table 4. Terrestrial mammal species identified within ten miles of the project area.

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Common Muskrat	Ondatra zibethicus	S4	-
Great Basin Pocket Mouse	Perognathus parvus	<b>S5</b>	-
Little Brown Myotis	Myotis lucifugus	\$3	-
Long-tailed Weasel	Mustela frenata	<b>S5</b>	-
North American Deermouse	Peromyscus maniculatus	S5	-
Piute Ground Squirrel	Urocitellus mollis	S4	-
Townsend's Pocket Gopher	Thomomys townsendii	S4	-
Western Harvest Mouse	Reithrodontomys megalotis	S4	-
Total Species = 8			

#### **FISH**

The Snake River is host to a diverse and extensive aquatic community. In the project area, the fishery is characterized as a warm water fishery, with the Snake River listed as exceeding temperature goals by the State of Oregon (IDEQ 2004). A number of factors contribute to the warm nature of the river in this area, including the diversion and return of water for agriculture. This in turn supports the warm-water fishery. A large number of fish species live in and utilize the Snake River for foraging, feeding, and reproduction, including Snake River white sturgeon, mountain whitefish, and rainbow trout. Anadromous fish are not present due to the multiple dams downriver, particularly a series of dams

referred to as the Hell's Canyon Complex. Data from the IFWIS database indicate 29 fish species have been observed within 10 miles of the project area (see Table 5). Idaho state ranks are statewide and were obtained from the IDFG website. Oregon state ranks are specific to the Northern Basin and Range ecoregion and were obtained from The Oregon Department of Fish and Wildlife Conservation Strategy website. None of the fish present are "species of concern" in the Upper Snake River watershed.

Table 5. Fish species identified within 10 miles of the project area.

Common Name	Scientific Name	Idaho State Rank	Oregon State Rank
Black Crappie	Pomoxis nigromaculatus	SNA	-
Bluegill	Lepomis macrochirus	SNA	-
Bridgelip Sucker	Catostomus columbianus	S4	-
Bullhead	Ameiurus sp.	SNA	-
Channel Catfish	Ictalurus punctatus	SNA	-
Chiselmouth	Acrocheilus alutaceus	S4	-
Columbia River Redband Trout	Oncorhynchus mykiss gairdneri	\$4	-
Common Carp	Cyprinus carpio	SNA	-
Crappie	Poxomis sp.	-	-
Fathead Minnow	Pimephales promelas	SNA	-
Flathead Catfish	Pylodictis olivaris	SNA	-
Largemouth Bass	Micropterus salmoides	SNA	-
Largescale Sucker	Catostomus macrocheilus	S4	-
Mountain Whitefish	Prosopium williamsoni	S5	-
Northern Pikeminnow	Ptychocheilus oregonensis	S4	-
Oriental Weatherfish	Misgurnus anguillicaudatus	SNA	-
Peamouth	Mylocheilus caurinus	<b>S3</b>	-
Pumpkinseed	Lepomis gibbosus	SNA	-
Rainbow Trout	Oncorhynchus mykiss	SNA	-
Sculpin	Cottus sp.	-	-
Smallmouth Bass	Micropterus dolomieu	SNA	-
Speckled Dace	Rhinichthys osculus	<b>S</b> 5	-
Tadpole Madtom	Noturus gyrinus	SNA	-
Tui Chub	Siphateles bicolor	SNA	-
Utah Sucker	Catostomus ardens	S4	-
Warmouth	Lepomis gulosus	SNA	-
White Crappie	Pomoxis annularis	SNA	-
White Sturgeon	Acipenser transmontanus	S2	-
Yellow Perch	Perca flavescens	SNA	-
Total Species = 29			-

## 3.7.2 ENVIRONMENTAL CONSEQUENCES

## **NO ACTION**

Under the No Action Alternative, maintenance activities would have the potential to affect wildlife in a similar manner as the Proposed Action.

#### PROPOSED ACTION

The Proposed Action will be removing vegetation including trees and riparian vegetation which has the potential to provide foraging, roosting, and perching habitat for avian species. Construction noise and water turbidity will also cause short-term impacts on species needs. Relative to noise it is likely that such species are acclimated to construction and noise impacts within an urban setting as these types of activities occur regularly. In general, project actions and construction activities are primarily temporary in nature and confined to within the project area. The project will not prevent these species (i.e. fish, birds and other wildlife) from nesting, rearing, feeding, roosting, perching or seeking refugia within the broader Snake River Watershed Corridor. Alternative habitat for these species is in close proximity to the project area and located both downstream and upstream on the Snake River. Upstream and downstream river use by wildlife will be available at all times during construction.

To avoid impacts to nesting avian species, vegetation removal will occur outside of active nesting season (i.e. March through September). If vegetation removal is proposed during active nesting season, prior to construction initiating, a biologist shall conduct an onsite field visit of the project area for active bird sites. If active nests are identified within the project area, consultation with the USFWS will be conducted prior to construction continuing.

## **INVASIVE SPECIES**

Invasive aquatic plants and invertebrates can be spread by construction equipment. To limit the spread of invasive species, all equipment should be cleaned prior to arrival and immediately after leaving the project site. Cleaning should include scraping/sweeping off any debris or soil and pressure washing. Cleaning should be performed at least 150 feet from any wetland or waterway, and the resulting silt and debris contained by a pit of gravel or vegetation.

## 3.8 ENDANGERED SPECIES ACT LISTED SPECIES

The primary federal law protecting threatened and endangered species is the Endangered Species Act (ESA), 16 United States Code (USC), Section 1531, et seq., as well as 50 CFR Part 402. The ESA and its subsequent amendments provide for the conservation and recovery of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of the ESA, federal agencies are required to consult with USFWS and/or National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations essential for the conservation of threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a no effect finding. Section 3 of the ESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires federal agencies to consult with NMFS on activities that may adversely affect essential fish habitat (EFH). The Pacific Fisheries Management Council has designated EFH for the Pacific coast salmon fishery, federally managed groundfish, and coastal pelagic fisheries. Federal agencies must consult with NMFS on all activities

#### 3.8.1 AFFECTED ENVIRONMENT

Review of the USFWS Information, Planning, and Consultation website indicates the Snake River physa snail (*Physa natricina*) as potentially occurring within the project area. The NMFS website did not list any fish species protected under ESA or essential fish habitat within or in the near vicinity of the project area.

In consultation with the USFWS, presence/absence and habitat surveys for Snake River physa snail were conducted in October and November 2016 for the project. No snails were found in the samples collected; however, a minimal amount of suitable habitat is present in the project area.

#### **ESA CONSULTATION HISTORY**

The USCG consulted with the USFWS on the potential project related effects to the Snake River physa snail which was documented in a Biological Assessment prepared by Bionomics Environmental, Inc. in 2018. The USCG consulted with the USFWS regarding potential project-related effects to the federally listed species. The USFWS issued a concurrence letter on the findings and effect determination on December 11, 2018 (01EIFW00-2019-I-0283) (see Appendix E).

## 3.8.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Maintenance activities under the No Action Alternative would result in limited in-water work; therefore, little potential for impacts to ESA listed species. Eventually the bridge would need replaced which would result in triggering consultation with the USFWS to address impacts to ESA listed species, similar to the Proposed Action.

#### PROPOSED ACTION

There is the potential for some effects, but they are tempered by the low probability that Snake River physa would be present in the project area. In-stream work will result in disturbance to the river bed. Direct harm or disturbance to Snake River physa may occur as a result of the release of armored riverbed sediment, the use of barge spuds, and/or falling debris. Additionally, indirect impacts such as changes to water quality, reduction of dissolved oxygen from silt or fine sediments, and alteration of substrate composition may occur. However, project design and BMPs should significantly reduce or eliminate sediments, chemical contaminants, and construction debris from entering the Snake River. The probability that these would impact Snake River physa is discountable, due to the low probability that they are present. Therefore, the determination of effect on the Snake River physa as a result of the proposed project actions is "May Affect, Not Likely to Adversely Affect".

## 3.9 ARCHAELOGICAL AND HISTORIC RESOURCES

The National Historic Preservation Act of 1966 (NHPA), 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 take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 CFR 800).

As part of the Section 106 process, federal agencies must consult with Idaho State Historic Preservation Office (SHPO) to assure that cultural resources are identified and to obtain formal concurrence from SHPO on site's eligibility and effect of the project on its eligibility. Although Idaho SHPO has taken the

lead on this federal action, the Oregon SHPO was informally consulted on the project action and its potential effect on resources.

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

#### 3.9.1 AFFECTED ENVIRONMENT

An evaluation of the significance in archaeology and history of the study area was completed for the project (Bionomics 2017). The evaluation included an intensive pedestrian survey of the study area. Subsurface testing was not conducted as part of this investigation. In lieu of testing, through consultation with Idaho and Oregon SHPO, it is recommended that archaeological monitoring of the western side of the Main Channel Bridge be conducted during ground disturbing activities.

The investigation identified two previously unrecorded historic cultural resources (AB-01: Alscott Bridge – Main Channel and AB-02: Alscott Bridge – Side Channel) and three Noted But Not Recorded Resources. Both of the historic cultural resources (AB-01: Alscott Bridge – Main Channel and AB-02: Side Channel) are eligible for the NRHP. Consultation on the eligibility of the resources was conducted with the Idaho and Oregon SHPO's. The Idaho SHPO concurred with the eligibility determination on December 28, 2018, while the Oregon SHPO concurred on February 25, 2019 (see Appendix F).

## 3.9.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

The No Action Alternative would result in limited ground disturbance; therefore, wouldn't likely effect cultural resources.

#### PROPOSED ACTION

The removal and replacement of both historic bridges will result in an Adverse Effect to Historic Properties by completely removing and replacing the historic structures. This action will adversely affect the characteristics that make the historic property eligible for inclusion in the NRHP. As such, the ACHP was notified of the adverse effect finding with the specified documentation and the ACHP chose not to participate in consultation (see Appendix F for ACHP consultation and Determination of Adverse Effect). The USCG, in consultation with the SHPO and interested parties, has determined that the undertaking's adverse effects cannot be avoided, and that the implementation of the following treatment to the historic structure will be conducted to mitigate for adverse effects (see Appendix F for Memorandum of Agreement):

- Cash Donation: The Applicant will make a one-time cash donation in the amount of three thousand dollars (\$3,000.00) to the Payette County Historical Museum, for the purpose of digitizing the Museum's collection of historic newspapers. This cash donation is due and payable not later than 60 days from the date of the USCG Bridge Permit for this project. A receipt of this transaction will be given to the Idaho SHPO to document fulfillment of this stipulation.
- Monitoring and Reporting. Ninety days after issuance of the USCG bridge permit and annually
  on that date until this agreement expires or is terminated, Alscott Farms, LLC will provide all
  parties to this agreement with a summary report detailing work undertaken pursuant to its
  terms. Such report shall include any scheduling changes proposed, any problems encountered

- and any disputes or objections in Alscott Farms' efforts to carry out the terms of this agreement. Failure to provide such summary report may be considered noncompliance with the terms of the Memorandum of Agreement.
- Inadvertent Discovery: If historic or culturally significant resources are discovered within the Area of Potential Effect during the work of replacing the bridges, work in the immediate vicinity of the cultural resources will cease until the Idaho SHPO is consulted.

## 3.10 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs Federal agencies to identify and address disproportionately high and adverse human health and environmental effects, including the interrelated and social and economic effects of their programs, policies, and activities on minority and low-income populations in the United States. Particular attention was paid to low-income and minority populations and the potential for disproportionate impacts to them, as well as the potential for displacements or relocations.

#### 3.10.1 AFFECTED ENVIRONMENT

The project area includes Census Tract 9705, Block Groups 1 and 2 within Malheur County, Oregon and Census Tract 9603, Block Group 4 within Payette County, Idaho (see Table 6).

The American Community Survey 2012-2016 Estimates for Census Tract 9705, Block Group 1 indicate an ethnic population of 63 persons (9%), while Block Group 2 has an ethnic population of 98 persons (7%). In comparison, Malheur County has an ethnic population of 3,871 persons (13%). Census Tract 9603, Block Group 4 has an ethnic population of 16 person (1%), compared to the Payette County with 1,854 persons (8%). The ethnic population in these block groups is lower than the county averages.

The American Community Survey 2012-2016 Estimates for Census Tract 9705, Block Group 1 revealed 30 families (11%) living in poverty, and 91 families (18%) in Block Group 2. In comparison, Malheur County has 2,509 families (24%) living in poverty. Census Tract 9603, Block Group 4 has 76 families (15%) living in poverty, compared to 1,571 families (19%) in Payette County. The population living in poverty in these block groups is lower than the county wide averages.

Table 6. American Community Survey 2012-2016 Estimates for Ethnic Populations and Poverty in Census Tract 9703, Block Groups 1 and 2 in Malheur County, Oregon and Census Tract 9603, Block Group 4 in Payette, Idaho.

	Ethnic Population	Poverty
Census Tract 9705, Block Group 1	63 persons (9%)	30 families (11%)
Census Tract 9705, Block Group 2	98 persons (7%)	91 families (18%)
Census Tract 9603, Block Group 4	16 persons (1%)	76 families (15%)
Malheur County, Oregon	3,871 persons (13%)	2,509 families (24%)
Payette, Idaho	1,854 persons (8%)	1,571 families (19%)

In addition to the U.S. Census Bureau data, a windshield survey of the project area was conducted to identify potential environmental justice populations. The survey did not identify any residential properties and/or businesses within the study area. The closest residential/business property, not on the applicant's property, is located approximately a half mile southeast of the Side Channel Bridge.

Furthermore, no readily identifiable groups of minority owned, occupied, or controlled properties were identified, as well as properties set aside or designated for low income use.

No minority or low-income populations have been identified that would be adversely impacted by the proposed project as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898.

## 3.10.2 ENVIRONMENTAL CONSEQUENCES

No minority or low-income populations were identified for the project; therefore, the No Action and Proposed Action alternatives would not affect these populations.

## 3.11 COASTAL ZONE MANAGEMENT

The Coastal Zone Management Act (CZMA) encourages coastal states to develop and implement coastal zone management plans that are consistent with national policies to preserve, protect, develop, and, where possible, restore or enhance coastal zone resources. Section 307 of the CZMA requires that any federal action occurring in or outside the coastal zone which affects coastal land or water uses or natural resources must be consistent with the state's Coastal Management Program.

#### 3.11.1 AFFECTED ENVIRONMENT

Gamble Island Bridges are located within Malheur County, Oregon and Payette County, Idaho which is located in the inland northwest; therefore, the CZMA does not apply to this project.

## 3.11.2 ENVIRONMENTAL CONSEQUENCES

The project is not within a coastal county; therefore, no impacts to coastal resources will occur as a result of the No Action or Proposed Action Alternatives.

# 3.12 PRIME AND UNIQUE FARMLANDS

The Farmland Protection Policy Act is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland.

#### 3.12.1 AFFECTED ENVIRONMENT

The U.S. Department of Agricultural Natural Resource Conservation Service soil survey for the study area identified the following soil complexes:

- Baldock silt loam, and
- Notus coarse sandy loam.

The Baldock silt loam was identified as being prime farmland if irrigated and drained in Oregon and farmland of statewide importance, if irrigated in Idaho. The Notus coarse sandy loam was identified as prime farmland if irrigated.

#### 3.12.2 ENVIRONMENTAL CONSEQUENCES

According to the USCG National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts (USGC 2000), actions that require bridge permits on private or nonfederal lands are exempt from the requirements of the Farmland Protection Policy Act. A bridge permit would be required for both the Proposed Action Alternatives and potentially the No Action Alternative. Therefore, compliance with the Farmland Protection Policy Act is not required.

## **3.13 NOISE**

Noise can be disruptive to normal activities for people and wildlife. In extreme cases, it can have adverse health effects, such as hearing loss. The location, duration, timing, and frequency of activity give rise to a pattern of noise. The loudness is measured in units called decibels (dB) over a time weighted average. The loudness of sound as heard by the human ear is measured on the A-weighted dBA scale. The Day-night average sound level descriptor is accepted by Federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses.

Noise is defined as undesirable sound, and is federally regulated by the Noise Control Act of 1972. In general, outdoor sound levels in excess of 67 dBA are normally unacceptable, given the desired land use. Certain land uses, facilities, and the people associated with them are more sensitive to a given level of noise than other uses. Such "sensitive receptors" include schools, churches, hospitals, retirement homes, campgrounds, wilderness areas, hiking trails, and some species of threatened or endangered wildlife.

Machinery and activities during construction can generate noise. However, construction sites of this size typically do not generate noise levels greater than 90 dBA, and elevated noise levels would be likely to be of short duration. Heavy equipment use tends to be the noisiest phase of construction, but lasts only a short time.

#### 3.13.1 AFFECTED ENVIRONMENT

Existing noise levels at the project site are relatively low, based on site observations, and are generated by agricultural-related machinery, intermittent train traffic, Bybee Field Airport, nearby vehicular traffic on local roads, boat traffic, and commercial and recreational activity from the adjacent land uses. Sensitive noise receptors in the project vicinity include workers and residents of Gamble Island, and recreational fisherman/hunters. The nearest sensitive noise receptor is a residence located on Gamble Island, approximately 215 feet south of the Side Channel Bridge. During construction, noise levels would increase. Machinery and equipment could raise daytime noise levels above the 67 dBA level.

## 3.13.2 ENVIRONMENTAL CONSEQUENCES

## **NO ACTION**

The No Action Alternative would result in no construction activity until maintenance on the bridge was necessary. These activities would result in similar project effects as described for the Proposed Action and overall not expected to be significant.

## PROPOSED ACTION

Impacts under the Proposed Action Alternative are likely to be short-term and minor in duration and associated primarily with the use of heavy machinery during the construction of the bridges. These impacts may negatively impact nearby sensitive receptors including the residential areas by the nature of the construction and because it would occur in outdoor areas. All work will need to strictly follow local noise ordinances to minimize potential impacts to local areas.

Following construction completion, no long-term, significant noise level increases are anticipated.

## 3.14 HAZARDOUS MATERIALS AND WASTES

Solid and hazardous materials and wastes are regulated in the U.S. under a variety of Federal and State laws. Federal laws and subsequent regulations governing the assessment, transportation, and disposal of hazardous wastes and materials include the Resource Conservation and Recovery Act (RCRA); the

RCRA Hazardous and Solid Waste Amendments; Comprehensive Environmental Response, Compensation, and Liability Act; the Solid Waste Act; the Toxic Substances Control Act; and the CAA. RCRA is the Federal law that regulates hazardous waste from "cradle to grave", that is, from the time the waste is generated through its management, storage, transport, treatment, and final disposal. EPA is responsible for implementing this law.

RCRA also sets forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enable the EPA, through relevant State agencies, to address the environmental problems that can result from underground tanks storing petroleum and hazardous substances. RCRA focuses only on active and proposed facilities, and does not address abandoned or historical sites.

Previous uses of a site may have included activities that generated, treated, stored, or transported hazardous waste. Some key examples include the presence of leaking underground fuel or chemical storage tanks, abandoned chemicals (from laboratory/photo processing/industrial cleaning), medical waste and sharps, or residuals from hazardous materials incidents such as mercury spills in plumbing and under flooring and casework, disposal of lamp ballast and mercury lamps, and areas contaminated with Polychlorinated Biphenyls (PCBs) from old transformers. These types of environmental site issues would require a thorough review by an environmental professional and the completion of appropriate Environmental Site Assessment in accordance with American Society for Testing and Materials standards or All Appropriate Inquiry under 40 CFR part 312.

It is anticipated that for buildings constructed before 2001, materials such as asbestos and lead-based paint may be present. All Federal, State, and local requirements must be followed in the removal, abatement, and disposal of these materials to ensure exposure is minimized. If the proper procedures are followed during construction, it is not anticipated that additional reviews under NEPA would be required.

#### 3.14.1 AFFECTED ENVIRONMENT

The affected environmental issues may include soil, water, air, and structures on site. The affected environments require investigation of potential indicators, review of federal and state regulatory databases, and review of historical records to identify any potential past or present uses of real property indicative of known or suspected hazardous materials activities. Such findings may result in identification of Recognized Environmental Conditions which may have impacted the target property, or may threaten or represent the potential to threaten an environmental impact to the target property.

## 3.14.2 ENVIRONMENTAL CONSEQUENCES

## **NO ACTION**

The No Action Alternative would not cause or change any use of hazardous materials or generate solid or hazardous wastes; therefore, no impacts would be anticipated.

# PROPOSED ACTION

The project area was searched for existing, known, and potential sources of hazardous materials using all available regulatory databases. The search radius and databases searched was taken from the American Society for Testing and Materials Standard E 1527-13. The review of agency databases did not reveal any known records within the specified search criterion.

Construction of new bridge structures has the potential to generate solid waste and potentially involve the use or creation of more hazardous wastes. Minimizing the types and quantities of waste during construction would mitigate the potential impact for these materials. Reuse and recycling of solid waste will reduce the impact associated with disposal of wastes generated during construction. BMPs for maintenance of construction equipment would be implemented to minimize the potential for the release of oil, fuel, or other contaminated materials into adjacent waters (see Section 4).

## 3.15 TRAFFIC

Local traffic includes surface vehicle traffic on private and local roadways and vessel traffic that utilizes the Snake River. The predominance of vessel traffic in the Snake River is associated with recreation, which is seasonal.

#### 3.15.1 AFFECTED ENVIRONMENT

Both bridges, roads a half mile west leading up to the bridges, and roads on Gamble Island are all privately owned by Alscott Farms, Inc. Furthermore, no public access is allowed in the vicinity of the bridges as adjacent land is privately owned. The Snake River near Gamble Island is primarily used by recreational fisherman, hunters, and local law enforcement year-round.

## 3.15.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

Under the No Action Alternative, no measureable change would occur to the site that would affect local transportation routes or traffic volumes.

#### PROPOSED ACTION

Under the Proposed Action Alternative, no permanent change to vehicular or vessel traffic would occur. During construction, vehicular use of private/local roadways would temporarily increase the volume of traffic in the project vicinity. Construction vehicles may include trucks carrying equipment, personnel, and supplies. It is anticipated that since construction equipment and materials would be transported by truck, potential impacts to local vehicle traffic could occur. Periods of peak use of private/local roadways by construction trucks would be sporadic and primarily associated with the initial phase of construction when heavy equipment and components for the bridges and temporary construction platforms are being delivered to the site. Although use of private/local roadways would be consistent through construction, periods of peak use will be sporadic and would not result in a substantial increase in local or regional traffic. No roadway closures are anticipated.

The installation of two temporary work platforms supported by steel piles will be required in order to construct the Proposed Action Alternative. During construction, vessels will be diverted around Gamble Island, outside of the construction zone, through the eastern channel of the Snake River. Informational signage will be posted at nearby boat launches to alert recreational boaters of the construction project dates, construction areas, and river passage options. Prior to construction, ODFW has requested a notice to be provided to Philip Milburn or Scott Torland or Jon Gutcher at the ODFW Ontario Office, (541) 889-6975, when construction begins.

## 3.16 SAFETY AND SECURITY

The Occupational Safety and Health Act (OSHA) was established to assure safe and healthful working conditions by providing workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. OSHA standards require that employers adopt certain practices, means, methods, or processes reasonably necessary and appropriate to protect workers on the job.

#### 3.16.1 AFFECTED ENVIRONMENT

The Contractor will adhere to all applicable OSHA requirements during construction.

### 3.16.2 ENVIRONMENTAL CONSEQUENCES

#### **NO ACTION**

As stated in Section 1.2, both the Main Channel Bridge and the Side Channel Bridge are nearing their structural life expectancies and do not meet current design standards. Leaving the bridges as they are, conducting maintenance as needed, could lead to a situation that is dangerous to life and health, and create a potentially significant safety hazard for workers and residents of Gamble Island. Work activities associated with maintenance of the existing bridges would be covered under OSHA requirements.

#### PROPOSED ACTION

The new structures would be designed to meet current design requirements and would prevent possible future impacts to life or human health. Work activities associated with replacement of the bridges would be covered under OSHA requirements. Implementation of the Proposed Action Alternative would result in multiple safety benefits.

## 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 regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor actions that can collectively become a measureable impact when taking place over a period of time.

Although the impacts of any individual action may be insignificant, the EA considers in this section the aggregate impacts of the proposed action and all other actions reasonably related to it in time and probability. As such, this assessment considers the cumulative impacts of associated actions taken and those actions that are reasonably foreseeable with respect to the proposed construction of the Gamble Island Bridges.

### Soil Loss and Air Quality

Construction activities associated with the proposed action together with construction activities from other developments have the potential to create significant negative cumulative impacts associated with the generation of total dust,  $PM_{10}$  and  $PM_{2.5}$ . The magnitude of these potential impacts may be minor, moderate or major, depending upon how the impacts from other construction projects will combine with impacts arising from the proposed Gamble Island Bridge project and the respective timing of each project. These impacts may be worsened by elevated wind speeds, increasing the potential for cumulative impacts during periods of adverse weather.

As the construction activities are temporary and because suitable mitigation will be in place, the potential for significant impacts is reduced as dust raising activities would need to be coincidental on other development locations.

BMPs implemented and maintained as discussed under Section 3.1 and 3.2 of this document are considered likely to render the impacts associated with construction activities as having a negligible significance during most circumstances. However, during periods of particularly adverse weather conditions (i.e. on days when the wind speed is particularly elevated), or when activities elsewhere are resulting in major emissions of dust, there may be call to reduce dust causing activities associated with

the construction or defer particularly dusty activities until such time as other activities are ceased, or weather conditions improve.

### Surface Water Quality

Construction activities associated with the proposed action together with construction activities from other developments have the potential to create significant negative cumulative impacts associated with surface water quality. The magnitude of these potential impacts may be minor, moderate or major, depending upon how the impacts from other construction projects will combine with impacts arising from the proposed Payette Dental Clinic and the respective timing of each project. These impacts may be worsened during periods of adverse weather due to increased runoff, increasing the potential for cumulative impacts.

BMPs implemented and maintained as discussed in Section 3.3 of this document are considered likely to render the impacts associated with construction activities as having a negligible significance during most circumstances. However, during periods of particularly adverse weather conditions (i.e. on days of high precipitation), there may be call to reduce sediment and erosion causing activities associated with the construction or defer particular activities until such time as other activities are ceased, or weather conditions improve.

#### Noise

In the event that construction activities of other developments be in parallel with the construction phase of the proposed action, it is possible that the cumulative noise impact of activities carried out may increase; however, this is dependent on how the impacts from other developments combine with the impacts from the proposed action, and the respective timing of these impacts. However, construction sites between developments will vary in their locality and hence it is unlikely that there will be a cumulative increase in noise levels.

## 4 MITIGATION

#### **Floodplains**

Conditions for approval from Payette County include:

- Approval of the Floodplain Development Permit will be contingent of permit approvals listed in the narrative and submittal of approved permits to the County.
- Design changes required in obtaining permits, elevation changes, alignments changes, etc., will require a resubmittal with changes noted.

Conditions for approval from Malheur County include:

• The Applicant must submit to the Malheur County Planning Department, all other necessary permits prior to the start of construction.

Water Resources and Water Quality/Fish and Wildlife/Threatened and Endangered Species

To avoid impacts to nesting avian species, vegetation removal will occur outside of active nesting season (i.e. March through September). If vegetation removal is proposed during active nesting season, prior to construction initiating, a biologist shall conduct an onsite field visit of the project area for active bird sites. If active nests are identified within the project area, consultation with the USFWS will be conducted prior to construction continuing.

### **Erosion and Sediment Control Plan (Including Spill Prevention Plan)**

The Contractor will be required to prepare an erosion and sediment control plan as part of the project. The erosion and sediment control plan will include a Spill Prevention Plan (SPP) with BMPs and Spill Prevention Measures. The erosion and sediment control plan will be implemented for the entire construction area and during the duration of construction activities.

## **Temporary Best Management Practices**

BMPs utilized may include but are not limited to sediment traps, silt fences, fiber wattles and compost socks.

All material will be removed and disposed of appropriately offsite in compliance with applicable regulations.

### **Designated Use Areas**

- Project Designated Use Areas (staging, stockpiling, storage areas including materials and equipment, fueling operations, access roads, source sites, waste sites, construction sites, borrow site operations, and equipment/concrete washouts) shall be located in upland area(s) at least a minimum of 150 feet away from any active water feature or water body. The Contractor shall ensure that BMPs and secondary containments are in place to avoid and minimize erosion and sediment impacts as well as capture 125 percent of the stored petroleum products, concrete/cement materials or other liquids and hazardous materials to be stored onsite.
- Appropriate BMPs will be employed to confine, remove, and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities.
- To the extent practicable, BMPs will be used to contain, control and filter stormwater prior to the water entering the river and/or associated wetlands.
- During construction, all erosion controls will be inspected as required by the current sediment and erosion control plan until the soils are stabilized and the temporary sediment erosion control measures are removed.
- If inspection shows the erosion controls are ineffective, work crews must be mobilized immediately to make repairs, install replacements, or install additional controls as necessary. Sediment must be removed from erosion controls once it has reached ½ of the exposed height of the control.

### **Restoration and Revegetation Efforts**

During all revegetation activities, no fertilizer shall be applied within 25 feet of the Snake River or connected waterways. Upland seeding shall be stabilized by the application of mulch, tackifiers, or erosion control blanket products. Use of geotextiles or similar materials may be allowed for stabilization of wetland restoration planting. All mulch and soil conditioners used in seeding methods shall be Certified Noxious Weed Free by a state accredited laboratory.

All areas that contain noxious weed seeds and/or plants shall be avoided or treated and weeds removed from the site prior to disturbance or excavation. Chemicals for treating weeds shall be applied no later than *two* weeks before seeding applications and all products shall be approved prior to use. Chemical treatments shall be applied by an applicator licensed by the states of Oregon and Idaho.

The Contractor shall hand pull weeds in riparian areas and where feasible. No herbicides shall be applied to areas within 100 feet of a river, water source, or where there is standing or running water. Hand weeding will be accomplished during the seeding operation and prior to applying seed. Prior to the seeding operation, mechanical and chemical methods can be used to control weeds in areas where directed. Spraying herbicide on open water areas and wetlands shall be prohibited. After planting and seeding operations are completed, hand weeding and/or direct blotter application of chemical weed control shall be used.

### **Fertilizer Application**

- For fertilizers to be used in revegetation efforts, no fertilizers will be applied below OHW. In areas above OHW that will have fertilizer applied, measures to contain fertilizers will be in place.
- Fertilizers will be applied in a rate and in amounts consistent with manufacturer's specifications.
- Fertilizers will be applied at the appropriate time of the year for the Gamble Island Bridge location, and timed to coincide as closely as possible with the period of maximum vegetation uptake and growth.
- Fertilizers will be applied to avoid excess nutrients to be discharged by heavy rains.

#### **Hazardous Waste and Materials**

A SPP will be prepared by the construction Contractor prior to project implementation. The purpose of the plan is to prevent discharges of oil, gasoline, cement, epoxy/mortar, or other foreign materials from leaking or spilling into waters from equipment or other construction activities.

### **Spill Prevention Plan**

The SPP plan will include notification procedures, specific clean up and disposal instructions for the different products used and/or available on the project site, proposed methods for disposal of spilled material, and employee training for spill containment. The SPP plan will include the Safety and Data Sheets of any hazardous product or material that will be used for the project, including procedures for inventory, storage, handling, and monitoring. The SPP will contain Spill Prevention Measures to minimize exposure (e.g. leakage, spills, or unwanted discharges) from construction equipment of petroleum products, hydraulic/lubrication fluids, radiator fluids, and other liquids in the stream/river channel. These BMPs include the following:

- Fuel and other chemicals including small fuel cans, oil and hydraulic fluid containers, and concrete chemicals will be stored at least 150 feet from any stream channel or wetland or surface waters and must be within containment systems (e.g. containment cells, berms, retention areas, or a similar combination of BMPs). To the extent practicable, all fueling or other chemical liquid transfer shall take place 150 feet from the river channel or other surface waters/wetlands. If this is not possible due to topographic, construction, or other constraints then the Contractor shall assure that BMPs and containments are in place to could capture 125% of stored fuel or other liquid chemicals/materials.
- Equipment/Vehicles used for or in relation to in-stream work shall be fueled and serviced in an
  established designated use staging area(s) where possible, except for the barges (which are
  discussed separately in their own section). When not in use, equipment and vehicles shall be
  parked in designated use staging areas. Staging areas shall be located to avoid delivery of
  petroleum products, hydraulic fluids, radiator fluids or other liquids to streams or other water
  bodies.
- All equipment and vehicles operated within 150 feet of any water body will be inspected daily
  for leaks or accumulations and build ups of petroleum products, hydraulic/lubrication fluids,
  radiator fluids or other liquids. Accumulations and leaks shall be corrected and repaired before
  leaving the staging (and refueling) areas. Equipment shall not have damaged hoses, fittings,

lines or tanks that have the potential to release pollutants/hazardous materials into the waterways either directly (e.g. stream contact) or indirectly (e.g. land that is part of the project site and sloped in a manner that drains to a waterway). Daily inspections shall be logged/recorded, repairs and corrective actions documented and copies of such documentation made available to the ODEQ, the IDEQ and other agencies including USFWS upon request.

- Heavy equipment driven in wet portions of a water body to accomplish work shall be cleaned of dirt and petroleum residue prior to the work, and will utilize vegetable based hydraulic oil.
- Excavation equipment buckets may reach out into the water for the purpose of removing or placing fill materials. Only the bucket of the crane/excavator/backhoe may operate in a water body. The main body of the crane/excavator/backhoe shall not enter the water body.
- Stationary equipment such as motors and pumps, located adjacent to a water body, shall be positioned over drip pans.
- Drip pans shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.
- Oil-absorbing floating booms, and other equipment such as absorption pads /"peanuts" appropriate for the size of the river, shall be available on-site during all phases and duration of construction. Booms shall be placed in a location that facilitates an immediate response to potential leakage, spills or other unwanted discharges of petroleum products, hydraulic fluids, radiator fluids or other liquids to streams or other water bodies.
- Absorption pads or spill containment kits capable of containing the amount of hazardous products on site shall be stored at all times in or near machinery, vehicles and equipment to be operated during construction duration.
- Reporting and remediation guidelines required by ODEQ, IDEQ, OSHA, and EPA will be followed. Any spills that are reported to any of these agencies will also be reported to USFWS.
- Fluid leaks will either be repaired or contained within a suitable waste collection device (e.g. drip pads, drip pans).
- When changing hydraulic lines, or making any repairs, care will be taken to keep all fluids from entering a waterbody or soils.
- Oil, fuel, hydraulic and other hazardous fluids that enter any waters will be absorbed by placing absorbent socks downstream of the spill/leak. To contain spills, absorbent pads and socks will be utilized according to manufacturer's recommendations and available for use on site to clean-up all spills/leaks. All fuel, oil, hydraulic and any other hazardous fluid spills/leaks on walking and working surfaces will be cleaned up within 24 hours.
- After completing the clean-up, all absorbent material will be placed in waste drums or in other suitable containers. The used absorbent material will be transported in the suitable containers to an approved waste facility. Soils contaminated from oil spills must also be placed in drums or other suitable containers and hauled to an approved waste facility for disposal in accordance with Oregon State, Idaho State, and Federal regulations. These materials must be removed from the site within 90 days.
- Any solid hazardous materials (e.g. cement, mortar, epoxy etc.) to be used, stored, generated, and maintained within designated use areas shall be placed under cover such as tarpaulins or roofs and within secondary containment until such time they can be utilized in construction or properly transported to and treated at an approved facility for treatment of hazardous materials.

#### **Barges and Boats**

- Upon arrival at the river, the barges/boats shall be completely fueled. If it is necessary to refuel
  the boats/barges in the water, absorbent pads, socks, or similar BMPs will be available to
  contain spills in the water. They will be implemented according to manufacturer's
  recommendations and available for use on site to clean up all spills/leaks.
- All equipment used on the boats and barges shall be checked daily, to prevent and repair drips or leaks, and shall be maintained and stored properly to prevent spills into waters.
- Barges and boats will be lined or have a lip to contain spills. They will be outfitted with spill containment kits to contain 125 percent of the volume of materials aboard.
- Both the barge and any boats used to transport materials to and from the barge shall have invasive species permits and will have been inspected by Oregon State Marine Board and Idaho Department of Agriculture before use.

#### **Over-Water Construction**

- When concrete is being delivered to the pier caps, it will be delivered to a contained form.
   During cement delivery, the forms and hoses delivering the cement will be inspected for leaks.
   If any leaks occur, work with the line will cease, and the form or line will be repaired before work continues.
- All forms used in construction must be approved by a project engineer to ensure they are structurally sound. This step is a quality control/quality assurance step to minimize the risk of cement spilling into the water.
- During bridge demolition or construction any hard materials (e.g. pieces of the bridge during demolition) ≥ 12 inches in diameter that fall into the river will be removed from the river bottom and disposed of in an approved upland location. Smaller pieces < 12 inches in diameter will be left to be incorporated into the channel sediment.

## **Off-Site Project Components**

- Off-site project components include staging areas, stockpiling, source areas, and waste sites, and will be environmentally cleared. To be consistent with the overall effects determinations for this action, the off-site project components will meet all conditions referenced above in this document and will **not** be located:
  - Within snail habitat or within a minimum of a 150-foot distance from any stream, waterbody, or wetland for vehicle staging, cleaning, maintenance, refueling, and fuel storage. Sites outside of this distance do not need additional review as long as the site cannot discharge to any surface waters.

# Wetlands

- Wetlands delineated will be identified on construction plans. Furthermore, adjacent wetlands
  that were identified but are to be retained and protected from disturbance (i.e. project's
  action); will be fenced off with temporary orange construction fencing and appropriately signed
  to retain and protect.
- In-water work will occur during low flows.

## **Archaeological and Historic Resources**

During ground disturbing activities, archaeological monitoring of the western side of the Main Channel Bridge will be conducted.

The Alscott Farms, LLC shall implement the following stipulations as identified in Section 3.9.2 and the MOA and as agreed upon by the consulting parties to resolve adverse effects to historic properties.

- Cash Donation: The Applicant will make a one-time cash donation in the amount of three
  thousand dollars (\$3,000.00) to the Payette County Historical Museum, for the purpose of
  digitizing the Museum's collection of historic newspapers. This cash donation is due and
  payable not later than 60 days from the date of the USCG Bridge Permit for this project. A
  receipt of this transaction will be given to the Idaho SHPO to document fulfillment of this
  stipulation.
- Monitoring and Reporting. Ninety days after issuance of the USCG bridge permit and annually on that date until this agreement expires or is terminated, Alscott Farms, LLC will provide all parties to this agreement with a summary report detailing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered and any disputes or objections in Alscott Farms' efforts to carry out the terms of this agreement. Failure to provide such summary report may be considered noncompliance with the terms of the Memorandum of Agreement.
- Inadvertent Discovery: If historic or culturally significant resources are discovered within the APE during the work of replacing the bridges, work in the immediate vicinity of the cultural resources will cease until the Idaho SHPO is consulted.

#### **Construction Access**

Informational signage will be posted at nearby boat launches to alert recreational boaters of the
construction project dates, construction areas, and river passage options. Prior to construction,
ODFW has requested a notice to be provided to Philip Milburn or Scott Torland or Jon Gutcher
at the ODFW Ontario Office, (541) 889-6975, when construction begins.

# 5 COORDINATION

As part of the preparation of the EA, Table 7 lists agency personnel consulted during the environmental process.

Table 7. Agency Personnel Consulted

Name	Agency	Date
Carl Smith, Project	USCG	May 8, 2018
Manager/Environmental Reviewer		
John Greene, Environmental Policy	USCG	May 8, 2018
Analyst		
Danny Mc Reynolds	USCG	May 8, 2018
Christen Marve Griffith, Project	USACE	May 8, 2018
Manager		
Aaron Golart	Idaho Department of Water Resources	May 8, 2018
Gary Spackman	Idaho Department of Water Resources	May 8, 2018
Tom Byler, Director	Water Resources Department	May 8, 2018
Julie Archabal	Oregon SHPO	May 8, 2018
Matt Halitsky	Idaho SHPO	May 8, 2018
Aaron Scheff	Idaho DEQ	May 8, 2018
Linda Hayes-Gorman	Oregon DEQ	May 8, 2018
Amy Simpson	Oregon DEQ	May 8, 2018
Sara Christensen	Oregon DEQ	May 8, 2018
Bob Pietras	Idaho Department of Lands	May 8, 2018
Sarah Kelly	Oregon Department of Lands	May 8, 2018

Name	Agency	Date
Regional Manager	Idaho Fish and Game	May 8, 2018
Curt Melcher	Oregon Department of Fish and Wildlife	May 8, 2018
Roland Springer	Bureau of Reclamation	May 8, 2018
James Werntz	Environmental Protection Agency, Idaho	May 8, 2018
	Operations Office	
Director	Environmental Protection Agency, Oregon	May 8, 2018
	Operations Office	
Director	Federal Emergency Management Agency	May 8, 2018
	Federal Regional Center	
Dave Hopper	U.S. Fish and Wildlife Service	May 8, 2018
Manager	Malheur County	May 8, 2018
Manager	Payette County	May 8, 2018
Mayor Ross Blanchard	City of Nyssa	May 8, 2018
Manager	Southwest Health District	May 8, 2018
Manager	County of Malheur Health Department	May 8, 2018
Eric Hawley, Tribal Chairman	Burns Paiute Tribe	December 14, 2018
Gary Burke, Chairman	Confederated Tribes of the Umatilla Indian	December 14, 2018
	Reservation	
Don Gentry, Tribal Chairman	Klamath Tribes	December 14, 2018
Nathan Small, Chairman	Shoshone-Bannock Tribe	December 14, 2018
Ted Howard, Chairman	Shoshone Paiute Tribes	December 14, 2018
Matt Halitsky, State Historic	Idaho State Historic Preservation Office	December 14, 2018
Preservation Officer		
Carl Smith, Project	USCG	December 18, 2018
Manager/Environmental Reviewer		

# **6 REFERENCES**

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Pierce, K. L. and Morgan, L. A., 1992, The track of the Yellowstone hot spot: Volcanism, faulting, and uplift, *in* Link, P. K., Kuntz, M. A., and Platt, L. B., eds., Regional Geology of Eastern Idaho and Western Wyoming: Geological Society of America Memoir 179, p. 1-53.

Shervais, J.W, Kauffman, J.D., Gillerman, V.S., Othberg, K.L., Vetter, S.K., Hobson, V.R., Zarnetske, M., Cooke, M.F., Mathews, S.H., and Hanan, B.B., 2005, Basaltic Volcanism of the Central and Western Snake River Plain: A Guide to Field Relations Between Twin Falls and Mountain Home, Idaho, *in* Pederson, J., and Dehler, C.M., eds., Interior Western United States: Geological Society of America Field Guide 6, 26 p.

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