

RATTLESNAKE BRIDGE ENVIRONMENTAL ASSESSMENT

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Prepared by:

Bureau of Land Management

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CHAPTER 1- INTRODUCTION

Background

In 2013, Idaho Transportation Department (ITD) inspected the existing Rattlesnake Bridge and gave it a sufficiency rating of 21.2 out of a possible 100 points. Based on this rating, the bridge was deemed structurally deficient due to substandard load carrying capacity.

In 2014, the bridge was closed to vehicles that weighed over three tons.

In July 2015, the bridge was barricaded and closed to all vehicles, including emergency vehicles with the exception of all-terrain vehicles (ATVs), motorcycles, and snowmobiles. The bridge is open to pedestrians and bicycles.

Purpose and Need for Action

The purpose for the action is to provide access across the river to two private residences and the public land because the existing Rattlesnake Bridge is no longer functioning. Lemhi County (the County) has applied for a BLM right-of-way for a new bridge. The 1976 Federal Land Policy Management Act (FLPMA) direction requires federal land management agencies to respond to ROW requests and to grant ROW to qualified applicants.

Location

The new bridge would be approximately 450 feet upstream (south) of the existing bridge. The project location is on federal land managed by the SFO 16 miles south of Salmon, Idaho in Lemhi County (T.19 N, R.21E, Sec. 34, Lots 3 and 4) (Figure 1).

The eastern boundary of the project area is the highway. The western boundary is Deer Creek Road.

The southern boundary is the cadastral survey bench mark (elevation 4,316') on a large, solitary boulder. The boulder is between the highway and the river, downstream of Waddington Creek.

The northern boundary is the BLM-Private land boundary downstream of the existing bridge.

Rattlesnake Bridge Relocation Overview Map

Salmon Field Office

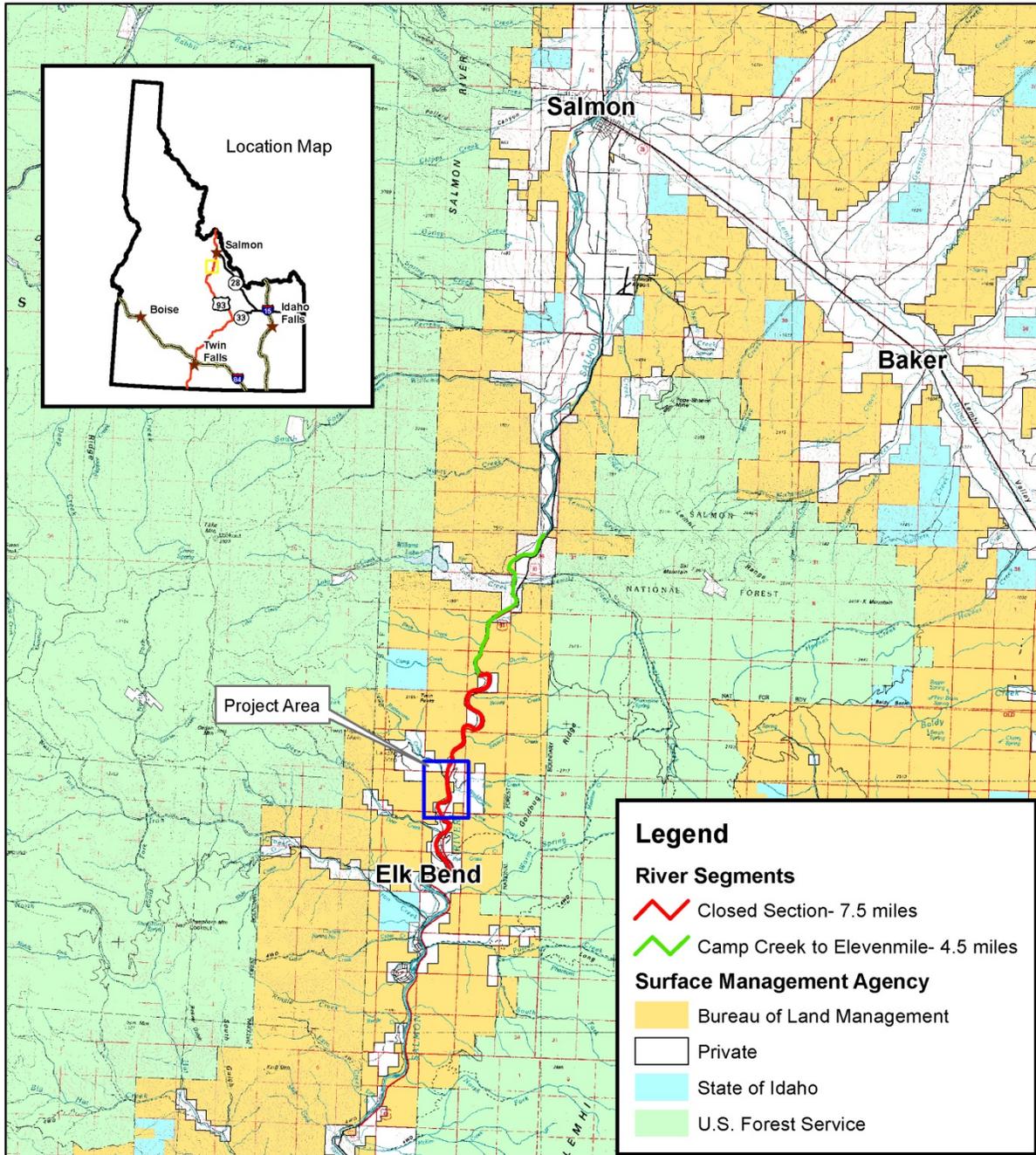


Figure 1: Location of the Rattlesnake Bridge replacement project

Conformance with the Applicable Land Use Plan

The Proposed Action and alternatives have been reviewed for conformance with the 1987 Lemhi Resource Management Plan (LRMP), as amended. The Proposed Action is in conformance with the LRMP objectives to:

- 1) consult with Idaho Department of Fish and Game (IDFG) and U.S. Fish and Wildlife Service (USFWS) prior to implementing projects that may affect habitat for threatened and endangered species (pg. 5)¹;
- 2) restrict some non-recreational uses in SMRAs (pg. 13);
- 3) implement restrictive visual management practices in SMRAs (pg. 13);
- 4) manage the Salmon River as a “recreational” wild and scenic river (pg. 14);
- 5) protect and preserve documented prehistoric and historic sites (pg. 16);
- 6) implement the weed control program on public land to minimize infestations of noxious weeds in cooperation with the County (pg. 5); and
- 7) consider any valid use, occupancy, or development including ROWs, leases, and permits subject to environmental review and possible limitations or stipulations to protect and preserve natural resources (pg. 27).

Relationship to Statutes, Regulations or Other Plans

- American Indian Religious Freedom Act of 1978
- Archaeological Resource Protection Act of 1979
- Bald and Golden Eagle Protection Act
- Bureau of Land Management 6840 Manual on Special Status Species Management 2008
- Clean Air Act of 1970 (amended 1990)
- Clean Water Act of 1972
- Code of Federal Regulations (CFR); Title 40; Part 1500 – Council on Environmental Quality 2009
- Coordinated Implementation Plan for Bird Conservation in Idaho
- Endangered Species Act (ESA) of 1973, Section 7, as amended
- Magnuson-Stevens Act Reauthorization 2014
- Federal Land Policy and Management Act of 1976, as amended
- Idaho Comprehensive Wildlife Conservation Strategy 2005
- Lemhi Resource Management Plan 1987, as amended
- Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH) 1995
- Migratory Bird Treaty Act of 1918 (MBTA)
- Coordinated Implementation Plan for Bird Conservation in Idaho
- BLM 6840 Manual on Special Status Species Management 2008
- BLM National Sage-Grouse Habitat Conservation Strategy 2010
- Idaho Sage-grouse Conservation Strategy 2006
- Greater Sage-grouse Interim Management Policies and Procedures (IM-2012-043)

¹ Coordination and development of conservation measures was initiated with IDFG, USFWS, and National Marine Fisheries Service (NMFS) prior to project implementation. Emergency consultation with USFWS and NMFS would be completed after project implementation.

- Challis Sage-grouse Local Working Group Plan 2007
- Code of Federal Regulations (CFR); Title 40; Part 1500 – Council on Environmental Quality 2009
- Lemhi County Cooperative Weed Management Area Strategic Plan, last updated in 2014

The 1868 Fort Bridger Treaty, between the United States and the Shoshone and Bannock tribes, reserves the Tribes right to hunt, fish, gather, and exercise other traditional uses and practices on unoccupied federal lands. In addition to these rights, the Shoshone-Bannock Tribes (the Tribes) have the right to graze tribal livestock and cut timber for tribal use on those lands of the original Fort Hall Reservation that were ceded to the federal government under the Agreement of February 5, 1898, ratified by the Act of June 6, 1900. Under this treaty and those agreements, the federal government has a unique trust relationship with the Tribes. BLM has a responsibility and obligation to consider and consult on potential effects to natural resources related to the Tribes treaty rights or cultural use.

Scoping, Issues, and Decision to be Made

SCOPING

The proposed bridge replacement was discussed at the bimonthly County Commissioners' meetings July 2014 through May 2015. In September 2014, the County contracted Northwest Engineering, Inc. to design the bridge project. The County's consultant made presentations at the Commissioners' meetings. These meetings were advertised and open to the public.

The SFO Fish Biologist and SFO Lands / Realty Specialist met with the County and Northwest Engineering staff on September 23, 2014 to discuss replacement of the Rattlesnake Bridge. Additional meetings, conference calls, and email communications were conducted with SFO, County, Northwest Engineering, and NMFS staff to develop project design criteria, best management practices (BMPs), conservation measures, monitoring criteria, and post-construction restoration actions.

On October 22, 2014 SFO staff presented the preliminary project to the Level I Consultation team. BLM, Salmon-Challis National Forest, NMFS, and USFWS Level I team members received a preliminary bridge design from the County on October 21, 2014. The design was not finalized because the geotechnical work had not been completed. NMFS provided a list of initial questions to the BLM by email for the Level I Team meeting. NMFS list of initial questions and the Level I Team meeting minutes are available in project file.

The SFO initiated emergency consultation for the Salmon River Rattlesnake Bridge Replacement Project with NMFS and USFWS on October 23, 2014. NMFS provided a memorandum that described the emergency consultation process, documented NMFS' recommended BMPs and monitoring and reporting requirements specific to this emergency action, and provided a record of the initial steps of emergency consultation with cc to: the Corps, Lemhi County Road and Bridge, USFWS, IDFG, IDWR, and IDEQ (K. Murphy, NMFS October 31, 2014) (see *Consultation and Coordination*). The list of initial questions and the Level I Team meeting minutes are available in the project file.

The County replaced Northwest Engineering with Deere & Ault Consultants, Inc. (Deere & Ault) on May 6, 2015. The SFO Fish Biologist, SFO Recreation Planner, and CFO Hydrologist,

met with NMFS staff, County Commissioners , and Deere & Ault staff at the project site on May 15, 2015. SFO and NMFS staff had a conference call with Army Corps of Engineers (Corps) to discuss issues and develop conservation measures following the field visit.

A complete list of BMPs, conservation measures, and design criteria were developed in a May 20, 2015 meeting and subsequent meetings by SFO, NMFS, and Corps staff. Specifics of the BMPs and conservation measures were further developed with Deere & Ault.

The contract for construction was awarded to Record Steel and Construction, Inc. (RSCI) as the general contractor and Inland Crane, Inc. as subcontractors on July 6, 2015. Since then, SFO, Deere & Ault, RSCI, and Inland Crane staff have been developing specifics of the project design and construction. This information was forward to NMFS, USFWS, and Corps personnel in emails, phone calls, and informal meetings. The Notice to Proceed was issued to RSCI on July 24, 2015.

The project was initially uploaded to the BLM E-Planning site as Categorical Exclusion on November 7, 2014. The BLM E-Planning site posting was changed to an Environmental Assessment on July 21, 2015 in response to significant changes in the engineering design and potential construction impacts.

All Section 106 compliance work (intensive Class III cultural resources inventory) was completed for proposed undertakings related to the new bridge placement and attendant surrounding impacts on BLM land just upstream of the old bridge. The Idaho State Historic Preservation Office (SHPO) has concurred in a finding of No Effect, and permission to proceed with these undertakings is recommended. Effects pertaining to the existing bridge were not addressed in this Section 106 investigation because no undertakings relative to the fate of the existing bridge were proposed.

SFO coordinated with the County Sheriff and Idaho Department of Fish and Game staff regarding the proposed project and the temporary river closure on July 17, 2015.

The County Sheriff sent an email to the nine outfitters that are currently permitted by the SFO to use these recreation sites for commercial boating and fishing opportunities notifying them of the proposed temporary river closure on August 11, 2015.

SCOPING COMMENTS

The Shoshone-Bannock Tribes did not have any issues with the site of the Proposed Action (email from C. Smith, TDOE-HeTO Cultural Resources Coordinator dated July 28, 2015).

The USFWS staff was notified of all meetings and all planning documents were forwarded to USFWS staff. No written comments were received from USFWS.

One of the outfitters permitted to use this section of the river for fishing and boating called James Townley, SFO Recreation Planner to request that the river be open to launch boats within 300-yards below the construction site. This outfitter also asked permission to use of the IDFG Waddington Creek site to take-out their boats just upstream of the new bridge site during construction.

IDFG asked if the County contractor could build a road from the new bridge south across the BLM to the IDFG Waddington Creek boat launch. The existing road to the site is steep, rough, and rocky.

IDFG also asked if boats could cross the river from bank-to-bank within the section temporarily closed during construction of the new bridge.

ISSUES

The public raised the issue of cost for the bridge replacement at the County Commissioners' meetings.

One of the outfitters permitted to use this section of the river for fishing and boating sent an email to the County Sheriff re: the proposed temporary river closure. The outfitter noted, "Steelhead fishing won't be the big problem; that section is not very good. The issue will be a few trout fishermen and scenic floaters".

The BLM interdisciplinary team in conjunction with NMFS and the Corps identified the following issues:

- Sediment and Turbidity Generated by Bank Excavation and Pile Drilling: Protection of the ESA listed sockeye salmon, Chinook salmon, steelhead, and bull trout, other resident fishes, river bank, migratory and overwintering habitat, and water quality
- Pile Drilling Noise and Vibration: Protection of ESA listed fishes and resident fishes
- Equipment River Crossings: Protection of the ESA listed sockeye salmon, Chinook salmon, steelhead, and bull trout, other resident fishes, migratory and overwintering habitat, river banks, and water quality
- Temporary Piers and Workbridge: Boater safety and protection of aquatic habitat
- Construction Traffic: Highway vehicle safety
- East Side Staging Area: Protection of cultural resources and the Salmon River bank
- Vegetation Protection: Retention of the Ponderosa pine on both banks of the river
- Post-Project Site Reclamation: Reclamation of the staging area and other disturbed sites, Salmon River bank reconstruction, noxious and invasive weeds management

DECISION TO BE MADE

The SFO Manager is the authorized officer responsible for the decisions regarding management of public lands within the proposed project area. Based on the results of the NEPA analysis, the authorized officer would issue a determination of the significance of the environmental effects and whether an environmental impact statement (EIS) would be required. If the authorized officer determines that it is not necessary to prepare an EIS, the EA would provide information for the authorized officer to make an informed decision whether to authorize: (1) a 30-year term renewable, assignable ROW on BLM lands to the County for the installation, use, and maintenance of the bridge infrastructure, as well as the temporary construction areas, (2) a one-time use of an existing, closed pit located on federal land on the west side of the river for up to 700 cubic yards (CY) for the Deer Creek Road base, and (3) the restoration of the construction sites associated with the ROW. Details of these project components are described below.

CHAPTER 2 –ALTERNATIVES

Alternative A (No Action)

This alternative provides a baseline for comparison of environmental effects and demonstrates the consequences of not meeting the need for the action. The No Action alternative would reject the County's ROW application for a new Rattlesnake Bridge site and the temporary construction, use of the BLM pit, and site restoration actions associated with installation of a new Rattlesnake Bridge.

The residents on the west side of the river would not be able to access their properties except by ATV, motorcycles, snowmobiles, bicycles, or on foot for the foreseeable future. Emergency vehicles and other services such as fuel delivery would not be able to access the private properties.

The public land would only be accessible by ATV, motorcycles, snowmobiles, bicycles, or on foot for the foreseeable future. The primary public land destination, the BLM Dugout Dick recreation site is on the west side of the river upstream of old Rattlesnake Bridge.

Alternative B - Proposed Action

SUMMARY OF THE PROPOSED ACTION

The Proposed Action would authorize the County for: (1) a 30-year term renewable, assignable ROW on BLM lands to the County for the installation, use, and maintenance of the bridge infrastructure, as well as the temporary construction areas, (2) a one-time use of an existing, closed pit located on federal land on the west side of the river for up to 700 cubic yards (CY) for the Deer Creek Road base, and (3) the restoration of the construction sites associated with the ROW. Details of these project components are described below.

BLM RIGHT-OF-WAY

The BLM would authorize a ROW (case file IDI-37837) to Lemhi County for the Rattlesnake Bridge approaches and abutments located above the Ordinary High Water (OHW) mark on the east and west sides of the Salmon River. The east side portion of the ROW would be 70-feet wide by 45-feet long. The west side portion would be 85-feet wide by 40-feet long and 400-feet long by 20-feet wide for the Deer Creek Road approach (BLM road #306). The total ROW encumbrance for the permanent infrastructure would be approximately 0.33 acre.

This ROW would include an authorization for the temporary construction disturbance area of about 3.6 acres, including: (1) an approximately 2.7 acre staging area between the highway and the river, (2) a 16-foot wide approach on either side of river north of the existing bridge for equipment crossing, and (3) a 400 by 20-foot wide section of Deer Creek Road on the west bank (Appendix A). The proposed action would include maintenance of the bridge structures as needed.

TEMPORARY CONSTRUCTION

In-water Work Window

In-water work would be completed during the Upper Salmon Basin Watershed Program Technical Team in-water work window for the main Salmon River - Horse Creek to the Pahsimeroi River Reach: July 15 through March 15 of the following year (USBWP Technical Team 2005).

Highway Safety

The general contractor, RSCI would be responsible for the Maintenance of Traffic Plan. The plan has been reviewed and accepted by ITD and conforms to the requirements of Lemhi County.

RSCI would supply highway signage and flaggers as needed during construction.

Staging Areas

The BLM would permit an approximately 2.7 acre construction staging area on the terrace between the highway and the east-side river terrace (Figure 2). This staging area was burned in the 3.4 acre Dugout Fire during the summer of 2014 (Figure 3). The southern end of the staging area would be delineated by a solitary boulder with highway survey bench mark (elevation 4,316') (Figure 3).

Prior to construction, the project area would be delineated with orange construction fence and signed in coordination with a SFO representative to identify the following: (1) the southern boundary of the staging area, (2) the equipment crossing site downstream of the existing bridge, (3) OHW line, (4) equipment entry and exit points, (5) designated vehicle parking and staging areas, (6) designated refueling areas, and (7) all other staging, storage, and stockpile areas.

The staging area would be kept to the minimum size necessary to allow for a maximum buffer between the staging areas and the slope break above the river. A silt fence would be trenched in and backfilled around the perimeter of the staging area to prevent sediment from entering the river.

Soil disturbance and compaction would be minimized during construction of temporary access points to the highway from the staging area. Clean, washed gravel would be placed over geotextile fabric at these sites to delineate the existing soil surface. All fill would be contained by the silt fence.

All surplus excavated material would be removed from the site and stockpiled in a designated upland site(s) away from any watercourses, rendering them unavailable to enter waterways as a result of storm runoff or a high water event.

All fill materials for temporary road construction / access to the staging would be removed to the level of the geotextile fabric and all access points to the staging area would be restored to grade with the stockpiled material when construction is completed. Orange construction fencing and other barriers would be installed between the highway and the construction staging area as necessary to protect the site rehabilitation / revegetation. Fencing would be removed when

revegetation objectives are met. The contractor would coordinate the fence removal with SFO staff.

All construction material and equipment would be off-loaded and stored in the designated staging area or on previously disturbed surfaces such as highway pull-outs and existing roadways where they would not deliver fuel, oil, and other contaminants to the river.

Cultural Resource Protection

Vehicles and equipment would not be allowed south of the east side staging area boundary for cultural resource protection. Orange construction fence would be posted north of the recorded site boundaries to provide a 165 foot buffer to the north of the recorded site boundaries.

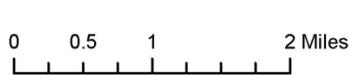
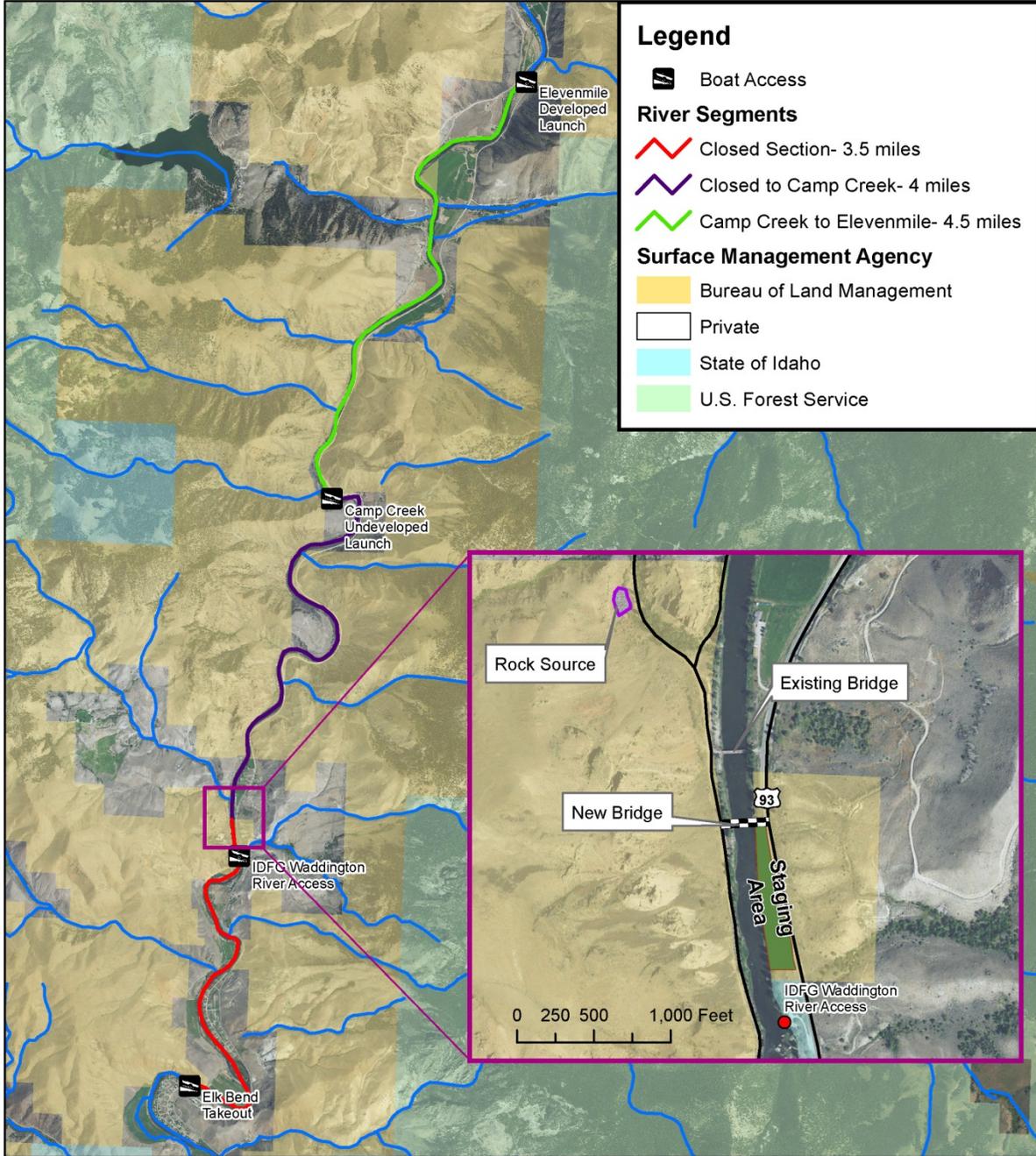
Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered on public or Federal land during construction shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery would be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

Dust Abatement and Water Drafting

Water would be used for dust abatement to maintain air quality and safe highway visibility. Any water used on site for drilling, dust abatement, etc. shall be procured from existing public or private water sources.

If water drafting from the river is required, the operator shall complete an application for “Temporary Approval Water Appropriation” through IDWR. Any water drafting equipment shall be appropriately screened to NMFS 2008 pump screening standards and criteria (Appendix B).

Drafting equipment would need to be cleaned and dried prior to arriving at the site and when leaving the site to prevent the spread of aquatic invasive species. The County weed cleaning station “hotsie” can be used for this purpose with prior notification to the County Weed Superintendent.



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July 2015



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



Figure 2: Staging area, BLM road base source, river closure, and river access sites



Figure 3: Staging area on the terrace between the highway (to the right) and the east bank of the Salmon River (looking north). The solitary boulder marks the southern end of the staging area. The old bridge is visible in the distance.

Equipment Stream Crossings

All equipment and vehicles shall be washed to prevent the spread of noxious and invasive weeds. The County Inspector would inspect all equipment and vehicles upon arrival at the construction site and prior to each river crossing. The contractor is required to schedule inspections with the County Inspector.

Machinery would be operated from the top of the stream bank on adjacent upland and developed areas at each site to the maximum extent practicable. Equipment would not be driven or operated in the Salmon River with the exception of river crossings to deliver materials and equipment to the west bank and construction of the work pads.

Access to the west bank would be allowed at the in-water crossings location designated and flagged by the BLM downstream (north) of the existing Rattlesnake Bridge. Six round-trip equipment crossings by a track-based excavator with a drill mount (one round-trip) and a track-based front end loader (five round-trips) would be permitted. These crossings would be monitored and reported as per NMFS requirements and the Corps permit. All other equipment and materials would be moved back and forth to and from the west bank over the old bridge by ATV or across the new bridge when it is completed.

The banks at the designated equipment crossing site are moderately sloped and were previously used by BLM equipment to cross the river for mine reclamation in 2007 (Figures 4 and 5). The west side is used by boaters as an undesignated launch site. Woody riparian vegetation at the proposed crossings includes coyote and booth willow, and chokecherry. If needed, the woody plants would be cut back and the soil surface would be covered with erosion control mats to protect both of the river banks and decrease the likelihood of sediment entering the river during the crossings. If the crossings result in bank damage or woody species do not naturally regenerate, the BLM would specify restoration requirements.

Bank grading is not expected to be necessary however, if grading is needed below the OHW mark of the Salmon River to facilitate the equipment crossing, it would be subject to approval by the IDWR and the Corps. Any excavated material would be stockpiled at a designated site away from any watercourses, rendering it unavailable to enter the stream channel as a result of storm runoff or a high water event. The stockpiled material would be used to reconstruct the bank to the original slope.



Figure 4: The east bank of the equipment crossing site, downstream of the existing bridge (looking west).



Figure 5: The west bank of the equipment crossing site, downstream of the existing bridge (looking north).

Work Platform

A temporary work platform approximately 30-feet wide would extend over the river 120 feet from the east bank. Deck height of the platform would be approximately 4 feet above OHW. The platform would be supported by up to ten temporary piers of 6 to 8-foot diameter corrugated metal pipe (CMP). The temporary CMP piers would be installed and removed within the in-water work window. The temporary piers would be installed in October to avoid peak periods of fish migration. The Corps 404 permit requires removal of the piers by December 31, 2015.

The piers would be filled with washed rock from a local source screened to 3-inch diameter minimum to remove the smaller fines. The piers would be constructed and partially filled on the bank, then lifted into place by crane or excavator. The bottom of the steel CMP would be fitted with a wire screen that would contain the fill material so that it can effectively be removed. The machine placing and removing the piers would not be in the river at any time.

The piers would be placed on the river bottom with minimal disturbance. The temporary fill below the OHW mark of the river must be the minimum footprint and shall not raise river levels upstream of the river by more than 0.5 foot above the OHW mark. The County proposes to alter the riverbed to set each pier. Boulders would be moved to provide a level, stable surface for the piers. Boulders would be selectively picked up with a clamshell excavator bucket and placed

back in the river. The County would restore the riverbed after pier removal. Temporarily relocated boulders could remain in the river adjacent each pier site.

When the piers are removed, the CMP rock fill would be disposed of in an approved location such as the County landfill or another acceptable containment site where it would not enter drainages as a result of storm runoff or a high water event.

Crane Pad

A 75-foot long by 30-foot wide (2,259 ft²) section of the east bank, above the OHW mark of the river would be excavated to provide a level staging area for a crane to reach the temporary work platform (Appendix C). The amount of material excavated for the crane pad would be approximately 750 to 850 cubic yards (CY).

A 40-foot long access ramp would be excavated between the staging area and the crane pad at a slope of approximately 1:4 with a 10-foot drop to the crane pad level. The amount of material excavated for this ramp would be approximately 150 CY. All work would be above the ordinary high water mark of the river.

The excavated material (~1,000 CY) would likely exceed the volume that could be stored on site in the staging area. The excess material would be hauled and stored at a clean and divided area at an approved site such as the County landfill or another acceptable containment site where it would not enter drainages as a result of storm runoff or a high water event.

Environmental and restoration requirements for long-term stabilization of the river bank include returning the bank to its natural contours with the excavated, stored material. This material would be used to rebuild the river bank with compacted 12-inch vertical lifts following construction.

Safety and River Closure

The principal public safety official in Lemhi County is the County Sheriff's Office. The general contractor shall coordinate with the County Sheriff's Office and with whomever the Sheriff's Office determine appropriate to ensure recreational boater safety. Boater Safety is critical during the construction. The County and its contractors are solely responsible for the safety of workers.

The County Sheriff would close a 3.5-mile long stretch of the river to boating when the temporary bridge is in place (Figure 2). Boats would be required to take-out of the river 3.5 miles upstream of the project site at the Elk Bend boat ramp. The Elk Bend Emergency Fire Department and IDFG cooperatively manage and maintain this ramp, primarily for search and rescue operations. The IDFG and the County Sheriff confirmed the ramp would be available September 22-November 30 when the temporary work platform is in place, and that closure of this river segment would not adversely impact steelhead fishermen or search and rescue operations (Sheriff L. Bowerman and W. Davis, IDFG pers. comm. July 17, 2015).

Boaters would be able to launch their crafts at any legally accessible site 100-yards or more downstream of the old Rattlesnake bridge. The BLM undeveloped Camp Creek boat launch 4 miles downstream of the closed section, and the BLM developed Elevenmile boat launch 4.5

miles downstream of Camp Creek would be available to the public (Figure 2). Both of these sites are managed by the SFO.

The IDFG Waddington Creek river access site would not be available. This site is within the closure area because of close proximity to the project site (Figure 2).

Lemhi County and the general contractor shall advertise and alert boaters to the construction in particular to the temporary fills below the OHW mark of the river. Upstream and downstream signage at boat ramps must be installed and maintained for the duration of the project. Nighttime lighting of the temporary fill must be installed and maintained to ensure visibility of the structures to boaters. At no time shall upstream or downstream navigation be blocked without prior notification of and coordination with the Sheriff's Office.

PERMANENT CONSTRUCTION

Highway Approach

The Idaho Transportation Department design for the permanent highway approach to the new bridge is in Appendix D.

Bridge Pilings

The Proposed Action includes placement of the 220 long x 16 feet wide bridge main span, two approach spans, and road work as shown on the bridge design drawings and construction specifications in Appendix C. These drawings were developed by Deere & Ault and issued by the County. They serve as the concept for the selected design-build contractor to complete the design and construct the project. The work required by the County's contractor, RSCI includes the standards and requirement that would be enforced by the County or the County's consulting engineer. As the final emergency bridge designs are completed, this information would be immediately given to the SFO and Corps staff to allow for coordination with NMFS and USFWS in developing any necessary additional BMPs and conservation measures.

Work at the site includes geotechnical exploration and utility location. One subsurface exploration was conducted in November of 2014 and consisted of a 23-foot deep boring on the east bank and a 15-foot deep pit on the west bank. In May 2015 five borings were made to depths between 20 and 30 feet below ground level. The investigation reports are available in the project file.

The permanent abutments and approach spans would consist of steel piles and painted steel framing. The casings would be installed using track mounted equipment. The reach of the drill rig would allow for a minimal temporary platform footprint. Fill material used for the temporary platforms would be placed over a geotextile type barrier according to the BMPs to allow removal with minimal disturbance to the existing bank material.

A permanent row of four pipe piles would be placed at each bank within the 100 year high water mark, but above of the OHW mark. A second row of two pipe piles would be 15-feet away, above the 100 year high water mark. The framing erected on these piles would be entirely above the 100 year high water as shown in the drawings (Appendix C). Except for the concrete filled pipe piles, no permanent structures would remain below the 100 year water line.

Directly behind this second row of pipe piles would be a retaining wall that consists of six H-piles. In between the H-piles, solid precast concrete lagging panels would be placed to hold back the earth fill. The retaining structures would be 50-feet long and would support the necessary road fill that joins the bridge abutments to the highway and Deer Creek Road.

The pipe piles would consist of circular casings installed by use of down-hole hammer method using an under reaming bit. The 40-foot long casings would be installed with approximately 8 to 10 feet extending above the surface. The 62-foot long steel wide flange piles would be centered and driven 20 feet beyond the casing depth. The casing annulus would be filled with structural concrete. Minimal welding over the bank would be required to complete the supporting structure.

Material including rock cuttings, soil and water ejected from the pipe piles during drilling would be deflected immediately above the piles and collected on the ground. The deflector is a special fitting that has been used successfully by Inland Crane for this exact operation in protected environments. A fabricated rubber basin with fully attached sides would be placed on the ground directly below the deflector to collect all water and debris as it is produced. An earthen berm would provide secondary containment around the basin to catch any loss of material. Material in the basin would be continually directed to a 12 x 8 x 4 foot deep detention pond by gravity or by pumping when gravity flow is not possible (Appendix C). A suitable membrane lined channel would contain material flowing into the detention pond. The detention pond would be monitored to prevent overflowing or release. The drilling operation would stop any time that the collection basin appears to be near capacity or if adjustment is necessary. If water, sediment, or drilling fluids cannot be contained during drilling operations, resulting in discharges to the Salmon River, operator shall cease operations until a suitable remedy can be determined. All of the solids from the drilling operation would be collected and placed in an approved site such as the County landfill, or could be buried in the basin during the reconstruction of the river bank as long as no drilling fluids or other contaminants are in the rock and water drilling waste.

In consultation with NMFS, BLM, and the Corps the County has proposed noise attenuation mitigation measures to reduce the acoustic impacts to fish. The permanent pile installation noise attenuation mitigation measures include: (1) The use of vibratory hammers for all sheet pile installation, temporary pile installation, and the start of permanent pile installation, (2) impact hammers would not be used within the wetted channel, (3) cessation of impact hammer pile driving activities would occur for at least 12 hours within each 24-hour period, and (4) to help attenuate sound pressure levels (SPLs), each pile would be fitted with a nylon cushion block prior to being struck with the impact hammer – reducing sound pressure levels by 4 to 5 decibels (dB) per strike. Further, while cofferdams are not proposed for this project, if conditions change and cofferdams are proposed and approved noise attenuation mitigation measures would include: (5) impact pile driving in the river would only occur within a cofferdam area and not in free-flowing water, and (6) within the cofferdam all water would be pumped out so pile driving would take place “in the dry”.

Bridge Structure

The main bridge span comprises steel girders and guard rails which are weathering steel and do not require coatings. The decking would be galvanized corrugated steel and would be welded to the girders in place over the river. The gravel for the bridge decking shall consist of material not

smaller than 3.5 US Standard mesh (5.6 mm diameter); less than 5.6 mm has been shown to adversely affect salmonid redds.

Each end of the bridge connects to a road running parallel to the river; the highway on the east side and Deer Creek Road on the west side. Retaining walls are required to connect these roads to the bridge abutments. The retaining walls have been designed to eliminate permanently altering the river bank below the 100 year high water. Each retaining structure would consist of a row of H-piles and pre-cast concrete lagging segments. The piles would require pre-drilling to meet acceptable tolerances. Placement methods would be either to fill pre-drilled holes with pea gravel and drive piles conventionally or to set the piles in pre-drilled holes and placed with concrete.

Deer Creek Road

About 400 feet of the Deer Creek Road (BLM Road #306) would be raised a maximum of three feet (tapered at either end to existing roadbed surface) and regraded to meet the new bridge elevation. Road work may require minimal over-excavation in order to reach suitable support material. Backfilling, compaction, finish grading, buried utility conduit, and guardrail would be surficial.

The road work would require about 500 cubic yards (CY) of road base and road surface material that meets the County road standards and would be from an acceptable source. The SFO would permit a one-time use of an existing pit located on federal land on the west side of the river for up to 700 CY for the road base for this project (Figure 2). The road surface material would come from a local, private source.

VEGETATION, SOIL, AND REHABILITATION MEASURES

The bridge would be placed in a stand of Ponderosa pine on the far side of the river (Figure 6). One Ponderosa pine on the east-side terrace that was killed in the 2014 Dugout Fire was cut down in the spring of 2015 before the late-April to mid-July migratory bird nesting season to allow the crane to operate during the bridge construction. The limbs were stockpiled at the south end of the staging area to use for site restoration following construction. The rest of the wood was given to the County for the firewood program. The smaller fork of a live Ponderosa pine was also cut down on the west bank to provide room for the bridge. All of this tree would be used for site restoration. No additional trees would be removed without BLM approval.



Figure 6: Opening between the Ponderosa pines where the new bridge would be located, looking east towards the highway. Deer Creek Road is in the foreground.

Heavy equipment would be selected and operated in a manner that minimizes adverse effects to the environment such as minimally-sized, low pressure tires, minimal hard turn paths for tracked vehicles, and temporary mats or plates within wet areas or sensitive soils.

Vegetation may be grubbed only from areas where permanent ground alteration would occur. Vegetation is to be cut at ground level and rootwads retained where temporary clearing occurs.

Earthwork including drilling, excavation, dredging, filling, and compacting would be completed as quickly as possible and site restoration would occur immediately following use. Restoration would be accomplished to restore ecosystem processes.

During excavation, native topsoil (if any) would be stockpiled above OHW where it cannot reenter the river, for later use during site rehabilitation.

All construction materials must come from outside of the construction site, and cannot be procured from BLM administered lands, unless approval is given by the BLM authorized officer. The exceptions to this requirement are mineral materials (riprap, fill, gravel) that were procured with a valid BLM permit and woody material identified by BLM for use in site restoration.

The County Weed Department would hydroseed the disturbed areas with a BLM approved seed mix to achieve establishment and erosion control objectives prior to or at the beginning of the first growing season following construction.

The County weed department would also treat noxious and invasive weeds within the project area for three consecutive years after project completion, or as needed.

Orange construction fencing and other barriers would be installed between the highway and the construction staging area as necessary to protect the rehabilitation / revegetation sites. Fencing would be removed when revegetation objectives are met. Contractor would coordinate the fence removal with the BLM.

Fertilizer would not be applied within 50 feet of any stream channel, waterbody, or wetland.

Construction would be done so as to keep streambank, soil, grass, shrub, and woody vegetation disturbance to a minimum.

Construction activities would be sequenced to minimize riparian and upland disturbance to the greatest extent possible.

ADDITIONAL BMPs AND CONSERVATION MEASURES

Erosion Control Measures

Temporary erosion controls, such as silt fences, certified weed-free straw matting/bales, or fiber wattles would be installed before any significant alteration of the project area, and would be appropriately installed down slope of project activity to provide a riparian buffer area until site rehabilitation is complete. *The Catalog of Stormwater BMP, Idaho Department of Environmental Quality, for Idaho Cities and Counties* (IDEQ 2005) would be cited for construction direction.

Short-term stabilization measures may include the use of certified weed-free straw, jute matting, and other similar techniques. Such barriers would be maintained throughout the related construction and removed only when construction is complete and erosion control is assured.

Sediment would be removed from erosion controls once the sediment has reached one-third of the exposed height of the control. If inspections show that the pollution controls are ineffective, crews would be immediately mobilized to repair, replace, or reinforce the controls as necessary. Such barriers would be maintained throughout the related construction and removed only when construction is complete and erosion control is assured. Once the site is stabilized, temporary erosion control measures must be removed.

Adequate materials for emergency erosion control would be maintained on site at all times, including an adequate supply of sediment control materials such as silt fence, straw wattles, and certified weed-free straw bales.

Earth disturbing activities would cease during heavy precipitation events greater than 1.6-inches in 24 hours (i.e. 5-year, 24-hour storm event) in order to minimize resource damage.

Ground-disturbing activities would not occur during wet conditions during or immediately following rain events. Additionally, project work would not occur until ground is sufficiently dry that wheeled equipment does not leave ruts with depth greater than 2-inches.

Sequence or schedule work to reduce exposed bare soil to wind erosion. Water may be used to control dust.

Water Quality Monitoring

The CWA requires States to set water quality standards sufficient to protect designated and existing beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Section 350 (Idaho Administrative Procedures Act (IDAPA) (58.01.02.350). In Idaho State Water Quality Standards for Aquatic Life (Section 250), the Act states "Turbidity, below any applicable mixing zone set by the Department, shall not exceed background turbidity by more than 50 nephelometric turbidity units (NTUs) instantaneously (at any point in time)" (IDAPA Idaho Code 58.01.02.250.01.e). An appropriate and regularly calibrated turbidity meter, measuring NTUs is required. A sample must be taken prior to anticipated turbidity pulses at a relatively undisturbed area approximately 100 feet upstream from in-water disturbance to establish background turbidity levels. A sample must then be taken every hour at a site approximately 600 feet downstream from the point of discharge, or most appropriate downstream site during in-water construction activities (i.e., installation and removal of work platforms, installation of the piers, and removal of the existing bridge) that generate sediment pulses and be compared against the background measurement. This turbidity monitoring requirement does not apply during equipment crossings.

If maximum turbidity levels in excess of State standards (50 NTUs over background) at the measurement point approximately 600 feet downstream of the discharge point are exceeded during construction, work would be stopped until turbidity levels dissipate, and if necessary additional mitigation measures would be implemented to prevent reoccurrence of exceeding these levels.

Pollution Control Measures

Project actions would follow all provisions of the Clean Water Act (CWA) and provisions for maintenance of water quality standards as described by Idaho Department of Environmental Quality (IDEQ), and would be in compliance with all applicable state and Federal laws and processes (*e.g.*, Section 402 and 404 CWA permits).

No uncured "green" concrete would be allowed to enter the river. The concrete would be poured through a tube directly into the pilings. The contractor would avoid mixing excess amounts of fresh concrete, grout, or cement mortar on-site. Storage of dry and wet materials associated with concrete would be located a minimum 150-foot upslope of any live water, water feature (including irrigation amenities or domestic water sources), or areas susceptible to stormwater or surface water movement.

Minimization of Equipment Fluid Leaks

All equipment would be inspected for leaks by the Contracting Officer's Representative before unloading at site.

Equipment would be inspected daily to minimize the possibility of machine lubricants entering the river.

Equipment and vehicles would be stored in the designated staging area or on previously disturbed surfaces such as highway pull-outs and existing roadways where they would not deliver fuel, oil, and other contaminants to the river.

Oil-absorbing floating booms, and other equipment such as petroleum diapers or “pig” mats, pads and absorbent "peanuts" appropriate for the size of the stream would be available on-site during all phases of construction. More pads and certified weed-free straw bales to anchor booms may be necessary. Booms would be placed in a location that facilitates an immediate response to potential petroleum leakage.

Spill Prevention, Containment, and Reporting

Construction spill prevention and control would be in accordance with *The Catalog of Stormwater BMP, Idaho Department of Environmental Quality, for Idaho Cities and Counties* (IDEQ 2005) BMP 8: *Spill prevention and control*.

Refueling tanks must be kept at least 50 feet from the river and would be limited to 75 gallons or less. All vehicle and heavy equipment refueling that takes place within 150 feet of the river would have appropriate spill containment structures and/or absorbent pads in place. If spills occur, contaminated soil would be removed and disposed of at an appropriate facility off-site.

All pumps and generators used within 150 feet of the river would have appropriate spill containment structures and/or absorbent pads in place during use. If spills occur, contaminated soil would be removed and disposed of at an appropriate facility off-site.

All vehicles carrying fuel would have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials would be specific to each project site, and can include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads and material, certified weed-free straw bales, containment structures and liners, and/or booms.

Adequate materials for the emergency control chemical spills would be maintained on site at all times, including an oil-absorbing floating boom and absorbent pads whenever surface water is present.

Federal and Idaho state regulations regarding spills would be followed: Any spills resulting in a detectable sheen on water shall be reported to the EPA National Response Center (1-800-424-8802). Any spills over 25 gallons would be reported to the IDEQ (1-800-632-800), and cleanup would be initiated within 24 hours of the spill.

Materials Disposal

A port-a-potty would be on site during all phases of construction.

Inert and organic material generated during the excavation and pile drilling operation would be placed in the County landfill or at another approved disposal site.

Any waste liquids generated at the staging areas would be temporarily stored under cover on an impervious surface such as tarpaulins until such time they can be properly transported to and treated at an approved facility.

The contractor shall never dispose of concrete, grout or cement mortar washout into live water, water feature, or area susceptible to storm water or surface water movement. Washout of concrete transit mixers would only occur in designated washout areas where water would flow into temporary pit in gravel area(s) or into stockpiles or aggregate base or sand. The contractor

may dig a pit large enough to hold all washout waste. All hardened concrete, grout, or cement mortar waste would be collected and transported to an approved licensed solid waste disposal/processing/recycling site by the contractor.

SITE SUPERVISION

The lead contractor would provide a site supervisor during all construction, restoration, and monitoring activities. The site supervisor would be responsible for compliance with the BMPs and conservation measures, and reporting any occurrences of non-compliance to the appropriate agency.

Deere & Ault would work with the County to provide oversight by personnel with authority to direct operations during critical activities. Critical activities include but are not limited to:

- signing and delineation of the project area, staging areas, etc. with orange construction fence prior to construction,
- construction of the crane pad and access to the pad,
- equipment river crossings,
- placement and removal of temporary piers and work bridge,
- reconstruction of the river bank at the crane pad site,
- restoration of the disturbed sites (with the exception of the County hydroseeding and weed treatment activities,
- and storm events that might result in sediment if operations continue.

The contractors would comply with all federal, state, and local laws and regulations, and would comply with all permits and safety provisions as documented for this project.

The contractors would communicate and coordinate with SFO staff throughout the project.

Alternatives Considered but Not Analyzed in Detail

LIME CREEK

The County proposed a site near the confluence of Lime Creek and the Salmon River for the new Rattlesnake Bridge. The east side of the river this site would be located on lands managed by the State of Idaho. On the west side of the river this site is within a private subdivision. An easement for the road access would be needed from the subdivision to tie into the private road. A new road would need to be built from the subdivision to provide vehicle access to the private properties on the west side of the existing Rattlesnake Bridge. Idaho Transportation Department would not approve this site because it is on a curve and the measured approach speeds are 65 mph, so this site would not meet safety requirements.

EXISTING RATTLESNAKE BRIDGE SITE

The existing Rattlesnake Bridge location was proposed as the site for the new bridge. This site was not considered in detail because the length of the span would be more costly than the Proposed Action location.

CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

General Setting

The proposed project area is located in the Salmon River corridor in the Upper Salmon River Subbasin, Twelvemile Creek-Salmon River 5th field watershed USGS hydrologic unit code 1706020303. The bridge spans the Salmon River which is part of the Snake River system, and eventually flows into the Columbia River.

The narrow floodplain is confined by the terrace and highway on the east side, and Deer Creek Road on the west side. There are scattered Ponderosa pine (*Pinus ponderosa*), black cottonwood (*Populus trichocarpa*), mountain mahogany (*Cercocarpus ledifolius*), and western juniper (*Juniperus scopulorum*) on the river banks and the terrace above the floodplain. The east-side terrace between the river and the highway was burned in the 3.4 acre Dugout Fire in the summer of 2014. Cheatgrass and knapweed are common in the burn area.

The bank of the east-side terrace at the proposed bridge site is steep; the west bank is lower. The river is a simplified, confined run without undercut banks, large woody debris, side channels, pools, or spawning habitat in the project area.

This section of the Salmon River is impacted by water diversions and irrigation return flows and is on Idaho's Category 5 303(d) list of water quality impaired streams for not supporting cold water aquatic life, "causes unknown" (IDEQ 2014). A Total Maximum Daily Load (TMDL) has not been developed for this section of the river.

The Salmon River is designated critical habitat for four species ESA listed fish species: threatened Columbia River bull trout (*Salvelinus confluentus*), threatened Snake River spring/summer Chinook salmon (*Oncorhynchus tshawytscha*), endangered Snake River sockeye salmon (*O. nerka*), and threatened Snake River Basin steelhead (*O. mykiss*), and is Magnuson-Stevens Act Essential Fish Habitat (EFH) for the spring/summer Chinook salmon. The river is a migratory corridor for all four listed species, and overwintering and rearing habitat for Chinook salmon, steelhead, and bull trout.

Resources Considered in the Analysis

The results of the site-specific assessments indicate that not all of the resources considered are present or would be directly or indirectly affected by any of the alternatives described in Chapter 2. Only those resources that are present and affected are discussed in the following narratives (Table 1).

Table 1. Resources Considered in the Impact Analysis

| Resource | Resource Status | Rationale |
|---|------------------------|--|
| Access | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Air Quality | Present, Not Affected | The implementation of the alternatives would not result in the production of vehicle or equipment emission or particulate matter above incidental levels as required by the Clean Air Act. |
| Areas of Critical Environmental Concern (ACECs) | Not Present | There are no ACECs located within or near the proposed project area. |
| Cultural Resources | Not Present | Cultural resources are documented in the general area but there are no cultural resources within the Area of Potential Affect. |
| Economic and Social Values | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Environmental Justice | Present, Not Affected | There are minority and low-income populations in the County however, the projects and actions described in the alternatives would not affect these populations as described under Executive Order 12898 of 2/11/1994. There would be no disproportionately high and adverse human health or environmental effects to the minority and low-income populations in the area resulting from the proposed activities. |
| Existing and Potential Land Uses | Present, Not Affected | The Proposed Action would not affect the current or future authorized uses occurring in the project area. Uses include ROWs, Land Use Permits, grazing allotment, etc. |
| Fisheries | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Floodplains | Present, Not Affected | The general contractor has applied for a “No Rise” certification with Lemhi County. The FEMA identified floodplains would not be impacted by any of the alternatives. |
| Forest Resources | Not Present | There are no forest resources in the proposed project area. |
| Invasive, Non-Native Species | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Mineral Resources | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Migratory Birds | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Native American Religious Concerns | Not Present | There are no known ceremonial sites or resources associated with ceremonial practices in the proposed project area. |

| Resource | Resource Status | Rationale |
|---|------------------------|--|
| Paleontological Resources | Not Present | There are no paleontological resources located in the proposed project area. |
| Prime and Unique Farmlands | Not Present | There are no prime or unique farmlands located within or near the proposed project area. |
| Soil Resources | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Threatened, Endangered, and Sensitive Plants | Not Present | There are no threatened, endangered, or sensitive plants or their habitat within the proposed project area. |
| Threatened, Endangered, and Sensitive Animals | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Threatened, Endangered, and Sensitive Fish | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Range Resources | Present, not affected | The proposed action would not affect surrounding rangeland resources, such as fences, water troughs, private grazing land or grazing allotments. |
| Recreational Use | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Tribal Treaty Rights and Interests | Present, Not Affected | Tribal Treaty Rights or Interests would not be impacted by any alternative. |
| Upland Vegetation | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Visual Resources | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Wastes, Hazardous and Solid | Not Present | There are no hazardous or solid wastes in the proposed project area. |
| Water Quality (Surface and Ground) | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Wetlands and Riparian Zones | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> . |
| Wild and Scenic Rivers | Not Present | There are no Congressionally designated Wild and Scenic rivers within or near the proposed project area. |

| Resource | Resource Status | Rationale |
|---------------------------------------|------------------------|--|
| Wild Horse and Burro HMAs | Not Present | There are no wild horse and burro HMAs in the Salmon Field Office. |
| Wilderness | Not Present | There are no Congressionally designated Wilderness areas or Wilderness Study Areas within or near the proposed project area. |
| Wildlife Resources | Present, Affected | Impacts are disclosed under <u>Environmental Consequences</u> |
| Lands with Wilderness Characteristics | Not Present | There are no lands with wilderness characteristics in or near the proposed project area. |

ACCESS

Affected Environment

The east side of the Salmon River in the project area is accessible via the highway.

The only vehicle access to the west side of the river in the project area is via the existing Rattlesnake Bridge which is currently closed to all traffic except ATV, motorcycles, snowmobiles, bicycles, and pedestrians. Prior to the vehicle restrictions, the County plowed the road to the Dugout Dick recreation site and to the private properties.

The BLM does not have road easements across the private land in the Rattlesnake Draw or Deer Creek drainages, so vehicle access to the public land would essentially be limited to the Dugout Dick recreation site, as it is now.

Currently, the closest vehicle access to the west side of the river is south of the community Elk Bend at Iron Creek, 5.1 miles south of the Rattlesnake Bridge. To the north, the closest vehicle access to the west side of the river is the Shoup Bridge, 13.5 miles north of the Rattlesnake Bridge. The roads on the west side of the river that are accessible from the Iron Creek Bridge and Shoup Bridge do not provide access to the project area.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

The No Action alternative would presumably result in a continuation of limited access to the west side of the river similar to conditions described in the Affected Environment. Vehicle access to the west side of the river would continue to be restricted to ATV, motorcycles, and snowmobiles. The inability of emergency vehicles such as fire engines and ambulances to access the west side of the river would be maintained. These restrictions would also continue to impact the two private property owners on the west side of the river by preventing them from driving other vehicles across the bridge and transporting goods across the river such as propane and heating oil. One of these properties includes the Twin Peaks commercial guest ranch.

Members of the public wishing to visit the BLM Dugout Dick recreation site on the west side of the river would continue to be impacted and access would continue to be limited to foot, bicycle, motorcycle, snowmobile, or ATV traffic over the existing bridge. Vehicle access to the public land would essentially be limited to the Dugout Dick recreation site, as it is now.

Access to the active mine claims on public land would continue to be restricted to ATVs, motorcycles, and snowmobiles unless permission to drive the private roads is obtained from the private landowners.

If the old bridge is not replaced, the County would not be able to plow the roads to the Dugout Dick recreation site or to the private roads. This would continue to impact winter access to the recreation site and to the homes of year-round residents.

Alternative B – Proposed Action

The Proposed Action would provide restored vehicle access to the west side of the private property owners and for the public wishing to visit public lands. Vehicle access to the public land would essentially be limited to the Dugout Dick recreation site, as it is now. The completed bridge would allow the County to plow the public roads which would provide year-round access to the Dugout Dick recreation site and the private roads.

A completed bridge would also restore access for emergency vehicles such as fire engines, search and rescue, and ambulances to the west side of the river, improving safety for the County residents and providing them with these emergency services.

Access to the active mine claims on public land would continue to be restricted to ATVs, motorcycles, and snowmobiles as it is now, unless permission to drive the private roads is obtained from the private landowners.

ECONOMIC AND SOCIAL VALUES

Affected Environment

The Twelvemile Creek-Salmon River Watershed is in Lemhi County, Idaho, a rural area with an estimated population of 7,936. Salmon has an estimated population of 3,100.

Historically, the County economy was based on mining activity which caused population and job numbers to fluctuate over time. The County's basic economic sectors are services and retail tied to tourism and ranch/farm activities, government, agriculture/ranching, mining, and construction.

Public land access is a strongly held social value in the County. Dispersed and developed recreation including boating, fishing, camping, hiking, hunting, and ATV use are popular public land activities.

The largest number of jobs in the County in 2011 included government, retail trade, construction, and farming. In recent years, service contracts and material sales related to aquatic and riparian restoration projects has become an increasingly important sector of the local economy.

Quality of life issues such as a slower pace of life, low crime rates, high levels of interpersonal trust, opportunities for community involvement, a sense of belonging and a high value placed on the quality of nearby surroundings motivate people to live in the County.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

If the No Action alternative is implemented, there would be no cost to the County taxpayers for replacement of the Rattlesnake Bridge. Access to public and private land on the west side of the river would continue to be restricted to ATVs, motorcycles, snowmobiles, bicycles, and foot traffic. The BLM does not have road easements across the private land in the Rattlesnake Draw or Deer Creek drainages, so vehicle access to the public land would essentially be limited to the Dugout Dick recreation site, as it is now.

Prior to the vehicle restrictions, the County plowed the road to the Dugout Dick recreation site and to the private properties. If the old bridge is not replaced, the County would not be able to plow the roads for the foreseeable future. The public may not be able to access the Dugout Dick site year-round. If the private property owners plow the County road for their own use, they would incur increased cost and labor.

Restricted vehicle access would continue to adversely impact the two private property owners in other ways, such as preventing the delivery of goods and services (e.g. propane and heating oil). The private landowners would not be allowed to drive their vehicles and trailers over the old bridge to the highway to shop, keep appointments, access trails on the east side of the river, take livestock to the veterinarian, etcetera. These restrictions would create hardships and additional expenses for the residents.

Emergency vehicles such as fire engines and ambulances would not be able to cross the old bridge. These restrictions would create safety concerns for the residents and the guests of the Twin Peaks guest ranch.

The restricted vehicle access may also adversely impact the Twin Peaks guest ranch business. At least one party decided not to book the ranch for an event in 2015 because vehicle use of the old bridge is restricted. It is likely the ranch would continue to lose bookings and revenue if these restrictions were maintained.

Alternative B – Proposed Action

The Proposed Action would cost the County approximately 2.7 million dollars for replacement of the Rattlesnake Bridge. This funding would be provided by tax revenue. The private landowners that would benefit from the new bridge are Lemhi County taxpayers, and it is likely restoration of vehicle access would maintain the value of their properties long-term.

The new bridge would restore all vehicle access to the west side of the river which would give the two private property owners vehicle access to their properties for themselves, their guests and clients, emergency vehicles, and delivery of goods and services. The County could resume plowing the public roads which would save the private property owners the added cost and labor of plowing to access their private roads.

Installation of the new bridge would benefit the Twin Peaks guest ranch business by providing vehicle access for clients of the ranch. The out-of-town clients of the Twin Peaks guest ranch (owned by Salmon River Properties) would be likely to buy fuel, food, and other items to benefit the local economy during their visits to Salmon area.

The BLM does not have road easements across the private land in the Rattlesnake Draw or Deer Creek drainages, so vehicle access to the public land would essentially be limited to the Dugout Dick recreation site, as it is now. There is no measurable economic benefit to the County from this use.

The general contractor and his employees are not from Lemhi County. They would stay in local motels, rent RV spaces, buy fuel and groceries, and eat in local restaurants during the project implementation. This would benefit these sectors of the local economy. The local economy would also benefit from the sale of aggregate for the bridge construction.

RECREATIONAL USE

Affected Environment

The project area lies within the Salmon River Special Recreation Management Area (SRMA). Recreation is recognized as a principal use of lands in the SRMA. The 1987 LRMP, as amended, directed that the Salmon River within the SRMA would be managed as a “recreational” wild and scenic river.

Recreation use within the SRMA is extensive. The SFO manages seven developed recreation sites in the SRMA where the primary purpose is to provide river access to recreational boaters and fishermen. Generally, there is a boat ramp every five to six miles along the Salmon River between Challis and North Fork, Idaho. Nine outfitters are currently permitted by the SFO to use these recreation sites for commercial boating and fishing opportunities. These outfitters are each permitted to operate 300 user-days a year on the Salmon River within the SRMA. Silver Cloud Expeditions, Idaho Adventures, Rawhide Outfitters, Kookaburra LLC, Richie Outfitters, and Wild Idaho Outfitters have BLM special recreation permits for the section of the Salmon River from the Kilpatrick boat launch to North Fork, which includes the project area.

The project area includes the BLM SFO Elevenmile and Camp Creek river access sites. Elevenmile has a developed boat ramp and public restroom. The Camp Creek site has an undeveloped launch site. The majority of the use at these sites occurs during the summer Chinook salmon fishing season, spring and fall steelhead fishing seasons, and during the summer when regional residents use these sites to launch boats for recreational boating.

The IDFG has two boat launches in the project area. The first is a developed boat ramp at Elk Bend that is cooperatively managed by IDFG and the volunteer Elk Bend fire department (Figure 2). This boat ramp is used primarily for Search and Rescue operations, but it is also open to the public.

The second IDFG river access site is at Waddington Creek, just south of the project staging area boundary (Figure 2). This launch site is accessed from the highway on a two-track road and does not have a developed boat ramp.

The SFO manages two trails on the west side of the river near the project area, the Lime Creek Trail and the Goldbug Hot Springs Trail. The Lime Creek Trail begins at the highway south of Waddington Creek and climbs relatively quickly onto lands managed by the Salmon-Challis National Forest (SCNF). This trail is popular with mountain bikers and equestrians, and also serves as access to the Lemhi Mountain Range during the fall hunting seasons.

The Goldbug Hot Springs Trail originates on private property near Elk Bend on Warm Springs Creek. The trail crosses onto SFO managed lands after the first ¼-mile. The last 0.35 miles and the hot springs are on lands managed by the SCNF. Goldbug Hot Springs has seen an explosion in popularity over the last decade and receives year around use.

Beyond the developed trails there are countless opportunities for cross country travel for visitors seeking a more primitive experience. This type of recreation becomes more prevalent during the fall hunting seasons.

Another frequently visited recreation site in the project area is the Dugout Dick recreation site. Richard Zimmerman, better known as “Dugout Dick” located his cabin and occupied the caves on public land along the west bank of the Salmon River just upstream from the Rattlesnake Bridge in 1948. Mr. Zimmerman occupied about eight acres of public land under an authorized Cooperative Agreement between him and the SFO signed on March 5, 1990. The agreement was valid for the life of Mr. Zimmerman and was void at the time of his death on April 21, 2010. Following Dugout Dick’s death, the SFO reclaimed hazardous portions of the previously occupied area and developed a recreation site that highlighted the life of Zimmerman and the unique history of the site. Vehicle access to the site was provided by the Rattlesnake Bridge until its closure.

The privately-owned Twin Peaks commercial guest ranch is also on the west side of the river. The only vehicle access to the guest ranch is provided by the Rattlesnake Bridge.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

Alternative A would presumably result in continued impacts to recreation opportunities within the project area. Visitors wishing to access the Dugout Dick recreation site, public lands, and Twin Peaks guest ranch on the west side of the river would not be able to drive vehicles across the existing bridge and would need to access the area on foot, by ATV or boat.

There would be no impact to the other recreation sites in the project area including the IDFG-Elk Bend Fire Department boat ramp, or the IDFG Waddington Creek river access site.

Alternative B – Proposed Action

The Proposed Action would result in impacts to recreation within the project area, which would be temporary and would cease upon completion of the project. During construction a temporary work platform would be constructed that would block the majority of the river to boat traffic and create a serious safety hazard to anyone trying to float through the project site. As a result, the Lemhi County Sheriff would close a 3.5-mile long stretch of the river to boating when the temporary bridge is in place (Figure 2). Boats would be required to take-out of the river 3.5 miles upstream of the project site at the Elk Bend boat ramp. Boaters would be able to launch their crafts at any legally accessible site 100-yards or more downstream of the old Rattlesnake bridge. The undeveloped BLM Camp Creek boat launch 4 miles downstream of the closed section, and the developed BLM Elevenmile boat launch 4.5 miles downstream of Camp Creek would be available to the public (Figure 2). Both of these sites are managed by the SFO.

The temporary platform is scheduled to be in place from September 22 to November 30. The County Sheriff would be responsible for the river closure and signage to protect public safety. Signs would be placed at area boat launches to warn boaters of the closure and a press release would also be sent to area newspapers and the radio station to inform members of the public of the closure. The timing of the temporary platform would avoid high seasons of use along this portion of the river. A small number of commercial outfitters, trout anglers, and recreational floaters may be impacted.

The outfitters holding a BLM Special Recreation Permit for this stretch of river would be contacted by the County Sheriff to ensure that they were aware of the closure. This is not a high use section of the river, and the closure dates coincide with a season of low use by anglers and boaters so the closure would have minimal impacts.

There would be no vehicle access to the Dugout Dick recreation site during reconstruction of the Deer Creek Road on the west side of the river. This impact would be short-term and would cease upon completion of the bridge project.

All temporary impacts to recreation would cease and access for full-sized vehicles would be restored to the public and private lands (including the Twin Peaks commercial guest ranch) on the west side of the river for the long-term when the Proposed Action is completed.

VISUAL RESOURCES

Affected Environment

The location of the Proposed Action is in the Salmon River SRMA. The 2001 LRMP amendment provided direction to manage visual resources in the SRMA to VRM Class II guidelines. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

This section of the Salmon River consists primarily of a narrow winding river canyon with hills on either side rising steeply away from the river. Most of level ground along the river has been developed for residential or agricultural purposes. There are numerous bridges either for the highway to cross the river or to provide access to private property and the public lands beyond.

Views along the highway consist of fleeting glimpses up and down the river, as visitors navigate the many turns in the road. The ridges around the project area offer more expansive views both up and down the river. However, these too are often blocked by the steep, rugged topography of the area. Views looking down to the river are often fairly short, with only a narrow segment visible between river bends.

Colors above the river consist of the greys, reds, and browns associated with an arid river canyon. The colors transition to more vibrant greens closer to the river as a result of the riparian vegetation, landscaping around private homes, and irrigated agricultural fields.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

There would be no impacts to visual resources in the project area under Alternative A.

Alternative B – Proposed Action

The Proposed Action would have little impact on the existing environment due to vegetative screening; the winding nature of the highway and the river; and the weathering steel used to construct the bridge. This material may result in short-term contrast, but after a season or two it is expected that the steel would have weathered to the point where it would blend with the natural colors in the project area.

The bridge would consist of a main span crossing the Salmon River with two approach spans. There are no overhead structures or suspension planned for the bridge which would increase its contrast with the existing environment. The most noticeable impacts to visual resources are expected to occur during the construction of the bridge and the restoration of the project area. All of these impacts would be short-term and no longer noticeable after construction and the site restoration are completed.

The primary visitors to the area who are expected to notice the bridge and its construction are those traveling the highway or using the Salmon River in the project area. An analysis of the area showed that the bridge would be visible for approximately 1,600 feet for visitors traveling northbound on the highway, and 1,000 feet for southbound travelers. This would provide travelers moving at 60 mph with a view of the bridge for 18 seconds northbound and 11 seconds southbound. These short time frames, combined with vegetative screening along the river would ensure that the bridge does not attract the attention of the casual observer traveling along the highway.

Boaters on the river would see new the bridge for approximately 1,600 feet both upstream and downstream. This would provide a boater floating downstream at 3 mph with a view of the bridge for 6 minutes. A boater traveling upstream in a jet boat would presumably be moving much faster than a drift boat or a raft; as a result the bridge would be visible for a much shorter period of time. The design features of the bridge combined with the numerous bridges and other structures adjacent to the river would ensure that the bridge would not attract the attention of a casual observer on the river.

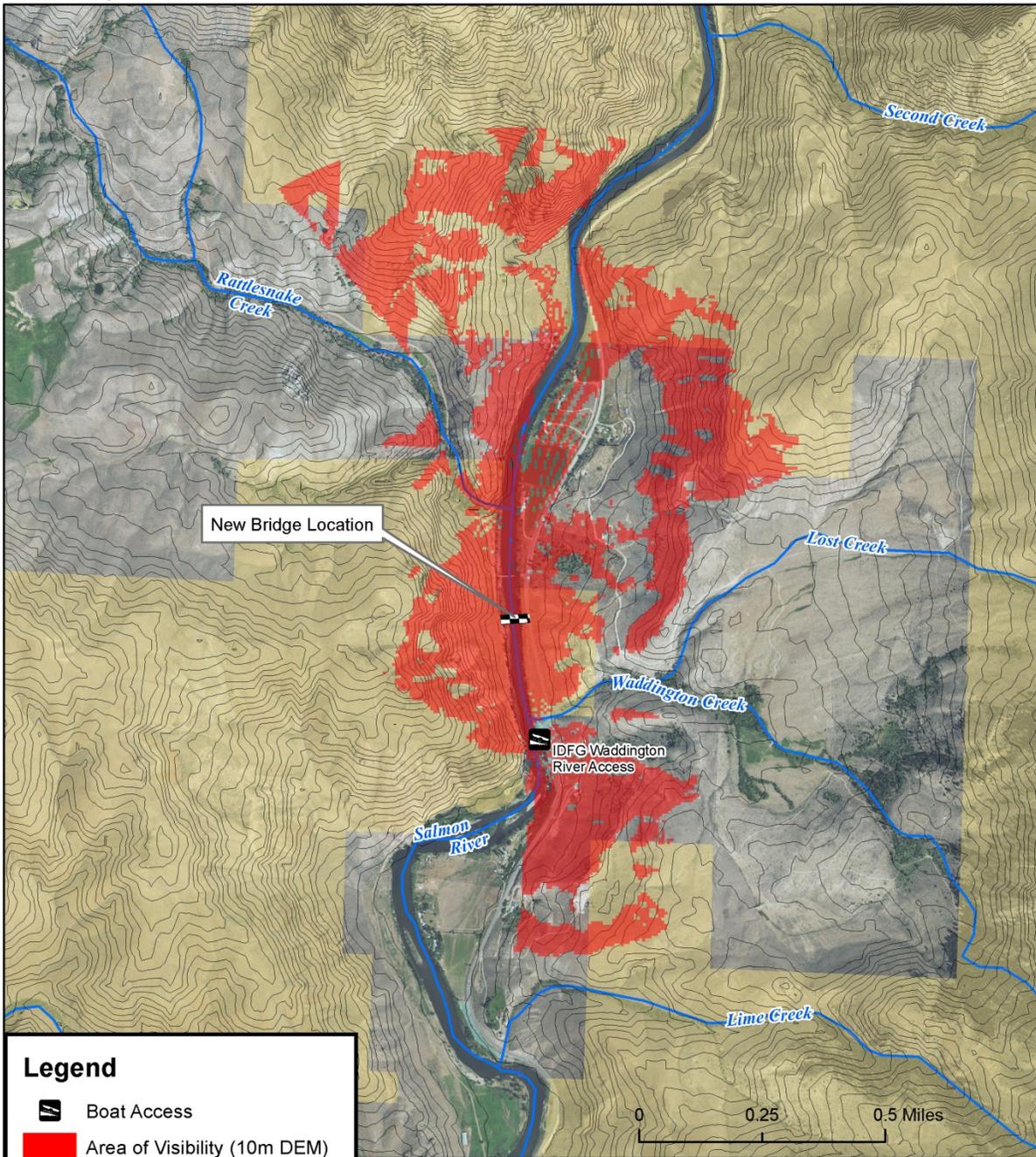
The new bridge may be visible to visitors hiking the ridges in the project area that rise steeply on either side of the river. These views would be fleeting due to the steep, rugged topography of the area. The possible viewpoints based on a 10-meter digital elevation model (DEM) are shown in Figure 7. These viewpoints are within a 1-mile radius of the proposed bridge. Factors such as trees, other vegetation, river bends, and topography that would provide screening were not modeled.

The bridge may also be visible to visitors hiking the Lime Creek Trail southeast of the proposed bridge site. The bridge would be mostly unnoticeable from the Lime Creek Trail due to vegetative and topographic screening (Figure 8). This photograph showing the opening in the Ponderosa pines where the new bridge would be located, looking east towards the highway and Deer Creek Road in the foreground cannot be made 508 compliant. For help with its data or

information, contact the BLM Salmon Field Office at 208-756-5100. No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of this data for individual use or aggregate use with other data cannot be guaranteed.

Visibility Extent

Salmon Field Office



Legend

- Boat Access
- Area of Visibility (10m DEM)
- 40' Contour
- Surface Management Agency**
- Bureau of Land Management
- Private

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July 2015



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



Figure 7: Possible viewpoints of the proposed bridge based on a 10-meter digital elevation model.



Figure 8: View of the project area and existing bridge from the Lime Creek Trail.

SOIL RESOURCES

Affected Environment

The project area is closely bounded by the highway on the east and Deer Creek Road on the west side of the river. The construction and the roadfill for both of these road prisms has impacted the native soil on the east side terrace and the river bank on the west side.

The vegetative cover and the organic soil on the east side terrace between the highway and the river was further impacted by a 3.4 acre roadside wildfire in the summer of 2014 (Figure 3). Cheatgrass and spotted knapweed has invaded the site post-fire.

The banks at the designated equipment crossing site are moderately sloped and were previously used by BLM equipment to cross the river for mine reclamation in 2007 (Figures 4 and 5). These crossings temporarily impacted the soil on the banks. Some woody riparian vegetation regeneration has occurred at these crossing sites.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

No additional impacts to soil resources would occur.

Alternative B –Proposed Action

The proposed staging area on the east side of the river is within the 2014 burn. The staging area would cause additional short-term adverse impacts to soils including compaction and the grubbing to remove the vegetative cover. The upland vegetation at the site would be compacted and possibly destroyed during excavation where the native topsoil (if any) would be stockpiled for later use during site rehabilitation.

It is likely some woody riparian vegetation would need to be cut down to soil level on the river banks for the equipment crossings. It is expected these plants would regenerate from the root stock to provide soil protection following construction.

The only impact to native soil on the east side of the river would be the permanent approach to the bridge. Most of this 3,400 foot² area is part of the shoulder of the existing Deer Creek Road prism. The fill to build up the Deer Creek Road would be added only to the existing road prism so there would be no additional soil impacts. The SFO would permit a one-time use of an unauthorized pit on the west side of the river for up to 700 CY for the road base for this project (Figure 2). The road surface material would come from a local, private source.

The general contractor has applied for an EPA Low Erosivity Waiver Certification. This certification provides notice to EPA that the project operator identified in is certifying that construction activity at the project site would take place during a period when the rainfall erosivity factor is less than five [40 CFR 122.26(b)(15)(i)(A)].

The low rainfall erosivity and the proposed design criteria, BMPs, and conservation measures including erosion control mats, topsoil stockpiling, reseeding, and weed treatment are expected to protect, conserve and restore the native soil and vegetation resources at these sites during and after construction. The staging area vegetation is expected to be in better condition and provide better soil cover following the reseeding and weed treatments than the baseline condition.

NATIVE UPLAND VEGETATION AND INVASIVE, NON-NATIVE SPECIES

Affected Environment

In the summer of 2014, the upland site on the east-side terrace of the Salmon River burned was burned in a 3.4 acre roadside wildfire. Although the site is in an early seral stage after having burned, a number of native species are present on the site. The native upland plant species at the proposed project site include: Ponderosa pine, mountain mahogany, western juniper, basin big sage (*Artemisia tridentata* ssp. *tridentata*), Wyoming big sage (*Artemisia tridentata* ssp. *wyomingensis*), rubber rabbitbrush (*Chrysothamnus nauseosus*), greasewood (*Sarcobatus vermiculatus*), western tanseymustard (*Descurainia pinnata*) creeping wildrye (*Leymus triticoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), slender wheatgrass (*Elymus trachycaulis*), sandberg bluegrass (*Poa sandbergii*), pricklypear cactus (*Opuntia polyacantha*), yellowbells (*Fritillaria pudica*), buttercup (*Ranunculus* sp.), and pussytoes (*Antennaria* sp.).

Cheatgrass (*Bromus tectorum*) and spotted knapweed (*Centaurea stoebe*) are common in the burn area and also occur on the west side of river.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

Under the No Action alternative, there would be no direct or indirect project related impacts to upland vegetation and invasive, non-native species. The native and non-native species present on the site would continue to persist and sprouting shrubs, such as rabbitbrush and greasewood would recover from the 2014 fire in the short-term. Non-sprouting shrubs, such as basin big sage would take longer to establish on the site, provided fire does not re-occur at the site and competition from weeds is not too great. Cheatgrass and spotted knapweed would continue to compete with native vegetation for resources on this roadside site.

Alternative B – Proposed Action

Under the Proposed Action, the upland vegetation at the site would be compacted and possibly destroyed during excavation where the native topsoil (if any) would be stockpiled for later use during site rehabilitation.

The County weed department would hydroseed the disturbed areas with a BLM approved seed mix and would treat noxious and invasive weeds within the project area for three consecutive years after project completion, or as needed. These actions would result in an improved native plant community and reduced invasive plant impacts to the area.

The stockpiled Ponderosa pine limbs on the southeastern end of the highway side staging area and the down Ponderosa pine west of the river, as well as any other large woody vegetation removed during the course of construction would be used for site restoration. The use of this material would provide more favorable microsites for native seed germination and seedling survival to a reproductive stage. Large woody debris would eventually biodegrade, providing nutrients and soil organic matter inputs that would benefit native plants on the site.

WETLANDS AND RIPARIAN ZONES

Affected Environment

The narrow floodplain and riparian zone in the project area are confined by the terrace and the highway on the east side, Deer Creek Road on the west side, the abutments of the existing Rattlesnake Bridge that are below OHW, and topography (Figure 9). There are no wetlands. The east-side terrace at the proposed bridge site is steep; the west bank is lower.

There are some scattered Ponderosa pine, black cottonwood, mountain mahogany, and western juniper on the river banks and the terrace above the floodplain. The west end of the bridge would sit between two Ponderosa pines (Figure 6).

The riparian species in the floodplain and lower banks are black cottonwood, coyote willow (*Salix exigua*), booth willow (*S. boothii*), Baltic rush (*Juncus balticus*), horsetail (*Equisetum arvense*), chokecherry (*Prunus virginiana*), serviceberry (*Amelanchier alnifolia*), and dogbane (*Apocynum* sp.). Good regeneration of the woody riparian species is occurring.

The banks at the designated equipment crossing site are moderately sloped and were used a site to cross the river with BLM equipment for mine reclamation in 2007 (Figure 5). The west side

is used by boaters as an undesignated launch site (Figure 6). Woody riparian vegetation at the proposed crossing sites includes coyote and booth willow, and chokecherry.



Figure 9: Salmon River project reach looking upstream from the existing bridge toward the new bridge site.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

The current condition of the floodplain or riparian zone would be maintained.

Alternative B – Proposed Action

There would be no change in the existing floodplain and riparian zone confinement because the proposed bridge would span the river and there would be no structures that would confine high flow below the 500-year floodplain.

The Proposed Action is likely to have short-term impacts on woody riparian vegetation at the equipment crossings. If woody plants need to be cut down to soil level to facilitate the 16-foot wide crossing sites, it is expected the plants would regenerate from the root stock following construction. The proposed design criteria, BMPs, and conservation measures including erosion

control mats, topsoil stockpiling, reseeded, and weed treatment would protect, conserve and restore the native soil and vegetation resources at these sites during and after construction. If the crossings result in bank damage or woody species would not naturally regenerate, the BLM would specify any requirements to restore the riparian zone long-term.

WATER QUALITY

Affected Environment

This section of the Salmon River is impacted by water diversions and irrigation return flows and is on Idaho's Category 5 303(d) list of water quality impaired streams for not supporting cold water aquatic life, "causes unknown" (IDEQ 2014). A Total Maximum Daily Load (TMDL) has not been developed for this section of the river.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

The current water quality would be maintained.

Alternative B – Proposed Action

The excavation for the crane pad, the drilling for the permanent pilings, and the equipment crossings have the highest potential for sediment delivery to the Salmon River. The CWA requires States to set water quality standards sufficient to protect designated and existing beneficial uses. The project actions would follow all provisions of the CWA and provisions for maintenance of water quality standards as described by IDEQ, and would be in compliance with all applicable state and Federal laws and processes (e.g., Section 402 and 404 CWA permits). Construction spill prevention and control would be in accordance with *The Catalog of Stormwater BMP, Idaho Department of Environmental Quality, for Idaho Cities and Counties* (IDEQ 2005) BMP 8: *Spill prevention and control*. In addition, the Pollution Control Measures, Minimization of Equipment Fluid Leaks, Materials Disposal, and Spill Prevention, Containment, and Reporting BMPs were developed for this Proposed Action to ensure water quality is maintained during and after construction.

The water quality monitoring required by NMFS would require the contractor to stop work if maximum turbidity levels in excess of State standards (50 NTUs over background) at the measurement point approximately 600 feet downstream of the discharge point are exceeded during construction until turbidity levels dissipate. Additional mitigation measures would be implemented to prevent reoccurrence of exceeding these levels if necessary.

The restoration / revegetation conservation measures that would be implemented post-construction would continue to protect water quality long-term.

FISHERIES, ESA-LISTED FISHES, AND DESIGNATED CRITICAL HABITAT

Affected Environment

The Salmon River is designated critical habitat for Snake River sockeye salmon, Snake River spring/summer Chinook salmon, Snake River Basin steelhead, and Columbia River bull trout, and is Snake River spring/summer Chinook salmon EFH.

Snake River Sockeye Salmon

The Snake River sockeye salmon was designated as Endangered in the Federal Register on November 20, 1991 (57 FR 58619), with some modifications on June 28, 2005 (70 FR 37160). NMFS designated critical habitat for the Snake River sockeye salmon on December 28, 1993, effective January 27, 1994 in the Federal Register (Volume 58, 68543). Designated critical habitat includes river reaches and riparian areas presently or historically accessible.

Sockeye salmon spawn in Redfish Lake in the upper Salmon River Subbasin near Stanley, Idaho more than 100 miles upstream from the action area. The Salmon River is used as a migratory corridor for adult sockeye salmon swimming to the lake from the Pacific Ocean, and for juveniles swimming from the lake to the ocean on spring high flows.

Snake River Spring/Summer Chinook Salmon

Snake River spring/summer Chinook salmon was listed as Threatened under ESA on April 22, 1992 (57 FR 14653), with some modifications on June 28, 2005 (70 FR 37160).

NMFS designated critical habitat for the Snake River spring/summer Chinook salmon on December 28, 1993, effective January 27, 1994 in the Federal Register (58 FR 68543); revised on October 25, 1999 (64 FR 57399). Chinook salmon designated critical habitat consists of all river reaches presently or historically accessible by Chinook salmon, including 300 feet from either side of the OHW mark.

The Magnuson-Stevens Act defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” NMFS updated the designated EFH in the Federal Register on January 17, 2002 (USDI FWS 2002). The MSA established procedures designed to identify, conserve, and enhance EFH for species regulated under various federal fisheries management plans that require federal agencies to consult with NMFS on all actions they propose, authorize, fund, or plan to undertake, that may adversely affect EFH (U.S. 1996). EFH designation and considerations for this action only applies to Chinook salmon, as they are the only fish species defined as “commercial” in the planning area.

Most spring/summer Chinook salmon enter the Salmon River from mid-April through August 21 (USBWP Technical Team 2005). The Salmon River is the migratory corridor for Sawtooth and Pahasimeroi hatchery Chinook salmon that spawn upstream of the project area. Pre-spawning adults hold in deep pools and under overhead structure such as large woody debris and bridges prior to spawning. Chinook spawning does not occur in the project area reach.

The project area is juvenile rearing habitat, overwintering habitat, and the out-migration corridor for the anadromous smolts during spring high flows. Juvenile Chinook salmon reside in rearing areas for approximately 1 year before migrating downstream the following spring. When water temperatures rise in the summer, juvenile Chinook salmon move from the river into accessible tributaries where the water temperatures are lower.

Snake River Basin Steelhead

Snake River Basin steelhead was listed as Threatened in the Federal Register on August 18, 1997 (Vol. 62, 43937) with an effective date of October 17, 1997. The listing was modified on January 5, 2006 (71 FR 834) to clarify the status of some hatchery stocks and to adopt the Distinct Population Segment designation for the species. This rule assessed the effectiveness of

the six artificial propagation programs that are a part of the Snake River Basin steelhead distinct population segments and determined that those programs, collectively, do not substantially reduce the extinction risk of Snake River Basin steelhead. The Snake River Basin steelhead Evolutionarily Significant Unit includes all naturally spawned anadromous populations below natural and man-made barriers in streams tributary to the Snake River in southeast Washington, northeast Oregon and Idaho, and also includes stocks from six artificial propagation programs located throughout the same region.

NMFS designated critical habitat for Snake River Basin steelhead on September 2, 2005 (70 FR 52630). Designated critical habitat includes the stream channel with a lateral extent as defined by the OHW mark or the bankfull elevation where an OHW mark has not been defined.

O. mykiss (redband/rainbow/steelhead) may express either resident or anadromous life histories. Both resident and anadromous forms occur in the planning area. Anadromous steelhead migrate inland, spend the winter in larger rivers, and spawn in early spring (USBWP Technical Team 2005). Juvenile *O. mykiss* may be present year-round.

The Salmon River is the migratory corridor for steelhead that spawn in the Salmon River and its tributaries. Pre-spawning adults hold in deep pools and under overhead structure such as large woody debris and bridges prior to spawning. Steelhead spawning is not known to occur in the project area. The project reach is juvenile rearing habitat, overwintering habitat, and the out-migration corridor for the anadromous smolts during spring high flows. When water temperatures rise in the summer, juvenile steelhead move from the river into accessible tributaries where the water temperatures are lower.

Columbia River Bull Trout

Columbia River bull trout were listed as Threatened in the Federal Register on June 10, 1998 (63 FR 31647) with an effective date of July 10, 1998. USFWS designated bull trout critical habitat in October 2010 (USDI FWS, 2010). The project reach is bull trout juvenile rearing habitat, overwintering habitat, and migration corridor. Bull trout in this section of the Salmon River move into nearby tributaries in the spring and spend the summer in colder waters close to fall spawning habitat (Schoby 2004). Spawning occurs in tributaries to the Salmon River from mid-August through mid-October (USBWP Technical Team 2005). Fry incubate over winter and emerge from the substrate by the first of May (USBWP Technical Team 2005). The migratory bull trout portion of the population has been severely diminished because of lost connectivity between the Salmon River and a number of its tributaries.

Other Resident Fishes

The Salmon River has reproducing populations of native westslope cutthroat trout (*O. clarki lewisi*), redband trout (*O. m. gairdneri*), mountain whitefish (*Prosopium williamsoni*), hatchery strain rainbow trout (*O. m. irideus*), and non-native brook trout (*Salvelinus fontinalis*) that support recreational fisheries.

The redband trout and westslope cutthroat trout are BLM, Forest Service Region 4, and Idaho State sensitive species.

Aquatic Habitat

The Salmon River is a migratory corridor for all four listed fish species and overwintering habitat for Chinook salmon, steelhead, and bull trout. The Salmon River is a simplified, confined run without undercut banks, large woody debris, side channels, pools, or spawning habitat in the project area. The dominant substrate is large cobble with some scattered, small boulders (Figure 9). There is no spawning habitat in the project area. During the summer months the water temperature is elevated due to irrigation withdrawals and diminished riparian canopy cover and fish seek cooler water in the accessible tributaries.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

This alternative would have no effect on the ESA listed fish species, or the resident fish species in the sport fisheries.

Alternative B – Proposed Action

The proposed in-water work is scheduled to occur from mid-September through late November 2015 during the Upper Salmon Basin Watershed Program Technical Team in-water work window for the main Salmon River - Horse Creek to the Pahsimeroi River Reach: July 15 through March 15 of the following year (USBWP Technical Team 2005). The recommended in-water work window is based on guidance prepared by the Upper Salmon Basin Watershed Project Technical Team (2005). The in-water work windows are based on the general timing of migration, spawning, incubation, and fry, juvenile, and adult presence to protect Chinook salmon, sockeye salmon, steelhead, and bull trout.

This section of the river is relatively low quality habitat because it lacks habitat complexity (e.g. pools, boulders, overhanging banks, large wood). The project area is used primarily as a migratory corridor and some limited juvenile rearing/adult holding/overwintering habitat. The proposed in-water work would occur during a period of low migration activity for Chinook salmon, sockeye salmon, and bull trout. Adult steelhead may be migrating through the project area during the construction. There is no spawning habitat in the project area, so the Proposed Action would have no effect on eggs, embryos, or larval fishes.

It is likely fish would be displaced upstream and downstream during work hours, particularly during the instream work and the impact hammer drilling for the permanent piers. The Proposed Action includes noise attenuation measures and cessation of impact hammer pile driving for at least 12 hours within each 24-hour period to reduce these impacts. The measures to reduce the drilling sound pressure levels by 4 to 5 dB per strike is expected to reduce the risk of physical injury to the extent practicable in the few, if any, fish remaining in the project area during the drilling however, some adverse impacts to listed fishes may occur. During the non-work hours, fish are expected to resume normal use and migratory patterns in the project area.

NMFS turbidity monitoring requirements, and the other BMPs and conservation measures that were developed for this Proposed Action would also ensure water quality and fish habitat are maintained during and after construction. If water, sediment, or drilling fluids cannot be contained during drilling operations, resulting in discharges to the Salmon River, the operator

shall cease operations until a suitable remedy can be determined. All of the solids from the drilling operation would be collected and placed in an approved site such as the County landfill, or could be buried in the basin during the reconstruction of the river bank as long as no drilling fluids or other contaminants are in the rock and water drilling waste.

The in-water work would be limited to leveling the riverbed to place up to ten 6 to 8-foot diameter rock-filled, temporary CMP piers and six equipment crossings. Boulders that need to be moved to level the CMP piers would be selectively picked up with a clamshell excavator bucket and placed back in the river. The County would restore the riverbed after pier removal. The temporarily relocated boulders could remain in the river adjacent each pier site. No boulders would be permanently removed from the river, so net loss of in-water habitat would occur. Fish passage would be provided under and around the temporary work bridge at all times. All in-water work, including the river crossings would be monitored by SFO and NMFS staff.

Cofferdams are not proposed for this project, however, if conditions change and cofferdams are proposed and approved the noise attenuation mitigation measures to protect fish would include: (1) impact pile driving in the river would only occur within a cofferdam area and not in free-flowing water, and (2) within the cofferdam all water would be pumped out so pile driving would take place “in the dry”.

As part of the Proposed Action, it was necessary to cut down a large Ponderosa on the east-side terrace to facilitate construction of a new bridge prior to the 2015 migratory bird nesting season. This tree was killed in the 2014 wildfire and would have eventually fallen into the river where it would have provided long-term valuable fish habitat that is lacking in this section of the river. It is unlikely the County would have allowed this tree to fall in the river regardless of the Proposed Action because of the potential for damage to downstream bridges and the road system. The Proposed Action does not authorize the removal of additional trees, and no additional trees would be removed without BLM approval.

The Proposed Action is expected to have the same short-term effects during construction on the other resident species as described for the ESA listed species, above.

WILDLIFE RESOURCES INCLUDING THREATENED, ENDANGERED, AND SENSITIVE ANIMALS AND MIGRATORY BIRDS

Affected Environment

The project area is used by wildlife as species move up and down the river corridor. This includes mostly avian species such as bald eagles, osprey, waterfowl and smaller song-birds. Most of the ponderosa pine in the area are smaller, and while they have potential to provide roosts and nest sites for these species, they have not been documented as such by the BLM.

Small mammals and birds are expected to use native sage-steppe vegetation at the site. The site does not support a large enough cottonwood gallery to support yellow-billed cuckoo use. The site is outside of mapped sage-grouse habitat and the nearest know population is near the town of Salmon, approximately 7 miles to the north. The site is also outside of habitat that would be used by Canada lynx as denning habitat or a movement corridor.

Environmental Consequences – Direct and Indirect Effects

Alternative A – No Action

There would be no effect to wildlife or their habitat from the No Action alternative.

Alternative B – Proposed Action

There would be little effect to wildlife and their habitat. During the construction phase wildlife species in the area would mostly likely be displaced to areas both upstream and downstream of the bridge location. This displacement would be short in distance and in a stretch of the river that provides additional habitat of the same type for miles in both directions. Once constructed, the bridge would provide a visible obstacle for avian species moving up and down the river; these species would have no trouble avoiding the bridge as they move through the area.

A small amount of habitat would be permanently removed from the landscape. This area would be small, approximately 3,400 feet², and similar habitat is present over many miles of the Salmon River both upstream and downstream of the new bridge. The effect to wildlife would be small and concentrated to the project area which is surrounded by similar habitat that would remain usable by those species.

CHAPTER 4 – CUMULATIVE EFFECTS OF ALTERNATIVES

Cumulative Impacts

This section discloses the incremental impacts that the alternatives are anticipated to have when considered in the context of impacts associated with past, present, and reasonably foreseeable future actions that have occurred, or are likely to occur, in the area. The Cumulative Impact Assessment Area (CIAA) consists of approximately 565 acres, with about <1% of those acres managed by the Idaho Fish and Game, 48% managed by the BLM, 45% private land, and 6% managed as historic water (Table 2).

Past, present, and reasonably foreseeable actions that have impacted the CIAA to varying degrees include: livestock grazing, invasive species and invasive species management, wildland fire, mining and gravel pits, developed recreation, roads and road maintenance, bridges and irrigation practices (Table 3). Although these actions probably do not account for all of the actions that have or are likely to occur in the CIAA, GIS analysis, agency records, and professional judgment suggest that they have contributed to the vast majority of cumulative impacts that have occurred in the CIAA.

Table 2. Surface Management Status within the CIAA.

| Ownership | Acres |
|---------------------------|--------------|
| Bureau of Land Management | 274 |
| Private Property | 257 |
| Idaho Fish and Game Lands | 2 |
| Other - Historic Water | 32 |

Cumulative Impacts Assessment Area (CIAA)

Salmon Field Office

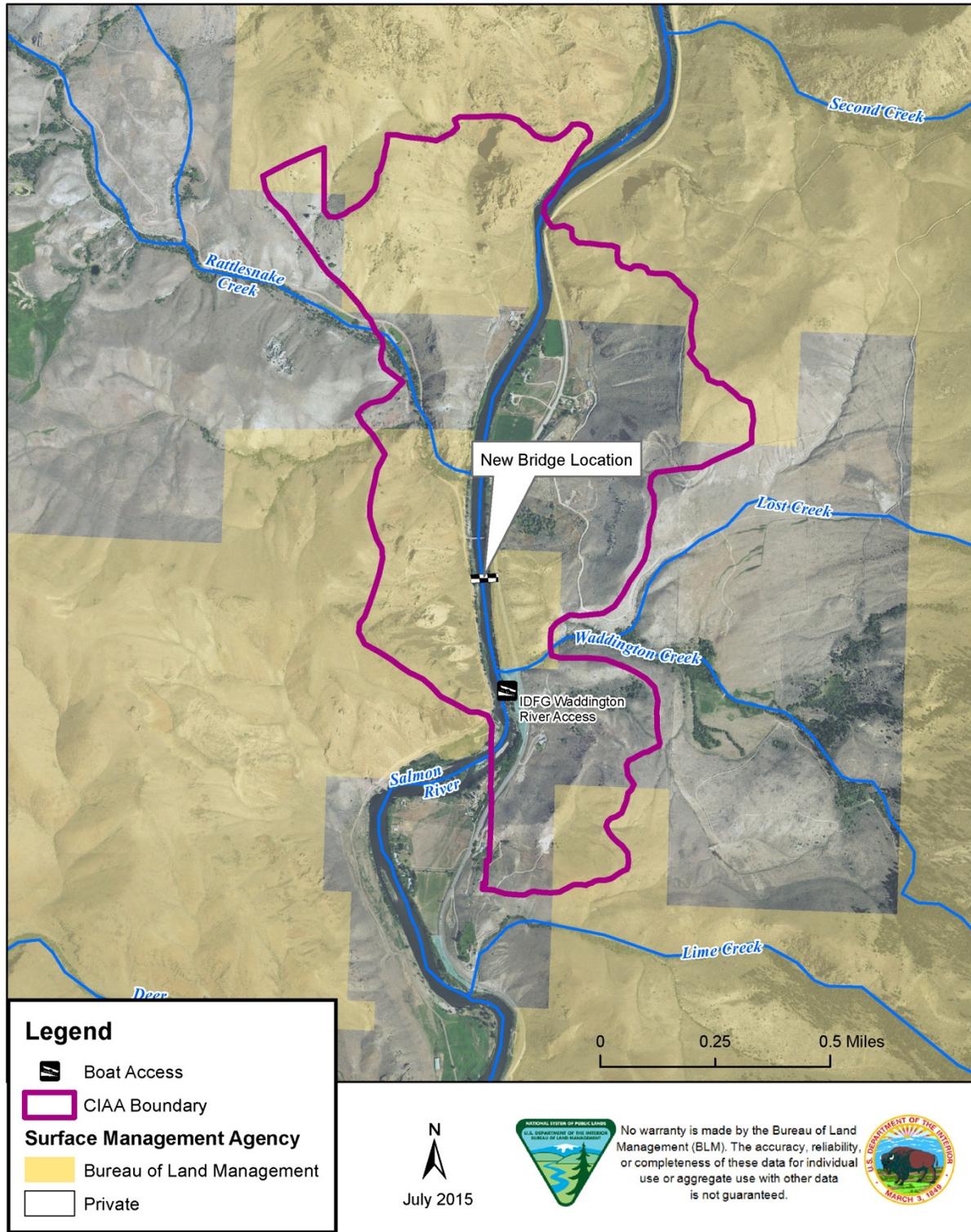


Figure 10: The Cumulative Impacts Assessment Area

Table 3. Past, Present, and Reasonably Foreseeable Actions within the Rattlesnake Bridge Project CIAA.

| Actions | Type of Activity | Past and Present Actions | Reasonably Foreseeable |
|--|--|---|---|
| Livestock Grazing | Vegetation removal, soil disturbance | Grazing by domestic livestock and wildlife has occurred and continues to occur on both private land and BLM-managed lands within the CIAA. Riparian zones and wetlands have been adversely impacted and significantly decreased by livestock grazing and agricultural practices. Proper livestock grazing management results in healthy and functional native plant communities; repetitive, long-term, improper grazing can result in degraded plant community health and function. | Grazing by livestock and wildlife will continue in the CIAA |
| Invasive Species and Invasive Species Management | Displacement of native plant species. Management of invasive species according to the Strategic plan; this may include mapping, herbicide application, mechanical and biocontrol methods. | Invasive species such as cheatgrass and spotted knapweed are found on private, federal (BLM and USFS) and state lands in the CIAA. Ongoing agreements with the County resulted in the Lemhi County Cooperative Weed Management Area Strategic Plan, last updated in 2014. Strategic Plan goals include: (1) prevent the introduction, establishment and spread of new invasive plants, (2) reduce the extent and density of established invasive plant infestations, (3) protect desired plant communities from weed invasion, (3) implement economical, practical and effective weed control methods for target species, and (4) rehabilitate priority areas after treatment to reduce the susceptibility of re-invasion and attain desired plant communities. | Invasive species will persist and expand within the CIAA. Management according the Strategic Plan will continue in the CIAA. |

| Actions | Type of Activity | Past and Present Actions | Reasonably Foreseeable |
|----------------------------|--|--|--|
| Wildfire | <p>Soil impacts</p> <p>Loss of upland and riparian vegetation</p> <p>Invasive species increase</p> | <p>In the summer of 2014, the Dugout Fire burned 3.4 acre on the east side river terrace that killed Ponderosa pine.</p> <p>In the spring of 2015, one of the private landowner's weed burning activities caused the Rattlesnake wildfire that burned ¾ acre in the willow riparian zone on the west side of the river.</p> | <p>The CIAA is not an area where wildfires are typically started by lightning.</p> <p>Human-caused fires are more likely to occur in the CIAA. The location, magnitude, and frequency of the human-caused wildfire are unpredictable.</p> |
| Mining and Gravel Pits | <p>Soil disturbance</p> <p>Water quality</p> <p>Spread of noxious and invasive weeds</p> <p>Visual impacts</p> | <p>The Twin Peaks Mine produced lead, copper, and silver from the 1920s-1960s. BLM reclaimed the heavy metal tailings and abandoned structures in the mine to protect water quality and public safety in 2007.</p> <p>There are two historic BLM gravel pits on the west side of the river in the CIAA.</p> | <p>The active mining claims in the CIAA are expected to be maintained and these claims may be developed in the foreseeable future.</p> <p>There are no plans to permit BLM gravel sources in the foreseeable future.</p> |
| Developed Recreation | <p>Day-use vehicle traffic</p> <p>Boating access</p> | <p>The IDFG Waddington Creek river access is within the CIAA. The Dugout Dick recreation site was developed in 2013. This interpretive site is a public destination on the west side of the river that accessible via the Rattlesnake bridge. The site may also be used as river access for boaters. This site increases use of the bridge year-round.</p> | <p>The IDFG Waddington river access and the Dugout Dick recreation site will continue to be open to the public year-round.</p> <p>No other public land developed recreation opportunities have been identified. Access is for more development is limited.</p> |
| Roads and Road Maintenance | <p>Sediment delivery and chemical contaminants</p> <p>Channel and flow modifications</p> <p>Decrease in-river large wood supply in the road prisms</p> | <p>Construction and maintenance of U.S. Highway 93 on the east side of the river and the Deer Creek Road on the west side of the river have confined the river floodplain and riparian zone, reduced the in-river large wood supply, and</p> | <p>The current road and highway system in the CIAA will retained and maintained for the foreseeable future.</p> <p>The County will continue to remove large wood from the river or in close proximity to the river to protect bridges</p> |

| Actions | Type of Activity | Past and Present Actions | Reasonably Foreseeable |
|----------------------|---|--|---|
| | | contributed sediment to the river. | and roads. |
| Bridges | Channel and flow modifications | The only Salmon River bridge in the CIAA is the old Rattlesnake Bridge was built the 1950s. The concrete abutments are below OHW which causes a rise in surface water elevation and streambed scour during periods of high flow. | It is likely the old bridge abutments that are within OHW of the river will be removed in the foreseeable future for the new bridge “no rise” certification. |
| Irrigation Practices | Increased water temperature and other water quality impacts Decreased peakflows and baseflows Fish passage barriers | Irrigation practices have adversely impacted the hydrologic regime, water quality, channel maintenance, fish habitat, and fish passage in the CIAA. Recent changes in irrigation practices have improved some of these conditions in the CIAA. | The irrigation practices in the CIAA are expected to continue and to have similar impacts to existing conditions with some additional improvements in the foreseeable future. |

Cumulative Impacts Associated with Past, Present and Reasonably Foreseeable Future Actions

Each of the past, present, and reasonably foreseeable future actions contribute a specific incremental environmental effect that can be described or accounted for with the same indicators as used in the alternative analysis presented earlier in the document. The accumulated effect of past, present, and reasonably foreseeable future actions on a given resource provides a baseline from which to evaluate the contribution of the alternatives to the collective impact on that resource. The purpose of this section of the document is to provide that baseline. The effects of the various alternatives on the baseline are presented in a subsequent section and Table 4.

ACCESS

Cumulative impacts to Access from development will continue to occur in the CIAA. Future development can restrict access to areas that have historically been available to the public.

ECONOMIC AND SOCIAL VALUES

Cumulative impacts to the economy in the CIAA include land development and the cyclical fluctuations in extractive industries such as mining which cause population and job numbers to fluctuate over time. Some changes in social values may occur with increases and decreases in

population growth. These cumulative impacts are expected to continue and have similar impacts to existing conditions in the foreseeable future.

RECREATIONAL AND VISUAL RESOURCES

Cumulative impacts to Recreational Uses from development and increased visitation will continue to occur in the CIAA. The Dugout Dick recreation site will continue to be open to the public year-round. No other public land developed recreation opportunities have been identified and access is limited.

An increase in the frequency and amount of visitation to the Salmon River during the spring and fall fishing seasons is expected in the reasonably foreseeable future, with the present level of access remaining the same, this could lead to user-created conflicts. This can result in congestion at parking areas at developed recreation sites and highway pull-offs along the river. Future development within the CIAA can result in restricted access to public lands and limit recreation opportunities in the CIAA.

Cumulative impacts to Visual Resources from development of lands in the Salmon River corridor within the CIAA will continue. The majority of public lands suitable for development are already developed, although future private land development such as ranch subdivisions and associated roads may occur within the CIAA.

SOIL RESOURCES

Cumulative impacts to soil resources from development of lands, roads, wildfire, mining, and gravel removal will continue in the CIAA. These impacts are expected to continue and have similar impacts to existing conditions in the foreseeable future.

NATIVE UPLAND VEGETATION AND INVASIVE, NON-NATIVE SPECIES

Cumulative impacts to native plant communities from development, wildfire, grazing, OHV use, and other disturbance will continue to occur in the CIAA. These activities can result in damage to or destruction of native plant communities. Proper livestock grazing management results in healthy and functional native plant communities; repetitive, long-term, improper grazing can result in degraded plant community health and function. Invasive and non-native species continue to be the greatest threat to native upland plant community health and ecosystem function; these species will persist and possibly expand within the CIAA. Management according the Strategic Plan will continue in the CIAA.

WETLANDS AND RIPARIAN ZONES

Cumulative impacts to wetlands and riparian zones from construction and maintenance of U.S. Highway 93 on the east side of the river and the Deer Creek Road on the west side of the river include: confined floodplains and riparian zones, reduced the in-river large wood supply, and increased sediment delivery to the river.

Riparian zones and wetlands have been adversely impacted and significantly reduced by wildfire, livestock grazing, and agricultural practices. Grazing by domestic livestock occurred and continues to occur on both private land and BLM-managed lands within the CIAA. These

impacts are expected to continue and have similar impacts to existing conditions in the foreseeable future.

WATER QUALITY

This section of the Salmon River is cumulatively impacted by water diversions and irrigation return flows and is on Idaho’s Category 5 303(d) list of water quality impaired streams for not supporting cold water aquatic life, “causes unknown” (IDEQ 2014). It is expected a TMDL will be developed for this section of the river. Recent changes in irrigation practices have made some cumulative improvements in the CIAA. The irrigation practices in the CIAA are expected to continue and to have similar impacts to existing conditions with some additional improvements in the foreseeable future.

The Twin Peaks Mine produced lead, copper, and silver from the 1920s-1960s in the CIAA. BLM reclaimed the heavy metal tailings and abandoned structures in the mine to protect water quality and public safety in 2007. The active mining claims are expected to be maintained and may be developed in the foreseeable future. If the mining claims are developed, current environmental protections and requirements would prevent additional impacts to water quality.

FISHERIES, ESA-LISTED FISHES, AND DESIGNATED CRITICAL HABITAT

Cumulative impacts to fisheries, ESA-listed fishes, and designated critical habitat from irrigation practices, U.S. Highway 93, the Deer Creek Road , other roads, loss of riparian vegetation and floodplain function, loss of in-water large wood recruitment potential within the road prisms, “stream cleaning” to remove in-river large wood, turbidity, and sedimentation will continue to occur in the CIAA. These developments and maintenance activities have adversely affected aquatic habitat. This development and these practices in the CIAA are expected to continue and to have similar impacts to existing conditions with some additional development in the foreseeable future.

WILDLIFE RESOURCES INCLUDING THREATENED, ENDANGERED, AND SENSITIVE ANIMALS AND MIGRATORY BIRDS

Cumulative impacts to wildlife and their habitat from development, wildfire, grazing, OHV use, and other disturbance will continue to occur in the CIAA. These activities can result in damage to or destruction of habitat and displacement of wildlife species from localized habitat. Development and invasive and non-native species continue to be the greatest threats to wildlife species in the area.

Table 4. Contribution of the Alternatives to the Cumulative Impacts

| Resource | Alternative 1 - No Action | Alternative 2 – Proposed Action |
|-------------------------|--|---|
| Access | Alternative 1 would result in a slight negative impact to Access within the CIAA, as access for full sized vehicles to the west side of the river would continue to be restricted. | The Proposed Action would result in a slight positive impact to Access within the CIAA by restoring access for full sized vehicles to the west side of the river in the project area. |
| Economic/ Social Values | Overall Alternative 1 would contribute very little to the collective impact | The Proposed Action would incur a significant cost for Lemhi County |

| Resource | Alternative 1 - No Action | Alternative 2 – Proposed Action |
|---|--|--|
| | associated with past, present, and reasonably foreseeable future economic and social values in the County. | taxpayers. The new bridge would benefit the landowners and their property values on the west side of the river. There would be some economic benefit for some businesses during and after the construction. Overall the Proposed Action would contribute very little to the collective impact associated with past, present, and reasonably foreseeable future economic and social values in the County. |
| Recreational Resources /VRM | Alternative 1 would have no additive impacts to Recreation or VRM. | The Proposed Action would result in a slight negative impact to Visual Resources within the CIAA as a result of constructing another structure within the Salmon River SRMA. Overall the Proposed Action would contribute very little to the collective impact associated with past, present, and reasonably foreseeable future actions. In the event that the existing Rattlesnake Bridge is removed in the future this slightly negative impact would cease and Visual Resources within the CIAA would be essentially unchanged. |
| Soil Resources | Alternative 1 would have no additive impact to Soil Resources. | The Proposed Action would have soil impacts during construction of the new bridge. These short-term impacts would be minimized by the proposed BMPs, conservation measures, and restoration. Overall the Proposed Action would contribute very little to the collective impact associated with past, present, and reasonably foreseeable future actions. |
| Native Upland Vegetation and Invasive, Non-native Species | Alternative 1 would have no additive impact to native upland vegetation and invasive, non-native species. | The Proposed Action would result in a slight beneficial additive impact for native plant communities in the CIAA through the restoration of a currently degraded site, and the reduction of invasive, non-native plant species on that site, which is situated along a major transportation corridor. Overall, the Proposed Action would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. |
| Wetlands and Riparian Zones | Alternative 1 would maintain the narrow floodplain and riparian zone in the project area that are confined by the highway on the east side, Deer Creek Road on the west side, the abutments of the existing Rattlesnake Bridge that are below OHW, | The short-term construction impacts associated with the Proposed Action would adversely affect small areas of the project riparian zone until the site restoration is completed and the vegetation is re-established. Overall, the Proposed Action |

| Resource | Alternative 1 - No Action | Alternative 2 – Proposed Action |
|--|---|--|
| | and topography. | would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. |
| Water Quality | The Rattlesnake Bridge is in a 12.6 segment of the Salmon River that is on IDEQ’s Category 5 303(d) list of water quality impaired streams for not supporting cold water aquatic life, “causes unknown” (IDEQ 2014). Alternative 1 would have no additive impacts to this impairment. | The new bridge would be channel spanning with no structures below the 100-year flood stage and does not require a 404 CWA permits. The Corps issued a CWA 404 permit for the temporary pier and work platform. Some sediment delivery and turbidity would be generated during construction of the new bridge. These short-term impacts would be minimized by the proposed BMPs, conservation measures, and restoration. Overall, the Proposed Action would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions that have resulted in the impairment. |
| Fisheries, ESA-Listed Fishes, and Designated Critical habitat | Alternative 1 would have no additive impacts to fish habitat. | <p>The new bridge will be channel spanning with no structures below the 100-year flood stage to increase surface water elevation and streambed scour during periods of high flow.</p> <p>A large, fire-killed Ponderosa pine was removed to facilitate construction of the new bridge, and to prevent potential damage to other bridges and the road system. Overall, the Proposed Action would contribute to the collective impact associated with past, present and reasonably foreseeable future actions that have resulted in loss of in-water large wood that provides high quality fish habitat.</p> |
| Wildlife Resources including Threatened, Endangered, and Sensitive Animals and Migratory Birds | Alternative 1 would have no additive impacts to wildlife species or their habitat. | Overall, the Proposed Action would contribute very little to the collective impact associated with past, present and reasonably foreseeable future actions. Wildlife displacement during the construction phase would be short in distance. The additional loss of 3,400 feet ² of habitat would add very little impact to wildlife in the CIAA. |

CHAPTER 5 - CONSULTATION AND COORDINATION

Persons and Agencies Consulted

BLM, Salmon-Challis National Forest, NMFS, and USFWS Salmon-Challis Level I Consultation Team members received a preliminary Rattlesnake Bridge design from the County on October 21, 2014. At that time the proposed date for start of construction was mid-November 2014.

On October 22, 2014 SFO staff presented the preliminary project proposal to the Level I Team. The design was not finalized because the geotechnical work had not been completed. NMFS provided a list of initial questions to the BLM by email for the Level I Team meeting. NMFS list of initial questions and the Level I Team meeting minutes are available in project file.

The SFO initiated emergency consultation for the Salmon River Rattlesnake Bridge Replacement Project with NMFS and USFWS on October 23, 2014. NMFS provided a memorandum that described the emergency consultation process, documented NMFS' recommended BMPs and monitoring and reporting requirements specific to this emergency action, and provided a record of the initial steps of emergency consultation with cc to: the Corps, Lemhi County Road and Bridge, USFWS, IDFG, IDWR, and IDEQ (K. Murphy, NMFS October 31, 2014). The memorandum stated, "Human safety and protection of property are top priority, and NMFS does not advocate any action that may put people or property at risk....Chapter 8 of the Section 7 Consultation Handbook (50 CFR § 402.5) describes the emergency consultation process. Even in an emergency, the Action Agency (i.e., the federal agency responding to an emergency situation) has a duty to meet their section 7(a)(2) and 7(d) obligations under the ESA. You should be aware that emergency consultation, in this case for emergency bridge repair, should include the following steps:

1. *Initial Contact:* Initial contact by the Action Agency often by phone or fax, followed by written documentation of the initial contact, the Action Agency requests emergency consultation. Typically, initial contact occurs after the Action Agency has responded to the emergency in some form. During the initial response, the Action Agency describes the emergency incident and response (proposed and taken actions) and NMFS will provide recommendations to minimize effects to listed species and their habitats. In situations where an adverse effect to ESA-listed species or designated critical habitat may occur, NMFS will also determine whether the incident may result in jeopardy or adverse modification. NMFS recommendations will not compromise safety or the mission.
2. *Maintain Close Contact:* Maintain contact with NMFS throughout the emergency action. Additional resource concerns may develop as the action progresses.
3. *Completing Consultation:* Once the emergency is controlled or the action is completed, the Action Agency must continue the consultation process. A Biological Assessment, including a justification for emergency consultation, description of the emergency action, and resultant effects to ESA-listed species and their habitats, may be required. Note that the "federal action" is the actual agency actions (i.e., BLM ROW permit and/or Section 404 permitting) whereas the description of the existing streambed, streambank, and riparian vegetation are related to the environmental baseline."

USFWS staff has been notified of all additional meetings and all emails documenting project information have been forward to the USFWS. No comments have been received from USFWS. Since October 2014, the SFO participated in multiple meetings, conference calls, written messages, and site visits to discuss project issues, objectives, alternatives, design criteria, BMPs, conservation measures, monitoring criteria, and post-construction restoration actions. The meetings and site visits were attended by NMFS, County Road and Bridge, the County's contract engineers, and County commissioners. The SFO geologist met with County Road and Bridge staff in October to locate potential rock sources.

The County's proposed plan required an oversized crane to place the assembled bridge in one piece from the east side to the west side. Scheduling and logistics involving the crane postponed the project start date. In March 2015, the County requested a variance for equipment to cross the river between March 15 and April 15, outside of the USBWP Technical Team recommended in-water work window of April 15 to March 15 to avoid high water. NMFS granted the variance (email dated March 4, 2015).

As of May 2015, the County's contractor had not provided a final design for the BLM ROW application or applied for a joint 404 permit. On May 6, the County replaced Northwest Engineering with Deere & Ault. The County, through its agent Deere & Ault approached the SFO in May 2015 with a request to use federal lands to construct the replacement bridge. Given the overarching public need for a replacement bridge, a short review and evaluation period was initiated. The SFO utilized the emergency procedures under the ESA to confer with NMFS and USFWS. SFO also coordinated this action with the Walla Walla District, Army Corps of Engineers (Corps) and other state and federal agencies.

SFO, NMFS, County Commissioners, and Deere & Ault staff had an initial on-site meeting on May 15, 2015. SFO and NMFS staff had a conference call re: the Proposed Action with the Corps following the site visit. SFO, NMFS, and Corps staff have coordinated development of project specific BMPs and Conservation Measure recommendations since May 2015.

The SFO contacted the County Sheriff and IDFG to discuss responsibility and options for closure of the river during the in-water work (Sheriff L. Bowerman and W. Davis, IDFG pers. comm. July 17, 2015). Concurrence was reached on the closure, County responsibility, and the boat take-out and launch sites. The Sheriff contacted the SFO outfitters who are permitted for the section of the Salmon River from Kilpatrick boat launch to North Fork, Idaho and may be the most affected by the river closure on August 11, 2015.

Permit Requirements and Contractual Agreements

An application for permit was submitted to the Corps on June 2, 2015. In coordination with the SFO and the County, the Corps concluded that the Proposed Action, if delayed substantially, would result in an unacceptable economic hardship to the County, if the corrective action (new bridge) was not accomplished within a time period, less than the normal time needed to process the permit. The Corps solicited agency comments by letter dated July 7, 2015 on the use of Regional General Permit – Emergency for certain temporary activities associated with emergency conditions (R. Brochu, Project Manager, Regulatory Division letter dated 7/9/2015).

Deere & Ault submitted a revised joint application for a permit from the Corps, IDWR, and Idaho Department of Lands (IDL) on July 17, 2015. An IDWR Stream Channel Alteration Permit was issued on August 28, 2015 to Lemhi County for the work in the Salmon River to construct the temporary work bridge and to alter the bed and bank of the river.

An IDL easement for the new bridge over the State owned bed of the Salmon River was approved on February 27, 2015.

Idaho Department of Transportation (ITD) was notified, in a letter dated August 5, 2015, of the proposed ROW that would encumber a portion of ITD's highway ROW, identified as ID-BL-051182. The encumbrance would be 75-feet wide, along the current pavement edge of U.S. Highway 93, and 45-feet long, for the east side approach and bridge abutment. There would also be a temporary construction area within the ITD ROW. We have not received any objection from ITD to the Proposed Action.

The Corps verified by letter dated August 28, 2015 that the County's proposed temporary discharge of dredged and fill material below the OHW mark of the Salmon River was authorized by Regional General Permit - Emergency.

Stormwater discharges from construction activities such as clearing, grading, excavating, and stockpiling that disturb one or more acres, or smaller sites that are part of a larger common plan of development or sale, are regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. Prior to discharging stormwater, construction operators must obtain coverage under an NPDES permit, which is administered by either the state (if it has been authorized to operate the [NPDES stormwater program](#)) or the Environmental Protection Agency (EPA), depending on where the construction site is located.

Where EPA is the permitting authority, construction stormwater discharges are almost all permitted under the Construction General Permit (CGP). The CGP requires compliance with effluent limits and other permit requirements, such as the development of a Stormwater Pollution Prevent Plan ([SWPPP](#)). Construction operators intending to seek coverage under EPA's CGP must submit a Notice of Intent (NOI) certifying that they have met the permit's eligibility conditions and that they will comply with the permit's effluent limits and other requirements.

The general contractor has applied for an EPA Low Erosivity Waiver Certification. This certification provides notice to EPA that the project operator identified in is certifying that construction activity at the project site will take place during a period when the rainfall erosivity factor is less than five [40 CFR 122.26(b)(15)(i)(A)]. By submitting a complete and accurate form, the otherwise applicable NPDES permitting requirements for stormwater discharges associated with construction activity are waived. The waiver will be granted for the period beginning on the date the Low Erosivity Waiver Form is mailed to EPA (i.e., postmark date), or the project start date specified in the application, whichever shall occur last, and ending on the project completion date.

List of Preparers

| | |
|--|--|
| | |
| Right-of Ways | J. Cain, Lands and Realty Specialist |
| Vegetation | K. Povirk, SFO Rangeland Specialist |
| Geology/Minerals/Soils | A. Hedrick, SFO-CFO Zone Geologist |
| Cultural Resources/Native American Religious Concerns/Indian Trust Resources/Tribal Treaty Rights/Paleo. Resources | S. Wright, SFO Archaeologist |
| Access/Recreation/Visual Resources | J. Townley, SFO Recreation Planner |
| Invasive, Non-native Species | K. Povirk, SFO Rangeland Specialist |
| Fisheries/TES Fisheries/Wetlands-Riparian Zones/Floodplains/Water Quality | L. Littlejohn, SFO Fish Biologist |
| Wildlife/TES Animals/Migratory Birds | V. Guyer, SFO Assistant Field Manager |
| Economic and Social Values | L. Littlejohn, SFO Fish Biologist, NEPA Lead |

| | | | |
|---------------------|----------|-----------------|----------|
| /s/ Lucy Littlejohn | 9/9/2015 | /s/ Kyra Povirk | 9/9/2015 |
| Preparer | Date | NEPA Reviewer | Date |

CHAPTER 7 – REFERENCES

- Idaho Department of Environmental Quality (IDEQ). 2014. Idaho's 2012 Integrated Report. Boise, ID: Idaho Department of Environmental Quality.
- Schoby, G. P. (2006). Home range analysis of bull trout (*Salvelinus confluentus*) and westslope cutthroat trout (*Oncorhynchus clarki lewisi*) in the Upper Salmon River Basin, Idaho. Idaho State University, M.S. thesis.
- Upper Salmon Basin Watershed Project Technical Team (USBWP Technical Team). 2005. Upper Salmon River recommended in-water work windows and fish periodicity: River reaches and tributaries above the Middle Fork Salmon River including the Middle Fork Salmon River drainage. Revised November 30, 2005.
- USDA Forest Service and USDI BLM. 1995. Decision Notice for the interim strategies for managing anadromous fish-producing watersheds in the eastern Oregon and Washington, Idaho, and portions of California. Washington D.C.: USDA and USDI.
- USDC NMFS. 2013. Snake River Basin Steelhead. http://www.nwr.noaa.gov/protected_species/salmon_steelhead/salmon_and_steelhead_listings/steelhead/snake_river_basin/snake_river_basin_steelhead.html. Accessed on 19 February 2013.
- USDC National Marine Fisheries Service (NMFS). 2005. Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho; Final Rule. 70, 170, 52630.
- USDI Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised designation of critical habitat for bull trout in the coterminous United States. Final Rule. 75:200:63897.

APPENDIX A. Temporary Construction Disturbance Areas

APPENDIX B. National Marine Fisheries Service Water Drafting Criteria

NMFS Pump Intake Screen Criteria for Water Drafting

Screen Approach Velocity (How to calculate): The approach velocity must not exceed 0.40 feet per second (ft/s) for active screens, or 0.20 ft/s for passive screens. Using these approach velocities would minimize screen contact and/or impingement of juvenile fish. For pump intake screen designs for water drafting, approach velocity is calculated by dividing the maximum screened flow amount as cubic feet per second (cfs) by the entire effective screen area. Approach velocity should be measured as close as physically possible to the boundary layer turbulence generated by the screen face.

Effective Screen Area: The minimum effective screen area must be calculated by dividing the maximum screened flow by the allowable approach velocity - 0.40 ft/s for active screens or 0.20 ft/s for passive screens.

Specific Criteria and Guidelines for Pump Intake Screen Mesh Material

Circular Screens: Circular screen face openings must not exceed 3/32 inch in diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow.

Slotted Screens: Slotted screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction.

Square Screens: Square screen face openings must not exceed 3/32 inch on a diagonal.

Material: The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface with long term use.

Other Components: Other components of the screen facility, such as seals, must not include gaps greater than the maximum screen opening defined above.

Open Area: The percent open area for any screen material must be at least 27 percent.

Technical References

National Marine Fisheries Service (NMFS). 2008. Anadromous salmonid passage facility design. Northwest Region. February 8, 2008

NMFS. 1996. NMFS juvenile fish screen criteria for pump intakes addendum. Environmental and Technical Services Division. Portland, Oregon. May 9, 1996

APPENDIX C. Rattlesnake Bridge Design and Construction Specifications

APPENDIX D. U.S. Highway 93 Approach Design