

# Partridge Creek Bridge Repair Project

## Environmental Assessment

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**U.S. Department of the Interior**  
Bureau of Land Management  
Cottonwood Field Office  
1 Butte Drive  
Cottonwood, ID 83522

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## **1.0 Introduction**

1.1 Background: Bureau of Land Management (BLM) engineers while conducting routine scheduled bridge inspections identified maintenance and repair needs for the Partridge Creek Bridge. Scouring (3-4 feet) has occurred under one of the bridge abutments making it unsafe for vehicles and is at risk for additional scouring which would further jeopardize bridge integrity. The existing bridge is located on a BLM road easement across private lands in the Partridge Creek drainage. The bridge is currently used primarily by private land owners, BLM, and Idaho Department of Lands to access lands in the Partridge Creek area.

1.2 Proposed action summary: The BLM proposes to conduct bridge repairs during low flow periods (winter or summer 2016). Construction activities would include construction of a temporary coffer dam to isolate the abutment work area, conduct a concrete pour to stabilize the undercut and scoured abutment, and placement of rock (riprap) along the bridge abutment. Immediately upstream from the bridge an eroding streambank would be stabilized with rock placement to protect the bridge and streambank from high flow erosion and scouring.

1.3 Location: The project area is located approximately nine air miles east of Riggins, Idaho. The Partridge Creek drainage is located on the south side of the Salmon River and flows into the Salmon River at river mile 99.2. The bridge is located approximately 400-feet upstream from the mouth of the creek. The project area is located in Idaho County in T. 24 N., R. 3 E., Section 19, Lot 5.

## **2.0 Purpose and Need**

### **2.1 Need:**

As described in paragraph 1.1 above, scouring under one of the bridge abutments of the Partridge Creek Bridge has made it unsafe for vehicles and the bridge has been recently closed for motorized use. The bridge is at risk for additional scouring which would further jeopardize bridge integrity. Based on available funding and prioritization schedule for new bridge replacements, immediate stabilization of the existing bridge is required.

### **2.2 Purpose:**

The purpose of the project is to provide a safe bridge crossing of Partridge Creek for motorized vehicle use and access to the Partridge Creek area.

## **3.0 BLM Decision to be Made**

The authorized officer will make a decision regarding the authorization of the bridge repair and maintenance project.

## **4.0 Land Use Plan Conformance**

Record of Decision and Approved Cottonwood Resource Management Plan (BLM 2009).

Action LR-1.4.1 – Where appropriate and feasible, maintain existing, and acquire new, access easements.

Action TM-1.4.6 – Implement Road Management Guidelines for road planning, design, and maintenance (Appendix A, Best Management Practices and Appendix D, Aquatic and Riparian Management Strategy).

Action AF-1.3.1 – Activities within Riparian Conservation Areas (RCAs) will be designed to minimize or avoid adverse impacts on the riparian and aquatic habitat(s) through implementation of specific standards and guides in the Aquatic and Riparian Management Strategy (Appendix D, Aquatic and Riparian Management Strategy).

Objective AR-1-10 – Protect and conserve scenic values, cultural resources, and federally listed and sensitive fish, wildlife, and plants by designating the Upper Salmon River as an ACEC.

Action WR-1.1.4- The 112-mile segment of the Lower Salmon River, Long Tom Bar to the confluence of the Sane River was recommended to Congress for inclusion the National Wild and Scenic River System (NWSRS) as Recreation (59 miles Long Tom Bar to Hammer Creek and Scenic (53 miles Hammer Creek to the Snake River Confluence). BLM management actions will not alter free flowing nature, measurably diminish outstandingly remarkable values, or modify the setting or level of development that will change its identified Scenic or Recreation classification.

## **5.0 Scoping and Issues**

**5.1 Public Involvement:** Scoping for preparation of this EA included publishing information on the Idaho BLM NEPA website in December 2015, and sending letters requesting comments from various agencies, organizations, and the public. The BLM received substantive comments from two individuals, Idaho County Commissioner's, and four agencies (State and Federal). The BLM is consulting and coordinating this project with the Nez Perce Tribe, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. Comments and coordination identified above were considered in the development of the proposed action and identification of issues for analysis.

**5.2 Issues:** The following issues were identified for analysis during internal and external scoping:

5.2.1. Soil and Water Resources: Proposed actions have the potential to cause erosion, turbidity and sediment and impact soils and water resources. Proposed actions have the potential to impact the stream channel and streambank stability.

5.2.2. Riparian/Wetland Habitats: Proposed actions have the potential to impact soils and riparian habitats.

5.2.3. Fisheries, Aquatic Habitats, and Special Status Fish Species: Proposed actions have the potential to cause erosion and sediment delivery to streams within the project and analysis area; which would potentially impact spawning, rearing, and foraging habitats for federally listed and BLM sensitive fish species. Proposed actions have the potential to impact riparian and aquatic habitats.

5.2.4. Wildlife and Special Status Wildlife: Proposed actions have the potential to disturb or displace wildlife in the short term. Proposed actions have the potential to alter wildlife habitats in a localized area (e.g., riparian habitats).

5.2.5. Invasive Species: Proposed actions have the potential to impact soils and vegetation in a localized area and could result in the spread of invasive species.

5.2.6. Travel Management: The proposed action could affect private land owners, public, and agency use of roads and access within the Partridge Creek drainage.

5.2.7. Special Designations: Proposed actions have the potential to impact values of the Upper Salmon River Area of Critical Environmental Concern and the outstandingly remarkable values of a segment of the Salmon River that has been recommended for inclusion in the National Wild and Scenic Rivers System.

5.3 Issues Eliminated from Further Analysis: The proposed action will not adversely impact the resource values associated with visual resources. The proposed action will not adversely impact the resource values associated with cultural resources. Section 106 consultations with the Idaho State Historic Preservation Office and the Nez Perce Tribe Cultural Department has been completed. No further discussion on these issues will occur in this document and will not be carried forward for additional analysis.

## **6.0 Alternatives**

### **6.1 Alternative A (Proposed Action):**

The proposed action is to conduct bridge maintenance and repair activities for the Partridge Creek Bridge during 2016 low flow winter or summer periods (February 1 thru March 15 or July 15 thru August 15) and would occur during low flow periods (e.g., <15-20 cfs). The bridge is currently closed to motorized vehicle use because of safety concerns. It is expected that construction activity may take approximately one to two weeks. Refer to Appendix A for project location maps A-1 and A-2. Refer to Appendix B for project design drawings. Construction specifics include the following:

1. All instream construction activity would occur between February 1 thru March 15 or July 15 thru August 15, dependent on low flow conditions.
2. Construction of coffer dam with sand bags and polypropylene to isolate the concrete fill and abutment work site from the stream. Dewatering of the work site shall be conducted so no uncured concrete will be placed below waterline. Pumping and dewatering of work site will be to an upslope settling area located on moderately sloped terrace area adjacent to the road (west side of Partridge Creek). Water pumped to settling area will also be filtered thru straw bales before entering Partridge Creek.
3. After coffer dam is in place for isolation of abutment work site and de-watering in preparation for concrete pour an evaluation of current stream flows, coffer dam elevation, and predicted weather will be conducted. Concrete pour would proceed only if stream flows and predicted climate are compatible with isolation of work site and not allowing uncured concrete contacting water.
4. Within the constructed forms an estimated 1.5 cubic yards of poured concrete will be placed in the fill area of the undercut abutment.

5. When concrete is cured and construction forms are removed, an estimated 37 cubic yards of riprap material will be placed adjacent to the concrete fill area and abutment and also includes the area 20 feet upstream and 10 feet downstream of the bridge. It is estimated that approximately 20 cubic yards of riprap material will be placed below mean high water level.
6. Riprap material will have an average diameter 14 – 18 inches of (Class 4) and will be selectively placed using an excavator (thumb and bucket) and by hand (e.g., under the bridge). Streambank riprap placement will minimize adverse impacts to riparian vegetation where possible without compromising desired streambank stability and desired benefit of structural integrity related to the existing bridge.
7. Re-watering of the isolated work site would occur with curtailing of all pumping activity and allowing water to seep into work site. When water level within isolated work site is the same as unaltered stream flows; the coffer dam would be removed incrementally until all coffer dam material is removed from stream channel.
8. As needed, sediment and erosion control measures would include the use of sediment fences, mulching, straw bales, and wattles. Seeding (see Table 5 below) and plantings of desired species (e.g., red-osier dogwood, alder sp., willow sp., and Rocky Mountain maple) would also occur in disturbed areas to provide for long term erosion control and bank stability. Certified weed free straw mulch would be used.

**Table 5. Rehabilitation Seed Mixture**

<b>Species</b>	<b>Percentage</b>	<b>Pounds per Acre</b>
Streambank Wheatgrass	35%	7 lbs.
Mountain Brome	35%	7 lbs.
Hard Fescue	10%	2 lbs.
Tufted Hairgrass	10%	2 lbs.
Annual Ryegrass	10%	2 lbs.
<b>TOTAL</b>	<b>100%</b>	<b>20 lbs.</b>

9. No fuel storage will be authorized on site. Slip-on tank capacity for equipment fueling would not exceed 100 gallons. Fueling and maintenance activities would occur a minimum of 100 feet from any water course. An emergency spill kit would be located on site during construction.
10. Staging areas for equipment, construction material, and settling pond area for water pumping would occur in the west side terrace area adjacent to the bridge (within 50 feet – 75 feet of the bridge). The east side of the bridge would also be used for staging as needed, but would be expected to be minimal or to a lesser extent.
11. The settling pond area where water would be pumped for de-watering of the coffer dam is planned to occur on the west side of bridge, on north side of approach road approximately 30-50 feet from bridge. If needed to avoid adverse impacts (e.g., erosion, sediment, and turbidity), other potential settling pond options for a settling pond would be on south side of the approach road

- or on the east side of bridge within 30 – 50 feet of bridge. Pumped water would filter thru straw bales and natural vegetation before entering Partridge Creek.
12. Prior to placement of coffer dam and de-watering, the abutment work site would be “netted” to move and flush fish out of the work area. During the de-watering process the work site would be inspected to insure no fish are present and any observed fish would be netted and placed downstream of the work site. Activities will be stopped immediately and National Marine Fisheries Service (NMFS) will notified immediately if more than 20 juvenile steelhead and two juvenile spring/summer Chinook salmon are handled, and more than six juvenile steelhead and two juvenile spring/summer Chinook salmon are injured or killed.
  13. All equipment (e.g., excavator) used for construction activity shall be cleaned and any leaks repaired prior to arriving at the project. Equipment will be inspected daily for leaks or accumulations of grease, and fix any identified problems before entering areas that drain directly to Partridge Creek or the Salmon River.
  14. Washout of concrete equipment may occur on site and would be in an area where washout will not reach live waters (minimum 300 feet from Partridge Creek or Salmon River).
  15. All heavy equipment prior to entering the project area (e.g., excavator, dump truck, etc.) will be cleaned, washed, and inspected to insure invasive species are not present.
  16. If turbidity monitoring detects levels that are 50-NTU above baseline, construction activity causing elevated levels would be temporarily curtailed and/or additional erosion and sediment control measures would be implemented to lower turbidity levels to acceptable levels (<50 NTU above baseline) before construction activities continue. NMFS will be notified immediately if turbidity plumes at 150 feet downstream of the source exceed state water quality turbidity standards for more than 60 minutes.
  17. All construction activity will be in accord with state and federal permits and authorizations (U.S. Army Corps of Engineers, Idaho Department of Water Resources, and Idaho Department of Environmental Quality).
  18. A project monitoring report will be submitted to NMFS and U.S. Fish and Wildlife Service within three months of project completion.

**6.2 Alternative B (No Action):** Under the No Action alternative, no bridge repair or maintenance would occur. The bridge would remain closed to motorized use because of unsafe conditions.

**6.3 Alternatives Considered but Eliminated from Detailed Analysis:** Construction of a new bridge with design feature that include a bridge span that goes from high bank to high bank with abutments constructed above mean high water level was considered. However, based on available funding and prioritization, need for immediate stabilization, and plans for future bridge replacement schedule (e.g., new bridge replacement in 5 years); this was eliminated from detailed analysis.

## **7.0 Affected Environment and Environmental Effects**

### 7.1 Scope of Analysis

#### *7.1.1 General Setting*

The project area is located in the Partridge Creek watershed which flows into the Salmon River at river mile 99.2, approximately nine air miles east of Riggins, Idaho. The Partridge Creek watershed totals 20,241 acres; and the lower portion of the watershed is primarily private, BLM, and State lands and the middle and upper portion of the watershed is Forest Service lands. The existing bridge is located on a BLM road easement across private lands in the Partridge Creek drainage. The bridge is currently used primarily by private land owners, BLM, and Idaho Department of Lands to access lands in the Partridge Creek area.

#### *7.1.2 Related Past, Present, and Reasonably Foreseeable Actions*

As defined by NEPA regulations (40 CFR 1508.7), “Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”

Human caused and natural events have had varying levels of impacts on the resources and values affected by the proposed bridge repair and maintenance project. Natural events, such as wildfires, landslides, and debris torrents have impacted soils, water quality, upland habitats, riparian areas, and aquatic habitats to varying levels. The most recent event was the 2015 Tepee Springs Wildfire which burned 81% of the Partridge Creek watershed. Within the watershed analysis area the primary man caused impacts to watershed resources have occurred from road construction, and is followed by timber harvest and livestock grazing. Varying levels of impacts to soil, vegetation, water quality, aquatic habitats, and wildlife habitats have occurred from these activities.

Private land fire salvage of dead and dying trees would potentially occur on 300 to 500 acres (west-side Partridge Creek) and harvest methods would include tractor, jammer logging, and high lead logging (Guy Carlson personal communication 2016). Logging activities would use existing roads and no new road construction. Potential salvage would occur in Partridge Creek and Warm Spring drainage. All timber harvest would be in accord with the Idaho Forest Practices Act.

Idaho Department of Lands fire salvage timber harvest would potentially occur on 40 acres (estimate 200,000 board feet) of State lands, located on west side of Partridge Creek (T. 24 N., R. 2 E., Section 36, NWNW) and harvest methods would include tractor and jammer logging (Chris Clark, Idaho Dept. of Lands, personal communication 2016), Road maintenance would occur to provide for proper road drainage. Areas where fire salvage occurs would be planted with conifer seedlings.

#### *7.1.3 Analytical Assumptions*

Eventual bridge closure because of unsafe conditions or bridge failure is likely to occur under the No Action Alternative. It is expected that because of the 2015 Tepee Springs wildfire that the bridge is at increased risk from higher peak flows and additional abutment scouring.

## **7.2 Soil and Water Resources:**

### *7.2.1 Affected Environment:*

#### Soils

The project area is located in the lower portion of the Partridge Creek watershed. The analysis area includes the project area and the Partridge Creek watershed. The soils within the project area are primarily very coarse cobbly sand in the upper profile (0-10 inches) and stratified gravelly sand to extremely cobbly coarse sand in lower profile (10-60 inches). The parent material is mixed alluvium and/or colluvium derived from granitics. Within the stream bottom area the slopes are generally moderate to level (0 – 2%) for the approaches to the stream channel and bridge (50 – 100 feet wide). Adjacent sideslopes of the canyon are steeper sloped (50-70% slopes) with rock outcrops. The streambanks are steeper sloped, and some streambank erosion has occurred upstream of the bridge (west side of the creek).

The 2015 Tepee Springs Wild Fire burned a large percentage (81%) of the Partridge Creek watershed. The Partridge Creek watershed total size is 20,241 acres and 16,513 acres were within the burn perimeter and 3,728 acres were outside the burn perimeter. The following Table 1 summarizes burn severity within the Partridge Creek watershed. The project area, which includes the bridge repair site and adjacent upstream and downstream riparian area was rated as having low burn severity.

**Table 1. Tepee Springs Burn Severity Within the Partridge Creek Watershed**

<b>Burn Severity</b>	<b>Acres Within Fire Perimeter</b>	<b>Percent (%) Burned Within Watershed</b>
High	4,455	22%
Moderate	7,460	37%
Low	4,366	22%
Unburned	230	---
Total	16,511	81%

Refer to Figure 1 below for an aerial view of the lower Partridge Creek watershed.



**Figure 1.** Aerial view of the lower Partridge Creek watershed, looking north towards the Salmon River. The majority of the watershed was burned during the 2015 Tepee Springs Fire, photo taken September 19, 2015.

The high and moderate soil burn severity areas have discontinuous water repellency in the soil surface and little ground cover remaining. These burned areas will be susceptible to erosion from intense storms, particularly for the first growing season after the burn, until grasses have re-established some ground cover. Impacts may include accelerated erosion and sediment delivery to streams, flooding, and/or debris flows. The risk for increased erosion and sedimentation should decrease each year as native vegetation returns, and should be back to pre-fire risks by fall 2020 (Tepee Springs Fire BAER – Soil Resources 2015).

Natural events, such as wildfires, landslides, and debris torrents have impacted soils to varying levels. Major land slides or debris torrents have occurred in the drainage in 1990 and 1997, other lesser natural events have also occurred. The majority of the watershed (middle and upper portions) is roadless (Forest Service lands) and the lower watershed has had more road construction and timber harvest. A large amount of the lower watershed located on private, State, and BLM lands has had a large amount of previous timber harvest and includes previous fire salvage logging, which occurred in 1990 (1989 Wild Fire). Within the watershed analysis area the primary man caused impacts to soils have occurred from road construction and maintenance, and are followed by timber harvest and livestock grazing. Varying levels of soils and vegetation disturbance have occurred, which have resulted in erosion and sediment delivery to streams.

### Water Resources

The project area is located in the lower portion of the Partridge Creek watershed. The analysis area includes the project area and the Partridge Creek watershed. The Partridge Creek watershed totals 20,241 acres and flows into the Salmon River at river

mile 99.2. Partridge Creek occurs in the Lower Salmon River subbasin and is a 6<sup>th</sup> Order HUC (Hydrologic Unit Code – No. 170602090203). In the Idaho Water Quality Standards, Partridge Creek is included in water body identification number and assessment unit IDI7060209SL021\_03 and is protected for cold water aquatic life and contact recreation presumed beneficial uses. This Partridge Creek assessment unit is currently listed in Category 3 of the Idaho 2012 Integrated Report as there is insufficient data to determine if the beneficial uses are being met. Overall, Lower Salmon River water quality is good and contributing water quality impacts (e.g., Partridge Creek tributary stream) is usually dependent on major events that trigger landslides, flood events, or debris torrents in the tributary drainage and associated water quality impacts (e.g., sediment, turbidity).

However, as a result of the 2015 Tepee Springs fire and the fact that 81 percent of the watershed burned it is expected that increased erosion and sediment would occur (see Soils discussion and analysis above). Partridge Creek burned with enough moderate and high intensity, that increased peak flows and responses to storm events, are possible to occur (Tepee Springs Fire BAER – Hydrology Resources 2015). Private and public lands could experience an increased risk from floods and potential debris torrents or bulked flows, with debris and water combined (Tepee Springs Fire BAER – Hydrology Resources 2015).

Removal of the forest canopy which resulted from the 2015 Tepee Springs Fire can result in increased water yield and hydrograph modification (e.g., increased peak flows, particularly in areas subject to rain-on-snow events). An indicator of the overall relative risk of impact to the hydrologic functions of a forested watershed may be calculated as the equivalent clearcut area (ECA). Values generated by this method are combined with other information, such as stream condition and channel type, to interpret the potential effects of proposed land management activities.

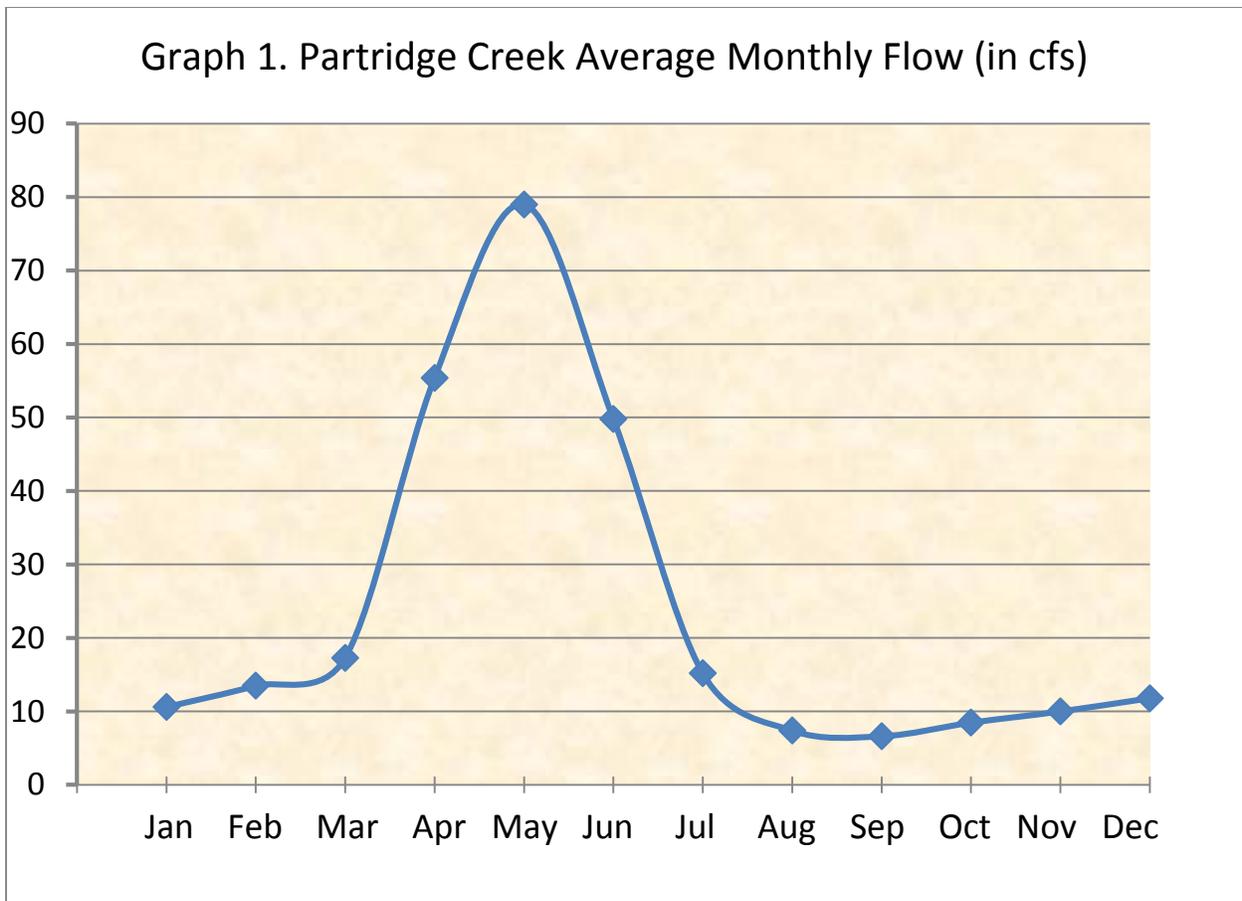
Scouring (3-4 feet) has occurred under one of the bridge abutments (west side) making it unsafe for large vehicles and is at risk for additional scouring which would further jeopardize bridge integrity. The west-side bridge abutment encroaches on the stream channel and is at risk for increased scouring. Refer to Figure 2 below for a view of the scoured out bridge abutment.



**Figure 2.** View of the west side bridge abutment which has 3 to 4 feet scouring under the abutment. Photo taken November 18, 2015.

The stream gradient within the project area is 6 percent. Within the project area the average low-flow width is 26.5 feet and average depth is 0.45 feet. Average mean high-flow width is 36.0 feet and average depth is 2.0 feet. Stream profile data was measured immediately downstream from the bridge. The dominant stream channel substrate is large cobble (6-12 inches) and subdominant substrate is large gravel (1-3 inches).

However, as discussed previously in this section it is expected that as a result of the 2015 Tepee Springs Fire that changes to hydrograph would result in higher peak flows, higher run-off, and lower base flows. Flow conditions are dependent on annual snow pack, climate, and storm events. Rain on snow events or severe storm precipitation events could also result in high flow conditions. Stream average monthly low flows suitable for abutment work would occur mid-late July thru mid-March (12 – 15 cfs) and the hydrograph starts rising in late-March - early April. Mean average peak flows are estimated to be 237 cfs and would be expected to occur between mid-May and mid-June. Graph 1 below depicts the mean monthly flows for the Partridge Creek watershed.



<sup>1</sup> Data source from U.S. Geological Service Website – USGS StreamStats:  
<http://water.usgs.gov/osw/streamstats/idaho.html>

**7.2.2 Environmental Effects from Alternative A (Proposed Action):**

Localized vegetation and soil disturbance is expected to occur within the project area; which includes the bridges and areas located upstream and downstream of the bridge (within 30 to 50 feet). Disturbance to vegetation would be short-term, with brush expected to re-establish within two years. All construction activity would occur on the west side of Partridge Creek, and primary soil and vegetation disturbance would occur from bridge abutment work and placement of riprap material. The approaches to the bridge and adjacent terrace areas would be used for staging equipment and construction materials for bridge repair work (<0.1 acre).

A temporary coffer dam would be constructed with sand bags and polypropylene to isolate the concrete fill and abutment work site from the stream. Dewatering of the work site shall be conducted so no uncured concrete will be placed below waterline. Pumping and dewatering of the abutment work site will be to an upslope settling area located on moderately sloped terrace area adjacent to the road (west side of Partridge Creek). Water pumped to settling area will also be filtered thru straw bales before entering Partridge Creek. Selective placement of rock would occur upstream from the bridge site would stabilize approximately 20-feet of eroding streambank bank. It is expected that minor turbidity would occur from installation of the coffer dam, pumped

water, and placement of riprap material. Turbidity would be below 50 NTU and would be short term.

Overall, soil and vegetation disturbance would be negligible from project implementation. As needed, erosion control measures would be used to minimize potential for adverse erosion and sediment. Short term negligible water quality impacts from sediment and turbidity would occur. Project design measures would provide for protection of Partridge Creek beneficial uses. Implementation of the proposed project would provide for long term protection of the bridge structure and prevent additional abutment and streambank scouring, erosion, and sediment delivery. Long term benefits would occur from reduction of erosion and sediment and reducing potential risks associated with bridge failure, high flow damage to road crossing, and streambank erosion and scouring.

#### *7.2.3 Environmental Effects from Alternative B (No Action):*

Under the No Action alternative, no bridge repair or maintenance would occur. No project related effects to soil, vegetation, or water quality condition would occur. Existing conditions and trends would occur for the stream channel at the bridge crossing. The bridge would be at high risk for increased abutment scouring and failure and increased bank erosion would occur upstream from the bridge. Continued abutment scouring and potential for bridge failure and high flow erosion may occur, which would result in additional sediment delivery to the stream.

#### *7.2.4 Cumulative Effects:*

Natural events, such as wildfires, landslides, and debris torrents have impacted riparian habitats to varying levels. The most recent event was the 2015 Tepee Springs Wildfire which burned 81% of the Partridge Creek watershed. These burned areas will be highly susceptible to erosion from intense storms, particularly for the first growing season after the fire, until grasses have re-established some ground cover. Impacts may include accelerated erosion and sediment delivery to streams, flooding, landslides, and/or debris flows.

Within the analysis watershed the primary man caused historic impacts to soils have occurred from road construction and maintenance, and are followed by timber harvest and livestock grazing. A residence has been constructed in the stream bottom area downstream from the project area. It is expected that foreseeable future actions would include road maintenance and fire salvage logging that would occur on private and State lands. Livestock (cattle) grazing would also continue to occur in the watershed. The majority of the watershed is roadless (Payette National Forest) and minimal human impacts have occurred. Implementation of the proposed action and Best Management Practices would minimize potential for adverse erosion and impacts to State of Idaho designated beneficial uses for the watershed. The contribution of proposed action to cumulative effects is discountable. The proposed action effects would result in unmeasurable or discountable effects to the combination of past, present, and reasonably foreseeable future action impacts to soils and water resources within the cumulative effects analysis area; which includes the Partridge Creek watershed.

### **7.3 Riparian – Wetland Habitats:**

### 7.3.1 Affected Environment:

The project area includes riparian habitats that are associated with Partridge Creek and stream bottom area. Riparian widths for the lower reach of Partridge Creek generally vary from 30-50 feet on each side of the stream. The lower riparian habitat of Partridge Creek is a white alder (*Alnus rhombifolia*) riparian community type; and other common vegetation includes syringa (*Philadelphus lewisii*), Rocky Mountain maple (*Acer glabrum*), black raspberry (*Rubus leucodermis*), red-osier dogwood (*Cornus stolonifera*), ocean spray (*Holodiscus discolor*), black hawthorne (*Crataegus douglasii*), Douglas hackberry (*Celtis douglasii*), poison ivy (*Rhus radicans*), *Carex* sp., orchardgrass (*Dactylis glomerata*), mountain brome (*Bromus marginatus*), western yarrow (*Achillea millefolium*), and other forbs and grasses. The lower reach of Partridge Creek also has Douglas-fir and ponderosa pine occurring within riparian habitats.

No known Endangered Species Act (ESA)-listed plants or BLM sensitive plants occur within the project area. A plant survey (2015) of the project area has not documented the occurrence of any known special status plants.

Within the project and analysis area a variety of man-caused land uses have impacted riparian habitats to varying levels. The primary human caused impacts are attributed to livestock grazing, road construction and maintenance.

Within the project area the burn severity from the 2015 Tepee Springs Fire was rated low. Upstream riparian habitats had variable burn severity, which include low, moderate, and high. Riparian vegetation was impacted by the Tepee Springs fire, and areas rated as having high and moderate severity burn had high mortality for the trees and shrubs. A lesser amount of mortality occurred in low severity burn areas. Many of the shrubs will be re-sprouting and ground cover (e.g., grasses and forbs) will start reestablishing within 1-3 years. As a result of the 2015 Tepee Springs the majority of the riparian habitats in the Partridge Creek watershed is currently rated functional at risk or non-functional. The following Figure 3 shows a general view of the riparian vegetation and habitat associated with the project area.



**Figure 3.** General view of the project area and stream bottom riparian habitats. The general project area riparian habitat is rated as having a low severity burn rating. Photo taken November 18, 2015.

#### *7.3.2 Environmental Effects from Alternative A (Proposed Action):*

Implementation of the proposed action would result in localized soils and vegetation disturbance of a very small amount or riparian vegetation (<.05 acre), which includes streambank and a previously disturbed terrace area adjacent to road, which would be used for staging equipment and construction materials. As needed, appropriate erosion control measures would be used to minimize potential for adverse erosion. Disturbed areas would be seeded and planted with desirable vegetation and shrubs. Project design measures would reduce potential for increase of invasive species and seeding and plantings would provide desirable riparian vegetation cover. Overall, impacts to riparian habitats would be negligible.

#### *7.3.3 Environmental Effects from Alternative B (No Action):*

No project related soil and vegetation disturbance or impacts to riparian habitats would occur. The No Action Alternative would increase risk for increased abutment scouring, bridge failure, and streambank erosion; which would have localized small impact to riparian habitats if such occurs. Lack of vegetation on the eroding streambank that is upstream from the bridge would be more susceptible to increased erosion, scouring, and sediment. The abutment scouring would be expected to increase with high flow scouring events because such is not armored or protected from high flows. The bridge would be vulnerable to failure and high flow flood events washing out the abutment which would result in severe bank erosion and impacts to downstream riparian habitats adjacent to the bridge.

#### *7.3.4 Cumulative Effects:*

Natural events, such as wildfires, landslides, and debris torrents have impacted riparian habitats to varying levels. The most recent event was the 2015 Tepee Springs Wildfire

which burned 81% of the Partridge Creek watershed. Consequently, the large majority of riparian habitats experienced varying levels of burn severity (e.g., low to high).

Within the analysis watershed the primary man caused historic impacts to riparian habitats have occurred from road construction and maintenance (e.g., stream bottom roads and crossings), and is followed by livestock grazing or associated timber harvest activity. It is expected that foreseeable future actions would include road maintenance and fire salvage logging that would occur on private and State lands. Livestock (cattle) grazing would also continue to occur in the watershed. The majority of the watershed is roadless (Payette National Forest) and minimal human impacts have occurred in these areas.

The proposed action alternative, in combination with past, present, and reasonably foreseeable future actions would have discountable effects to riparian and vegetation resources within the cumulative effects analysis area; which includes the Partridge Creek watershed.

#### **7.4 Fisheries, Aquatic Habitats, and Special Status Fish Species:**

##### *7.4.1 Affected Environment:*

The project area is located in the lower portion of the Partridge Creek watershed. The analysis area for the project includes the Partridge Creek watershed and lower stream reach. The Partridge Creek watershed totals 20,241 acres and flows into the Salmon River at river mile 99.2.

Partridge Creek provides designated critical habitat for Endangered Species Act (ESA) – listed spring/summer Chinook salmon, steelhead trout, and bull trout. Spring Chinook salmon use Partridge Creek primarily for juvenile rearing only, no known spawning has been documented in the stream and primary juvenile fish rearing use is associated with the mouth area and lower stream reach. Steelhead trout use Partridge Creek for spawning and juvenile rearing. Bull trout primary use is expected to be for adult and subadult foraging and primary use would be expected to occur in the mouth area and lower reach. Past fish sampling conducted in the lower reaches of Partridge Creek (mouth to Forest Service boundary) have primarily documented the presence of juvenile redband/steelhead trout and a few juvenile spring/Chinook salmon.

The ESA-listing of the above species requires the BLM to ensure that all actions authorized or funded by the agency are not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of designated or proposed critical habitat of listed species [ESA Section 7 (a)(2) and (4)]. The BLM in cooperation with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) has prepared a Biological Assessment (BA) for the Partridge Creek Bridge Repair Project to address potential effects to steelhead trout, spring Chinook salmon, bull trout, and designated critical habitat from implementation of the proposed project (BLM 2016).

Pursuant to section 305(b)(2) of the Magnuson-Stevens Act, Federal agencies must consult with NOAA Fisheries (NMFS) regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect Essential Fish Habitat (EFH). The Magnuson-Stevens Act, section 3, defines EFH

as “those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity.” Federal agencies may incorporate an EFH Assessment into ESA BA (BLM 2016). The referenced BA prepared for this project includes an EFH assessment for Chinook salmon for the Partridge Creek watershed. Partridge Creek provides suitable aquatic habitat for spring Chinook salmon (juvenile rearing).

The following Table 2 identifies the time of year when each fish species/lifestage is present within the general project/analysis area (Partridge Creek and Salmon River).

**Table 2: Occurrence of ESA-Listed and BLM Sensitive Fish Species Lifestages**

Lifestage	Sp/Summer Chinook Salmon	Steelhead Trout	Bull Trout	Westslope Cutthroat Trout	Pacific Lamprey
Adult Migration	APR-JUL Salmon R.	AUG-APR Salmon R.	JUN-AUG Salmon R.	JUL-OCT Salmon R.	JUL-OCT Salmon R.
Adult Spawning	AUG-SEP Trib. Streams	MAR-JUN Partridge Cr.	Late AUG-SEP Trib. Streams	MAR-JUN Trib. Streams	APR-JUL Salmon R. Trib. Streams
Adult Overwintering	N/A	NOV-MAR Salmon River	NOV-MAR Salmon River	NOV-MAR Salmon R.	NOV_MAR Little Salmon R.
Adult/Subadult Rearing	N/A	N/A	YEARLONG Salmon R. & Trib. Streams	YEARLONG Salmon R. Trib. Streams	N/A
Incubation & Emergence	SEP-MAY Trib. Streams	MAR-JUN Partridge Cr.	SEP-MAY Trib. Streams	MAR-JUN Trib. Streams	APR-JUL Salmon R. Trib. Streams
Juvenile Rearing	1 Year Tributary Streams	1-3 Years Partridge Cr.	2 - 3 Years Trib. Streams	1 - 3 Years Trib. Streams	4-6 Years Salmon R. Trib. Streams
Smolt Emigration	APR-JUL	APR-JUL	N/A	N/A	APR-JUL

The Salmon River is used by ESA-listed sockeye salmon and fall Chinook salmon and is designated critical habitat for these two fish species. The sockeye salmon utilizes the mainstem Salmon River as an upstream and downstream passage corridor. No sockeye salmon spawning or early rearing occurs in the Lower Salmon River subbasin. Fall Chinook salmon use the Salmon River for upstream and downstream passage, spawning and early rearing.

Partridge Creek provides potential spawning and rearing habitat for the following Idaho BLM sensitive species: redband trout, westslope cutthroat, and Pacific lamprey. Fish sampling has documented the occurrence of redband trout. Potential use by westslope cutthroat trout and Pacific lamprey may be expected to occur in the drainage, however, such use would be expected to be very low.

The Cottonwood Field Office Resource Management Plan (RMP) identified programmatic aquatic management direction for specific conservation and restoration watersheds within the planning area (BLM 2009, Appendix B). Identifying conservation and restoration watersheds demonstrates the BLM’s priority of programmatic

management direction and strategies for watershed, riparian, and aquatic resources; which is the basis for developing goals, objectives, standards, and monitoring strategy. Partridge Creek has been identified as a Restoration watershed. Restoration watersheds were identified because biological and physical processes and functions do not reflect natural conditions because of past and long-term land disturbances (natural and man-caused). Management strategies do not preclude land uses, but active management may be required to restore the watershed physical and biological function to their natural range of frequency, duration, and intensity.

The 2015 Tepee Springs Wild Fire burned a large percentage (81%) of the Partridge Creek watershed. These burned areas will be susceptible to erosion from intense storms, particularly for the first growing season after the burn, until grasses have re-established some ground cover. Impacts may include accelerated erosion and sediment delivery to streams, flooding, and/or debris flows. The following Figure 4 is a view of upstream stream channel and riparian habitat that experienced fire impacts.



**Figure 4.** View of Partridge Creek stream channel and riparian habitat approximately 1.5 mile upstream from project area. Photo taken September 23, 2015.

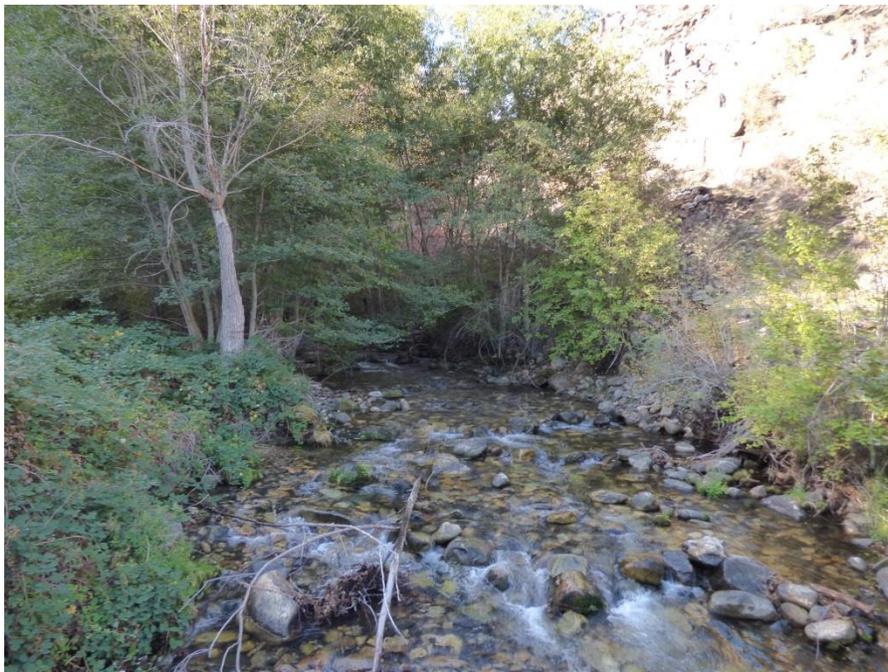
During the fall of 2015 a post-fire reconnaissance survey of the lower reaches of Partridge Creek was conducted and a summary of the aquatic habitat analysis is included in Table 3. As discussed above, it is expected that increased erosion and deposited sediment would occur from the 2015 wildfire, particularly during the first two years following the fire. The stream channels and streambanks would be at increased risk for high flow scouring.

**Table 3. Habitat Analysis for the Lower Reaches (SM 0.0-2.8) of Partridge Creek**

Habitat Pot.	Cobble Embed.	Spawning Gravels %<6.3	Pool Rif. Ratio	Summer Temp. Co	Active Debris & Pot. Debris 100m.	Pool Qual.	Instream Cover	Bank Cov.	Bank Stab.
Natural	<22%	<19%	1:4	<=16	25+/60+	5.0	15%+	7%	95%+
Exist.	25%	30%	1:4	<17	10-25/10-54	4.6-4.8	8-15%	0-5%	95%
%Nat.	85%	70%	100%	90%	75%/100%	90%	80%	60%	98%

1/ Post fire evaluation of lower reaches of Partridge Creek (fall 2015), field verified previous survey and monitoring efforts.

The aquatic habitat associated with the project area is classified as a riffle/rapid habitat unit and would primarily be utilized by fish for rearing habitat. The project area does not provide preferred spawning habitat for fish. Overall, within the bridge repair project area the burn severity from the 2015 Tepee Springs Fire was low and some un-burned areas occur adjacent to Partridge Creek. Figure 5 provides a view from the Partridge Creek bridge of the stream channel and riparian habitat.



**Figure 5.** View of Partridge Creek stream channel and riparian habitat, looking upstream from bridge. Photo taken September 24, 2015.

**7.4.2 Environmental Effects from Alternative A (Proposed Action):**

Localized vegetation and soil disturbance is expected to occur within the project area; which includes the bridges and areas located upstream and downstream of the bridge (within 30 to 50 feet). All construction activity would occur on the west side of Partridge

Creek, and primary soil and vegetation disturbance would occur from bridge abutment work and placement of riprap material.

A temporary coffer dam would be constructed with sand bags and polypropylene to isolate the concrete fill and abutment work site from the stream. Dewatering of the work site shall be conducted so no uncured concrete will be placed below waterline. Selective placement of rock would occur upstream from the bridge site stabilize approximately 20-feet of eroding streambank bank. It is expected that minor turbidity would occur from installation of the coffer dam, pumped water, and placement of riprap material. Turbidity would be below 50 NTU and would be short term.

The instream project work and areas below mean high flow level is primarily used for fish rearing habitat. The large sized substrate and riffle/rapid habitat does not provide preferred fish spawning habitat. The bridge abutment repair work, placement of coffer dam, dewatering of work site, and rip-rap placement adjacent to eroding streambank would adversely impact a very small area of aquatic habitat (primarily used for rearing habitat),

Overall, soil and vegetation disturbance would be negligible from project implementation. As needed, erosion control measures would be used to minimize potential for adverse erosion and sediment. Implementation of the proposed project would provide for long term protection of the bridge structure and prevent additional abutment and streambank scouring, erosion, and sediment delivery. Long term benefits would occur from reduction of erosion and sediment and reducing potential risks associated with bridge failure, high flow damage to road crossing, and streambank erosion and scouring.

### **Endangered Species Act (ESA)-Listed and BLM Sensitive Fish Species**

Refer to the following Table 4, for a summary of determinations for ESA-listed, designated critical habitats, and BLM Sensitive species. A BA has been prepared in cooperation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS) for the proposed project (BLM 2016).

**Table 4. ESA-Listed Species, Critical Habitat, and BLM Sensitive Fish Determinations<sup>1</sup>**

<b>Species Status</b>	<b>Proposed Action (Alt. 1)</b>	<b>No Action (Alt. 2)</b>
Sockeye Salmon <i>Endangered</i>	NE (Species) NE (CH)	NE (Species) NE (CH)
Fall Chinook Salmon <i>Threatened</i>	NE (Species) NE (CH)	NE (Species) NE (CH)
Spring/Summer Chinook Salmon <i>Threatened</i>	MA-LAA (Species) MA-LAA (CH)	NE (Species) NE (CH)
Steelhead Trout <i>Threatened</i>	MA-LAA (Species) MA-LAA (CH)	NE (Species) NE (CH)
Bull Trout <i>Threatened</i>	MA-NLAA (Species) MA-NLAA (CH)	NE (Species) NE (CH)
Westslope Cutthroat Trout	MII	NI
Redband Trout	MII	NI
Pacific Lamprey	MII	NI

<sup>1</sup>ESA-Listed: NE=No Effect; MA-NLAA="May Affect, Not Likely to Adversely Affect"; MA-LAA="May Affect, Likely to Adversely Affect"

<sup>1</sup>Critical Habitat: CH

<sup>1</sup>Idaho BLM Sensitive: NI=No Impact; MII="May impact individuals or habitat, but will not likely lead to a trend toward federal listing or cause a loss of viability of the population or species".

A "likely to adversely affect" determination was made for Essential Fish Habitat (EFH) (see analysis rationale for listed fish). Pursuant to section 305(b)(2) of the Magnuson-Stevens Act, Federal agencies must consult with NOAA Fisheries regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect EFH. The Magnuson-Stevens Act, section 3, defines EFH as "those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity". The referenced BA (BLM 2016) incorporated an EFH Assessment into the analysis.

Within the Salmon River, no adverse effects to fish passage or water quality for migrating fish would occur from the proposed project. Implementation of the proposed project would result in no adverse effects to sockeye salmon, fall Chinook salmon, or designated Salmon River critical habitat and a determination of "no effect" was made for the species and no further discussion about these species will occur in this document.

*Rationale for Special Status Species Determinations:* Project implementation is expected to result in negligible or discountable erosion or sediment and no measurable increase in deposited sediment would occur in Partridge Creek. No adverse effects to water yield or peak flows, spawning habitat, water quality (e.g., temperature), channel condition, streambank stability, or large woody debris recruitment would occur from project implementation. Conducting bridge repair actions and placement of rip-rap material adjacent to bridge abutment and stabilization of eroding streambank would have minor adverse impacts on fish rearing habitat. Implementation of the bridge repair project would provide for long term reduction of erosion/sediment from an eroding streambank and prevent additional scouring/erosion under the bridge abutment.

#### *7.4.3 Environmental Effects from Alternative B (No Action):*

Under the No Action alternative, no bridge repair or maintenance would occur. No adverse effects to aquatic habitats or water quality would occur. Under this alternative, a “no effect” determination for ESA-listed fish and “no impact” determination is concluded for BLM sensitive species (see Table 4 above). Existing conditions and trends would occur for the stream channel and aquatic habitats at the bridge crossing. The bridge would be at high risk for increased abutment scouring and bridge failure and increased bank erosion would occur upstream from the bridge; which would result in localized increased erosion and sediment which would impact water quality and aquatic habitats.

#### *7.4.4 Cumulative Effects:*

Natural events, such as wildfires, landslides, and debris torrents have impacted riparian habitats, aquatic habitats, and special status fish species to varying levels. The most recent event was the 2015 Tepee Springs Wildfire which burned 81% of the Partridge Creek watershed. These burned areas will be highly susceptible to erosion from intense storms, particularly for the first growing season after the fire, until grasses have re-established some ground cover. Impacts may include accelerated erosion and sediment delivery to streams, flooding, landslides, and/or debris flows. Accelerated erosion, debris flows, and high flow scouring events have the potential to adversely impact aquatic habitats and fish species in the Partridge Creek watershed.

Within the analysis watershed the primary man caused historic impacts to soils have occurred from road construction and maintenance, and are followed by timber harvest and livestock grazing. A residence has been constructed in the stream bottom area downstream from the project area. It is expected that foreseeable future actions would include road maintenance and fire salvage logging that would occur on private and State lands. Livestock (cattle) grazing would also continue to occur in the watershed. The majority of the watershed is roadless (Payette National Forest) and minimal human impacts have occurred. Implementation of the proposed action and Best Management Practices would minimize potential for adverse erosion and impacts to aquatic habitats and special status fish species.

The proposed action alternative, in combination with past, present, and reasonably foreseeable future actions would have negligible effects to aquatic habitats and special status fish species within the cumulative effects analysis area; which includes the Partridge Creek watershed.

### **7.5 Wildlife and Special Status Wildlife:**

#### *7.5.1 Affected Environment:*

The project area is located in the lower portion of the Partridge Creek watershed. The analysis area includes the project area and lower portion of the Partridge Creek watershed. The lower portion of the Partridge Creek watershed is primarily a canyon grassland habitat, which contains riparian habitat along Partridge Creek, and a few scattered shrub/timber stringers. The Salmon River canyon and Partridge Creek drainage is used by a variety of big game species which include mule deer, white-tailed deer, elk, mountain lion, black bear, gray wolf, and bighorn sheep.

## **Migratory Bird Species**

The habitat most likely to be impacted by the proposed action includes riparian and aquatic habitats. The project area occurs with the lower portion of the Partridge Creek drainage and adjacent habitats are primarily canyon grassland habitat with scattered shrubs/trees. The 2015 Tepee Springs fire has impacted these habitats within the analysis area and high mortality of trees and shrubs has occurred.

All migratory birds are protected under the 1918 Migratory Bird Treaty Act (16 USC 703), as well as the Neotropical Migratory Bird Conservation Act (16 USC Chapter 80). Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* requires the BLM and other federal agencies to work with the U.S. Fish and Wildlife Service (USFWS) to improve protection for migratory birds. Migratory birds occur within the project area and analysis area. Idaho Partners in Flight (IPIF) has identified 243 species of birds that breed in the State of Idaho. Of these species, 119 are considered Neotropical migrants.

Neotropical migrant birds utilize coniferous forest habitats of the U.S. during the spring and summer breeding seasons, but migrate to southern latitudes to spend winters as far south as Mexico and South America.

Idaho Partners in Flight (2000) identified four high-priority habitats in Idaho that are also important habitats for migratory birds and include riparian, low-elevation mixed conifer, grasslands, and ponderosa pine. Two of these habitats occur in the general analysis and project area (i.e., riparian and grasslands).

Analysis will focus on project specific riparian habitats. The willow flycatcher will serve to represent the riparian habitat, and this species is a BLM Idaho sensitive species. For additional information and analysis regarding the willow flycatcher refer to BLM Sensitive Species section which follows.

## **Special Status Species**

The project area does not provide suitable habitats for any ESA-listed species, proposed, or candidate wildlife species, consequently a “no effect” determination is concluded for ESA-listed Canada lynx and Northern Idaho ground squirrel. No further discussion regarding these species will occur in this document.

BLM sensitive species which may potentially occur in the project area and suitable habitat occurs within the general analysis area are listed in Table 5 below.

**Table 5. BLM Sensitive Wildlife Species Summary and Determinations**

Species	POTENTIAL OCCURRENCE IN PROJECT AREA				
	Potentially Present?		Potentially Affected?		Determination <sup>1</sup>
	Species	Habitat	Species	Habitat	
<b>Wildlife - Mammals</b>					
Bighorn Sheep <i>Ovis canadensis spp.</i>	Yes	Yes	No	No	NI
Gray Wolf <i>Canis lupus</i>	Yes	Yes	No	No	NI
Big Brown Bat <i>Eptesicus fuscus</i>	Yes	Yes	No	No	NI
Canyon Bat <i>Parastrellus hesperus</i>	Yes	Yes	No	No	NI
Fringed Myotis <i>Myotis thysanodes</i>	Yes	Yes	No	No	NI
Pallid Bat <i>Antrozous pallidus</i>	Yes	Yes	No	No	NI
Western Small-footed Myotis <i>Myotis cillolabrum</i>	Yes	Yes	No	No	NI
Yuma Myotis <i>Myotis yumanensis</i>	Yes	Yes	No	No	NI
<b>Birds</b>					
Bald Eagle <i>Haliaeetus leucocephalus</i>	Yes	Yes	No	No	NI
Golden Eagle <i>Aquila chrysaetos</i>	Yes	Yes	No	No	NI
Short-eared Owl <i>Asio flammeus</i>	Yes	Yes	No	No	NI
Brewer's Sparrow <i>Spizella breweri</i>	Yes	Yes	No	No	NI
Cassin's Finch <i>Carpodacus cassinii</i>	Yes	Yes	No	No	NI
Grasshopper Sparrow <i>Ammodramus savannarum</i>	Yes	Yes	No	No	NI
Green-tailed Towhee <i>Pipilo chlorurus</i>	Yes	Yes	No	No	NI
Mountain Quail <i>Oreortyx pictus</i>	Yes	Yes	Yes	Yes	MI
Willow Flycatcher <i>Empidonax traillii</i>	Yes	Yes	Yes	Yes	MI
<b>Amphibians</b>					
Idaho Giant Salamander <i>Dicamptodon aterrimus</i>	Yes	Yes	Yes	Yes	MI
Western/Boreal Toad <i>Anaxyrus boreas</i>	Yes	Yes	Yes	Yes	MI

<sup>1</sup>BLM Sensitive Species Determination: NI="No Impact"; MI="May impact individuals or habitat but not likely to cause trend toward federal listing or reduce viability for the population or species".

The following Table 6 lists the BLM sensitive species which may be impacted by the proposed project and preferred habitats.

**Table 6. BLM Sensitive Species and Preferred Habitats**

Common Name	Habitat
Mountain Quail <i>Oreotys pictus</i>	Riparian areas, shrub mountainsides, coniferous forests, and forest edge. Nests on ground. Foods are buds, seeds, grain, and insects.
Willow Flycatcher <i>Empidonax traillii</i>	Migratory. Riparian areas, swamps, willow thickets, open woodlands. Builds cup shape nest in shrub or deciduous tree. Insectivorous.
Idaho Giant Salamander <i>Dicamptodon aterrimus</i>	Larvae usually inhabit clear, cold streams, but are also found in mountain lakes and ponds. Adults are found under rocks and logs in humid forests, near mountain streams, or on rocky shores of mountain lakes. Larvae feed on wide variety of aquatic invertebrates as well as some small vertebrates (e.g., fishes, tadpoles, or other larval salamanders). Adults eat terrestrial invertebrates, small snakes, shrews, and salamanders.
Western/Boreal Toad <i>Anaxyrus boreas</i> and Eastern/Boreal Toad <i>Anayrkus boreas boreas</i>	Streams, springs, grasslands, woodlands, mountain meadows. Usually in and/or near ponds, lakes, reservoirs, rivers, streams. Insectivorous.

**7.5.2 Environmental Effects from Alternative A (Proposed Action):**

Potential effects to riparian habitats would be discountable from project implementation and would occur from placement of rip-rap (rock) for stabilization of an eroding streambank (approximately 20-feet). Seeding and plantings of disturbed areas would establish desirable vegetation in the project area. Short term disturbance (two weeks) or displacement to wildlife species utilizing habitats in proximity to the project area potentially would occur, such impacts are considered negligible. Project implementation would occur during low-flow periods, which would avoid primary spring nesting periods and minimize or avoid impacts to migratory birds. Potential effects to BLM sensitive species (see Table 5 and 6 above) and preferred habitat is considered low-risk because of the small area that may be disturbed during project implementation (less than 0.05 – 0.1 acre). Overall, potential impacts to wildlife species and habitats are considered negligible because of the small area disturbed.

**7.5.3 Environmental Effects from Alternative B (No Action):**

No adverse effects to wildlife habitats or wildlife species would occur.

**7.5.4 Cumulative Effects:**

Natural events, such as wildfires, landslides, and debris torrents have impacted riparian and upland wildlife habitats to varying levels. The most recent event was the 2015 Tepee Springs Wildfire which burned 81% of the Partridge Creek watershed. Consequently, the large majority of riparian, grassland, and forest habitats experienced varying levels of burn severity (e.g., low to high).

Within the analysis watershed the primary man caused historic impacts to riparian and upland habitats have occurred from road construction and maintenance (e.g., stream bottom roads and crossings), timber harvest, and livestock grazing. A residence has been constructed in the stream bottom area downstream from the project area. It is expected that foreseeable future actions would include road maintenance and fire

salvage logging that would occur on private and State lands. Livestock (cattle) grazing would also continue to occur in the watershed. The majority of the watershed is roadless (Payette National Forest) and minimal human impacts have occurred in these areas.

The proposed action alternative, in combination with past, present, and reasonably foreseeable future actions would have discountable effects to wildlife species and habitats within the cumulative effects analysis area; which includes the project area and Partridge Creek watershed.

## **7.6 Invasive Species:**

### *7.6.1 Affected Environment:*

The project occurs within the Salmon River Weed Management Area (WMA), a cooperative partnership effort to manage weeds across ownerships. Cooperators meet regularly to develop management plans and annual operating plans to most effectively manage weeds in the area. The bridge is also located in the BLM's Partridge Creek weed site with control actions implemented in accordance with the Cottonwood Integrated Weed Treatment Program (DOI-BLM-IC020-2011-0017-EA). Weed inventories show spotted knapweed and rush skeletonweed in the area. The general project area was impacted by the Tepee Springs fire. BLM's Emergency Stabilization and Rehabilitation (ESR) plan for the Tepee Springs Fire includes implementing focused inventory and treatment, if necessary of weeds in the Partridge Creek area for three years post fire.

### *7.6.2 Environmental Effects from Alternative A (Proposed Action):*

The project may result in minor disturbance of vegetation along the bank of Partridge Creek during placement of riprap which may expose bare soils that could provide opportunity for weed establishment. The project would include use of heavy equipment and increased short-term vehicle use in the general project area which could also result in vegetation disturbance in staging and working areas. The vehicles may also be a spread vector for transport of weed seeds.

Project design features include seeding and mulching of any bare soils after disturbance to provide desirable, competitive vegetation to reduce the opportunity for weed establishment. Due to current vegetation in the project area, establishment of desired species may reduce potential for weed persistence at the project site when compared to the no action alternative. Since the project area is in a BLM weed treatment site, management actions including inventory and treatment are in place. Due to the Tepee Springs fire, additional patrol and treatment emphasis will occur in the Partridge Creek drainage to address potential weed spread from the fire for the next three years. Due to project design features, ongoing management of weeds through the WMA, and increased emphasis for inventory and treatment through the ESR program, it is unlikely there will be negative effects of the project in relation to weed establishment, persistence, or expansion. Establishment of desired vegetation as a result of the project would be a beneficial impact of the proposed action.

### *7.6.3 Environmental Effects from Alternative B (No Action):*

Impacts of the no action alternative in relation to weed establishment, persistence and spread would be similar to alternative A, unlikely for negative effects. Although there is slightly less potential for weed introduction due to weed spread vectors and disturbance.

### *7.6.4 Cumulative Effects*

Due to the minimal footprint of this project and unlikely potential for negative impacts in relation to weed introduction, persistence or expansion, the project will not contribute to cumulative effect impacts.

## **7.7 Travel Management:**

### *7.7.1 Affected Environment:*

The project area is located in the lower portion of the Partridge Creek watershed. The analysis area includes the project area, Partridge Creek watershed, and motorized vehicle access routes that are accessed by the project area bridge/stream crossing. The lower Partridge Creek Bridge provides access to the only road providing motorized access to Partridge Creek drainage and adjacent Warm Springs watershed. This access route provides access to a residence used seasonally located on the east side of Partridge Creek, a recreational cabin, hay fields, access for ranching/farming activities, recreational access, timber harvest activities, fire suppression activity, and access to private and public lands.

The Partridge Creek Bridge Repair Project occurs on private lands and the BLM has a perpetual exclusive easement for the approach access road and bridge (project area). The easement where the project area is located is T. 24 N., R. 3 East, Section 19, Lot 5. The easement includes a strip of lands that has a width of 66 feet (i.e., 33 feet on each side of the centerline). The perpetual exclusive easement authorizes the BLM to maintain, improve and repair a road (includes bridge) that occurs within the easement boundary.

### *7.7.2 Environmental Effects from Alternative A (Proposed Action):*

Implementation of the required maintenance and repair on the Partridge Creek Bridge will provide for safe motorized vehicle use and access in the Partridge Creek area. The scoured and undercut abutment will be stabilized to prevent additional scouring and protect the bridge from high flow events.

### *7.7.3 Environmental Effects from Alternative B (No Action):*

Existing conditions and trends would occur for the stream channel at the bridge crossing. The bridge would be at high risk for increased abutment scouring and failure and increased bank erosion would occur upstream from the bridge. An emergency closure and restriction order was issued by the Cottonwood Field Office January 27, 2016. Partridge Creek Bridge #1 is now closed to all motorized traffic. Not implementing required maintenance and repair on the Partridge Creek Bridge will preclude access to BLM managed public lands, IDL managed lands, a private residence and private agricultural lands. Thus impacting access to a residence used seasonally located on the east side of Partridge Creek, a recreational cabin, hay fields,

ranching/farming activities, recreational, timber harvest activities, and fire suppression activity on private and public lands.

#### *7.7.4 Cumulative Effects*

The lower Partridge Creek Bridge provides access to the only road providing motorized access to Partridge Creek drainage and adjacent Warm Springs watershed. Motorized access and private and public land management within the drainage is dependent on this access route and bridge repairs would maintain existing access to the area. Access would be provided for timely fire salvage harvest on private and State lands. Additional road maintenance or hazard tree removal would occur as a result of the 2015 Tepee Springs Fire. Overall, the proposed action alternative, in combination with past, present, and reasonably foreseeable future actions would have no cumulative effects in regarding to changing historic travel management within the Partridge Creek area.

### **7.8 Special Designations – Areas of Critical Environmental Concern and Wild and Scenic Rivers**

#### *7.8.1 Affected Environment:*

The general analysis area for the proposed project includes BLM lands within the Upper Salmon River Area of Critical Environmental Concern (ACEC) and the Salmon River corridor from White Bird Creek to French Creek. The objectives for the ACEC are to protect and conserve scenic values, cultural resources, federally listed and BLM sensitive fish, wildlife and plants (BLM 2009).

The 112 mile segment of the Lower Salmon River, Long Tom Bar to the confluence of the Snake River was recommended to Congress for inclusion in the National Wild and Scenic River System (NWSRS). The project area occurs within the 0.25 mile river corridor that was recommended for Recreational designation. The outstanding remarkable values (ORV) identified for the Salmon River for inclusion in the NWSRS include: fishery and wildlife; archeology and historical; and outstanding recreation area in a scenic mountainous canyon.

For additional information regarding specific project related affected environment values that may directly or indirectly impact the high resource values for ACECs or ORVs for NWSRS inclusion refer to previous sections in this document (Section 7.2, 7.3, 7.4 and 7.5).

#### *7.8.2 Environmental Effects from Alternative A (Proposed Action):*

Implementation of the proposed action would have short term discountable impacts to the high resource values identified for the Upper Salmon River ACEC and Salmon River ORVs for fisheries and wildlife. Short term minor and discountable erosion, sediment, or turbidity would occur from project implementation. Long term reduction from erosion and sediment would occur from stream bank and abutment stabilization and bridge repair. Short term negligible potential disturbance to fish, wildlife, or habitats within the project area would occur. Refer to Sections 7.2, 7.3, 7.4, and 7.5, *Environmental Effects from Alternative A*, for additional environmental effects. No adverse effects to scenic, recreation, or cultural resources would occur from project implementation.

#### *7.8.3 Environmental Effects from Alternative B (No Action):*

No adverse impacts to the high resource values identified for the Upper Salmon River ACEC or Salmon River ORVs for inclusion in NWSRS would occur. Current conditions and trends for resources would be expected to occur. Localized minor erosion and sediment would continue from streambank erosion and abutment scouring (current conditions and trends).

#### *7.8.4 Cumulative Effects*

Overall, the small localized area impacted in the short term and discountable or no impacts to high resource values or ORVs is expected. The proposed action alternative, in combination with past, present, and reasonably foreseeable future actions would have no cumulative adverse effect to the Upper Salmon River ACEC or Salmon River ORVs for inclusion in the NWSRS.

### **8.0 Tribes, Individuals, Organization, or Agencies Consulted**

Consultation under section 7 of the Endangered Species Act is ongoing for ESA-listed wildlife and fish. BLM coordinated and consulted with NOAA Fisheries and USFWS biologists in preparing a biological assessment specific to the Proposed Action (BLM 2016).

The BLM sent a letter describing the proposal to the Nez Perce Tribe on November 20, 2015. Coordination with the Tribe did not identify any concerns for traditional cultural properties or their ability to exercise treaty rights.

The Nez Perce Tribe has been coordinated with in regards to the review of the proposed action and review of a draft Environmental Assessment.

Consultation under section 106 of the National Historic Preservation Act with the Idaho State Historic Preservation Office was completed.

Coordination with the U.S. Army Corps of Engineers, Idaho Department of Water Resources, and Idaho Department of Environmental Quality has been conducted regarding the permitting process for the project.

### **9.0 List of Preparers**

Craig Johnson: Soils/Water, Riparian, Fisheries, Wildlife

Mike Stevenson: Soils/Water

David Sisson: Cultural Resources

Lynn Danly: Invasive Species

Scott Pavey: Planning and Environmental Coordinator

### **10.0 References Cited**

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## **11.0 Attachments**

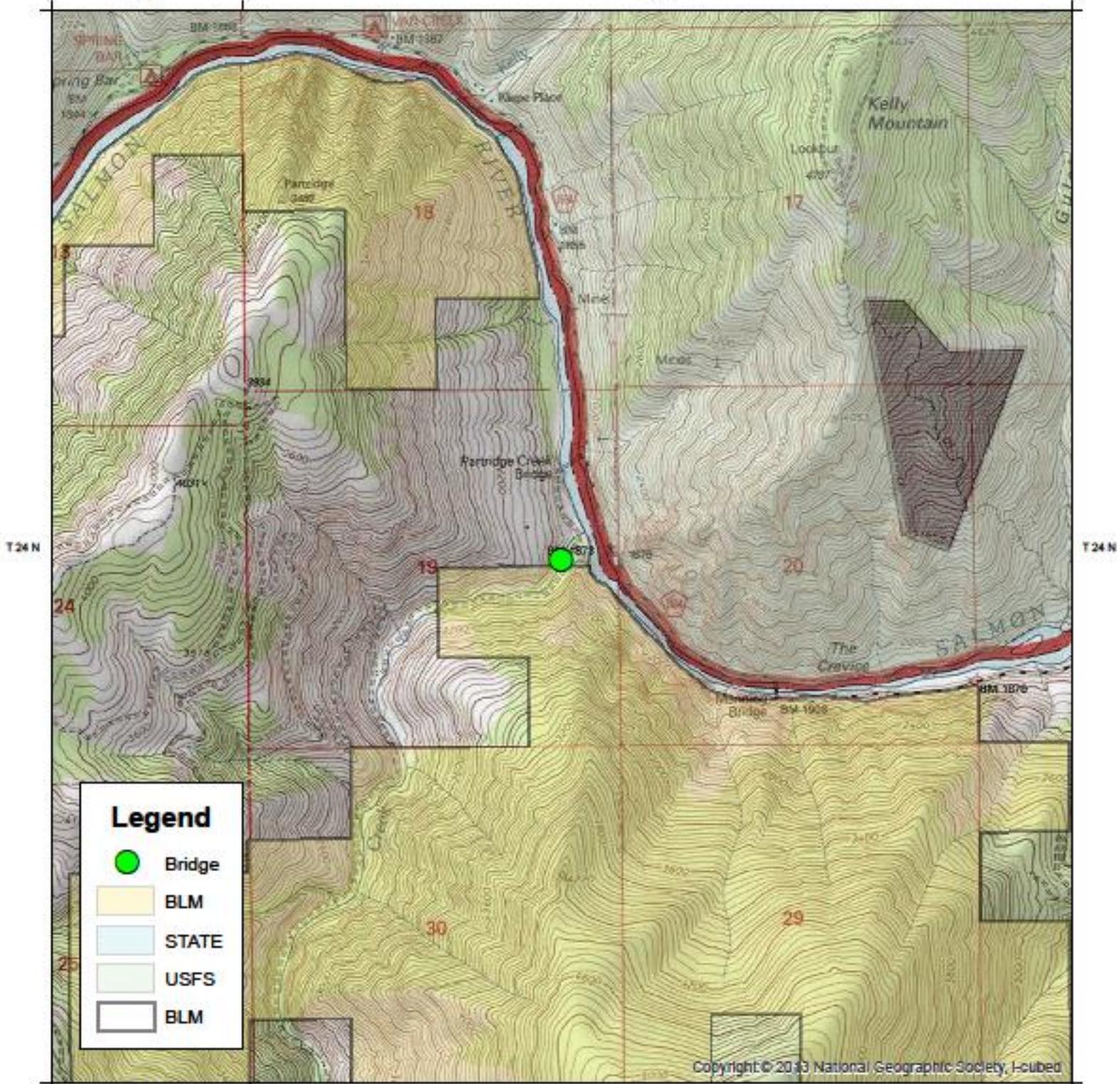
1) [Map](#)

# Partridge Creek Bridge Repair

## DOI-BLM-ID-C020-2016-0005-EA

R2E

R3E



### Legend

-  Bridge
-  BLM
-  STATE
-  USFS
-  BLM

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R2E

R3E



The surface management status ("land ownership") should be used as a general guide only. Official land records, located at the Bureau of Land Management (BLM) and other offices, should be checked for up-to-date information concerning any specific tract of land.

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Map Created: 11/19/2015

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Map Projection: NAD 1983 UTM Zone 11N

