



Biological Assessment

for the Montana Department of Transportation
and Federal Highway Administration

Taft - West

IM 90-1(227)0

UPN 9487000

Mineral County, Montana

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Prepared for:



Prepared by:





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1 Introduction

The purpose of this Biological Assessment (BA) is to assess the effects of a construction project proposed by the Montana Department of Transportation (MDT) on federally listed, proposed, and candidate species in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended.

1.1 Federal Nexus

Section 7 of the ESA of 1973 (as amended) directs federal agencies to ensure that actions they authorize, fund, and/or conduct are not likely to jeopardize the continued existence of any federally proposed or listed species or result in destruction or adverse modification of critical habitat for such species. Section 7(c) of the ESA requires that federal agencies contact the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) before beginning any construction activity to determine if federally listed threatened and endangered (T&E) species or designated critical habitat may be present in the vicinity of a proposed project. A BA must be prepared if actions by a federal agency, or permits issued by a federal agency, will result in effects to T&E species that occur in the vicinity of a proposed project. With respect to the proposed action, the Federal Highway Administration (FHWA) is the federal agency funding the project. The proposed project is anticipated to require a Clean Water Act (CWA) Section 404 permit.

1.2 Project Description and Location

MDT, in partnership with the FHWA, is proposing a surfacing reconstruction of the interstate to the geometry and standards in place at the time of original construction or inclusion in the interstate system and replace the existing plant mix bituminous surface with Portland Cement Concrete Pavement (PCCP). Pavement preservation, or mill and overlay, is included on the Lookout Pass Interchange ramps and Taft Interchange ramps. The project will also include drainage, environmental [e.g., Permanent Erosion and Sediment Control measures], traffic, and safety improvements.

I-90 is the only east/west interstate highway connecting Montana with Idaho and Washington to the west. This corridor is heavily used by tourists and truck traffic carrying various goods throughout the region. I-90 within the project limits had an annual average daily traffic (AADT) count of 7,500 in 2020.

The project is located in Mineral County on I-90 from the Idaho border at reference post (RP) 0.0 to the Taft Interchange at RP 5.7. The project is located within the Lolo National Forest. The project area is within Protracted Block 49 of Township 20 North, Range 32 West and Sections 2, 3, 4, 5, 11, and 12 of Township 19 North, Range 32 West, Montana Principal Meridian. The project limits and general project area are shown in Figure 1-1.

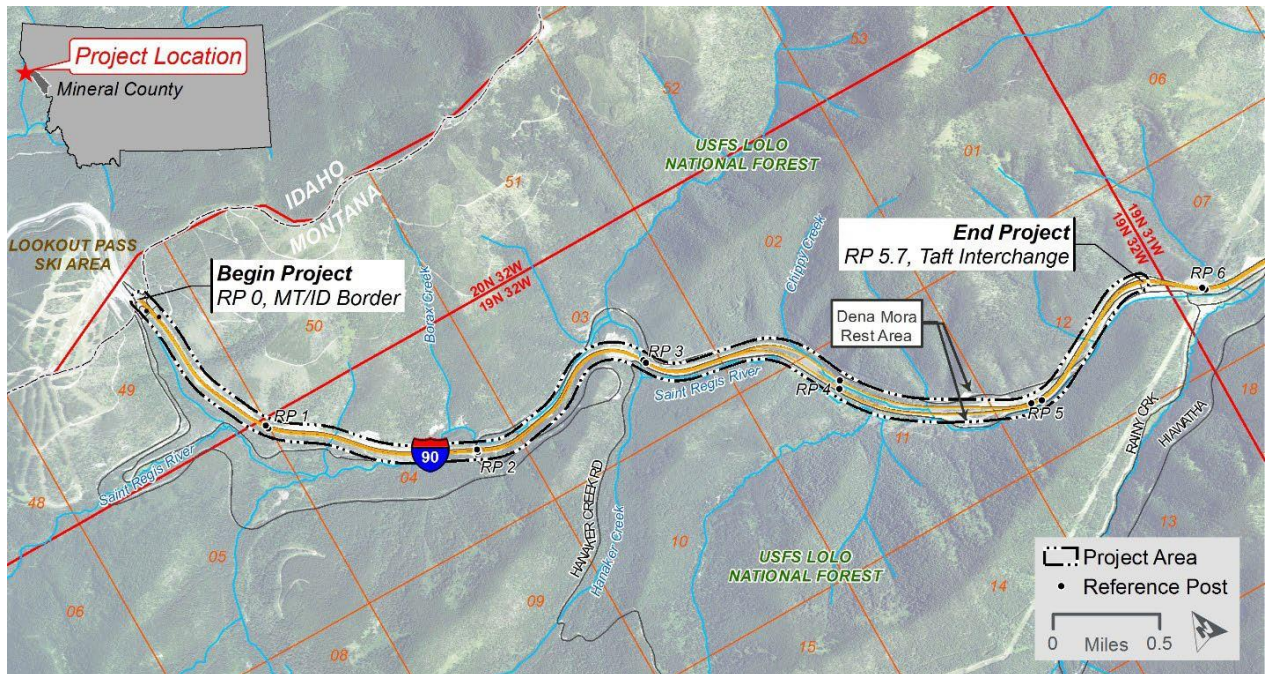


Figure 1-1. Project Area and Vicinity Map

1.3 Proposed Action

The purpose of this project is to remove the existing plant mix bituminous surface that is deteriorating due to the harsh weather environment in this area. The plant mix will be replaced with a more durable concrete surface. Additional improvements to drainage, signing and roadway lighting are also included. This section of I-90 is located within the Lolo National Forest in rugged, mountainous terrain. The project roughly parallels the upper reaches of the St. Regis River from RP 1.7 to RP 5.7. The adjacent terrain is heavily forested and sparsely populated. Local access is provided at two interchanges including Lookout Pass (RP 0.2) and Taft (RP 5.7). The Dena Mora Rest Area is located at RP 4.7.

1.3.1 Roadway Width and Ditch Configuration

The first 3.4 miles of the project from RP 0.0 to RP 3.4 (Sta. 1+09 to 180+02) has an undivided four-lane interstate typical section consisting of four 12-ft lanes, a 10-ft flush median, and two 10-ft outside shoulders. For about 600 feet at the Lookout Pass Interchange the shoulders are 14-ft wide. The median has concrete barrier installed throughout the section and varies between tall and standard height (see Section 1.3.4). In addition to the Lookout Pass Interchange bridge crossing over I-90, this section has a bridge crossing over the old Northern Pacific railroad grade at RP 1.9 (Sta. 105+45) and crosses the St. Regis River twice using large culverts. There are ten horizontal curves and four vertical curves in the first section.

The section of Interstate from RP 3.4 to RP 4.8 (Sta. 180+02 to 257+85) is divided into two independent alignments, eastbound and westbound. The typical section for both the eastbound and westbound sides is two 12-ft lanes, a 4-ft inside shoulder, and a 10-ft outside shoulder. There is roughly a 200-ft wide median between the two alignments through most of this section. The median has a mixture of open grassy and forested areas with mature trees. There is one authorized-vehicle-only turnaround at RP 4.2 (Sta. 222+85). Chippy Creek runs in the median from RP 3.8 to RP 4.3

(Sta. 213+69 to 227+98). This section also includes the Dena Mora Rest Area at RP 4.7 (Sta. 254+00). There is a westbound chain-up area from RP 3.5 to RP 3.9 (Sta. 191+68 to 200+00) and an eastbound chain removal area from RP 4.4 to RP 4.6 (Sta. 238+05 to 248+36). There are three horizontal curves for both the eastbound and westbound lanes. There are four vertical curves for eastbound and five vertical curves for the westbound lane. This divided section ends within the middle of a horizontal and vertical curve for both alignments.

The last section of I-90 from RP 4.8 to RP 5.7 (Sta. 257+85 to 300+38) is an undivided alignment with four 12-ft lanes, a 10-ft flush median, and two 10-ft outside shoulders. The median has concrete barrier installed throughout the section and varies from tall to standard height. This section has two bridges and ends at the Taft Interchange. One bridge crosses over the old Northern Pacific railroad grade at RP 5.1 (Sta. 272+69) and the other bridge is the I-90 overpass at the Taft Interchange, approximately RP 4.8 (Sta. 300+38).

The proposed finished top width of I-90 will match the existing condition and consist of two 12-ft lanes, a 10-ft flush median, and 10-ft outside shoulders, in the undivided sections, and two 12-ft lanes, 10-ft outside shoulders, and 4-ft inside shoulders in the divided sections. Pullout, chain-up and chain removal areas will be perpetuated and will match existing conditions. The Lookout Pass Interchange, Dena Mora Rest Area and Taft Interchange ramps will match existing and consist of 6-ft outside shoulders, 15-ft lane (Dena Mora Rest Area and Taft Interchange) or 16-ft lane (Lookout Pass Interchange) and 4-ft inside shoulders.

The standard ditch width for a rural interstate is 10-ft; however, a maximum 4-ft wide ditch is proposed throughout the project limits to match existing conditions and eliminate additional grading and associated environmental impacts. By matching the existing conditions, right-of-way impacts to the adjacent Lolo National Forest will not be required.

1.3.2 Hydraulics

The project includes mainline culvert crossings, storm drain infrastructure, and floodplains. The area is subject to significant snowfall (typically exceeds 400 inches annually at Lookout Pass) which contributes to drainage challenges.

The project includes minor drainage culverts (42 inches and smaller) and major drainage culverts (48 inches and larger), with multiple mainline culvert crossings located in deep fill locations (greater than 15 feet of fill). The design of culvert replacements in deep fill locations will reference MDT's updated Hydraulics Manual. Where possible, culverts located under the Frontage Road will not be replaced by the project. All mainline culvert crossings, except for major culvert crossings in deep fill locations, will be replaced with minimum 30-inch culverts.

Due to the corrosive nature of the site and heavy salt operations, all proposed crossings will be installed using an open-cut method and will consist of reinforced concrete pipe (RCP). Where mainline culvert crossings outfall to steep slopes, spillway assemblies with down drains will convey flow to the toe of the slope. Alternative pipe materials determined in accordance with MDT's updated Hydraulics Manual will be considered for down drains to facilitate installation on steep slopes. Culvert outlet protection and/or velocity dissipation devices will be incorporated at the outfall of down drains. Multiple 30-inch mainline culvert crossings have end treatments located within the clear zone. The incorporation of safety end sections will be considered while taking into consideration a potential increase in maintenance and corrosion due to salt. Five major culvert crossings are located in deep fill locations as follows:

- Station 29+24: 48-inch CMP (unnamed drainage)
- Station 70+62: 48-inch CMP (unnamed drainage)
- Station 93+82: 180-inch SSPP (St. Regis River crossing)
- Station 157+90: Double barrel 108-inch SSPP (St. Regis River crossing)
- Station 280+43: 48-inch CMP (unnamed drainage)

The three 48-inch culvert crossings are proposed to be rehabilitated (e.g., slip lining or cured-in-place pipe (CIPP) liners), rather than replaced due to the deep fills and extra conveyance capacity exhibited at these locations. For the two St. Regis River crossings, both are located within a FEMA regulatory floodplain associated with the St. Regis River and will be rehabilitated in place, with current considerations consisting of slip lining and an in-place installation of a concrete invert. No stream channel impacts are proposed for the two St. Regis River crossings.

The majority of the existing storm drain infrastructure within the project limits will be removed and replaced with a new storm drain system. Where possible, existing infrastructure will be left in place. New storm drain infrastructure will include drop inlets, median inlets, and storm drain piping. Where storm drain pipes outfall to steep slopes, spillway assemblies with down drains will be used (see above for details). Sediment basins will be incorporated where practicable along the project to limit sediment transport offsite. Pavement edge drains are proposed along the project to assist with the removal of water from the pavement section and promote pavement longevity. Edge drains will be integrated into the storm drain system facilities as design progresses.

Near Lookout Pass, an existing CMP flume is present on the north side of I-90. The flume extends into Idaho, and collects runoff from the hillside, which also includes springs, and conveys runoff to a 48-inch mainline (broken-back) culvert crossing under I-90, which is likely to be replaced in-kind as part of the project. The flume is in poor condition and options to rehabilitate or replace the flume will be evaluated as design proceeds.

1.3.3 Safety Enhancements

Roadway lighting will be upgraded to meet current MDT Highway Lighting Design Standards at the chain-up/removal areas. Additional signing will also be installed along the chain-up/removal areas to help inform drivers of the location and length of the pullout area. By adding chain-up/removal signage, it will help increase the utilization of the full paved area. Roadway lighting will also be upgraded at the Lookout Pass Interchange to increase safety and awareness for drivers accessing the ramp and merging onto the interstate.

Curve warning signs and chevrons will be updated to meet current MDT standards at the curve near RP 5.0 to help address crash trends that have been identified at this location. New lineal delineation will also be placed where concrete barrier is proposed on both the inside and outside of the curve to help guide drivers through the horizontal curve. New wildlife crossing signs will also be considered between RP 3.3 and 5.1 to address the wildlife-vehicle collision crashes along this stretch of divided interstate where animal/vehicle collisions are common.

1.3.4 Concrete Barrier Rail

Existing concrete barrier rail will be replaced where warranted throughout the project. The existing 2-loop barriers will be replaced with 3-loop barriers throughout the project limits. The existing median concrete barrier will be replaced with new tall concrete barrier in the undivided interstate sections

except in areas where emergency turnarounds are being perpetuated. Standard concrete barrier will be used adjacent to the emergency turnarounds in order to maintain sight distance for vehicles utilizing the turnaround. Standard concrete barrier rail that stands 2'-8" tall will be replaced with taller median rail that stands 3'-10" tall, and increase in height of 14" between barrier types. The use of MDT's tall barrier with an 8-in wider base will result in the safety step encroachment 4 inches onto each inside shoulder. The impact face and shy distance provided will remain 4-ft or greater from the traveled way constituting a shoulder meeting standards and the intent of separation from the barrier providing positive protection between the directions of travel. This minor encroachment is offset by the use of the heavier, more stable barrier that provides reduced dynamic deflection and potential of vehicle overhang/rollover when impacted, and reduced headlight glare from opposing traffic at night. Drainage patterns will be evaluated as part of the concrete barrier placement and the standard scupper will be eliminated in order to convey surface drainage to the new stormwater inlets.

1.4 Conservation Measures

The following conservation measures and construction Best Management Practices (BMPs) will be implemented for the project:

- The proposed project will be constructed in accordance with the applicable environmental standard specifications found in the current MDT *Standard and Supplemental Specifications for Road and Bridge Construction*. The standard specification 208 – Environmental Protection will be included in the final construction documents and specific components of the specification include, but are not limited to:
 - Section 208.03.1 – Water Pollution Control
 - Section 208.03.2 – Aquatic Resource Protection
 - Section 208.03.4(A) – Migratory Bird Treaty Act
 - Section 208.03.4(E) – Bear Habitat
- Additional standard BMPs will be implemented with the project to include:
 - Reduction of project duration and length of time soils are allowed to remain unprotected.
 - Minimizing the site disturbance to only the area absolutely necessary to complete the project.
 - Clearing and grubbing should not be allowed within the right-of-way (ROW) beyond the construction limits or required clear zone. Any temporary clearing outside the construction limits (e.g., for culvert installation, etc.) but within the ROW should be kept to the smallest area possible and reclaimed immediately following construction.
 - Minimize impact on riparian vegetation fringing the project area and the St. Regis River to the greatest extent practicable.
 - All excavated material that cannot be reused as backfill will be contained and hauled off site.
 - Stabilize exposed soils with a desirable native vegetation community as soon as feasible.

In addition to the standard specifications the following Special Provision will be included in the contract documents:

- GRIZZLY BEAR – ENDANGERED SPECIES ACT (REVISED 04/07/2022M)
 - Description. This project is located within grizzly bear habitat. Comply with this provision to minimize impacts to the grizzly bear, which is a federally listed species under the Endangered Species Act. Not following the conditions set forth in this special provision may result in a violation of the Endangered Species Act.
 - Requirements.
 - Follow the requirements of Subsection 208.03.4(E) for all project activities.
 - Notify the Project Manager of any animal carcasses found in the area. The Project Manager will contact MDT Maintenance to promptly remove and dispose of carcasses.
 - Notify the Project Manager of any bears observed in the vicinity of the project. The Project Manager will promptly inform the MDT District Biologist of bear observations.
 - Conduct project-related activities outside of construction limits in accordance with the requirements above and Subsection 208.03.4(E).
 - Measurement and Basis of Payment. Requirements in this provision are not measured for payment.

2 Action Area and Environmental Baseline

2.1 Action Area

The action area for the proposed project is defined as “all areas to be affected directly or indirectly by the proposed action and not merely the immediate area directly adjacent to the action” (50 CFR §402.02). Project components that pose potential effects include construction noise and clearing and grading resulting from construction activities and operation of the highway facility.

The Washington Department of Transportation (WSDOT) BA Preparation Manual (2018) was used to determine an applicable terrestrial action area based on the potential for noise associated with operation of construction equipment. Blasting is not currently anticipated for the project but is referenced here to provide a worst-case scenario approach in determining the terrestrial action area and area of potential effect caused by noise. The maximum noise level potentially generated during blasting is conservatively estimated to be 94 dBA (in-air) as measured 50 feet from the device (WSDOT 2018). Using a point-source sound attenuation model where a 7.5 dB noise reduction occurs per doubling distance from the activity (over soft ground) and calculating the distance construction noise attenuates to existing traffic noise levels (assumed to be 74 dBA based on existing traffic noise), construction noise should attenuate to baseline levels approximately 5,000 feet from the proposed project. Topography and site characteristics can affect the propagation of sound, and the forested mountains surrounding the project area would likely reduce the extent of noise; however, a distance of one mile extending from the approximate construction limits provides a

conservative estimate for the terrestrial action area. The locations of the construction contractors' staging and equipment areas are unknown, but these sites would be located within existing ROW and/or previously disturbed areas along existing roadways.

An aquatic action area was defined as areas of the St. Regis River within a distance of 500 feet from the highway. The aquatic action area extends approximately 500 feet downstream from the end of the project. Refer to Figure 2-1 for the project action areas.

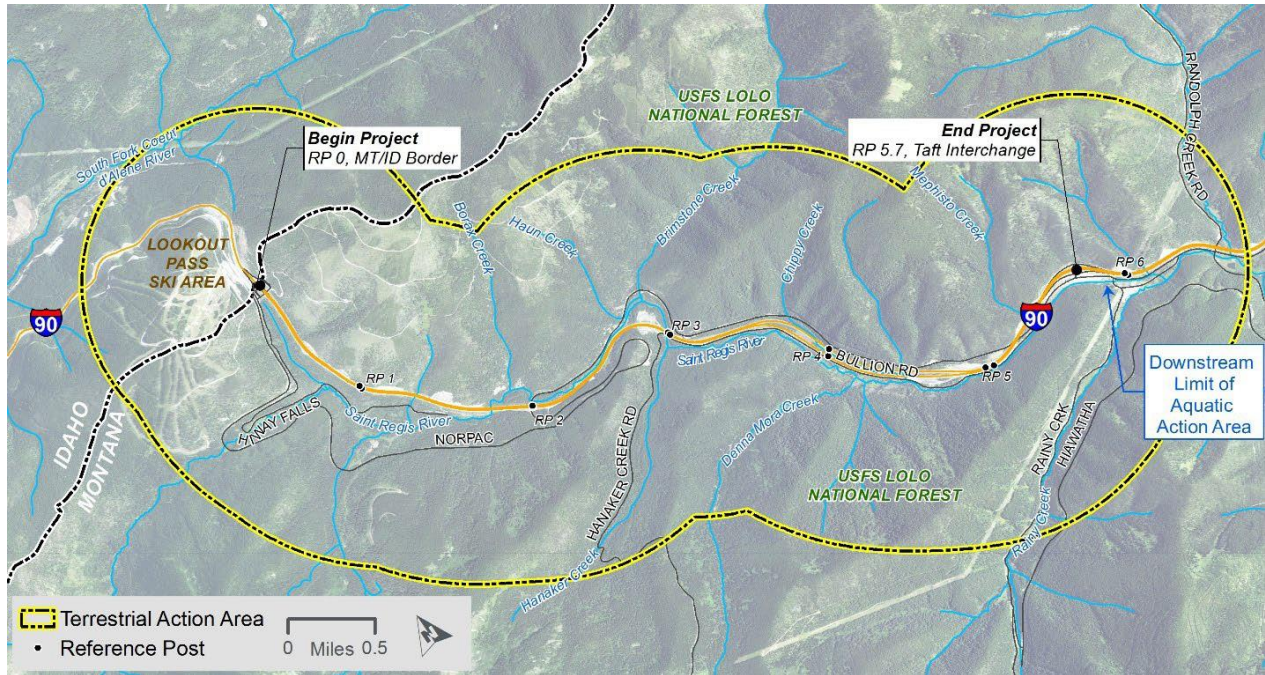


Figure 2-1. Project Action Area

2.2 Environmental Baseline

Regulations implementing the ESA (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area.

2.2.1 Project Setting

Information reported within the following sections were obtained from a combination of literature and database searches and on-site field investigations conducted June 19-20, 2021, as reported in the final Biological Resource Report dated November 5, 2021.

Land Use and Land Ownership

Land use in the project area vicinity is predominantly undeveloped National Forest land. Within the immediate project area, transportation land uses include the interstate ROW, as well as some frontage roads and logging roads. The Lookout Pass Ski Area is located at the west end of the project area at the Idaho border, near RP 0.0. The Dena Mora Rest Area is located within the project area on both the eastbound and westbound directions at approximately RP 4.7 (see Figure 1-1). There is an MDT maintenance facility located at RP 5.7 at the east end of the project area. There are no residential or commercial land uses or structures in the project area.

The project is located within the Lolo National Forest and land ownership adjacent to MDT ROW is under the jurisdiction of the U.S. Forest Service (USFS). No private land exists within or adjacent to the project area. Interstate ROW is owned by MDT and no new ROW is anticipated to construct the project.

Vegetation and Land Cover Type

During preparation of the BRR for this project, the Montana Natural Heritage Program (MTNHP) provided a custom Environmental Summary report for the project area and vicinity (which includes the defined Action Area) that included a review of the MTNHP Land Cover framework layer. Land cover types are grouped into general ecological systems that represent groups of biological communities that are found in similar physical environments and are influenced by similar ecological processes. The project area vicinity is predominantly mapped as “Rocky Mountain Mesic Montane Mixed Conifer Forest” (MTNHP 2021). Additional land cover types located in the project area vicinity include “Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland”, “Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest”, and “Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland”.

Forested habitat in the project area is predominantly lodgepole pine (*Pinus contorta*) dominated stands but also includes mixed stands of western larch (*Larix occidentalis*), Engelmann spruce (*Picea engelmannii*), western white pine (*Pinus monticola*), and Douglas-fir (*Pseudotsuga menziesii*). Shrubs noted in the project area include common snowberry (*Symphoricarpos albus*), Douglas’s hawthorn (*Crataegus douglasii*), red-osier dogwood (*Cornus sericea*), willow (*Salix spp.*), alderleaf buckthorn (*Rhamnus alnifolia*), Saskatoon serviceberry (*Amelanchier alnifolia*), common huckleberry (*Vaccinium membranaceum*), and speckled alder (*Alnus incana*).

Typical roadside vegetation consisted of several common grasses, forbs, and weeds. Grasses documented in the project area typically included a mix of meadow timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), and western wheatgrass (*Elymus smithii*). Common forbs observed included yellow sweet-clover (*Melilotus officinalis*), common yarrow (*Achillea millefolium*), and Virginia strawberry (*Fragaria virginiana*). Common weeds observed included spotted knapweed (*Centaurea stoebe*), Canada thistle (*Cirsium arvense*), leafy spurge (*Euphorbia virgata*), oxeye daisy (*Leucanthemum vulgare*), and common tansy (*Tanacetum vulgare*).

Waterways

The St. Regis River is the most prominent surface water within the project area and generally flows southeasterly direction for nearly 39 miles before entering the Clark Fork River at St. Regis, MT. The St. Regis River originates at the St. Regis Lakes approximately 3 miles southwest of Lookout Pass and the St. Regis watershed encompasses 365 square miles of mostly federally owned land (DEQ 2008). The St. Regis River parallels I-90 throughout most of the project’s 5.7-mile length and enters the project area and crosses I-90 from the south to the north side of the highway at approximately RP 1.75 through a single 108” CMP culvert. The river parallels I-90 from approximately RP 2.0 to 2.7, flows outside the project area, then re-enters the project area and flows underneath I-90 at approximately RP 3.0 through two 180” CMPs and remains on the south side of I-90, intermittently passing in/out of the project area, and periodically is located directly adjacent to the highway embankment slope.

Other named creeks that pass through the project area include Chippy Creek and Mephisto Creek. Chippy Creek enters the project area from the north at approximately RP 3.9 and flows within the

center median to approximately RP 4.5, then flows south under the eastbound lane and into the St. Regis River. The open channel portions of Chippy Creek were delineated as shown in Appendix B and includes fringing wetlands. Mephisto Creek flows from the north and under I-90 at approximately RP 5.35; no open channels of this creek were identified or delineated during the field investigation and this creek is likely confined to a culvert within the project limits.

Several other named creeks (i.e., Borax, Haun, Hanaker, Brimstone, Denna Mora, and Hilda) are tributaries to the St. Regis River that occur within the greater action area, but do not enter the immediate project area. Numerous additional unnamed creeks and drainages were identified during the field investigation.

3 Threatened and Endangered Species Biological Assessment

Section 7 of the ESA [16 U.S.C. 1531 *et seq.*] outlines the procedures for Federal interagency cooperation to protect federally listed species and conserve designated critical habitats. Section 7 requires Federal agencies to determine the effects of the proposed action on threatened, endangered, and proposed species and to consult with the USFWS for concurrence on the determination of effect. This section provides the Biological Assessment of the proposed action's effect on federally listed species and designated critical habitats.

3.1 Methods

Information reported within this section was obtained from a review of literature and database searches and on-site field observations. A list of federally listed endangered, threatened, proposed, and candidate species to be considered for this project was generated based on USFWS data obtained online. The project area was examined using the USFWS Information for Planning and Conservation (IPaC) tool to generate a list of species likely to occur in the project area and identify critical habitat in the vicinity of the project (USFWS 2023a). Table 3-1 below identifies the federally listed species, along with their respective federal status, that were identified as potentially present in the Action Area. Despite the species not showing up on the IPaC report, the potential effects of this project on the threatened grizzly bear (*Ursus arctos horribilis*) are considered in this BA because the species is likely to occur in the project vicinity and was included in the Preliminary Biological Assessment (PBA) prepared for this project in 2021.

Table 3-1. Federally Listed Species Potentially Present in the Action Area

Common Name	Scientific Name	Status ^a	Critical Habitat in Action Area?
Canada Lynx	<i>Lynx canadensis</i>	LT	No
Grizzly Bear	<i>Ursus arctos horribilis</i>	LT	No
Bull Trout	<i>Salvelinus confluentus</i>	LT	No
North American Wolverine	<i>Gulo gulo luscus</i>	P	No
Whitebark Pine	<i>Pinus albicaulis</i>	LT	No
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	LT	No
Monarch Butterfly	<i>Danaus plexippus</i>	C	No
Sources: USFWS 2023a			
^a LT = Listed Threatened; P = Proposed; C = Candidate			

3.2 Previous Effect Determinations in the Preliminary Biological Assessment

A Preliminary Biological Assessment (PBA) was completed for the proposed project on November 5, 2021. The November 2021 PBA assessed the proposed project’s potential effects on the species listed in Table 3-1. Based on the analysis presented in the PBA, **may affect** determinations were rendered with regard to grizzly bear and Canada lynx. Based on this preliminary determination, it was identified that the proposed project develop a final BA to further evaluate potential effects to these species based on the most current project design details. For bull trout, whitebark pine, and yellow-billed cuckoo (threatened species), a **no effect** determination was rendered in the PBA, and, monarch butterfly (candidate), a **not likely to jeopardize the continued existence of** determination was rendered in the PBA. Based on these effect determinations, no further analysis on these species is deemed necessary in this BA. It should be noted that the listing status of whitebark pine has been changed from proposed to threatened since preparation of the PBA. This status change means the determination of effect has been changed from **not likely to jeopardize the continued existence of** to **no effect**. No impact to this species will occur and no further evaluation is deemed necessary for whitebark pine.

At the time of the PBA, the proposed status of North American Wolverine (*Gulo gulo luscus*) had been withdrawn from consideration and therefore the species was not discussed in that document. Since that time, the species has been reinstated as a proposed threatened species with a final determination on its status expected in November 2023. In order to address the potential impacts of this proposed project on the wolverine, the species is addressed in greater detail in this BA.

3.3 Potential Cumulative Effects Analysis

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this preliminary biological assessment (USFWS 1998). Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA (USFWS 1998). A cumulative impacts analysis examines the additive effect of the proposed action’s residual impact (i.e., impacts remaining after applying avoidance and minimization measures) in relation to

the residual impacts generated by past, present, and reasonably foreseeable actions within the cumulative analysis area.

The MDT Tentative Construction Projects 2023-2027 web application (MDT 2023) was reviewed on March 1, 2023, to identify any MDT-sponsored projects occurring in the vicinity of the proposed project. Two projects were identified in the vicinity of the proposed project. The I-90 VMS – St. Regis to Idaho project (IM 90-1(244)0) coincides with the proposed action (begins at RP 0) and continues eastward to RP 33. The scope of the project includes roadway and roadside safety improvements, and implementation is scheduled for 2026. The other project, Saltese – Lozeau (IM STWD(905)), is located five miles east of the proposed action on I-90 at RP 11.1 to RP 18.9 and includes resurfacing of I-90. Both projects will receive federal funding and will undergo independent environmental evaluation in accordance with the ESA. Cumulative impacts are not anticipated as a result of the proposed action in conjunction with the other transportation projects occurring in the project vicinity. No additional future federal, state, local, or private actions of regional significance that are reasonably certain to occur have been identified within the vicinity of the proposed project.

3.4 Canada Lynx

3.4.1 Species status, distribution, habitat requirements, reasons for decline

The Canada lynx (*Lynx canadensis*) was listed as threatened under the ESA in 2000 (65 FR 16053 16086), and critical habitat was designated on November 9, 2006, and revised on February 24, 2009, and again on September 12, 2014. Critical habitat includes substantial areas of boreal forests in northwestern Montana and the Greater Yellowstone Ecosystem.

In general, lynx distribution in North America is closely associated with the distribution of North American boreal forest. Canada lynx west of the Continental Divide generally occur in subalpine forests at elevations between 4,000 and 7,000 feet in stands of lodgepole pine or mixed stands of subalpine fir, lodgepole pine, Douglas-fir, grand fir, western larch and hardwoods (Ruediger et al. 2000). In nearby neighboring northern Idaho, western redcedar and western hemlock habitat types support relatively high densities of snowshoe hares, and lynx appear to regularly use these habitat types (Ruediger et al. 2000).

Among the general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. Disturbances that create early successional stages such as fire, insect infestations, and timber harvest, provide foraging habitat for lynx by creating forage and cover for snowshoe hares (Ruediger et al. 2000). Without high densities of snowshoe hares, lynx are unable to sustain populations despite utilizing a multitude of other prey when snowshoe hare numbers are low.

Reasons for decline include incompatible land uses such as timber harvest and recreation and related activities. The primary factor that caused the lynx to be listed was the lack of guidance for the conservation of lynx and snowshoe hare habitat in plans for federally managed lands (USFWS 2017).

3.4.2 Occurrence in Project Area

Minimal data exists documenting lynx observations in the vicinity of the action area. The MTNHP database includes a few Canada lynx observations for Mineral County from 1991 and 1994, and

several other data entries dating back to the 1980s based on furbearer harvest data (MTNHP 2023). According to the MTNHP predicted habitat suitability model, the action area is moderately suitable habitat based on a few observations in the area (MTNHP 2016). Despite the lack of direct observations, the action area includes substantial areas of suitable forest habitat and Canada lynx occurrence in the project area is possible. There are no recorded lynx mortalities on I-90 through the action area.

3.4.3 Potential Impact Analysis

Given the presence of suitable forest habitat, it is reasonable to assume that Canada lynx movements through the action area may at least occasionally occur. The existing I-90 acts cumulatively with other human-induced activities and features (e.g., logging, recreation, frontage roads) to slow movement between forested communities in the vicinity of the project. Traffic volumes are projected to increase regardless of whether the proposed project is implemented and are likely to contribute to incrementally increased habitat fragmentation.

No impact on designated lynx critical habitat would occur because there is none within the action area. The nearest designated lynx critical habitat is greater than 50 miles to the northeast in the Cabinet Mountain range. Negligible vegetation impacts are expected and no reduction of available roadside cover that may increase the difficulty associated with cross-highway movements for lynx is expected to occur.

In addition to slowing or discouraging north-south movements between suitable habitat areas, I-90 also affects lynx through potential for direct mortality. The proposed project involves no widening of the travel lanes or highway shoulders and clear zone and would not likely result in increased travel speeds. Undivided segments of I-90 through the project area currently incorporate concrete median barriers between east and west bound traffic to prevent vehicles from crossing over into oncoming traffic. In order to reduce headlight glare and strengthen the median barrier, some standard concrete barrier (2'-8" tall) will be replaced with taller barrier standing 3'-10" tall. The taller median barrier may pose a challenge to some wildlife, especially young-of-the-year as they attempt to cross I-90, increasing their time within the interstate footprint. Canada lynx are strong climbers and have the ability to jump over tall objects and so the taller barrier is not likely to effect lynx ability to cross the interstate.

Construction activities would result in a temporary increase of noise levels. Construction would occur during normal daytime hours and the short-term noise increase is not anticipated to reach levels that would harm Canada lynx. Construction would occur during the normal Montana construction season, approximately May through October, with a break in construction during the snowy, winter months should construction take more than one season.

3.4.4 Determination of Effect

Although lynx may occur in the action area during construction and Canada lynx behavior may be modified for a short duration during construction, no adverse impacts to lynx are expected. I-90 will remain a 4-lane highway following construction and impacts to lynx movements are not likely to be measurable. Although infrequent and uncommon, if present, lynx would likely continue to make north-south movements across I-90 to the east and west of the action area during and following construction. The project is not expected to increase the potential for lynx mortality in the future. For these reasons, effects to Canada lynx are extremely unlikely to occur and are expected to be insignificant and discountable. Based on the above information and conservation measures, it has

been determined that the proposed project **may affect, not likely to adversely affect** Canada lynx, and would have **no effect** on Canada lynx critical habitat, as none occurs within the action area.

3.5 Grizzly Bear

3.5.1 Species status, distribution, habitat requirements, reasons for decline

The grizzly bear (*Ursus arctos horribilis*) was listed as threatened under the ESA in 1975 in the conterminous 48 states (40 FR 31734). Habitat loss and human encroachment are the primary reasons for decline in grizzly bear populations (Reel et al. 1989). On June 30, 2017, the Greater Yellowstone Ecosystem (GYE) population of grizzly bears was removed from the federal list of endangered and threatened species. The USFWS June 30, 2017, final rule delisting the Greater Yellowstone Ecosystem grizzly bear population was vacated and remanded by the court on September 24, 2018. Therefore, grizzly bears throughout the lower 48 states are listed as threatened except where designated as an experimental population.

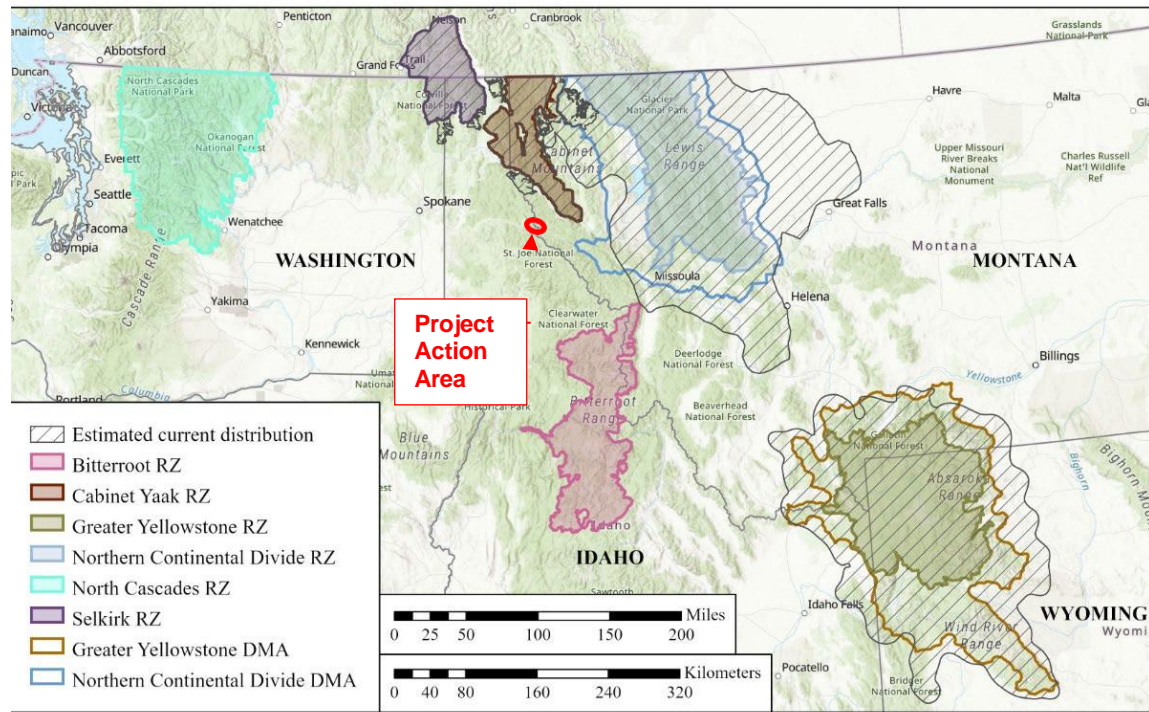
Grizzly bears are wide-ranging mammals requiring large areas of undisturbed habitat. Grizzlies occupy a wide range of habitat types and elevations throughout the year and will opportunistically occupy areas that can best meet their food requirements. Grizzlies prefer habitat that is forested and provides good cover (USFWS 1993). Home ranges can vary considerably from approximately 11 to 2,000 square kilometers (7 to 1,245 sq. mi.) and are dependent upon food distribution (Reel et al. 1989). No critical habitat for grizzly bear has been designated.

According to Kendall et. al. (2008), in 1998 and 2000 an estimated mean population of 241 grizzly bears occupied what was then termed the Greater Glacier Area. An increasing trend in grizzly bear numbers continued and, in 2004, the estimated number had increased to 765 individuals (Kendall et. al. 2008). By 2016, an estimated 1,800 grizzlies resided in the lower 48 states.

Presently, there are five regions where grizzlies are known to occur: Yellowstone ecosystem, Northern Continental Divide ecosystem (NCDE), Cabinet-Yaak ecosystem, Selkirk ecosystem, and Northern Cascades ecosystem. The project area is located south and outside of the Cabinet-Yaak Ecosystem Grizzly Bear Recovery Zone. The Cabinet-Yaak grizzly bear population is estimated to be approximately 59 individuals (USFWS 2022). The project area is situated between the Cabinet-Yaak and Bitterroot recovery areas in what has been identified as the Cabinet/Yaak to Bitterroot Linkage Area (Servheen and Waller 2001). The minimal development in the vicinity of the project along I-90 and federal ownership together create an opportunity for a linkage area between the two recovery zones.

3.5.2 Occurrence in Project Area

The MTNHP database does not include any grizzly bear observations in the vicinity of the project (MTNHP 2023). The project area is not included in areas of current estimated grizzly bear distribution (USFWS 2023b; see Figure 3-1). In reviewing the Cabinet-Yaak Grizzly Bear Recovery Area 2021 Research and Monitoring Progress Report (Kasworm et al. 2022), and specifically Figure 3-2 showing grizzly bear observations from 1959-2021, the project area is located at the southern limits of the study area and no grizzly bear observations are identified within the project action area (refer to Figure 3-2).



Estimated distributions are current as of 2020 for the Greater Yellowstone and the Northern Continental Divide and are current as of 2019 for the Cabinet-Yaak and Selkirk. There are currently no known populations in the North Cascades and Bitterroot. Current distributions do not include low-density peripheral locations and represent a minimum known area of occupancy, not extent of occurrence. DMA = Demographic Monitoring Area; RZ = Recovery Zone

Figure 3-1. Grizzly Bear Recovery Zones and Estimated Distributions (Source: USFWS 2023)

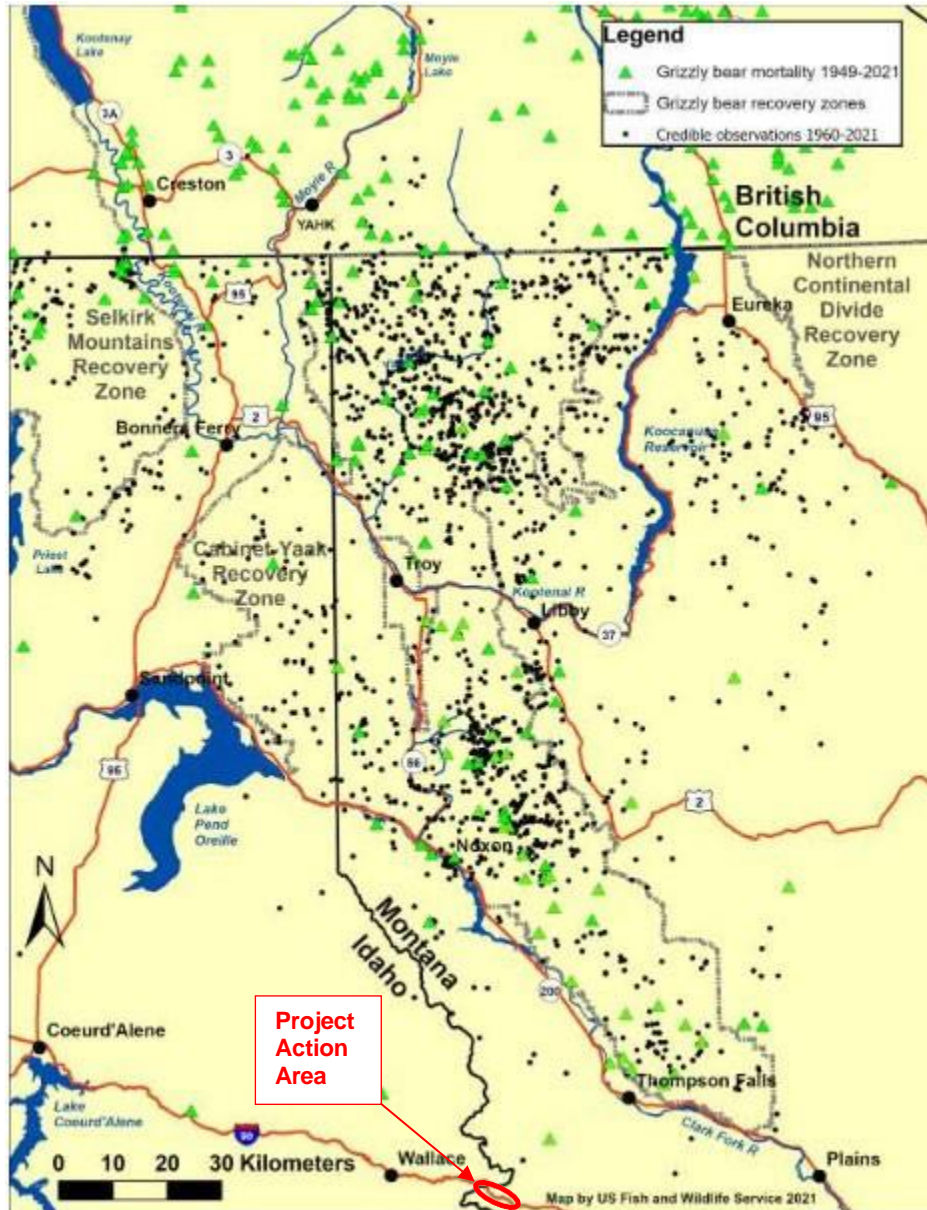


Figure 3-2. Grizzly Bear Observations (1959-2021) (Source: Kasworm et al. 2022)

According to the USFWS “may be present” map, the project area appears to be situated in an area where grizzly bears are not present; however, areas where grizzly bears “may be present” surround the I-90 corridor in the project vicinity (USFWS 2023). Evidence from past studies suggest grizzly bears may be generally displaced from habitats within 0.5 to 1.0 mile of the existing highway. They are, however, known to frequently cross highways. Figure A101 in Kasworm et al., for instance, shows grizzly bear 927 having crossed I-90 approximately 15 miles east of the project area twice in 2019. According to Jamie Jonkel, Bear Management Specialist with FWP, grizzly bears are starting to show up more frequently in north central Idaho and may be dispersing from areas to the north and crossing I-90 as they move south (Jonkle 2023).

Despite the lack of direct evidence of grizzly bear in the project action area, the potential for grizzly bear to be present or pass through the project area during construction exists given the ample suitable habitat in the project vicinity, the project location just on the periphery of where grizzlies may be present and increasing populations and geographic distribution of grizzly bears.

3.5.3 Potential Impact Analysis

Based on available literature and research, the likelihood of grizzly bear within the project area is low. The limits of construction will stay within areas of previously disturbed highway ROW and the proposed project is not anticipated to result in the alteration, degradation, or removal of potential grizzly habitat. The proposed project is not expected to create or increase any new or existing barriers that would affect bear mobility or movements. The increased height of the median barrier from 2'-8" tall to 3'-10" tall is not expected to have an effect on bear mobility or movements. The proposed improvements are not anticipated to encourage or exacerbate human development in the project area.

Although unlikely, temporary impacts to grizzly bears during construction are possible, assuming that construction occurs during the typical spring through fall construction season. Winter construction would have no or minimal temporary impacts because most bears would be in their dens for the winter. Project construction is expected to be completed in a single construction season. Short-term behavioral changes would be limited to the construction period and grizzly bear use is expected to return to preconstruction levels immediately following construction.

Grizzly bears occupying habitat in the action area during construction may be displaced from that habitat because of increased and concentrated equipment operation and increased human activity near the highway during construction. Wildlife habitat within the adjacent Lolo National Forest, represents a large block of contiguous habitat that disturbed bears could move into during construction. Bears wishing to make north-south movements across the highway would be able to do so at night when no construction activities are occurring or outside the action area. This temporary and short-term impact related to construction activity is expected to result in a behavioral response, as bears alter their movements to avoid or move around the disturbing activity. Temporary disturbance during construction that forces bears to use habitat away from the highway and associated campgrounds is not altogether negative, as the potential for human/bear conflicts in the action area may temporarily decrease during construction. Bear use of habitat in the action area is likely to return to preconstruction levels following construction.

While bear activity in the action area may decrease during construction, habituated bears may not be affected by construction activities. Standard special provisions for working in bear habitat will be included in the project contract to minimize the potential for bear/human conflicts during construction.

3.5.4 Determination of Effect

Although grizzly bears have not been documented in the action area, they could potentially occur in the action area during construction and grizzly bear behavior may be modified for a short duration during construction, no adverse impacts to grizzly bears are expected. I-90 will remain a 4-lane highway following construction and impacts to grizzly bear movements are expected to be negligible. Although infrequent and uncommon, grizzly bears will likely continue to make north-south movements across I-90 to the east and west of the action area during and following construction. The project is not expected to increase the potential for grizzly mortality in the future. For these reasons, effects to grizzly bears are extremely unlikely to occur and are expected to be insignificant and discountable. Based on the above information and conservation measures, a **may affect, not likely to adversely affect** determination has been rendered relative to grizzly bears.

3.6 North American Wolverine

3.6.1 Species status, distribution, habitat requirements, reasons for decline

In February 2013, the USFWS proposed listing the Distinct Population Segment (DPS) of the North American wolverine (*Gulo gulo luscus*) that occurs in the contiguous United States as a threatened species under the ESA (78 FR 7864). The USFWS subsequently withdrew its proposed rule in August 2014, stating that the factors affecting the DPS (as identified in the proposed rule) were not as significant as assumed at the time of the proposed rule's publication in 2013. In April 2016, as a result of court order, the USFWS withdrawal was vacated and the status of wolverine was reverted to a proposed listing. On October 18, 2016, the USFWS issued a notice that the agency was reopening the comment period on the February 2013 proposed rule to list the DPS of wolverine as threatened. The USFWS released a final ruling on October 8, 2020, stating that the wolverine had once again been withdrawn from consideration as a T&E species, vacating its proposed status. In May 2022, a federal judge required the USFWS to once again consider federal protection for the species and that the proposed listing be reinstated during this review period. As such, the proposed ruling is in effect as of the date of this BA.

Preferred habitat for wolverine is limited to alpine tundra as well as boreal and mountain forests (primarily coniferous) in the western mountains, especially large wilderness areas (MTNHP, 2022). Wolverines are typically found in areas with snow cover in the winter. In northwestern Montana, wolverines tend to occupy higher elevations in summer and lower elevations in winter. Researchers in Montana have reported habitat requirements of large, isolated tracts of wilderness with minimal to no roads, which support a diverse prey base (MTNHP 2022).

Reasons for the decline of wolverine numbers in the United States are predominantly attributed to a reduction of habitat caused by climate change, habitat impacts caused by human use and disturbance, dispersed recreational activities, and infrastructure development that includes transportation corridors (USFWS 2013). Additional factors, as described in the proposed rule, have also attributed to the decline of the species. The wolverine population in the contiguous United States is estimated at 250 to 300 individual wolverines, with most of them occurring in the northern Rocky Mountains (USFWS 2013).

3.6.2 Occurrence in Project Area

A review of the MTNHP database indicates no wolverine records exist for the vicinity of the action area. Information on wolverine is available, however, for areas outside the action area. Data within the MTNHP database is largely attributed to a 2016/2017 study by Lukacs et. al. that surveyed predicted wolverine habitat in a 4-state region for wolverine presence. Wolverines were not detected in the vicinity of the action area but were identified in areas to the north and south of I-90 (Lukacs et al. 2020). While there is no designated wilderness in the action area, there is substantial high elevation coniferous forest habitat that is relatively undisturbed both north and south of the interstate. Considering the large home ranges attributed to wolverines in the Northern Rocky Mountains, it is reasonable to expect that at least on rare occasions, wolverines cross I-90 within or near the action area. Because there are no recorded sightings in the literature, wolverine use of habitat within the action area is speculative based on habitat availability and wolverine detections north and south of I-90 in western Montana. There are no recorded wolverine mortalities on I-90 through the action area.

3.6.3 Potential Impact Analysis

Although documented occurrences of wolverines do not exist in the project vicinity, suitable habitat does exist in the project action area and at higher elevations in the surrounding mountains north and south of I-90. As such, it is reasonable to assume that movements through the project area may at least occasionally occur. The existing highway acts cumulatively with other human-induced activities and features (e.g., logging, ski area, road construction) to slow movement between forested communities. Traffic volumes, projected to increase regardless of whether the proposed project is implemented, are likely to contribute to incrementally increased habitat fragmentation.

No impact on wolverine critical habitat would occur because none has been designated for this species in Montana. Negligible vegetation impacts are expected and no reduction of available roadside cover that may increase the difficulty associated with cross-highway movements for wolverine is expected to occur.

In addition to slowing or discouraging north-south movements between suitable habitat areas, I-90 also affects wolverines through potential for direct mortality. The proposed project involves no widening of the travel lanes or highway shoulders and clear zone and would not likely result in increased travel speeds. Undivided segments of I-90 through the project area currently incorporate concrete median barriers between east and west bound traffic to prevent vehicles from crossing over into oncoming traffic. To reduce headlight glare and strengthen the median barrier, some standard concrete barrier (2'-8" tall) will be replaced with taller barrier standing 3'-10" tall. The taller median barrier may pose a challenge to some wildlife, especially young-of-the-year as they attempt to cross I-90, leaving them vulnerable to collisions with vehicles. Wolverines are strong climbers and have the ability to scale tall objects and so the taller barrier is not likely to effect wolverine ability to cross the interstate.

Construction activities would result in a temporary increase of noise levels. Construction would occur during normal daytime hours and the short-term noise increase is not anticipated to reach levels that would harm wolverines. Construction would occur during the normal Montana construction season, approximately May through October, with a break in construction during the snowy, winter months should construction take more than one season.

3.6.4 Determination of Effect

This determination is warranted because although wolverines may occur in the project area during construction and wolverine behavior may be modified for a short duration during construction, no adverse impacts to wolverines are expected. I-90 will remain a 4-lane highway following construction and impacts to wolverine movements are expected to be negligible. Wolverines will likely continue to make north-south movements across I-90 to the east and west of the project area during and following construction. The project is not expected to increase the potential for wolverine mortality in the future. Based on the above information and conservation measures, it has been determined that the proposed project is ***not likely to jeopardize the continued existence of*** the North American wolverine

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