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Wildlife Resources Report

Hoteling Gulch Fish Passage and Stream Restoration Project

Salmon/Scott River Ranger District, Klamath National Forest
Siskiyou County, California

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Wildlife Resources Report

Introduction

This report discloses the effects of the Hotelling Gulch Fish Passage and Stream Restoration Project on wildlife species as Threatened, Endangered, Proposed, Forest Sensitive, Management Indicator Species, Survey and Manage, and Migratory Birds.

The project proposes to improve fish passage at a county road crossing and reconnect a historic channel alignment at Hotelling Gulch on the South Fork Salmon River. The project is located about 2.5 miles southeast of Forks of Salmon, in Siskiyou County, California and adjacent to the Hotelling Campground (Township 10 North, Range 8 East and Section 28, Humboldt Meridian). It is in the Negro Creek-South Fork Salmon River 7th field watershed (18010210010802). The project area is about 5 acres and is entirely within the Riparian Reserve Management Area (Klamath National Forest Land and Resource Management Plan, pp. 4-108:4-114).

This report follows standards established in the Forest Service Manual direction and complies with the National Forest Management Act, National Environmental Policy Act, the Endangered Species Act, and the 1995 Land Resource Management Plan for the Klamath National Forest (Forest Plan) for the Klamath National Forest.

Methodology

Threatened, Endangered and Proposed Species

Threatened, Endangered, or Proposed species identified by the U.S. Fish and Wildlife Service are analyzed in this document. The following list of Threatened, Endangered, and Proposed species was considered in this report (USFWS IPAC report, March 2017).

- Northern spotted owl (*Strix occidentalis*) (Threatened)
- Gray wolf (*Canis lupus*) (Endangered)
- North American wolverine (*Gulo gulo luscus*) (Proposed)

The northern spotted owl and California wolverine are also on the Forest Sensitive species.

The Oregon spotted frog and yellow-billed cuckoo are species included in the IPAC report provided by the Fish and Wildlife Service. The proposed project is outside the range of these species and will not affect these species or their habitat. The Oregon spotted frog and yellow-billed cuckoo will not be further analyzed.

Sensitive Species

The Forest Service, Region 5, Proposed Sensitive Species list was provided by the USDA Pacific Southwest Region (2013, as amended). Sensitive Species Reference Document for the Klamath National Forest was developed and updated on September 2013. Based on the effects of the proposed activities, this analysis determines whether these activities will lead the Forest Service Sensitive Species in a trend toward Federal listing (FSM 2672.41).

- Bald eagle (*Haliaeetus leucocephalus*)
- Northern goshawk (*Accipiter gentilis*)
- Willow flycatcher (*Empidonax trailii*)
- Pallid bat (*Antrozous pallidus*)
- Townsend's Big-eared bat (*Corynorhinus townsendii*)

- Fringed Myotis (*Myotis thysanodes*)
- Pacific Fisher (*Pekania pennanti*)
- American Marten (*Martes americana*)
- Western Pond turtle (*Emys marmorata*)
- Foothill Yellow-legged frog (*Rana boylei*)
- Western Bumblebee (*Bombus occidentalis*)
- Cascade frog (*Rana cascadae*)
- Tehamana Chaparral snail (*Trilobopsis tehamana*)

The great gray owl, Siskiyou Mountains salamander, southern torrent salamander, marbled murrelet, and greater sandhill crane are not likely to occur in the project area and the project area is outside the species range, as noted on the NEPA Species Tracking Sheet (USDA, 2017). Therefore, this project will have no effect on the great gray owl, Siskiyou Mountains salamander, southern torrent salamander, marbled murrelet, and greater sandhill crane and these species will not be further considered in this wildlife resource report.

For the cascades frog, Tehamana Chaparral Snail, American marten, and western bumblebee there will be no further analysis due to the lack of habitat within the project area, therefore there will be no effect to the Cascades frog, Tehamana Chaparral Snail, American marten, and western bumblebee. Further description is present in the NEPA Species Tracking Sheet available in the Project Record (Appendix A).

Survey and Manage Species (S&M)

Under the Pechman Exemptions (USDA, 2014) the proposed action will not require surveys for the species listed as ‘Survey and Manage’ within the Northwest Forest Plan (Record of Decision 2001, USDA Forest Service and USDI Bureau of Land Management 2001). Additionally, there are no known sites present within the project area, therefore Survey and Manage species will not be further addressed further in this report.

Management Indicator Species (MIS)

Species considered for MIS are analyzed in the MIS Part 1 Species Tracking Sheet in (Appendix B). This analysis is sufficient to determine maintenance of MIS objectives and this species group will not be addressed further in this report.

MIS- Pertains to species whose habitat requirements most reflect those of the species community in the habitat of concern, usually used to indicate habitat quality and to predict future conditions. They are usually selected because their welfare is presumed to be an indicator of the welfare of other species in the habitat. Conditions of these species can be used to assess the impacts of management actions on a particular area, and managing for these species usually requires significant allocations of land or resources.

Migratory Birds

Under the National Forest Management Act (NFMA), the Forest Service is directed to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives” (P.L. 94-588, Sec 6 (g) (3) (B)). The January 2000 USDA Forest Service (FS) Landbird Conservation Strategic Plan, followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific habitat Conservation Plans for birds and the January 2004 PIF North American Landbird Conservation Plan all reference goals and objectives for integrating bird conservation into forest management and planning.

On December 2008, a Memorandum of Understanding (MOU) between the USDA Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds was signed. The intent of the MOU is to strengthen migratory bird conservation through enhanced collaboration and cooperation between the Forest Service and the Fish and Wildlife Service as well as other federal, state, tribal, and local governments. Within the National Forests, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

For the Forest, the migratory bird species of management concern are those bird species listed under the Endangered Species Act as threatened or endangered, those species designated by the Regional Forester as sensitive species, and those species listed under Standard and Guideline 8-21 through 8-34 of the Forest Plan as management indicator species (MIS) for project level assessment. This project is in compliance with the MOU for migratory birds that fall under threatened or endangered, sensitive, or management indicator species within the forest and will not be evaluated any further.

Analysis Indicators and Measures

The following analysis indicators will be used to determine the effects to wildlife species of concern that may be present within the project area:

- Likelihood of habitat disturbance or removal for all species
 - For the Pacific fisher, wolverine, and northern goshawk, the effects to northern spotted owl nesting/roosting and foraging habitat was used as a proxy for analyzing the effects to the preferred habitat of these species. The northern spotted owl analysis is used as a proxy because it analyzes for similar habitat components that the Pacific fisher, wolverine, and northern goshawk require. The effects to northern spotted owl nesting/roosting and foraging habitat was used as the analysis indicator of affects to Pacific fisher, wolverine, and northern goshawk.
 - For the remaining species analyzed in this document, a habitat assessment was performed to estimate the number of habitat acres removed or modified by the proposed actions. Habitat was typed using the Forest GIS layer containing classified vegetation typing which was used to define habitat types. Vegetation types were split between ten categories such as oak woodland and brush. From these ten habitat types, a single or combination of habitat types was assigned to each species that best represents the habitat commonly used by the particular species. Treatments occurring in those assigned habitat types were analyzed for potential affects and reported as acres of habitat potentially affected by the proposed actions.
- Noise disturbance that may affect the northern spotted owl
- Direct affects to the western pond turtle

Spatial and Temporal Bounding of Analysis Area

The analysis area is represented by the project area plus a 1.3 mile buffer surrounding the project area. This boundary is appropriate because it will capture all potential effects to all Forest Service Sensitive species within the analysis area for this project. Habitat within the analysis area was classified into three habitat types specific to northern spotted owl and for species that are analyzed by proxy using northern spotted owl habitat: nesting/roosting, foraging, or dispersal.

The short-term temporal bound for this project is the time in which direct effects of the project may be observed during the project implementation.

The long-term temporal bound for the project is 10 years because it is expected that any potential reduction to vegetation, and associated loss of shade over the Hotelling Gulch channel, resulting from project activities will recover within 10 years. This timeframe assumes that reduced shade and canopy cover is primarily due to the disturbance to 15 trees less than 18 inches in diameter: alder, madrone, and pine. It is expected that planted vegetation and natural reproduction of shrub species at the site will recover and provide vegetation habitat within a few years of disturbance, no more than 10 years.

Affected Environment

Threatened, Endangered, and Proposed Species

Northern Spotted Owl (Strix occidentalis caurina)

The northern spotted owl (*Strix occidentalis caurina*) is a medium-sized, dark brown owl with a barred tail, white spots on the head and breast, and dark brown eyes surrounded by prominent facial disks. Males and females have similar plumage, but females typically weigh 10 to 20 percent more than males. Northern spotted owls are a federally listed threatened species. Suitable northern spotted owl habitat is commonly separated into nesting/roosting, foraging, and dispersal habitat; these habitat types are described in detail in the Northern Spotted Owl Recovery Plan (USFWS 2011). Nesting/roosting is generally described as mid- to late-seral forests that contain stands of large trees with high canopy cover, multilayered canopies, and nesting platforms. Foraging habitat can be described as slightly reduced canopy cover, fewer large trees, and enough space for NSO to maneuver through the trees for hunting prey when compared to nesting/roosting habitat. Dispersal habitat contains a moderate level of canopy closure and trees large enough to provide shelter and potential foraging opportunities for traveling northern spotted owls. Determination of northern spotted owl habitat suitability also considers many factors including size of the stand and adjacency to other habitat types which owls may use.

Suitable habitat in the form of nesting/roosting and foraging habitat for the northern spotted owl is present in the analysis area, which includes the project area plus a 1.3 mile buffer. There is no suitable habitat in the project area and there is no known northern spotted owl activity within the analysis area. The nearest known northern spotted owl activity center is 1.45 miles from the analysis area.

Gray wolf (Canis lupus)

Gray wolf was listed as Endangered on March 9, 1978 (USDI FWS 1978). Critical Habitat has not been designated.

Originally listed as a subspecies or as a regional population of subspecies in the contiguous U.S. and Mexico, the species was reclassified in 1978 as an endangered population at the species level (*C. lupus*) throughout the contiguous U.S. and Mexico, except for the Minnesota population, which was classified as Threatened. Populations in Idaho and Montana were delisted due to recovery in 2011.

The gray wolf once ranged throughout the northern hemisphere until humans began to compete with the species for food and habitat. A habitat generalist, the species only requires ungulate prey and relative safety from human-caused mortality and, due to its adaptability, can occur in a wide range of habitats including temperate forest, mountains, tundra taiga and grasslands.

A keystone predator, gray wolf is an integral part of the ecosystems it inhabits. Prey species primarily include both wild and domestic ungulates but the species will also take smaller prey such as beaver, other small mammals, birds and fish, and will readily scavenge.

Wolves are territorial, defending territories in packs. Territory size is a function of prey density and can range from 25-1,500 square miles. Both male and female wolves disperse at equal rate an equal distances, sometimes >600 miles.

Gray wolf typically first breeds as a yearling and then once per year from January-March (typically in February). Pups are born in 63 days in litters of 1-10 (normally around 5) and stay with the pack until >1 year of age.

Current threats to gray wolf include continued conflict with humans, primarily resulting from livestock losses but also from hunting and trapping and habitat degradation and fragmentation from human encroachment.

Wolves have a large home range and range expansion. California Department of Fish and Wildlife (CDFW) has collected evidence that suggests at least one individual has traveled into southeastern Siskiyou County (CDFW 2015) about 50 miles from the project area. Oregon Department of Fish and Wildlife (ODFW) has a single male gray wolf, designated OR7, which was radio collared in February 2011. Tracking data from the collar indicates that this animal has entered California on December 28, 2011 but returned to Oregon on April 2013. Future movements are unpredictable but it is possible he may return to California. Hotelling Gulch is situated in a low elevation river corridor where it could be possible that a resident wolf may use for dispersal but it is unlikely that a wolf would inhabit the area due to its low quality in suitable habitat.

North American Wolverine (*Gulo gulo luscens*)

Sightings of this species are rare in northern California; sightings range from Del Norte and Trinity Counties east through Siskiyou and Shasta Counties, and south through Tulare County. Habitat distribution in California is poorly known for the North Coast and northern Sierra Nevada. Wolverines are typically associated with high elevation (>7,200 feet) montane conifer forest consisting of Douglas fir in lower elevation to true fir and lodgepole pine at higher elevation (Copeland et al. 2007). For the purposes of this analysis, northern spotted owl nesting and roosting habitat is used as a proxy for wolverine habitat; a similar analysis area is considered due to its large annual home range use.

Camera stations and track plate surveys have been conducted on the Forest but these surveys did not detect wolverines. There are ten historic records of wolverines on the Klamath National Forest but no den sites have been documented.

Areas with low human disturbance are preferred by North American wolverine and it uses caves, hollows in cliffs, logs, rock outcrops, and burrows for cover, generally in denser forest stages (Zeiner et al. 1988-1990). It dens in caves, cliffs, hollow logs, cavities in the ground and under rocks.

Primary food items are small mammals and carrion (Grinnell et al. 1937, Honrocker and Hash 1981, Ingles 1965, Krott 1982). Prey species include marmots, ground squirrels, gophers and mice, deer carcasses, other vertebrates, berries and insects. Foraging occurs in open to sparse tree habitat on the ground, in trees, burrows, among rocks, in or under snow and sometimes in shallow water. The species may be capable of detecting prey under deep snow and it caches its food (Zeiner et al. 1988-1990).

Surveys for wolverines have not been conducted within the project area. The Hotelling Gulch project is situated in a low elevation river corridor, far from appropriate high elevation alpine habitats. It is possible that a wolverine may travel through Hotelling Gulch to traverse to more suitable habitat, but it is unlikely that a wolverine would inhabit the area or den due to its low quality habitat.

Forest Service Sensitive Species

Bald eagle (*Haliaeetus leucocephalus*)

Bald Eagle nesting territories are usually associated with lakes, reservoirs, rivers, or large streams and are usually within close proximity of water bodies that support adequate food supply (Lehman 1979). Bald eagle nests are usually located in uneven-aged, multi-storied stands with old-growth components. Most nests in California are located in ponderosa pine/mixed conifer stands and nest trees are most often ponderosa pine (Lehman 1979). Nest sites also include a perch that is near the nest but in sight of water

where the eagles would forage. Bald eagles are common during migration and in winter along major river systems such as the Klamath and Scott Rivers, and in agricultural areas such as Scott Valley. Nine nest sites and four roost sites are known to occur on the Forest. Four nest sites are on the westside of the Forest and the remaining sites are on the eastside.

No known Bald Eagle nest sites occur within the analysis area or immediately adjacent to project activities. However, eagles may use the area along the north and south fork of the Salmon River for foraging and may roost in trees along the river but is uncommon.

Northern goshawk (*Accipiter gentilis*)

The goshawk is a forest hawk associated with late successional forest, or with mid-successional forests with late successional elements, in mixed conifer or true fir habitat types. Foraging habitat is variable and includes mid- and late-successional forest, natural and man-made openings, and forest edges. Moderate and high quality habitats contain abundant large snags and large logs for prey habitat and plucking posts. Goshawks generally breed in older-age coniferous, mixed, and deciduous forest habitats. This habitat provides large trees for nesting, a closed canopy for protection and thermal cover, and open spaces allowing maneuverability below the canopy. Forest stands containing nests are often small, approximately 25-250 acres; territories may contain 1–5 alternative nest areas. In northern California, maximum distance between alternative nest stands was about 1 mile, and approximately 85% of alternate nest stands were <0.5 mile apart.

On the west side of the Klamath National Forest, goshawk habitat generally consists of mid- and late-successional mixed conifer forest with scattered harvested and natural openings. Many of the known goshawk sites on Scott River, Salmon River, and Oak Knoll Districts are associated with northern spotted owl sites and goshawks were found incidentally while surveying for owls.

Therefore suitable goshawk habitat, for this analysis, is considered equivalent to nesting, roosting and foraging habitat defined for northern spotted owls. The analysis area contains foraging habitat that could be used by northern goshawks. There are no known territories or nesting sites within the Hotelling Gulch Project but it is possible that northern goshawks may forage in the analysis area.

Willow Flycatcher (*Empidonax traillii*)

The willow flycatcher is a neotropical migrant breeding in North America and wintering in Central and South America. Although historically common and widely distributed in California riparian habitat (Grinnell and Miller 1944), the species has been extirpated from most of its former California range (Harris et al. 1987). Currently it is absent from most of California with known breeding locations restricted primarily to the Sierra Nevada/Cascade region (southeastern Shasta County south to northern Kern County including Alpine, Inyo, and Mono Counties), near Buelton, Santa Barbara County; Prado Basin riparian forest, Riverside County; and several locations in San Diego County (Small 1994).

Suitable breeding habitat for the species is characterized by willow (*salix* spp.) and/or alder (*alnus* spp.) dominated riparia with permanent water, typically consisting of low gradient water courses, ponds, lakes, wet meadows, marshes, and seeps within and/or adjacent to forested areas. In California, willow flycatcher is “restricted to thickets of willows, whether along streams in broad valleys, in canyon bottoms, around mountain-side seepages, or at the margins of ponds and lakes” (Grinnell and Miller 1944).

Willow flycatcher is a late spring migrant and has a short, 70-90 day breeding season. Clutch sizes are usually 3-4 eggs, laid in late May-late June. The incubation period is 13-14 days and young fledge about 13-15 days after hatching, typically in mid-July. Both adults feed nestlings and fledglings, but it is nearly always the female that incubates the eggs and broods the young (Sedgwick 2000).

Willow flycatcher is primarily an aerial forager, capturing most of its insect diet on the wing, but it may hover-glean extensively from leaf surfaces or occasionally take insects from the ground (Sedgwick 2000).

The decline of willow flycatcher in California is due primarily to extensive loss, fragmentation and degradation of its riparian breeding habitat as a result of changes in hydrology and species composition in riparian plant communities from overgrazing, damming, dredging, channelization, urbanization, and de-watering (Sedgwick 2000).

Suitable riparian habitat for the willow flycatcher exists throughout the analysis area on the adjacent South Fork Salmon River. The project area supports alder and a minimal amount of willow habitat that may be used for forging and perching for the willow flycatcher. It is possible that the willow flycatcher may nest along the South Fork Salmon River within the analysis area but it is unlikely to nest in the project area, due to the lack of suitable habitat.

Pallid bat (*Antrozous pallidus*)

Throughout California the pallid bat is usually found in low to middle elevation habitats below 6000 feet, however, the species has been found up to 10,000 ft. in the Sierra Nevada. Populations have declined in California within desert areas, in areas of urban expansion, and where oak woodlands have been lost. This species, like many other bats, is extremely sensitive to disturbance at roosting and nesting sites.

A variety of habitats are used, including grasslands, shrublands, woodlands, and coniferous forests. Pallid bats are most common in open, dry habitats that contain rocky areas for roosting. They are a yearlong resident in most of their range and hibernate in winter near their summer roost. Occasional forays may be made in winter for food and water. Pallid bats are unusual in that most of their food consists of large insects captured on the ground.

Day roosts may vary but are commonly found in rock crevices and tree hollows; and have been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks. Cavities in broken branches of black oak are very important and there is a strong association with black oak for roosting (Pierson 1999). Roosting sites are usually selected near the entrance to the roost in twilight rather than total darkness. The site must protect bats from high temperatures, as this species is intolerant of roosts in excess of 104 degrees Fahrenheit. Pallid bats are also very sensitive to roost site disturbance. Night roosts are usually more open sites and may include open buildings, porches, mines, caves, and under bridges (Pierson 1999).

Suitable roost sites for pallid bats in the form of large trees and snags do occur in the analysis area. Surveys have not been conducted within the analysis area, but because of the presence of large trees and snags, it is reasonable to assume that the pallid bat is present. The pallid bat may use the project area for foraging and day roost area.

Townsend's Big-eared bat (*Corynorhinus townsendii*)

Townsend's big-eared bats occur throughout the western United States. In California, the species is generally associated with cave systems, but they are also found under older bridges, basal tree hollows and in the crevices of old buildings and mining structures (Pierson 1999). This species has been found Pluto Caves and other caves in the area north of Mount Shasta. Foraging associations include edge habitats along streams and areas adjacent to and within a variety of wooded habitats (Pierson 1999). The Townsend's bat is a moth specialist, with over 90 percent of its diet composed of moths and butterflies.

Townsend's big-eared bats are sensitive to disturbance at roost sites and may abandon a roost site following a single disturbance (CDFG 1990).

Surveys have not been conducted and no known locations occur within the analysis area. Caves or open mines are not known to occur within the analysis area; however, suitable roost sites for Townsend's big-

eared bats in the form of large diameter trees are scattered throughout the analysis area. It is likely that the Townsend's big-eared bat may use the area for foraging and day roost sites. Thus, it is reasonable to assume that Townsend's big-eared bats are present in the analysis area.

Fringed Myotis (Myotis thysanodes)

The fringed myotis is found in western North America from south-central British Columbia to central Mexico and to the western Great Plains. In California, it is distributed statewide except the Central Valley and the Colorado and Mojave Deserts (CDFG 1990). This species occurs on the Klamath National Forest.

The fringed myotis uses caves, crevices, mines, and buildings for roosting, hibernacula, and maternity colonies (CDFG 1990). They day and night roost under bark and in tree hollows, and in northern California they day roost in snags only (CDFG 1990). Medium to large diameter snags are important day and night roost sites. In California, this species is found from 1300 to 2200 meters (4265 – 7217 feet) in elevation in pinyon-juniper, valley foothill hardwood and hardwood-conifers (CDFG 1990).

Another important habitat component for the fringed myotis are open water sources, which may include artificial sources, such as stock tanks and ponds, in addition to natural sources. Home range size varies with insect abundance, increasing as the number of available insects decreases. Travel distances from roosting to foraging areas are up to eight kilometers (CDFG 1990). The fringed myotis consumes primarily beetles, and is supplemented by moths and fly larvae captured in the air and on foliage (CDFG 1990).

Suitable roost sites for fringed myotis bats in the form of large trees and snags do occur in the analysis area and are absent in the project area, where implementation will occur. Surveys have not been conducted within the analysis area but it is likely that the fringed myotis may use the project area for foraging and day roosting.

Pacific Fisher (Pekania pennanti)

Fisher habitat distribution occurs from Del Norte and Trinity counties east through Siskiyou and Shasta Counties, and south through the Sierra Nevada to Tulare County. In a compilation of published and unpublished fisher literature from South-Central British Columbia, Western Washington, Western Oregon, and California, fishers are found to be associated with habitats containing moderate to dense forest canopy in low- and mid-elevation areas; home ranges include mosaics of different vegetation types and forest age classes with complex forest structure for denning, resting, and foraging. Some home ranges throughout the range were positively associated with the presence of younger successional stages which likely provide source habitat for fisher prey. In evaluation of fisher resting site selection in three study areas including the Klamath Mountains, Buskirk and others (2010) found when compared to random sites, fishers selected areas with mesic (balanced) moisture and temperature regimes, higher vegetation cover, steeper in slope, and contained a relatively high basal area of conifers, hardwoods, and snags, and relatively large diameter conifer and hardwoods. One study located on the Trinity River, California, use areas appeared to be negatively associated with non-forested or open shrub habitats.

While home ranges may contain mosaics of different vegetation types and age classes, this species is highly associated with large live and dead trees and structural features. Fishers are known to use multiple rest trees in their home range and typically are located in large live trees with some form of deformity such as mistletoe, avian or mammal platform nests, and cavities (Zielinski 2013). Den sites on average to be 1.7-2.8 times the diameter of other available trees within the vicinity; in Northern California den sites are commonly located in hardwoods (Lofroth et al. 2010). Fishers on Hoopa Tribal Lands and on the Shasta Trinity National Forest were found to use both conifers and hardwoods; black oak trees were used more than expected at both study areas and the fishers selected sites made up of stands with large diameter trees and dense canopy cover; these sites were generally situated in drainage-bottoms. Similar findings are reported by others for northern California and southern Oregon. Thompson et al. (2011) found fishers often in areas with high numbers of small (<20" dbh) trees, and along lower portions of

north facing slopes in the Sierra Nevada range. Diet varies across the range, but in Northern California, small mammals comprise the majority of the fisher diet.

General surveys have been conducted on the west side of the Forest using baited trip cameras and baited 35mm camera stations; positive detections have been made at many of the stations on Scott River, Oak Knoll and Ukonom Districts. An on-going fisher genetic study on federal and non-federal ownerships has detected numerous fishers. Incidental sightings of fisher have also occurred on the KNF for the most part along major roads and highways associated with rivers or large creeks, but no den sites have been located. Most detections on or adjacent to the Forest have been were located in mid-late seral true fir, mixed conifer and mixed conifer-hardwood habitats.

Northern spotted owl nesting/roosting/foraging habitat is considered a proxy for high quality fisher denning and resting habitat because this habitat type typically contains large trees, denser canopy closure, and structural complexity. Although large trees and dense canopy habitat is poor within Hotelling Gulch analysis area, there is some potential foraging habitat where fisher may be present.

Western Pond turtle (Emys marmorata)

The northwestern pond turtle is recognized as a subspecies of the western pond turtle (Stebbins 2003), and is found throughout California excepting desert regions. Western pond turtles are a highly aquatic species that can be found in ponds, lakes, streams, rivers, marshes, and irrigation ditches that have a muddy or rocky bottom and abundant vegetation (Stebbins 2003). They feed on aquatic plants, insects, worms, fish, and carrion.

Nests are constructed four inches belowground in moist areas in sandy to very hard soil types. Nets and burrows are usually found in undisturbed areas of duff or mud, but pond turtles have been found nesting under mine tailings. Females lay their eggs in soil and have been recorded nesting up to 300' from water (Holland 1991). Eggs are laid from March to August, and take 73 to 80 days to incubate. Turtles leave the water in late September and spend the winter in burrows up to 500 feet away from the stream. Basking sites such as rocks and logs are an important component of western pond turtle habitat.

Surveys for pond turtles have not been conducted for the Hotelling Gulch Project. The site has suitable aquatic habitat for this species in the adjacent South Fork Salmon River but not within the current channel of Hotelling Gulch due to its small size and seasonally dry conditions. The project area consists of bedrock and a limited amount of shaded riparian habitat, making it unsuitable for digging or laying eggs but the area could be used for basking sites. The project will occur for one week in September, limiting the time of disturbance to turtles that will begin to overwinter.

Foothill Yellow-legged Frog (Rana boylei)

Known distributions of the foothill yellow-legged frog range through most Pacific drainages west of the Sierra/Cascade Crest from the Santiam River, Oregon to the San Gabriel Drainage in southern California. They are typically found at elevations below 1800 feet (Corkran and Thoms, 1996). Current distribution and abundance of this species has been reduced in the southern portion of its range but still occurs in significant numbers in some coastal drainages. Listed as a California Species of Special Concern, the foothill yellow-legged frog is at risk due to various anthropogenic and environmental threats throughout their range. Among some of the larger rivers in California, predation from introduced bullfrogs has been implicated as a cause of their decline. Increased sediment loads in breeding streams have a potential to reduce survival of eggs.

Breeding occurs in the spring, where adults congregate in habitats consisting of shallow, slow flowing water with pebble and cobble substrate, preferably with shaded riffles and pools. This species is also known to utilize moderately vegetated backwaters, isolated pools, and slow moving rivers with mud substrates in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer,

valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types (Stebbins 2003).

Surveys for the foothill yellow-legged frog have not been conducted in the analysis area and no known locations occur in the project area. Hotelling Gulch does not contain suitable habitat for this species, but suitable aquatic habitat exists in the adjacent South Fork Salmon River. The project lies below an elevation of 1600 feet, therefore it is possible that there may be a presence of the foothill yellow-legged frog in suitable habitat in the nearby South Fork Salmon River.

Environmental Consequences

Alternative 1

Under alternative 1, project implementation would not occur so no direct or indirect effects would occur to the northern spotted owl, wolverine, Pacific fisher, northern goshawk, gray wolf, bald eagle, pallid bat, Townsend's big-eared bat, and fringed myotis. Therefore, there would be no cumulative effects.

Under alternative 1, no activities would occur causing indirect effects to the western pond turtle and foothill yellow-legged frog. With no action, the availability of water in the Hotelling Gulch existing and historic channels would continue to be seasonally dry and lack steep gradients. Potential habitat in terms of standing water, riparian vegetation, and basking sites would not be optimized for the western pond turtle and foothills yellow-legged frog.

Alternative 2

Northern Spotted Owl, Wolverine, Pacific Fisher, Northern Goshawk

Northern spotted owl habitat is used as a proxy for effects to late successional/ old growth dependent species such as the wolverine, Pacific fisher, and northern goshawk. Effects to northern spotted owl nesting/roosting and foraging habitats also have the potential for effects to the wolverine, Pacific fisher, and northern goshawk suitable habitats.

The northern spotted owl analysis area contains 3,390 acres. The analysis area has 481 acres of dispersal habitat, 558 acres of foraging habitat, and 286 acres of nesting/roosting habitat. The project area where activities will occur is approximately 5 acres. The Forest GIS layer determined that approximately .42 acres of the project area was foraging habitat for northern spotted owl. After reviewing aerial photos, and a field visit to the site it was determined that these areas were not suitable northern spotted owl habitat due to the lack of large trees, canopy closure, and structural complexity. There is approximately 1,324 acres of northern spotted owl habitat in the analysis area and no amount of suitable habitat present in the project area. The proposed actions in the project area will remove approximately 15 trees less than 18 inches in diameter. The tree species consist of madrone, alder, and pine; some of which are alive and some are already dead trees. No suitable nesting/roosting or foraging northern spotted owl habitat within the analysis area will be degraded, downgraded or removed by this action.

Table 2: Summary of habitat type in the analysis area and the project area for Northern Spotted Owl.

Habitat Type	Acres of Habitat Type in Analysis Area	Acres of Habitat Type in Project Area
Foraging	558	0
Nesting/Roosting	286	0
Total	844	0

Northern Spotted Owl

Direct and Indirect Effects

Potential direct effects of the project on the northern spotted owl are limited to noise disturbance within .25 mile of suitable habitat during the nesting period. The nearest known northern spotted owl activity center is 1.45 miles away from the project area, which is beyond the average home range distance of northern spotted owls.

The following Project Design Feature (PDF) is part of the project plan and will be used to mitigate impacts to the northern spotted owl:

WL-1-To avoid disturbance to northern spotted owl that may be breeding near the project area, project activities that involve louder than ambient noise levels will be prohibited from February 1 to July 9 each year. This is in conformance with CDFW's restriction for northern spotted owl, other raptors, and migratory birds.

Surveys for northern spotted owls have not been conducted during the planning of this project. Due to the lack of recent surveys, it is unknown to what extent the adjacent habitat is used by northern spotted owls. Therefore, a seasonal restriction applied to this project will protect unknown nesting owls that could occur near the project area. This restriction will not allow ambient noise levels or habitat modifications to occur until after July 9th; minimizing any effects to surrounding owls. The proposed actions will have no effect on northern spotted owls during the breeding season due to the application of the seasonal restriction. The proposed actions would result in a slight disturbance of non-habitat areas and are outside of the nearest northern spotted owl home range, therefore it is reasonable to conclude that there will be no impact on northern spotted owls.

There is critical habitat present within the analysis area including the 1.3 mile buffer surrounding the project boundary, however there is no suitable nesting/roosting/foraging habitat in the project area where implementation activities will occur. Therefore, the quantity or quality of critical habitat in the analysis area will not be affected by project activities.

The proposed project will have *no effect* on the northern spotted owl or designated Critical Habitat.

Wolverine

Direct and Indirect Effects

Habitat for the wolverine is limited and low quality within the project area thus not likely used for reproduction, although possibly for foraging and individuals may traverse the area along the riparian corridor. There are no records of North American wolverine from within or adjacent to the project area. However, this species has a relatively large home range and is known to avoid areas where human disturbance is a factor. All proposed construction activities within the project area will occur in only very small portions of wolverine habitat and will likely be avoided by the species. The project activities will occur within a short time frame of 4 days, limiting the time of human disturbance. There will be no modification of wolverine suitable habitat.

The proposed action will have *no effect* on the North American wolverine.

Pacific Fisher

Direct and Indirect Effects

Fisher habitat is limited and low in quality within the project area therefore it is unlikely that a fisher would use this habitat for reproduction, but the species may forage and traverse the area along the riparian corridor. There are no known records of fisher from within or adjacent to the project area. However, this species is nocturnal, has a large home range, and is known to avoid areas of human disturbance. The proposed activities within the project area will occur during daylight hours in a small portion of fisher habitat and will likely be avoided by the species. There will be no modification of fisher suitable habitat.

The proposed action will have *no effect* on the Pacific fisher.

Northern Goshawk

Direct and Indirect Effects

The proposed action will not remove any nesting/roosting/foraging habitat for the northern goshawk and the nearest goshawk recorded is a half mile away from the analysis area. There are no known nests within the analysis area, however there is potential for a northern goshawk to use the available habitat in the analysis area for foraging and roosting. A seasonal restriction will avoid any effects to unknown northern goshawks occurring in the area.

The proposed action will have *no effect* on the northern goshawk.

Cumulative Effects – Northern Spotted Owl and Proxy Species

The projects considered for cumulative effects that are within the analysis area are the mining claims and the Knownothing Fuels project. The mining claims do not have a plan of operations so the disturbance is superficial, will not remove habitat and limited in scale so any effects to northern spotted owl, North American wolverine, Pacific fisher, and northern goshawk is unlikely. The Knownothing Fuels project would have no effect to northern spotted owls, North American wolverine, Pacific fisher, and northern goshawk as described in the environmental analysis for that project. Therefore, there is no cumulative effects to northern spotted owl, North American wolverine, Pacific fisher, and northern goshawk from the project when combined with on-going and reasonably foreseeable actions.

Gray Wolf

Direct and Indirect Effects

Gray wolf is not known to be in the project area. However, it has a large home range and range expansion is documented and could result in wolves re-inhabiting the area at some point. The California Department of Fish and Wildlife (CDFW) has collected evidence (an anecdotal observation in early 2015, a remote trail camera image in May 2015, large canid tracks observed by CDFW biologists in June 2015 and a remote trail camera image in July 2015), that suggests at least one individual has traveled into southeastern Siskiyou County (CDFW 2015) about 50 miles away from the project area. The individual male, OR7, identified by Oregon Department of Fish and Wildlife (ODFW) has not been known to have reentered California after its last return to Oregon in 2013. During his movement in California, OR7 did not enter the project area and there is no evidence that wolves have occurred within the analysis area for over 100 years.

If a wolf were present in the project area, it would be most likely a dispersing individual. Wolves are generalist predators and if present in the project area, a wolf could find enough food to survive. Despite many reported observations of wolves in recent years made to the California Department of Fish and Wildlife, there has been no confirmed presence of the species, no den sites, and no rendezvous sites recorded anywhere near the project area. In addition, wolves generally avoid areas of concentrated human use such as the project area. If a wolf was present in the project area, the wolf would likely not be near any project activity that may create measurable effects to the species. Due to the small project footprint relative to the large home range size of gray wolf, the proposed project will not alter enough habitat to have any impact on the species.

The proposed action will have *no effect* on the gray wolf.

Bald Eagle**Direct and Indirect Effects**

The proposed action will not remove any bald eagle habitat and there are no known bald eagle nest sights surrounding the project area. There are no large standing bodies of water necessary for nesting and foraging. Bald eagles may be susceptible to noise disturbance while foraging near Hotelling Gulch. Project implementation will occur during September avoiding any effects to critical bald eagle nesting periods.

The proposed action will have *no effect* on the bald eagle.

Willow Flycatcher**Direct and Indirect Effects**

Surveys for willow flycatchers have not been conducted in the project area. The project proposes to remove a number of 15 trees, some of which include alder species. This disturbance may affect nearby willow flycatchers that may be foraging or perching. Nesting habitat for willow flycatcher is limited and low in quality in the project area, therefore, it is unlikely that willow flycatchers will be nesting in the project area.

The proposed action will have *no effect* on the willow flycatcher.

Pallid Bat, Townsend's Big-eared Bat, Fringed Myotis**Direct and Indirect Effects**

The pallid bat, Townsend's big-eared bat, and fringed myotis are highly susceptible to noise disturbance during young rearing and roosting periods both seasonally and daily. Project activities and noise disturbance will occur during daylight hours, resulting in a possible disturbance of day roosting bats in the project area. If disturbed, bats will likely abandon their day roost and travel away from the project area. There will be a removal of dead trees that could provide day roosting sights but the size of the trees is less than 18 inches in diameter, therefore only serving for day use. There will not be any large snags or other structures that could provide as a potential maternal colony removed and implementation will only last a short term of 4 days.

The proposed action *may affect preferred habitat and individuals, but will not cause a trend toward federal listing* for the pallid bat, Townsend's big-eared bat, and fringed myotis.

Western Pond Turtle**Direct and Indirect Effects**

The project would result in a small area of near stream disturbance and the temporary loss of a small amount of riparian habitat adjacent to Hotelling Gulch. Disturbance to the soil caused by large machinery within the 600 foot distance from the bank may cause a short term effect on turtles who may begin to overwinter in early fall, therefore, if any overwintering individuals are observed they will be moved from the project area downstream or upstream of the work site, to a safe location.

It is expected that once the project is completed, merging the channels into one restored channel will provide perennial flow in Hotelling Gulch for longer in the summer, increasing water and riparian habitat for the western pond turtle. In the long term, this project is expected to have a beneficial effect on pond turtles by providing improved habitat conditions.

The proposed action *may affect preferred habitat and individuals, but will not cause a trend toward federal listing* for western pond turtle.

Foothill Yellow-legged Frog

Direct and Indirect Effects

Suitable habitat for the foothill yellow-legged frog is not present in Hotelling Gulch because of its seasonally dry conditions, however, there may be potential suitable habitat available in the adjacent South Fork Salmon River. Foothill yellow-legged frogs are known to exist in elevations below 1800 feet, therefore it is possible that they may exist in the South Fork Salmon River adjacent to the project area which lies at 1600 feet in elevation. The removal of riparian habitat along the Hotelling Gulch channel is not likely to impact Foothill yellow-legged frogs or their habitat in the South Fork Salmon River.

The proposed action will have *no effect* on the foothill yellow-legged frog.

Cumulative Effects – Proposed and Sensitive Species

The projects considered for cumulative effects that are within the analysis area are the mining claims and the Knownothing Fuels project. The mining claims do not have a plan of operations so the disturbance is superficial, will not remove habitat and limited in scale so any effects to gray wolf, bald eagle, willow flycatcher, sensitive bats, western pond turtle, and foothill yellow-legged frog is unlikely. The Knownothing Fuels project would have no effect to bald eagle, willow flycatcher, sensitive bats, western pond turtle, and foothill yellow-legged frog as described in the environmental analysis for that project. There is no data that indicates that the gray wolf was present at the time of implementation of Knownothing Fuels project. Therefore, there is no cumulative effects to gray wolf, bald eagle, willow flycatcher, sensitive bats, western pond turtle, and foothill yellow-legged frog from the project when combined with on-going and reasonably foreseeable actions.

Comparison of Alternatives

Table 3. Comparison of Effects

Indicator	Alternative 1	Alternative 2
Likelihood of habitat disturbance or removal for all species	No habitat will be removed or disturbed under alternative 1	Habitat would be maintained for all wildlife species of concern. Removal of trees may disturb day roosting sights for the Pallid bat, Townsend's big-eared bat, and fringed myotis.
Noise disturbance that may affect the northern spotted owl	No implementation would occur therefore no noise disturbance would occur	Implementation of the wildlife project design feature of a seasonal restriction would avoid noise disturbance during critical time periods.

Indicator	Alternative 1	Alternative 2
Direct affects to the western pond turtle	No habitat modification would occur therefore Hotelling Gulch will continue its seasonally dry patters. Perennial flow of the historic stream will not exist. Habitat for western pond turtle will not be optimized.	Individual western pond turtles that may begin early overwintering sites may be directly affected by project implementation. Individuals will be safely removed from project sight to upstream or downstream from sight.

Compliance with law, regulation, policy, and the Forest Plan

The Hotelling Gulch Fish Passage and Restoration will comply with the Forest Plan Standards and Guidelines for Threatened and Endangered, Forest Sensitive, Management Indicator Species, and the Memorandum of Understanding for migratory birds. The project is consistent with Section 7 of the Endangered Species Act and with the 2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines.

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Wildlife Resource Report Summary

Methodology

Analysis Indicators and Measures

Because the project involves the use of heavy equipment and noise that may be above current ambient levels in the area, potential direct effects in the form of noise disturbance during the breeding season was evaluated for northern spotted owl (NSO) and other sensitive species as described in the Forest Plan.

A northern spotted owl habitat assessment was performed to estimate the number of habitat acres present in the analysis area and project area, and the number of habitat acres likely to be affected by the proposed action. The quantity of northern spotted owl habitat was calculated using the Forest GIS layer, derived from 2007 remotely sensed data. This data provides a generally accurate depiction of northern spotted owl habitat that was then verified at the site scale. Northern spotted owl habitat is classified into four categories non-habitat, dispersal habitat, foraging habitat and nesting/roosting habitat. Treatments occurring in foraging and nesting/roosting habitat are analyzed for potential effects and reported as acres of habitat potentially affected by the proposed action.

Northern spotted owl habitat is used as a proxy for effects to late successional/old growth associated species such as the fisher, marten, wolverine, and northern goshawk. The effects to northern spotted owl nesting/roosting and foraging habitat was used as the analysis indicator of potential effects to fisher, marten, and northern goshawk habitat.

Spatial and Temporal Bounds

The analysis area is represented by the project area plus a 1.3 mile buffer surrounding the project area. This boundary is appropriate because it will capture all potential effects to all Forest Service Sensitive species within the analysis area for this project. Habitat within the analysis area was classified into three habitat types specific to northern spotted owl and for species that are analyzed by proxy using northern spotted owl habitat: nesting/roosting, foraging, or dispersal.

The short-term temporal bound for this project is the time in which direct effects of the project may be observed during the project implementation.

The long-term temporal bound for the project is 10 years because it is expected that any potential reduction to vegetation, and associated loss of shade over the Hotelling Gulch channel, resulting from project activities will recover within 10 years. This timeframe assumes that reduced shade and canopy cover is primarily due to the disturbance to 15 trees less than 18 inches in diameter: alder, madrone, and pine. It is expected that planted vegetation and natural reproduction of shrub species at the site will recover and provide vegetation habitat within a few years of disturbance, no more than 10 years.

Northern Spotted Owl

Affected Environment

The northern spotted owl analysis area contains 3,390 acres. The analysis area has 481 acres of dispersal habitat, 558 acres of foraging habitat, and 286 acres of nesting/roosting habitat. The project area where activities will occur is approximately 5 acres. The Forest GIS layer determined that approximately .42 acres of the project area was foraging habitat for NSO. After reviewing aerial photos, and a field visit to the site it was determined that these areas were not suitable northern spotted owl habitat. There is approximately 1,324 acres of northern spotted owl habitat in the analysis/project area. No suitable nesting/roosting or foraging northern spotted owl habitat within the analysis area or the project area will be degraded, downgraded or removed by this action (See table 4).

Table 4: Summary of habitat type in the analysis area and the project area for Northern Spotted Owl.

Habitat Type	Acres of Habitat Type in Analysis Area	Acres of NSO Habitat affected within the Analysis/Project Area
Foraging	558	0
Nesting/Roosting	286	0
Total	844	0

Environmental Consequences

Alternative 1

Direct, Indirect and Cumulative Effects

Under Alternative 1, project implementation would not occur so no direct or indirect effects would occur to the northern spotted owl. Therefore, there would be no cumulative effects.

Alternative 2

Direct and Indirect Effects

Potential direct effects of the project on northern spotted owls are limited to noise disturbance within .25 mile of suitable habitat during the nesting period. The nearest known northern spotted owl activity center is 1.45 miles away from the project area, which is beyond the average home range distance. Surveys for northern spotted owls have not been conducted. Due to the lack of recent surveys, it is unknown to what extent the project area is used by northern spotted owls. Therefore, a seasonal restriction applied to this project will eliminate the potential for disturbance to unknown nesting owls. This seasonal restriction will mitigate project generated noise disturbance above ambient levels from February 1- July 9th. Therefore the proposed action will not result in affecting potential nesting owls adjacent to the project activities.

The proposed action will remove approximately 15 trees less than 18 inches in diameter in the project area. The tree species consist of madrone, alder, and pine; some of which are alive and some are already dead trees. Because the project actions will not remove suitable northern spotted owl habitat, the loss of these few relatively small trees will have no effect on northern spotted owls or northern spotted owl habitat. Because seasonal restrictions will be in place to protect nesting owls from noise disturbance, and northern spotted owl habitat will not be affected. Alternative 2 will have no effect on northern spotted owl.

Cumulative Effects

The projects considered for cumulative effects that are within the analysis area are activities at mining claims and the Knownothing Fuels project. The mining claims do not have plans of operations so the disturbance involved is superficial, will not remove habitat and is limited in scale so any impact to northern spotted owl habitat is unlikely. The Knownothing Fuels project would have no effect to northern spotted owl as described in the environmental analysis for that project. Therefore, there is no cumulative effects to northern spotted owl from the project when combined with on-going and reasonably foreseeable actions.

Northern Goshawk

Affected Environment

On the west side of the Klamath National Forest, goshawk habitat generally consists of mid- and late-successional mixed conifer forest with scattered harvested and natural openings. Many of the known goshawk sites on Scott River, Salmon River, and Oak Knoll Districts are associated with northern spotted owl sites and goshawks were found incidentally while surveying for owls. Suitable goshawk habitat is considered equivalent to nesting, roosting and foraging habitat defined for northern spotted owl. The analysis area, consisting of the project area plus a 1.3 mile buffer, contains suitable habitat for the northern goshawk, however there is no suitable habitat in the project area.

Environmental Consequences

Alternative 1

Direct, Indirect and Cumulative Effects

Under Alternative 1, project implementation would not occur so no direct or indirect effects would occur. Therefore, there would be no cumulative effects.

Alternative 2

Direct and Indirect Effects

Similar to northern spotted owl, potential effects of the project on northern goshawk are limited to noise disturbance in suitable habitat adjacent to project activities during the nesting period. Without a seasonal restriction noise generation could occur above ambient levels within .25 miles of suitable nesting habitat. There are no known territories or nesting sites within the project area but due to the lack of recent surveys, it is unknown to what extent the project area is used by northern goshawk. The seasonal restriction for northern spotted owl will restrict ambient project noise levels from February 1 – July 9th in the project area. The project avoids disturbance during the critical nesting period and therefore would have no effect on the success of nesting northern goshawks. Operations occurring after July 9th will generate noise but juvenile goshawks will be fledged and habitat removal will not occur within suitable habitat. This will eliminate the chance to injure fledged juveniles during project activities. Alternative 2 will have no effect to northern goshawk.

Cumulative Effects

The projects considered for cumulative effects that are within the analysis area are activities at mining claims and the Knownothing Fuels project. The mining claims do not have plans of operations so the disturbance involved is superficial, will not remove habitat and is limited in scale so any impact to goshawk habitat is unlikely. The Knownothing Fuels project would have no effect to northern goshawk as described in the environmental analysis for that project. Therefore, there is no cumulative effects to northern goshawk from the project when combined with on-going and reasonably foreseeable actions.

Pacific Fisher

Affected Environment

General surveys have been conducted on the west side of the Forest using baited trip cameras and baited 35mm camera stations; positive detections have been made at many of the stations on Scott River, Oak Knoll and Ukonom Districts. An on-going fisher genetic study on federal and non-federal ownerships has detected numerous fishers. Incidental sightings of fisher have also occurred on the Klamath National Forest KNF for the most part along major roads and highways associated with rivers or large creeks, but no den sites have been located. Most detections on or adjacent to the Forest have been in mid-late seral true fir, mixed conifer and mixed conifer-hardwood habitats.

Northern spotted owl nesting/roosting/foraging habitat is considered a proxy for high quality fisher denning and resting habitat because this habitat type typically contains large trees, denser canopy closure,

and structural complexity. There is fisher denning and resting habitat within the analysis area, but not within the project area. Alternative 2 will have no effect to pacific fisher.

Environmental Consequences

Alternative 1

Direct, Indirect and Cumulative Effects

Under Alternative 1 no activities would occur so no direct or indirect effects would occur. Therefore, there will be no cumulative effects.

Alternative 2

Direct and Indirect Effects

Similar to northern spotted owl, potential effects of the project on fisher are limited to noise disturbance during the breeding period. Due to seasonal restrictions, noise disturbance related to project activities would occur between July 10 and November 15. During this time period, noise above ambient levels would be relatively short-lived, lasting for several hours during the day over several weeks.

The project area is not suitable denning/resting habitat for fisher. For project implementation, about 10 alders, 3-5 pines, and some oaks would be removed; each of the trees are less than 18 inches in diameter. This loss of several relatively small trees would not have any impact on fisher habitat in the area and, because disturbance during the breeding season would be avoided, the project would have no effect on fisher. Alternative 2 would have no effect on fisher.

Cumulative Effects

The projects considered for cumulative effects that are within the analysis area are the existing mining claims and the Knownothing Fuels project. The mining claims do not have plans of operation so any disturbance due to these activities is superficial, will not remove habitat, and are limited in scale so that effects on habitat are unlikely. The Knownothing Fuels project Decision Memo states that there would be no effect to sensitive species from the project. Therefore, there is no cumulative effects from the project when combine with the on-going and reasonably foreseeable actions.

Western Pond Turtle

Affected Environment

Surveys for pond turtles have not been conducted for the Hotelling Gulch Project. There is suitable aquatic habitat for this species in the adjacent South Fork Salmon River, but not within the current channel of Hotelling Gulch due to its small size and seasonally dry conditions. The project area has about 5 acres of bedrock and shaded riparian habitat that may be suitable for this species.

Environmental Consequences

Alternative 1

Direct, Indirect and Cumulative Effects

Under Alternative 1 no activities would occur so no direct, indirect or cumulative effects would occur. With no action, the availability of water would continue to be low in both the historic channel and current alignment of Hotelling Gulch and therefore would not provide potential habitat for this species.

Alternative 2

Direct and Indirect Effects

The project would result in a small area of near stream disturbance and the temporary loss of a small amount of riparian habitat adjacent to Hotelling Gulch. Disturbance to the soil caused by large machinery within the 600 foot distance from the bank may cause a short term effect on turtles who may begin to overwinter in early fall, therefore, if any overwintering individuals are observed they will be moved from the project area downstream or upstream of the work site, to a safe location.

It is expected that once the project is completed, merging the channels into one restored channel will provide perennial flow in Hotelling Gulch for longer in the summer, increasing water and riparian habitat for the western pond turtle. In the long term, this project is expected to have a beneficial effect on pond turtles by providing improved habitat conditions. The proposed action may affect preferred habitat and individuals, but will not cause a trend toward federal listing for western pond turtle.

Cumulative Effects

The projects considered for cumulative effects that are within the analysis area are the mining claims and the Knownothing Fuels project. The mining claims do not have a plan of operations so the disturbance is superficial, will not remove habitat and limited in scale so the effects on habitat are unlikely. The Knownothing Fuels project Decision Memo states that there would be no effect to sensitive species from the project. Therefore, there is no cumulative effects from the project when combine with the on-going and reasonably foreseeable actions.

Foothill yellow-legged frog

Affected Environment

The current channel of Hotelling Gulch is not suitable for the foothill yellow-legged frog because of steeper gradients and seasonally dry conditions. Foothill yellow-legged frog are known to occur in the South Fork Salmon River, adjacent to the project area.

Environmental Consequences

Alternative 1

Direct, Indirect and Cumulative Effects

Under Alternative 1 no activities would occur so no direct, indirect or cumulative effects would occur. With no action, the availability of suitable habitat for this species would remain unchanged.

Alternative 2

Direct and Indirect Effects

Suitable habitat for the foothill yellow-legged frog is not present in Hotelling Gulch because of its seasonally dry conditions, however, there may be potential suitable habitat available in the adjacent South Fork Salmon River. Foothill yellow-legged frogs are known to exist in elevations below 1800 feet, therefore it is possible that they may exist in the South Fork Salmon River adjacent to the project area which lies at 1600 feet in elevation. The removal of riparian habitat along the Hotelling Gulch channel is not likely to impact Foothill yellow-legged frogs or their habitat in the South Fork Salmon River. Alternative will have no effect on the foothill yellow-legged frog.

Cumulative Effects

The projects considered for cumulative effects that are within the analysis area are the mining claims and the Knownothing Fuels project. The mining claims do not have a plan of operations so the disturbance is

superficial, will not remove habitat and limited in scale so the effects on habitat are unlikely. The Knownothing Fuels project Decision Memo states that there would be no effect to sensitive species from the project. Therefore, there is no cumulative effects from the project when combine with the on-going and reasonably foreseeable actions.

Appendix A– NEPA Species Tracking Sheet

NEPA TRACKING SHEET - FOR WILDLIFE									
PROJECT: Hotelling Gulch Fish Passage and Channel Resotration									DATE: March 2017
This form serves to track special management species for projects on the Klamath National Forest. Species considered in this document are those species listed as Endangered or Threatened under the Endangered Species Act; species included on the Region 5 Sensitive Species list; Survey and Manage species (per the 2001 ROD with application of subsequent Annual Species Reviews and Forest Service Region 5 guidance May 13, 2014), and species listed as Management Indicator Species (MIS) in the Forest Plan. With sufficient documentation on this form, this form may serve as a Biological Assessment and/or Biological Evaluation for actions that have no effect on these special management species and their habitat.									
Completion of this form certifies that species have been considered and identifies the potential level of survey effort needed.									
Taxa Group	Species Common Name	Scientific Name	Species Status	Probability of Occurrence Project w/in known or suspected range and there is suitable habitat w/in project area ("Yes" only if both are true)	Known sites exist in proposed project/ treatment area (Yes/No)	Magnitude of Effects per Proposed Action Magnitude of Effects (high, moderate, low)	Source of Survey Information (cite source including range map)	Are additional surveys necessary to further inform the Decision maker regarding risks to species?	Comments
Reptile	Western Pond Turtle	<i>Emys marmorata</i>	Sensitive, Project Level MIS	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	Time of implementation will avoid critical periods for the turtle. Some individuals starting overwintering sites may be disturbed. Further analyzed in specialist report.
Amphibs	Tailed Frog	<i>Ascaphus truei</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Amphibs	Siskiyou Mts. Salamander	<i>Plethodon stormii</i>	Sensitive and S&M Cat A	No	No	None	CDFW, Field Visit	No	Outside species range
Amphibs	Foothill Yellow-legged Frog	<i>Rana boylei</i>	Sensitive	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	
Amphibs	Cascade Frog	<i>Rana cascade</i>	Sensitive, Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	Present in elevations above 2500 feet. Hotelling Gulch sits below 1600 feet.
Amphibs	Northern Red-legged frog	<i>Rana aurora</i>	Project level MIS	No	No	None	CDFW, Field Visit	No	
Amphibs	Oregon spotted frog	<i>Rana pretiosa</i>	Threatened	No	No	None	CDFW, Field Visit	No	Outside species range
Amphibs	Southern Torrent Salamander	<i>Rhyacotriton variegatus</i>	Sensitive	No	No	Low	CDFW, Field Visit	No	
BIRDS	Acorn Woodpecker	<i>Melanerpes formicivorus</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Northern Goshawk	<i>Accipiter gentilis</i>	Sensitive, Forest-Level MIS	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	Potential habitat in analysis area
BIRDS	Burrowing Owl	<i>Athene cunicularia</i>	Project Level MIS	No	No	None	CDFW, Field Visit	No	Outside species range
BIRDS	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	No	No	None	CDFW, Field Visit	No	Outside species range
BIRDS	Marbled murrelet	<i>Brachyramphus marmoratus</i>	Threatened	No	No	None	CDFW, Field Visit	No	Outside species range
BIRDS	Swainson's hawk	<i>Buteo swainsoni</i>	Project Level MIS	No	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Brown Creeper	<i>Certhia americana</i>	In Snag association, Use S&G	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	

BIRDS	Vaux's Swift	<i>Chaetura vuaxi</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	American Dipper	<i>Cynclus platensis</i>	Project Level MIS	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	
BIRDS	Pileated Woodpecker	<i>Dryocopus pileatus</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Willow Flycatcher	<i>Empidonax traillii</i>	Sensitive	No	No	Low	CDFW, Field Visit	No	Outside species range
BIRDS	Greater sandhill crane	<i>Grus canadensis tabida</i>	Sensitive	No	No	None	CDFW, Field Visit	No	Outside species range
BIRDS	Pinon Jay	<i>Gymnorhinus cyanocephalus</i>	Project Level MIS	No	No	Low	CDFW, Field Visit	No	Outside species range
BIRDS	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Sensitive	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Sage Thrasher	<i>Oreoscoptes montanus</i>	Project Level MIS	No	No	Low	CDFW, Field Visit	No	Outside species range
BIRDS	Flammulated owl	<i>Otus flammeolus</i>	Project Level MIS, Use S&G	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	White-headed woodpecker	<i>Picoides albolarvatus</i>	Project Level MIS, Use S&G	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Black-backed woodpecker	<i>Picoides arcticus</i>	Project Level MIS, Use S&G	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Downy Woodpecker	<i>Picoides pubescens</i>	Project Level MIS	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	
BIRDS	Hairy Woodpecker	<i>Picoides villosus</i>	Project Level MIS	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	
BIRDS	Pygmy nuthatch	<i>Sitta pusilla</i>	In Snag association, Use S&G	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Red Breasted Sapsucker	<i>Sphyrapicus ruber</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Great Gray Owl	<i>Strix nebulosa</i>	Sensitive, S&M Cat A (no surveys in CA)	No	No	Low	CDFW, NRIS, Field Visit	No	Outside species range
BIRDS	Northern Spotted Owl	<i>Strix occidentalis</i>	Threatened, Forest Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
BIRDS	Peregrine falcon	<i>Falco peregrinus</i>	see LRMP Requirements	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Pronghorn	<i>Antilocarpa americana</i>	Project Level MIS	No	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Pallid Bat	<i>Antrozous pallidus</i>	Sensitive, Use S&Gs	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	Oregon red tree vole	<i>Arborimus longicaudus</i>	S&M Cat C	No	No	None	CDFW, Field Visit	No	Outside species range
Mammals	Roosevelt Elk	<i>Cervus canadensis roosevelti</i>	Emphasis Species	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	Sensitive, Use S&Gs	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	California Wolverine	<i>Gulo gulo</i>	Sensitive, Proposed Threatened	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Silver-haired bat	<i>Lasionycteris noctivagans</i>	Use S&Gs	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	American Marten	<i>Martes americana</i>	Sensitive, Forest Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	Associated with mid-high elevation (above 5,000ft), old grown habitats with dense canopy. Hotelling Gulch lies at 3,200 feet with scarce canopy.
Mammals	Pacific Fisher	<i>Martes pennanti</i>	Sensitive, Forest Level MIS	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	
Mammals	Long-tailed Vole	<i>Microtus longicaudus</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Montane Vole	<i>Microtus montanus</i>	Project Level MIS	No	No	Low	CDFW, NRIS, Field Visit	No	Outside species range
Mammals	Long-eared myotis	<i>Myotis evotis</i>	Use S&Gs	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	

Mammals	Fringed myotis	<i>Myotis thysanodes</i>	Sensitive	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	Long-legged myotis	<i>Myotis volans</i>	Use S&Gs	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	Black-tailed Deer	<i>Odocoileus hemionus</i>	Forest Level MIS	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	Northern Water Shrew	<i>Sorex palustris</i>	Project Level MIS	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mammals	Black Bear	<i>Ursus americanus</i>	Forest Level MIS	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mammals	Gray Wolf	<i>Canis lupus</i>	Threatened	Yes	No	Low	CDFW	No	
Mammals	Western Gray Squirrel	<i>Sciurus griseus</i>	Project Level MIS	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mollusk	Trinity shoulderband	<i>Helminthoglypta talmadgei</i>	S&M Cat D-1	Yes	Yes	Low	CDFW, NRIS, Field Visit	No	
Mollusk	Siskiyou sideband	<i>Monadenia chaceana</i>	S&M Cat B-3	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mollusk	Blue-gray tail dropper	<i>Prophysaon coeruleum</i> , in California and Washington	S&M -Cat A	Yes	No	Low	CDFW, NRIS, Field Visit	No	
Mollusk	Tehamana chaparral	<i>Trilobopsis tehamana</i>	Sensitive and S&M Cat A	Yes	Yes	Moderate	CDFW, NRIS, Field Visit	No	Requires shaded talus and rockpiles. Hotelling does not have talus and minimal shade.
Invertebrate	Western Bumble Bee	<i>Bombus occidentalis</i>	Sensitive	Yes	No	Low	CDFW, NRIS, Field Visit	No	Prefer open meadows with high diversity of plant structure and plant flowering. Habitat absent in Hotelling Gulch.

Appendix B– Management Indicator Species Tracking Sheet

MIS		Habitat* is not in or adjacent to the project area and is not affected by the project	Habitat* is in or adjacent to the project area, but is not directly or indirectly affected by the project (needs rationale)	Habitat* is potentially affected by the project (proceed to Part II)		Habitat removed by project activities (based on analysis in Part II)
Common Name	Scientific Name					
Hardwood Species Association						
Acorn woodpecker	<i>Melanerpes formicivorus</i>		463 acres of oak in analysis area	0 acres potentially affected by project		0 acres removed by project
Western gray squirrel	<i>Sciurus griseus</i>		463 acres of oak in analysis area	2.5 acres potentially affected by project		0 acres removed by project
River/Stream Species Association						
Rainbow trout	<i>Oncorhynchus mykiss</i>		17.1 miles of perennial stream and 23.3 miles of intermittent stream in 7th field watersheds	~3.9 miles perennial stream potentially affected by project components		~600 feet removed by project and ~600 feet created or enhanced
Steelhead	<i>Oncorhynchus mykiss</i>		17.1 miles of perennial stream and 23.3 miles of intermittent stream in 7th field watersheds	~3.9 miles perennial stream potentially affected by project components		~600 feet removed by project and ~600 feet created or enhanced
Tailed frog	<i>Ascaphus truei</i>		17.1 miles of perennial stream and 23.3 miles of intermittent	~4.4 miles perennial stream and ~2.2 miles intermittent stream potentially affected		~600 feet removed by project and ~600 feet created or enhanced

			stream in 7th field watersheds	by project components		
Cascades frog	<i>Rana cascade</i>	No habitat	N/A	N/A		N/A
American dipper	<i>Cynclus platensis</i>		17.1 miles of perennial stream and 23.3 miles of intermittent stream in 7th field watersheds	~4.4 miles perennial stream and ~2.2 miles intermittent stream potentially affected by project components		~600 feet removed by project and ~600 feet created or enhanced
Northern water shrew	<i>Sorex palustris</i>		17.1 miles of perennial stream and 23.3 miles of intermittent stream in 7th field watersheds	~4.4 miles perennial stream and ~2.2 miles intermittent stream potentially affected by project components		~600 feet removed by project and ~600 feet created or enhanced
Long-tailed vole	<i>Microtus longicaudus</i>		17.1 miles of perennial stream and 23.3 miles of intermittent stream in 7th field watersheds	~4.4 miles perennial stream and ~2.2 miles intermittent stream potentially affected by project components		~600 feet removed by project and ~600 feet created or enhanced
Marsh/Lake/Pond Species Association						
Northern red-legged frog	<i>Rana aurora aurora</i>	Outside known range (not included in FWS T&E species list for Klamath NF)	N/A	N/A		0 miles removed by project
Western pond turtle	<i>Clemmys marmorata</i>		3.8 miles of low gradient stream along SF Salmon River, adjacent to the project area	0 miles of indicator habitat potentially affected by project		0 miles of indicator habitat removed by project

Snag Species Association

Red-breasted sapsucker	<i>Sphyrapicus ruber</i>		1,308 acres in analysis area	2.5 acres potentially affected by project		1 acre of riparian deciduous removed in short term
Hairy woodpecker	<i>Picoides villosus</i>		600 acres in analysis area	0 acres potentially affected by project		0 acres removed by project
White-headed woodpecker	<i>Picoides albolarvatus</i>		600 acres in analysis area	0 acres potentially affected by project		0 acres removed by project
Vaux's swift	<i>Chaetura vuaxi</i>		600 acres in analysis area	0 acres potentially affected by project		0 acres removed by project
Downy woodpecker	<i>Picoides pubescens</i>		600 acres in analysis area	1 acre potentially affected by project		1 acre of riparian deciduous removed in short term
Pileated woodpecker	<i>Dryocopus Pileatus</i>		600 acres in analysis area	0 acres potentially affected by project		0 acres removed by project
Black-backed woodpecker	<i>Picoides arcticus</i>		0 acres in analysis area	0 acres potentially affected by project		0 acres removed by project