

Mattley Meadow Restoration Project
Wildlife Specialist Report & Biological Assessment & Evaluation
Threatened, Endangered, Proposed, Sensitive**Wildlife Specialist Report:**

The purpose of this report is to document the effects of the proposed action and the alternatives of this project (including no action) on terrestrial animal species that have the following status: federally listed under ESA (Endangered Species Act), Regional Forester's sensitive, and Management Indicator Species (MIS). Migratory Birds are discussed in a separate document. See Appendices A-B for complete lists of these species.

Species occurrence information for California was researched in the CNDDDB (California Natural Diversity Database), CWHR (California Wildlife Habitat Relations System), and NatureServe.

An official list of Federal Endangered and Threatened species for the project area was obtained from the U.S. Fish and Wildlife Service IPAC website on December 3, 2019 (Consultation Code: 08ESMF00-2020-SLI-0480). Aquatics species appearing on this list are discussed in a separate document (see aquatics report).

Introduction:

The Mattley Meadow Restoration Project is intended to restore ecosystem function in the currently degraded channel floodplain system in Mattley and Mattley Creek meadows. The project involves two distinct meadows: Mattley Meadow, a large meadow that spans both Stanislaus National Forest (STF) and private lands, and Mattley Creek Meadow, a smaller peripheral meadow on STF land. Historically, the Mattley meadow complex lacked deep stream channels and water travelled as sheet flow and through shallow swales on the surface of the meadow. Existing remnant vegetation indicates Mattley Meadow once supported a large aspen stand and a vigorous wet meadow plant community. However, natural and human-caused disturbances over the past 100 years have caused the formation of three large gully channels in Mattley Meadow and one gully in Mattley Creek Meadow which have resulted in meadow degradation and impaired ecological function. The gullies have prevented surface flows from accessing the floodplain and cause accelerated erosion. The gullies have also effectively drained the meadow by lowering ground water elevations, reducing groundwater storage, and altering stream flows. These hydrologic alterations in turn have negatively impacted the plant community and wildlife habitat. The aspen stand has suffered mass die-offs and has been encroached by conifers as the meadow has dried. There has been a conversion of moist plant communities to drier plant communities, increased conifer encroachment, and an overall deterioration of aquatic and terrestrial habitats.

Specific project objectives include restoring meadow hydrologic function, improving water quality by reducing channel erosion, improving the extent and vigor of meadow vegetation and aspen stands, and improving meadow habitat for aquatic and terrestrial wildlife.

Affected Environment:

The Mattley Meadow Restoration project consists of approximately 38 acres of National Forest System lands and 14 acres of private land located on the Calaveras Ranger District of the Stanislaus National Forest. The project is located in the headwaters of the North Fork Mokelumne River within Calaveras County, approximately forty miles east of Jackson, CA (T7N, R17E, Sec. 8 & 17, Mt. Diablo Base and Meridian).

The project planning area is located at elevations between 7,000 and 7,960 feet above sea level within the Upper North Fork Mokelumne River watershed and Mattley Creek subwatershed, west slope of the Sierra Nevada. The project area hosts great gray owl (*Strix nebulosa*) and willow flycatcher (*Empidonax traillii*) habitat areas. The dominant vegetation types are meadow vegetation communities varying from wet meadow species in the lower portions of the meadow to drier upland species in the upper end of the meadow and in the dewatered areas adjacent to the gullies. Meadow conditions are currently degraded due to three deeply incised channels that have altered the hydrologic processes and increased the need to implement restoration activities which would move them toward desired conditions (see hydrology report).

There are approximately 52 acres proposed for plug and pond and trail re-reroute treatments within the project area. Protocol surveys for California spotted owls and northern goshawks were conducted in 2014-2015 in the

surrounding general forest habitat within 0.5 mile of the project area. One spotted owl was detected twice in Jelmini Basin approximately 0.75 miles east of the project area. No spotted owls or goshawks were detected within or near the project area, likely due to the presence of several great horned owls, a natural predator of spotted owls. The nearest spotted owls PAC (Protected Activity Center) is over 0.25 miles north of Mattley Creek Meadow; the nearest northern goshawk PAC is almost 0.6 mile north of this northern-most section of the project area. These PACs were included in the protocol surveys conducted in the suitable habitat adjacent to the project area with negative results.

Protocol surveys for great gray owl and willow flycatcher within the meadow communities were also conducted in 2014-2015 with negative results. Although there are willows in the project area they are reduced in density and do not provide high capability habitat for the willow flycatcher. In addition, there is little standing water in the down-cut channels to provide insect prey for foraging. Other surveys included Visual Encounter Surveys for the presence of amphibians and fish and Streamscape Inventories for the aquatic habitat. A small population of the federally endangered Sierra Nevada yellow-legged frogs was detected within the project area (see aquatics report).

Baited camera surveys were conducted in the project area with a focus to detect target carnivore species (American marten, Pacific fisher, California wolverine). Martens were detected along Mattley Creek below 7N16 outside the project area; other target carnivores were not detected (fisher and wolverine).

Formalized surveys were not conducted for Townsend's big-eared bat or pallid bat. Suitable habitat occurs for these species in the project area; and therefore, presence was assumed for these species for effects analyses.

Alternative - Proposed Action:

The Calaveras Ranger District, in partnership with the private landowner, proposes to restore approximately 45 acres of riparian and meadow habitat. In Mattley Meadow, two of the three gullies (middle and east gullies) would be filled with a series of five gully plugs created using onsite material (totaling 15,632 cubic yards) excavated from eight borrow ponds (totaling 3.2 acres). The west gully channel would not be treated or directly impacted as part of the project due to the presence of a population of Sierra Nevada yellow-legged frogs (SNYLF), an endangered species. In Mattley Creek Meadow, the gully would be filled with one plug using material (286 cubic yards) from one borrow pond (0.1 acre). Although the principal function of the borrow ponds is to provide native fill material for plug construction, since the ponds will fill with groundwater and maintain ponded water year-round, habitat features and diversity would be incorporated into the construction. These features may include varying water depths, islands, peninsulas, basking logs, etc., which are determined as fill needs are met. /topsoil would be removed and stockpiled adjacent to the plug fill zone to top dress the completed plug. All plugs and borrow ponds are sited and configured to accommodate surface and subsurface through flow as well as adjacent hillslope-generated surface and groundwater inflows. Plugs would be constructed with wheel loaders to provide wheel compaction of the fill. The compaction levels are intended to match the porosity/transmissivity of the native meadow soils to allow moisture to move freely within the plug soil profile and support erosion resistant meadow vegetation for long term durability as well as preventing preferential pathways for subsurface flows either in the plug or the native material. Woody debris (existing dead/down material and green trees removed during excavation) and live vegetation (e.g. carex/juncus sod) would be strategically placed to disperse flows and reduce erosion on plugs while vegetation becomes established.

A 0.1 mile segment of a motorized trail (17EV16) that crosses Mattley Creek Meadow would be rerouted outside of the meadow. The new rerouted trail segment would be approximately 0.2-0.4 miles in length. The existing trail segment within the meadow would be restored by scarifying the trail surface and placing woody debris and/or vegetation as needed to promote vegetation regrowth.

Cattle grazing would be restricted within meadow restoration areas until the sites have revegetated and stabilized, generally a minimum of 2-3 years. In Mattley Meadow, range fencing on the north property boundary and east edge of the meadow would be reconstructed. Temporary fencing would be constructed around the immediate restoration area in Mattley Creek Meadow. An off-channel water source may be constructed to increase dispersal of cattle.

Project construction will require one month during the lowest/no flow period, when the channels are expected to be dry (currently proposed for September 1-30, 2021).

Table 1 compares the known habitat and distribution for each species with the project area and proposed action. For those species for which "Neither the habitat nor the species occur within the project area or would be impacted by this project", there is no further discussion of those species. Species with a box around the row are discussed in further detail following the table. *For MIS, the population trend is from the Sierra Nevada Framework MIS 2017.*

TABLE 6. TEP, Sensitive, MIS, PIF Species Review and Assessment			
Species	Status	Species background information	Project Information
Common name <i>Scientific Name</i>	ESA FS MIS PIF CDFW	The known distribution or habitat association for the species.	Project area is in wet and dry meadow vegetation communities at an elevation of 7000-7960 feet. The project is in the Upper North Fork Mokelumne River Watershed.
Pacific fisher <i>Pekania pennanti</i>	PT (West Coast DPS) S SSC	Fishers occupy intermediate to large-tree stages of coniferous forests and deciduous riparian habitats with a high percent canopy closure. Fishers use cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles. Dense, mature stands of trees also provide cover (CDFG 1997). Elevation range 5,000-8,500 ft.	Pacific fishers are not known to occur on the Calaveras Ranger District despite extensive surveying. The nearest population is south of the Merced River in Yosemite NP, although a male was recently detected north of the Merced River (Tucker 2018). This male was not detected north of the Merced in 2019 and no further detections have occurred (Holland). Neither the species nor its habitat would be impacted by this project.
California wolverine <i>Gulo gulo luteus</i>	PT S	In the contiguous US wolverine year-round habitat is found at high elevations in conifer forests near treeline and in rocky alpine habitats such as cirque basin and avalanche chutes that have food sources such as marmots, voles, and carrion. Wolverines use the coldest available landscapes within their geographic range where snow persists well into May likely due to a physiological need for cooler temperatures during the warm season. Deep, persistent snow is required for successful wolverine reproduction and correlates well with year-round habitat use. Elevation ranges used by historical wolverine populations in the Sierra Nevada is unknown, but presumably wolverines used higher elevations than more northerly populations to compensate for the higher temperatures found at lower latitudes. Valley bottom habitat appears to be used only for dispersal movements and not for foraging or reproductions. Wolverines rarely, or never, den in lower elevation forested habitats, although they may occupy these habitats seasonally. Current populations are restricted to the North Cascades Range in Washington and the Northern Rockies of Montana, Idaho, and Wyoming. Populations once existed in the Sierra Nevada of California but were likely extirpated by the mid-1900s. In 2008, a male wolverine was discovered in the Sierra Nevada and is thought to be a recent migrant from the Rocky Mountains (Federal Register 2010). Elevation range 6,400-10,800 ft.	California wolverines have been extirpated from California and are not known to occur on the Calaveras Ranger District or within the state. Neither the species nor its habitat would be impacted by this project.
Bald eagle <i>Haliaeetus leucocephalus</i>	DM S	Requires large, old-growth trees or snags in remote, mixed stands near water. Large bodies of water or free-flowing rivers with abundant fish, and adjacent snags required for foraging. More common at lower elevations; not found in the high Sierra Nevada (CDFG 1999). Known to occur at New Melones Reservoir (pers. obs March 2011). Elevation range: district-wide.	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project.</i>

TABLE 6. TEP, Sensitive, MIS, PIF Species Review and Assessment

Species	Status	Species background information	Project Information
Common name <i>Scientific Name</i>	ESA FS MIS PIF CDFW	The known distribution or habitat association for the species.	Project area is in wet and dry meadow vegetation communities at an elevation of 7000-7960 feet. The project is in the Upper North Fork Mokelumne River Watershed.
Northern goshawk <i>Accipiter gentilis</i>	S SSC	Nests locally in mature and old-growth stands of mixed conifer forests at low elevations into high elevation lodgepole pine forests. Nest stands are usually on north slopes, near water, in the densest parts of stands, but close to openings (CDFG 2005). Elevation range 4,000-8,000 ft.	Suitable foraging habitat for Northern goshawks occurs in the wet and dry montane meadow vegetation types within the project area.
Great grey owl <i>Strix nebulosa</i>	S	Nests in large, broken-topped snags within old-growth red fir, mixed conifer, or lodgepole pine habitats near wet meadows. Forages in wet meadows and roosts in nearby dense coniferous forest. Both old-growth and second-growth forest used if suitable nest-sites available (CDFG 1997, Weingardt 2006). Elevation range 2,500-8,000 ft.	Suitable nesting and foraging habitat for great grey owls occurs in the wet and dry montane meadow vegetation types within the project area.
California spotted owl <i>Strix occidentalis occidentalis</i>	S MIS	The CSO is known to nest in medium/large trees (≥ 24 inches dbh) with canopy closures above 40% within high elevation ponderosa pine, Sierran mixed conifer, white fir, and red fir coniferous forests, and multi-layered trees within ponderosa pine and Sierran mixed conifer forests (CDFG 2005, USFWS 2006). Elevation range >7,000 ft. This is the MIS for late seral closed canopy coniferous forest ponderosa pine, Sierran mixed conifer, white fir, red fir, tree size 5 (canopy closures M and D), and tree size 6 vegetation types. Population trend -stable	Suitable foraging habitat for California spotted owls occurs in the wet and dry montane meadow vegetation type within the project area.
Willow flycatcher <i>Empidonax traillii</i>	S	This flycatcher breeds principally in thickets of low, dense willows bordering wet meadows, ponds, or backwaters. Breeding success may be heavily affected by predation and brown-headed cowbird egg-parasitism (CDFG 2005). Elevation range 2,000-8,000 ft. They are known to occur on the Groveland District.	Marginally suitable nest sites and foraging habitat likely occur in the sparse willows and intermittent creeks within the project area.
Fringed myotis (bat) <i>Myotis thysanodes</i>	S	Pinyon-juniper, Valley foothill hardwood, and hardwood-conifers. Roosts under bark in medium to large snags surrounded by low canopy cover (USDA 2012, unpublished). Elevation range: sea level to 6,500 ft.	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project.</i>
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	S	This bat is found in all but subalpine and alpine habitats. Now considered uncommon in CA. Most abundant in mesic habitats. Gleans from brush or trees or feeds along habitat edges (CDFG 2000). Elevation range: <10,800 ft.	Suitable habitat for Townsend's big-eared bats occurs in the wet and dry montane meadow vegetation type within the project area.

TABLE 6. TEP, Sensitive, MIS, PIF Species Review and Assessment

Species	Status	Species background information	Project Information
Common name <i>Scientific Name</i>	ESA FS MIS PIF CDFW	The known distribution or habitat association for the species.	Project area is in wet and dry meadow vegetation communities at an elevation of 7000-7960 feet. The project is in the Upper North Fork Mokelumne River Watershed.
Pallid bat <i>Antrozous pallidus</i>	S	This species is associated with rocky outcrops, cliffs, and crevices with access to open habitats including grasslands, shrublands, woodlands, and forests for foraging. Roosts by day in caves, crevices, mines, hollow trees, buildings (CDFG 1997). Elevation range: <10,000 ft.	Suitable habitat for Pallid bats occurs in the wet and dry montane meadow vegetation type within the project area.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	S	This species occurs in high elevation habitats including mixed conifer and red fir forests, mountain hemlock and whitebark pine woodlands, talus slopes and mountain meadows, and remoteness from human presence (Perrine et al. 2010). Until recently (2010), the only known current population was near Lassen Peak. In August 2010 a single female was detected near Sonora Pass along the border of Tuolumne and Mono Counties on the Humboldt-Toiyabe NF (Kalkowski 2010; UC Davis 2010). In the fall of 2010, two additional animals, a male and female, were confirmed about 4 miles from the original on the Stanislaus NF (The Union Democrat 2010). In 2014 the species was detected north of Hwy 108 for the first time (pers comm C. Holland). Species has subsequently been located in Upper Gardner above Highland Lakes (pers.comm J. Harley). Elevation range >4,000 ft.	Project is well outside the current known elevation range and occupied habitat for this species. Neither the species nor its habitat occur within the project area or would be impacted by this project.
Pacific marten <i>Martes americana</i>	S MIS	<p>Optimal habitats for martens are different-aged mixed-conifer stands with 40-60% canopy closure that contain large trees and snags and large amounts of basal area, downfall cover, living ground cover, and log density. These provide cavities and holes for denning and nesting. Forages in small clearings, meadows, and riparian areas (CDFG 1997).</p> <p>This is the MIS for late seral closed canopy coniferous forest ponderosa pine, Sierran mixed conifer, white fir, red fir, tree size 5 (canopy closures M and D), and tree size 6 vegetation types.</p> <p>Population trend - decreasing</p>	Pine martens are known to occur within riparian corridors near Mattley Creek in the project area.
Western bumblebee <i>Bombus occidentalis</i>	S	This species is a generalist forager that does not depend on any one flower type. Requires habitats with rich supplies of floral resources with continuous blooming from spring to autumn at the landscape level. Since 1998 there has been drastic declines some areas, including CA. Threats include habitat alteration, livestock grazing, inbreeding from fragmented habitat, insecticides and imported bee disease.	Western bumblebee's have the potential to occur in the meadow communities within the project area.

TABLE 6. TEP, Sensitive, MIS, PIF Species Review and Assessment

Species	Status	Species background information	Project Information
Common name <i>Scientific Name</i>	ESA FS MIS PIF CDFW	The known distribution or habitat association for the species.	Project area is in wet and dry meadow vegetation communities at an elevation of 7000-7960 feet. The project is in the Upper North Fork Mokelumne River Watershed.
Fox sparrow <i>Passerella iliaca</i>	MIS	This is the MIS for shrubland (west-slope chaparral) including montane chaparral, mixed chaparral, and chamise-redshank chaparral vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project. This project would not impact the population trend for this species.</i>
Mule Deer <i>Odocoileus hemionus</i>	MIS	This is the MIS for oak-associated hardwood and hardwood/conifer including montane hardwood and montane hardwood-conifer vegetation types. Population trend - stable	Mule deer are known to occur within wet and dry montane meadow vegetation type in the project area.
Yellow warbler <i>Dendroica petechia</i>	MIS	This is the MIS for montane riparian and valley foothill riparian vegetation types. Population trend - stable	Marginally suitable nest sites and foraging habitat likely occur in the sparse willows and intermittent creeks within the project area.
Mountain quail <i>Oreortyx pictus</i>	MIS	This is the MIS for early and mid-seral coniferous forest ponderosa pine, Sierran mixed conifer, white fir, red fir, eastside pine, tree sizes 1, 2, 3, and 4, all canopy vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project. This project would not impact the population trend for this species.</i>
Sooty (blue) grouse <i>Dendragapus obscurus</i>	MIS	This is the MIS for late seral open canopy coniferous forest ponderosa pine, Sierran mixed conifer, white fir, red fir, eastside pine, tree size 5, canopy closures S and P vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project. This project would not impact the population trend for this species.</i>
Northern flying squirrel <i>Glaucomys sabrinus</i>	MIS	This is the MIS for late seral closed canopy coniferous forest ponderosa pine, Sierran mixed conifer, white fir, red fir, tree size 5 (canopy closures M and D), and tree size 6 vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project. This project would not impact the population trend for this species.</i>
Hairy woodpecker <i>Picoides villosus</i>	MIS	This is the MIS for medium and large snag components in green forest vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project. This project would not impact the population trend for this species.</i>
Black-backed woodpecker <i>Picoides arcticus</i>	MIS	This is the MIS for medium and large snag components in burned forest (stand-replacing fire) vegetation types. Population trend - stable	<i>Neither the species nor its habitat occur within the project area or would be impacted by this project.</i>

*** Status Definitions:**

- ◆ **E** Listed Endangered under the ESA: Any species that is in danger of extinction throughout all or a significant portion of its range. (Appendix A)
- ◆ **T** Listed Threatened under the ESA: Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. (Appendix A)
- ◆ **PE** Proposed Endangered under the ESA: Any species that is proposed in the Federal Register to be listed under Section 4 of the Endangered Species Act. (Appendix A)
- ◆ **PT** Proposed Threatened under the ESA: Any species that is proposed in the Federal Register to be listed under Section 4 of the Endangered Species Act. (Appendix A)
- ◆ **DPS** Distinct Population Segment
- ◆ **EXPN** Experimental population, non-essential
- ◆ **C** Candidate Taxon, Ready for Proposal
- ◆ **S** Sensitive: Those species listed on the Regional Forester's Sensitive Species list for the California Region of the Forest Service (Appendix B)
- ◆ **DM** Designated Monitoring
- ◆ **MIS** Management Indicator Species: Species identified in the STF Forest Plan Direction April 2010 (Page 42) for various vegetation types and seral stages. (Appendix C)
- ◆ **FP** Fully Protected – California Department of Fish and Game designation
- ◆ **SSC** Species of Special Concern – California Department of Fish and Game designation

Effects of the Proposed Project:**Direct, Indirect, and Cumulative Effects**

Current on-going, simultaneous implementation or very close projects in the vicinity of Mattley Meadow Restoration project that may influence forest conditions and contribute to cumulative effects include Hemlock Landscape-Level Environmental Assessment timber stand, aspen, and meadow improvement projects, logging on private inholdings adjacent to the project area, fire wood permits, and recreation activities.

The following discussions analyze the direct, indirect, and cumulative effects to terrestrial wildlife species by project for the Mattley Meadow Restoration project. As mentioned previously, some projects aren't expected to result in effects to certain species, thus detailed effects analysis was not conducted for all species identified in Table 1. 40 CFR 1508.08 defines effects: Direct effects are effects which are caused by the action and occur at the same time and place. Indirect effects are effects which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Cumulative effects are the incremental impact of the [proposed] action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7).

Effects of Proposed Action:**Direct and Indirect Effects**

Direct and indirect effects from the Proposed Action on mature forest sensitive wildlife species (California spotted owl, northern goshawk, and American marten), meadow and riparian-dependent species (great grey owl, willow flycatcher, western bumblebee), Townsends's big-eared bat, Pallid bat, and MIS species (mule deer, yellow warbler) are expected to be minor and short-term. Direct and indirect effects are related to: death, injury, disturbance from mechanical equipment, stream channel restoration, and trail construction, that may increase individual movement and displacement; and, habitat alteration from the minimal removal of trees and slight canopy reduction (no changes in CWHR classes), that may modify microclimatic conditions, alter prey availability and influence reproductive success.

Plug and pond construction, trail re-route and new construction, and tree removal within the meadow and along the margins have the potential to cause death or injury because of the use of heavy equipment and the felling of trees. However, the mobility of the species makes it highly improbable that death or injury

would occur as a result of project activities. These treatment have the potential to cause disturbances and change normal behavior patterns because of the use of loud machinery such as excavators, dump trucks, backhoes, trail dozers, and chain saws, during the period operations would take place over an approximate 30 day period in late summer/early fall 2021.

Wildlife species directly (great gray owl, willow flycatcher, deer, yellow warbler, Townsend's big-eared bat) or indirectly (California spotted owls, northern goshawks, marten, Pallid bat, western bumblebee), associated with meadow or riparian communities may exhibit a short term temporary avoidance of areas being disturbed during project implementation. Displacement or avoidance of the area by individuals should be of short duration and should subside soon after project completion. Individual movements may increase during project implementation due to noise and equipment disturbance. The increase in movement may lead to an increase in mortality from increased energetic expenditures and predation risk. The summer/early fall timeline for project implementation should reduce the risk of species avoidance and mortality risks during the sensitive breeding periods for all of these species.

Wildlife species may benefit in the long term (approximately 5-15 years) from movement of the trail outside the meadow, the increased retention of water resulting in the development of willows for colonization and meadow-associated plants for nesting, roosting and foraging habitat, and for protective movement corridors.

Cumulative Effects

Current on-going, simultaneous implementation or very close projects in the vicinity of Mattley Meadow Restoration project that may influence meadow conditions and contribute to cumulative effects include Hemlock Landscape-Level Environmental Assessment timber stand, aspen release, and meadow improvement projects, logging on private inholdings adjacent to the project area, fuelwood permits, and trail maintenance/construction activities. These projects could reduce the overall canopy cover by a minor amount. The additional effects of these activities on Forest Service terrestrial wildlife species is expected to be negligible, as these projects propose to thin, masticate/biomass removal smaller diameter trees (<16 inches dbh), or are not directly connected to the project area. Private land sales would use forest BMPs to minimize the impact of implementation and reduce sedimentation to the watersheds. Sales and trail re-routes are also scheduled to be implemented at different times over a period of time (2019 to 2024) which should help reduce the impacts.

Literature cited:

California Natural Diversity Database. <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>

CDFG (California Department of Fish and Game). 2008. California Department of Fish and Game and California Interagency Wildlife Task Group. California Wildlife Habitat Relationships (CWHR) version 8.2. personal computer program. Sacramento, California. On-Line version. <http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.asp>. Updated 2013.

Evans, E. Thorp, R., Jepsen S., and S.H. Black. 2008. Status Review of Three Formerly Common Species of Bumble Bee in the Subgenus *Bombus*. The Xerces Society.

NatureServe: <http://www.natureserve.org/>

USDA Forest Service. 2010a. Sierra Nevada Forests Bioregional Management Indicator Species (MIS) Report: Life history and analysis of Management Indicator Species of the 10 Sierra Nevada National Forests: Eldorado, Inyo, Lassen, Modoc, Plumas, Sequoia, Sierra, Stanislaus, and Tahoe National Forests and the Lake Tahoe Basin Management Unit. Pacific Southwest Region, Vallejo, CA. December 2010. 132pp.

USDA Forest Service. 2010b. Stanislaus National Forest, Forest Plan Direction. Forest Service, Pacific Southwest Region, Stanislaus National Forest, Sonora, CA.196 pp.

Best Available Science:

This evaluation was developed in consideration of the best available science and is consistent with the Stanislaus National Forest Land and Resource Management Plan (USDA 2017), as amended.

Biological Assessment:

The purpose of this report is to document the determinations of effects to federally listed or proposed species and/or critical habitat or proposed critical habitat under the ESA (Endangered Species Act) that may be impacted by the proposed action.

Biological Evaluation:

The purpose of this report is to document the effects of the proposed action to sensitive species listed on the Regional Forester’s Sensitive species list for Region 5, Pacific Southwest Region.

Determinations:

Based on the effects analyses above,

I find that this project will have no effect to any endangered or threatened species or their critical habitats or their proposed critical habitats.

I find that this project is not likely to trend toward listing any sensitive species listed for the Stanislaus National Forest.

I find that this project would not impact the population trend for any MIS species for the Stanislaus National Forest.

Signature:

Prepared by:



Melinda S. Benton
Wildlife Biologist
Stanislaus NF

February 12, 2020
Date

APPENDIX A**SENSITIVE TERRESTRIAL ANIMAL SPECIES LIST FOR THE STANISLAUS NF
EXERPTED FROM THE REGIONAL FORESTER'S SENSITIVE PLANT AND ANIMAL
LIST****JULY 3, 2013 updated 9/30/2013****ANIMALS:****Birds**

<i>Haliaeetus leucocephalus</i>	Bald eagle
<i>Accipiter gentilis</i>	Northern goshawk
<i>Strix nebulosa</i>	Great gray owl
<i>Strix occidentalis occidentalis</i>	California spotted owl
<i>Empidonax traillii</i>	Willow flycatcher

Mammals

<i>Pekania pennanti</i>	Pacific fisher
<i>Gulo gulo luteus</i>	California wolverine
<i>Myotis thysanodes</i>	Fringed myotis (bat)
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Antrozous pallidus</i>	Pallid bat
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox
<i>Martes americana</i>	American marten

APPENDIX B**Stanislaus National Forest
Management Indicator Species**

Excerpted from the Sierra Nevada Forests Management Indicator Species Amendment [EIS pg. 44 and ROD pg. 3; 12/14/2007], Sierra Nevada Project-Level MIS Report Template Outline – Modified for the STF 03/14/08 Table 1, Page 7, and STF Forest Plan Direction March 2017, Page 38.

Pertinent portions of Table 1. Management Indicator Species

Habitat or Ecosystem Component	CWHR Type(s) defining the habitat or ecosystem component ¹	Scientific Name
Riverine & Lacustrine	lacustrine (LAC) and riverine (RIV)	aquatic macroinvertebrates
Shrubland (west-slope chaparral types)	montane chaparral (MCP), mixed chaparral (MCH), chamise-redshank chaparral (CRC)	fox sparrow <i>Passerella iliaca</i>
Oak-associated Hardwood & Hardwood/conifer	montane hardwood (MHW), montane hardwood-conifer (MHC)	mule deer <i>Odocoileus hemionus</i>
Riparian	montane riparian (MRI), valley foothill riparian (VRI)	yellow warbler <i>Dendroica petechia</i>
Wet Meadow	Wet meadow (WTM), freshwater emergent wetland (FEW)	Pacific tree frog <i>Pseudacris regilla</i>
Early Seral Coniferous Forest	ponderosa pine (PPN), Sierran mixed conifer (SMC), white fir (WFR), red fir (RFR), eastside pine (EPN), tree sizes 1, 2, and 3, all canopy closures	Mountain quail <i>Oreortyx pictus</i>
Mid Seral Coniferous Forest	ponderosa pine (PPN), Sierran mixed conifer (SMC), white fir (WFR), red fir (RFR), eastside pine (EPN), tree size 4, all canopy closures	Mountain quail <i>Oreortyx pictus</i>
Late Seral Open Canopy Coniferous Forest	ponderosa pine (PPN), Sierran mixed conifer (SMC), white fir (WFR), red fir (RFR), eastside pine (EPN), tree size 5, canopy closures S and P	Sooty (blue) grouse <i>Dendragapus obscurus</i>
Late Seral Closed Canopy Coniferous Forest	ponderosa pine (PPN), Sierran mixed conifer (SMC), white fir (WFR), red fir (RFR), tree size 5 (canopy closures M and D), and tree size 6.	California spotted owl <i>Strix occidentalis occidentalis</i>
		American marten <i>Martes americana</i>
		northern flying squirrel <i>Glaucomys sabrinus</i>
Snags in Green Forest	Medium and large snags in green forest	hairy woodpecker <i>Picoides villosus</i>
Snags in Burned Forest	Medium and large snags in burned forest (stand-replacing fire)	black-backed woodpecker <i>Picoides arcticus</i>

¹ All CWHR size classes and canopy closures are included unless otherwise specified; **dbh** = diameter at breast height; **Canopy Closure classifications:** S=Sparse Cover (10-24% canopy closure); P= Open cover (25-39% canopy closure); M= Moderate cover (40-59% canopy closure); D= Dense cover (60-100% canopy closure); **Tree size classes:** 1 (Seedling)(<1" dbh); 2 (Sapling)(1"-5.9" dbh); 3 (Pole)(6"-10.9" dbh); 4 (Small tree)(11"-23.9" dbh); 5 (Medium/Large tree)(≥24" dbh); 6 (Multi-layered Tree) [In PPN and SMC] (Mayer and Laudenslayer 1988).