

## APPENDIX F: SENSITIVE SPECIES LISTS

This appendix includes lists of vertebrates and invertebrates that are indicated as federally and/or state listed species, or special-status species, that are known to occur or may potentially occur within SEKI (Tables F-1 and F-2). This appendix also provides an analysis of the potential for the proposed actions to measurably affect the state and federally listed vertebrates and other sensitive vertebrates that are known to occur or may potentially occur in the project area (Table F-3). There are no federally listed plant species within SEKI; sensitive plant species are not listed as there would be no to negligible effects on plants.

**Table F-1. Federal and state listed vertebrates and other sensitive vertebrates that are known to occur or may potentially occur in SEKI.**

Binomial Name	Common Name	T&E Listed	Sensitive
<b>Fish</b>			
<i>Lavinia symmetricus</i>	California roach		BLMS, CS
<i>Mylopharodon conocephalus</i>	Hardhead		CS, FS
<i>Oncorhynchus mykiss aguabonita</i>	California Golden Trout		CS, FS
<i>Oncorhynchus mykiss gilberti</i>	Kern Rainbow Trout		CS, FS
<i>Oncorhynchus mykiss whitei</i>	Little Kern Golden Trout	FT	
<b>Amphibians</b>			
<i>Anaxyrus [Bufo] canorus</i>	Yosemite Toad	FT	CS, FS
<i>Hydromantes platycephalus</i>	Mount Lyell Salamander		CS
<i>Rana muscosa</i>	Southern Mountain Yellow-legged Frog	CE, FE	CS, FS
<i>Rana sierrae</i>	Sierra Nevada Yellow-legged Frog	CT, FE	CS, FS
<b>Reptiles</b>			
<i>Anniella pulchra</i>	California legless lizard		CS, FS
<i>Emys marmorata</i>	Western pond turtle		BLMS, CS, FS
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard		BLMS, CC, CS
<b>Birds</b>			
<i>Accipiter cooperii</i>	Cooper's Hawk		CWL
<i>Accipiter gentilis</i>	Northern Goshawk		BLMS, CS, DFS, FS
<i>Accipiter striatus</i>	Sharp-shinned Hawk		CWL
<i>Aquila chrysaetos</i>	Golden Eagle		BLMS, CP, CWL, DFS
<i>Asio flammeus</i>	Short-eared Owl		CS
<i>Asio otus</i>	Long-eared Owl		CS
<i>Buteo regalis</i>	Ferruginous hawk		CWL
<i>Buteo swainsoni</i>	Swainson's hawk	CT	BLMS
<i>Chaetura vauxi</i>	Vaux's Swift		CS
<i>Circus cyaneus</i>	Northern Harrier		CS
<i>Cypseloides niger</i>	Black Swift		CS
<i>Dendroica petechia</i>	Yellow Warbler		CS
<i>Elanus leucurus</i>	White-tailed kite		BLMS, CP
<i>Empidonax traillii</i>	Willow Flycatcher	CE	FS
<i>Eremophila alpestris</i>	Horned lark		CWL
<i>Falco columbarius</i>	Merlin		CWL
<i>Falco mexicanus</i>	Prairie Falcon		CWL
<i>Falco peregrinus</i>	Peregrine Falcon	Delisted	CP, DFS

Binomial Name	Common Name	T&E Listed	Sensitive
<i>Gymnogyps californianus</i>	California Condor*	CE, FE	CP, DFS
<i>Haliaeetus leucocephalus</i>	Bald Eagle	CE	BLMS, CP, DFS, FS
<i>Histrionicus histrionicus</i>	Harlequin duck		CS
<i>Larus californicus</i>	California gull		CWL
<i>Pandion haliaetus</i>	Osprey		CWL, DFS
<i>Progne subis</i>	Purple martin		CS
<i>Strix nebulosa</i>	Great Gray Owl	CE	DFS, FS
<i>Strix occidentalis</i>	Spotted Owl	FT	BLMS, CC, CS, FS
<b>Mammals</b>			
<i>Antrozous pallidus</i>	Pallid Bat		BLMS, CS, FS
<i>Aplodontia rufa californica</i>	Mountain Beaver		CS
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat		BLMS, CC, CS, FS
<i>Euderma maculatum</i>	Spotted Bat		BLMS, CS
<i>Eumops perotis</i>	Western Mastiff Bat		BLMS, CS
<i>Gulo gulo</i>	Wolverine	CT	CP, FS
<i>Lasiurus blossevillii</i>	Western red bat		CS
<i>Lepus townsendii</i>	White-tailed Jack Rabbit		CS
<i>Martes caurina [americana]</i>			
<i>sierrae</i>	Sierra Marten		FS
<i>Pekania [Martes] pennanti</i>	Fisher (west coast DPS)		BLMS, CC, CS, FS
<i>Myotis ciliolabrum</i>	Small-footed Myotis		BLMS
<i>Myotis evotis</i>	Long-eared Myotis		BLMS
<i>Myotis thysanodes</i>	Fringed Myotis		BLMS, FS
<i>Myotis yumanensis</i>	Yuma Myotis		BLMS
<i>Ovis canadensis</i>	Bighorn Sheep	CE, FE	BLMS, CP, FS
<i>Taxidea taxus</i>	American badger		CS
<i>Vulpes vulpes necator</i>	Red Fox	CT	FS

FE = Federal Endangered, FT = Federal Threatened, FPT = Fed. Proposed Threatened, CC = California Candidate Sp., CE = California Endangered, CT = California Threatened, CP = California Protected, CS = California Special Concern, CWL = California Watch List, FS = Forest Service Sensitive, BLMS = BLM Sensitive, \* extirpated

**Table F-2. Federal and state listed invertebrates and other sensitive invertebrates that are known to occur or may potentially occur in SEKI, however, none are known to occur in the project area.**

Binomial Name	Common Name	Fed Status	State Status
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Threatened	None
<i>Branchinecta mesovallensis</i>	midvalley fairy shrimp	None	None
<i>Linderiella occidentalis</i>	California linderiella	None	None
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Endangered	None
<i>Bowmanasellus sequoiae</i>	An isopod	None	None
<i>Calasellus longus</i>	An isopod	None	None
<i>Cicindela tranquebarica ssp.</i>	San Joaquin Tiger Beetle	None	None
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Threatened	None
<i>Coelus gracilis</i>	San Joaquin dune beetle	None	None
<i>Lytta hoppingi</i>	Hopping's blister beetle	None	None
<i>Lytta moesta</i>	moestan blister beetle	None	None
<i>Lytta molesta</i>	molestan blister beetle	None	None
<i>Lytta morrisoni</i>	Morrison's blister beetle	None	None
<i>Hydroporus hirsutus</i>	wooly hydroporus diving beetle	None	None

Binomial Name	Common Name	Fed Status	State Status
<i>Aegialia concinna</i>	Ciervo aegilian scarab beetle	None	None
<i>Efferia antiochi</i>	Antioch efferian robberfly	None	None
<i>Metapogon hurdi</i>	Hurd's metapogon robberfly	None	None
<i>Oravelia pege</i>	Dry Creek cliff strider bug	None	None
<i>Eucerceris ruficeps</i>	redheaded sphecid wasp	None	None
<i>Andrena macswaini</i>	An andrenid bee	None	None
<i>Chrysis tularensis</i>	A cuckoo wasp	None	None
<i>Cryptochia denningi</i>	Denning's cryptic caddisfly	None	None
<i>Parapsyche extensa</i>	King's Creek parapsyche caddisfly	None	None
<i>Talanites moodyae</i>	Moody's gnaphosid spider	None	None
<i>Calicina dimorphica</i>	A harvestman	None	None
<i>Calicina macula</i>	A harvestman	None	None
<i>Calicina mesaensis</i>	Table Mountain harvestman	None	None
<i>Calicina piedra</i>	Piedra harvestman	None	None
<i>Calicina cloughensis</i>	Clough Cave harvestman	None	None
<i>Ammonitella yatesii</i>	tight coin (=Yates' snail)	None	None
<i>Helminthoglypta callistoderma</i>	Kern shoulderband	None	None

Analysis of Special Status Animal Species

The table below provides an analysis of the federal and state listed and sensitive vertebrates listed above. Those species that likely would not be measurably affected by the proposed actions were dismissed from further analysis. Those species that have the potential to be measurably affected by the proposed actions were evaluated under Special-Status Species or Wildlife-Vertebrates in Chapter 4. There are no known invertebrates of concern in the project area.

<u>Federal Agencies</u>	<u>California State Agencies</u>	
FE = Endangered	CE = Endangered	CWL = Watch List
FT = Threatened	CT = Threatened	DFS = Department of Forestry Sensitive
FPT =Proposed Threatened	CC = Candidate	
FS = Forest Service Sensitive	CS = Special Concern	
BLMS = Bureau of Land Management Sensitive	CP = Protected	

Table F-3. An analysis of the potential for proposed actions to measurably affect the federal and state listed vertebrates and other sensitive vertebrates that are known to occur or may potentially occur in SEKI.

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
Fish								
California roach	<i>Lavinia symmetricus</i>	-	-	BLMS	CS	No	This taxon is not found in project area.	Dismissed
Hardhead	<i>Mylopharodon conocephalus</i>	-	-	FS	CS	No	This taxon is not found in project area.	Dismissed
California golden trout	<i>Oncorhynchus mykiss aguabonita</i>	-	-	FS	CS	Yes	This taxon is found in the project area, however, it is nonnative in these habitats, and is nonnative in the parks. Its native range is completely within Sequoia National Forest. Many populations have been transplanted into the project area - to naturally fishless, high elevation waters. However, most are likely hybridized with rainbow and hatchery golden trout (Cordes et al. 2006). There is low potential for pure or nearly pure California golden trout to be present in lakes proposed for fish eradication. If any lakes approved for eradication contain California golden trout populations with genetic value, the parks would work with California Fish and Game staff to transplant these fish out of the treatment areas before they are treated.	Dismissed
Kern rainbow trout	<i>Oncorhynchus mykiss gilberti</i>	-	-	FS	CS	Yes	This taxon is found in the project area, however, it is nonnative in these habitats. Its native range is restricted to the mainstem Kern River, the upper portion of which is within Sequoia National Park, at elevations from approximately 6,000 to 8,000 ft (1,800 to 2,400	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							m). Some populations have been transplanted into the project area - to naturally fishless, high elevation waters. However, most are hybridized with rainbow and golden trout (Erickson et al. 2010). There is low potential for pure or nearly pure Kern rainbow trout to be present in lakes proposed for fish eradication. If any lakes approved for eradication contain Kern rainbow trout populations with genetic value, the parks would work with California Fish and Game staff to transplant these fish out of the treatment areas before they are treated.	
Little Kern golden trout	<i>Oncorhynchus mykiss whitei</i>	FT	-	-	-	Yes	This taxon is found in the project area, however, it is nonnative in these habitats. Its native range is restricted to the Little Kern River, the upper portion of which is within Sequoia National Park, at elevations from approximately 8,000 to 8,500 ft (2,400 to 2,600 m). One population has been transplanted into the project area – to naturally fishless, high elevation waters. However, it hybridized with rainbow and golden trout (Erickson et al. 2010). There is low potential for pure or nearly pure Little Kern golden trout to be present in lakes proposed for fish eradication. If any lakes approved for eradication contain Little Kern golden trout populations with genetic value, the parks would work with California Fish and Game staff to transplant some of these fish out of the treatment areas before they are treated. Nevertheless, since the proposed actions could have a measurable effect on Little Kern golden trout in at least one treatment area, this taxon is being evaluated under Special-Status Species in Chapter 4.	Evaluated
Amphibians								
Yosemite toad	<i>Anaxyrus [Bufo] canorus</i>	FT	-	FS	CS	Yes	This taxon, currently proposed for federal listing as threatened, may have meadow habitat in some areas affected by crew activity. The potential habitat is in the northern-most portions of the proposed restoration project area and is generally not associated with lakes or streams within proposed treatment areas. A study being conducted by the USGS in SEKI from 2010 to 2011 detected toads in 42 meadows of several hundred surveyed, which included	Evaluated

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							most of the range of Yosemite toads in SEKI (USGS unpublished data). If a proposed restoration area would be near toad habitat, crews would survey the area before beginning work. If toads are found during the pre-surveys, then mitigation would be implemented to minimize effects to this species. Since most work would be outside toad habitat and pre-surveys would be done before work in possible habitat, the proposed actions would not have a measurable impact in most treatment areas. Nevertheless, since the proposed actions could have a measurable effect on Yosemite toads in at least two treatment areas, this taxon is being evaluated under Special-Status Species in Chapter 4.	
Mount Lyell salamander	<i>Hydromantes platycephalus</i>	-	-	-	CS	Yes	This taxon is primarily found in seeps, and spray zones of flowing water and waterfalls, under rocks with moisture, near melting snow banks, and under low growing plants. They are found within many treatment basins. There would be potential for piscicide treatments to harm individuals that occupy habitat near larger flowing water that would be treated. However, most habitat for this species is outside of treatment waters given that this taxon is not truly aquatic. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Mountain yellow-legged frog (Sierra Nevada DPS <sup>1</sup> )	<i>Rana muscosa</i>	FE	CE	FS	CS	Yes	This taxon is federally listed as endangered and is state listed as endangered. It would be measurably affected by many of the proposed actions and therefore is being evaluated under Special-Status Species in Chapter 4.	Evaluated
Sierra Nevada yellow-legged frog	<i>Rana sierrae</i>	FE	CT	FS	CS	Yes	This taxon is federally listed as endangered and is state listed as threatened. It would be measurably affected by many of the proposed actions and therefore is being evaluated under Special-Status Species in Chapter 4.	Evaluated
<b>Reptiles</b>								
California legless lizard	<i>Anniella pulchra</i>	-	-	FS	CS	No	This taxon is not found in the project area.	Dismissed
Western pond turtle	<i>Emys marmorata</i>	-	-	BLMS, FS	CS	No	This taxon is not found in the project area.	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
Coast horned lizard	<i>Phrynosoma blainvillii</i>	-	-	BLMS, FS	CC, CS	No	This taxon is not found in the project area.	Dismissed
<b>Birds</b>								
Cooper's hawk	<i>Accipiter cooperii</i>	-	-	-	CWL	Yes	Primary habitat includes forested areas adjacent to, but not within the treatment habitat. There would be no likelihood of adverse effects on small birds and mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Northern goshawk	<i>Accipiter gentilis</i>	-	-	BLMS, FS	CS, DFS	Yes	Primary habitat includes open, forested areas adjacent to clearings and wetlands. This habitat is associated with only a small portion of the treatment basins. There is no likelihood for adverse effects on grouse, rabbits, and squirrels, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Sharp-shinned hawk	<i>Accipiter striatus</i>	-	-	-	CWL	Yes	Primary habitat includes forested areas adjacent to, but not within the treatment habitat. There could be a slight potential for effects on small bird related to nesting and foraging behavior, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Golden eagle	<i>Aquila chrysaetos</i>	-	-	BLMS	CP, CWL, DFS	Yes	Primary habitat includes open landscapes, which are found within many treatment basins. There would be no likelihood for adverse effects on small mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
Short-eared owl	<i>Asio flammeus</i>	-	-	-	CS	Yes	It is rare for this taxon to occur in the project area. Primary habitat includes grassy fields and marshes, which are found within some of the treatment basins. There would be a negligible impact on small mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Long-eared owl	<i>Asio otus</i>	-	-	-	CS	Yes	It is rare for this taxon to occur in the project area. Primary habitat includes dense forest stands, which are not associated with the treatment basins. There would be a negligible impact on small mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Ferruginous hawk	<i>Buteo regalis</i>	-	-	-	CWL	Yes	Primary habitat includes open treeless landscapes, which are found within many treatment basins. There would be a negligible impact on small mammals, which are primary prey items of this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis	Dismissed
Swainson's hawk	<i>Buteo swainsoni</i>	-	CT	BLMS	-	No	This taxon is not found in project area.	Dismissed
Vaux's swift	<i>Chaetura vauxi</i>	-	-	-	CS	Yes	It is rare for this taxon to occur in the project area. Primary habitat includes large, hollow trees for nesting and open land and water for foraging. Prey items include both terrestrial and emergent aquatic insects. There may be a minor short term impact to aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Northern harrier	<i>Circus cyaneus</i>	-	-	-	CS	Yes	Primary habitat includes grassy fields and marshes, which are found within some of the treatment basins. There would be a	Dismissed



Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							negligible impact on small mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	
Black swift	<i>Cypseloides niger</i>	-	-	-	CS	Yes	Primary nesting habitat includes cliffs and cliff ledges and open land and water for foraging. Prey items include both terrestrial and emergent aquatic insects. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Yellow warbler	<i>Setophaga petechia</i>	-	-	-	CS	Yes	Primary habitat includes wet, brushy habitat. Prey items include both terrestrial and emergent aquatic insects. There may be a minor short term impact to aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
White-tailed kite	<i>Elanus leucurus</i>	-	-	BLMS	CP	Yes	It would be very uncommon for this taxon to occur in a project area. Primary habitat includes grassy fields and marshes, which are found within some of the treatment basins. There could be a slight impact on small rodents, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Willow flycatcher	<i>Empidonax traillii</i>	-	CE	FS	-	Yes	Primary habitat includes wet, brushy willow thicket habitat. Prey items include flying insects. This taxon is typically found at elevations lower than all treatment basins. Should they occur in a	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							treatment basin, there may be a minor short term impact to aquatic prey items at piscicide treatment areas. The habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	
Horned lark	<i>Eremophila alpestris</i>	-	-	-	CWL	Yes	Primary habitat includes barren, open areas, which are found within many treatment basins. There would be no impact on seeds and terrestrial insects, which are primary prey items for this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Merlin	<i>Falco columbarius</i>	-	-	-	CWL	Yes	Primary habitat includes open landscapes, which are found within many treatment basins. There would be a negligible impact on small birds, which are primary prey items of this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Prairie falcon	<i>Falco mexicanus</i>	-	-	-	CWL	Yes	Primary habitat includes cliff ledges for nesting and open landscapes for feeding. This habitat is found within many treatment basins. There would be a negligible impact on small mammals and birds, which are primary prey items of this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Peregrine falcon	<i>Falco peregrinus</i>	Delisted	Delisted	-	CP, DFS	Yes	Primary habitat includes cliff ledges for nesting and open landscapes away from water for feeding. This habitat is found within many treatment basins. There would be a negligible impact on small birds, which are primary prey items of this taxon. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
California condor	<i>Gymnogyps californianus</i>	FE	CE	-	CP, DFS	No	This taxon historically occurred in the parks, but it was considered an extirpated species in SEKI after the last recorded observation occurred in 1981. From 2013 to 2015, three observations occurred of individuals flying (conducting exploratory movements) over the parks (Gammons D, pers. comm., 2016). Due to the rarity of the California condor, and its occasional brief visits to SEKI, project implementation and staff presence would have no likelihood of adverse effects to the California condor. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Bald eagle	<i>Haliaeetus leucocephalus</i>	Delisted	CE	BLMS, FS	CP, DFS	Yes	Primary habitat includes large nesting trees near rivers and lakes. This habitat is found within some treatment basins. There would be a negligible impact on small mammals and waterfowl, which are prey items of this taxon. Bald eagles also feed on fish. Eradication of this prey item is considered negligible since all fish are nonnative to the treatment basins. This prey source was historically unavailable to bald eagles prior to fish introductions into high elevation SEKI lakes and streams. This taxon is highly mobile so if there are bald eagles present at treatment basins, they can easily move to nearby areas that would still contain fish. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Harlequin duck	<i>Histrionicus histrionicus</i>	-	-	-	CS	No	This taxon is not found in project area	Dismissed
California gull	<i>Larus californicus</i>	-	-	-	CWL	Yes	Primary habitat includes lakes, ponds, rivers and areas of human habitation. In their natural aquatic habitat, this taxon feeds on small mammals, insects, and fish. There would be a negligible impact on small mammals. There may be a minor short term impact to aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. Eradication of fish is considered negligible since all fish are nonnative to the treatment basins. This prey source was historically unavailable to California gulls prior to fish introductions into high	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							elevation SEKI lakes and streams. This taxon is highly mobile so if there are individuals present at treatment basins, they can easily move to nearby areas that would still contain fish. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed.	
Osprey	<i>Pandion haliaetus</i>	-	-	-	CWL, DFS	Yes	Primary habitat includes large nesting trees near open water. This habitat is found within some treatment basins. Osprey feed almost exclusively on fish. Eradication of this prey item is considered negligible since all fish are nonnative to the treatment basins. This prey source was historically unavailable to osprey prior to fish introductions into high elevation SEKI lakes and streams. This taxon is highly mobile so if there is osprey present at treatment basins, they can easily move to nearby areas that would still contain fish. Though project base camps could have a slight effect on nesting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Purple martin	<i>Progne subis</i>	-	-	-	CS	No	This taxon is not found in project area.	Dismissed
Great gray owl	<i>Strix nebulosa</i>	-	SE	FS	DFS	No	This taxon is not found in project area.	Dismissed
Spotted owl	<i>Strix occidentalis</i>	FT	-	BLMS, FS	CC, CS	No	This taxon is not found in project area.	Dismissed
<b>Mammals</b>								
Pallid bat	<i>Antrozous pallidus</i>	-	-	BLMS, FS	CS	Yes	It would be very uncommon for this taxon to occur in a project area. This taxon is most commonly found at lower elevation sites in blue oak savannah in Sequoia National Park and ponderosa pine forests in Cedar Grove, Kings Canyon National Park. This taxon is rarely found up to 6,600 ft (2,000 m) in elevation and is likely to occur downstream of treatment basins. Though project base camps could have a slight effect on roosting and foraging behavior, there is no potential for measureable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
Sierra Nevada mountain beaver	<i>Aplodontia rufa californica</i>	-	-	-	CS	Yes	It would be very uncommon for this taxon to occur in a project area. There have been occasional sightings at high elevations, but most occurrences have been at lower elevations outside the project area. This taxon feeds exclusively on vegetation, which would not be impacted by the project. Though project base camps could have a slight effect on behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	-	-	BLMS, FS	CC, CS	No	This taxon is not found in project area.	Dismissed
Spotted bat	<i>Euderma maculatum</i>	-	-	BLMS	CS	Yes	This taxon is most commonly found at low elevation sites in Sequoia National Park. It is found less frequently in high elevation areas of both parks. Most known records occur outside of all treatment basins. In addition, this taxon nests on cliff ledges and forages over wet and dry meadows. There would be a slight impact to these areas by project treatments. Though project base camps could have a slight effect on roosting and foraging behavior, there is no potential for measurable effects. However, Pierson and Rainey (2009) reported this species as captured or recorded in the project area, and spotted bats either feed over aquatic habitats or are generalists feeders, making it possible for them to occur over treated habitat and therefore potentially be affected by proposed actions.	Evaluated
Western mastiff bat	<i>Eumops perotis</i>	-	-	BLMS	CS	Yes	This taxon roosts at low elevation rock outcrops in SEKI. It would travel to high elevation areas only to forage above meadows, lakes and other open areas. There may be a minor short term impact to emergent aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is small when compared to the foraging habitat available outside of treatment basins. Though project base camps could have a slight effect on roosting and foraging behavior, there is no potential for measurable effects. Nevertheless, Pierson and Rainey (2009) reported this species as captured or recorded in the project area,	Evaluated

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							and western mastiff bats either feed over aquatic habitats or are generalists feeders, making it possible for them to occur over treated habitat and therefore potentially be affected by proposed actions.	
Wolverine	<i>Gulo gulo</i>	-	CT	FS	CP	Yes	It would be very uncommon for this taxon to occur in the project area. Primary habitat includes most vegetation zones at middle to high elevations. There would be a negligible impact on small and large mammals, which are primary prey items for this taxon. Due to the rarity of the wolverine, and suspected low population density or extirpation in SEKI, project implementation and staff presence is expected to have no potential for adverse effects on the wolverine. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Western red bat	<i>Lasiurus blossevillii</i>	-	-	-	CS	Yes	This taxon is typically found in low elevation cottonwood and willow riparian habitats. It is found predominantly below 7,900 ft (2,400 m) in elevation. There have been a few detections above this elevation, including at elevations that could potentially overlap with the treatment basins. However, because it is highly unlikely to occur at project treatment basins, this taxon has been dismissed from further analysis.	Dismissed
White-tailed jack rabbit	<i>Lepus townsendii</i>	-	-	-	CS	No	This taxon is not found in project area.	Dismissed
Sierra Marten	<i>Martes caurina [americana] sierrae</i>	-	-	FS	-	Yes	This taxon is found in all elevations of SEKI. Marten typically occupy forested areas, which are occasionally found within or nearby treatment basins. There would be a negligible impact on small mammals, birds, and terrestrial insects, which are primary prey items for this taxon. Though project base camps could have a slight effect on behavior since project implementation would take place in open, exposed, aquatic habitats rather than upland forested habitats. However, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed

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Fisher (west coast DPS)	<i>Pekania [Martes] pennanti</i>	-	-	BLMS, FS	CC, CS	Yes	There is the potential that the habitat for this taxon occurs near proposed restoration areas. However, since nearly all of the proposed restoration areas occur at higher elevations than its habitat, it is highly unlikely that crew presence would disturb the animal. Primary habitat includes most vegetation zones in very complex forests at low to middle elevations. There would be a negligible impact on small mammals, which are primary prey items for this taxon. Due to the unlikely presence of the taxon and the negligible impacts from human action, this taxon has been dismissed from further analysis.	Dismissed
Small-footed myotis	<i>Myotis ciliobrum</i>	-	-	BLMS	-	Yes	This taxon has been detected in low frequencies throughout SEKI. It has been found at a wide elevation range in SEKI, occurring in foothill and alpine habitat. It forages on aquatic and terrestrial insects. There may be a minor short term impact to emergent aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. In addition, short-term, low impact project base camps would have negligible impacts on roosting and foraging behavior. Therefore, this taxon has been dismissed from being evaluated as a special-status species. However, Pierson and Rainey (2009) reported this species as captured or recorded in the project area, and small-footed myotis either feed over aquatic habitats or are generalists feeders, making it possible for them to occur over treated habitat and therefore potentially be affected by proposed actions. Therefore, this taxon is being evaluated under Wildlife-Vertebrates in Chapter 4.	Evaluated
Long-eared myotis	<i>Myotis evotis</i>	-	-	BLMS	-	Yes	This taxon is associated with mixed deciduous and coniferous forests. Prey items primarily include large terrestrial insects captured in the forest understory. This taxon is found in middle to high elevation habitats. Although this taxon is likely found near or within treatment basins, there would be a minor impact to their primary life history requirements since all treatments would take	Dismissed

Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
		Federal	State	Federal	State			
							place in aquatic habitats. Though project base camps could have a slight effect on roosting and foraging behavior, there is no potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	
Fringed myotis	<i>Myotis thysanodes</i>	-	-	BLMS, FS	-	Yes	This taxon is associated with mixed deciduous and coniferous forests, Douglas fir forest, and giant Sequoia habitat. In SEKI, they appear to be limited by elevation, ranging from 3,300 to 6,600 ft (1,000 to 2,000 m). The only treatment basin that this taxon could occur in is Crescent Meadow. However, their diet predominantly consists of terrestrial insects. There may be a minor short term impact on emergent aquatic prey items during a Crescent Meadow piscicide treatment. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of the Crescent Meadow treatment area. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Yuma myotis	<i>Myotis yumanensis</i>	-	-	BLMS	-	Yes	This taxon is a habitat generalist, found from low elevation blue oak forests to high elevation lodgepole pine forests. It is predominately found from 3,300 to 8,200 ft (1,000 to 2,500 m) in elevation, but it can occasionally occur over 9,900 ft (3,000 m). This taxon feeds primarily on emergent aquatic insects. There may be short term minor impacts to emergent aquatic prey items at piscicide treatment areas. However, the habitat impacted in the short term by these treatments is minor compared to the foraging habitat available outside of treatment basins. In addition, short-term, low impact project base camps would have negligible impacts on roosting and foraging behavior. Therefore, this taxon has been dismissed from being evaluated as a special-status species. However, Pierson and Rainey (2009) reported this species as captured or recorded in the project area, and small-footed myotis either feed over aquatic habitats or are generalists feeders, making it possible for them to occur over treated habitat and therefore potentially be affected by proposed actions.	Evaluated



Common Name	Latin Name	T&E Listed		Other Status		Found in project area?	Analysis	Result
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							Therefore, this taxon is being evaluated under Wildlife-Vertebrates in Chapter 4.	
Sierra Nevada bighorn sheep	<i>Ovis canadensis sierrae</i>	FE	CE	BLMS, FS	CP	Yes	This taxon is listed under the Endangered Species Act as endangered. Scattered portions of SEKI's high elevations have been designated as critical habitat for the Sierra Nevada bighorn sheep. One of the proposed treatment sites would be in the lower portion of Sixty Lake Basin. Bighorn sheep habitat is located in the upper portion of the basin where sheep have recently been observed. The proposed treatment site involves approximately seven lakes, connective ponds and streams in the lower end of the basin. In areas of the park where sheep and visitors frequently occur in the same general area, such as Upper Soldier Meadow, sheep show a high tolerance for human presence. Based on elevation preferences of the sheep and tolerance for people, the presence of crews in the Sixty Lake Basin restoration area is therefore not expected to measurably impact sheep activity, movement or use. Another proposed treatment site would be Laurel Basin, where restoration action would largely occur in stream habitat, and one pond. There has not been bighorn sheep activity observed in the area in the recent past; however, there may be the potential for sheep reintroductions in the future. Restoration activities can be scheduled so that any treatment activities are completed prior to any future reintroduction of bighorn sheep. If piscicides are used as part of the treatment options, studies indicate that effects to water quality and vegetation would be short-term (EPA 2007A; see Appendix G). Based on minor overlap between bighorn sheep and the proposed treatment areas, plus the above information and mitigations, the proposed actions would likely not have a measurable impact on bighorn sheep in most of the proposed treatment areas. Nevertheless, since the proposed actions could have a measurable effect on bighorn sheep in at least 1 to 2 treatment areas, this taxon is being evaluated under Special-Status Species in Chapter 4.	Evaluated

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American badger	<i>Taxidea taxus</i>	-	-	-	CS	Yes	This taxon is found in all elevations of SEKI, though it has been observed more often at lower and middle elevations. American badgers typically occupy drier open areas such as meadows and grasslands. These habitats are occasionally found within or nearby treatment basins. There would be a negligible impact on small mammals, which are primary prey items for this taxon. Though project base camps could have a slight effect on behavior since project implementation would take place aquatic habitats rather than upland habitats, there is not potential for measurable effects. Therefore, this taxon has been dismissed from further analysis.	Dismissed
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	-	CT	FS	-	No	This taxon is not found in project area.	Dismissed
<p><sup>1</sup> DPS = Distinct Population Segment – a separated and unique subspecies population</p> <p><sup>2</sup> The Sierra Nevada population of <i>Rana muscosa</i> was designated as a federal candidate in 2003 and again in 2007. The taxonomy for a portion of the range changed to <i>Rana sierrae</i> in 2007. In 2012, the Sierra Nevada population of <i>Rana muscosa</i> was state listed as endangered and <i>Rana sierrae</i> was state listed as threatened. In April 2013, the populations of both species in the Sierra Nevada were proposed for federal listing as endangered. In April 2014, the populations of both species in the Sierra Nevada were federally listed as endangered.</p>								
<p>Source: California Dept. of Fish and Wildlife, California Natural Diversity Database: 1) State &amp; Federally Listed Endangered &amp; Threatened Animals of California, January 2016; and 2) Special Animals List, January 2016. FWS IPaC Trust Resource Report, web accessed February 2016. <a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a></p>								