8.0 BIOLOGICAL RESOURCES

This section describes special-status species, vegetation communities, and fish and wildlife habitats in the Project area and addresses potential impacts to these resources. Impacts evaluated include the potential for loss of special-status (endangered, threatened, rare, or protected) species associated with habitat in the Project area, potential loss of sensitive vegetation communities and wildlife habitats, blockage of major migration corridors, potential detrimental effects to nesting raptors and to wildlife resources. The section also identifies mitigation measures that, upon implementation, will reduce the magnitude of significant impacts.

8.1 ENVIRONMENTAL SETTING

This section describes the riparian and stream environment zones, plant communities, their related wildlife assemblages, and special-status species that may occur in the Project area, and addresses potential Project-specific and cumulative impacts to these resources.

8.1.1 Regional Setting

Homewood Mountain Resort (HMR) is located in Homewood, California, approximately 5 miles to the south of Tahoe City, California along the west shore of Lake Tahoe. The Project area is located in portions of sections 1, 2, 11, and 12 of Township 14 North, Range 16 East. Elevation range of the Project area ranges between 6,240 to 7,900 feet above mean sea level (msl). HMR is surrounded by private residential properties to the east, and by U.S. Department of Agriculture Forest Service (USFS) lands on the north, west and south.

8.1.2 Local Setting

8.1.2.1 Site Location and Description

HMR is located on the east slope of the Sierra Nevada on the west shore of Lake Tahoe. The Project area is a composite of forested slopes, existing ski trails, and developed areas that include ski lodges, maintenance structures and parking areas. HMR encompasses 1,200 acres and currently includes a portion of Lake Louise and Quail Lake. The Quail Lake parcel was recently sold to the USFS but is used as a part of the ski-able terrain associated with Homewood Mountain Resort (December 2009).

8.1.2.2 Physical Features

HMR is composed of a long forested ridgeline below Homewood Peak that runs down slope to the northeast and is bordered by Madden Creek to the north and the northeastern slope of Knee Ridge to the south. Homewood Creek transects the southern portion of the Project area. The Project area is dominated by forested landscapes composed of pine and fir species described below. Interspersed with the forested areas and represented adjacent to the stream courses are riparian vegetation associations and wetland areas along the lake shores. As the Project area has been utilized as a ski resort since the 1960's, ski trails were cut through the forested area to create a mosaic of cleared areas, forested patches and cut lift lines to allow for ski lift access. The clearing and maintenance of ski trails in the otherwise forested environment have resulted in a

biological environment with existing disturbance and human activities. Figure 8-1 identifies the habitats within the Project area.

8.1.3 Biological Communities

The majority of the Project area is forested with white fir (*Abies concolor*) as the dominant species in lower elevations. At higher elevations, the north facing slopes are dominated by red fir (*Abies magnifica*), lodgepole (*Pinus contorta*) and western white pine (*Pinus monticola*). Vegetation communities in the Project area are primarily forested and include white fir, red fir, sierran mixed conifer and lodgepole pine forest (nomenclature follows Mayer and Laudenslayer 1988). In addition to these forest associations, the Project area contains relatively small, dispersed patches of montane chaparral, montane riparian, and wet meadow vegetation. Other overstory species, including incense cedar (*Calocedrus decurrens*), occur as an occasional component in the white fir forest association.

The ski runs are either covered with native shrubs such as greenleaf manzanita (*Arctostaphylos patula*) and huckleberry oak (*Quercus vaccinifolia*) or have been seeded with a mixture of wheatgrasses (*Agropyron* spp.). There are several riparian areas that are dominated by thin leaf alder (*Alnus incana* ssp. *tenuifolia*) and willow species (*Salix scouleriana*, *S. lucida* ssp. *lasiandra*, and *Salix lasiolepis*).

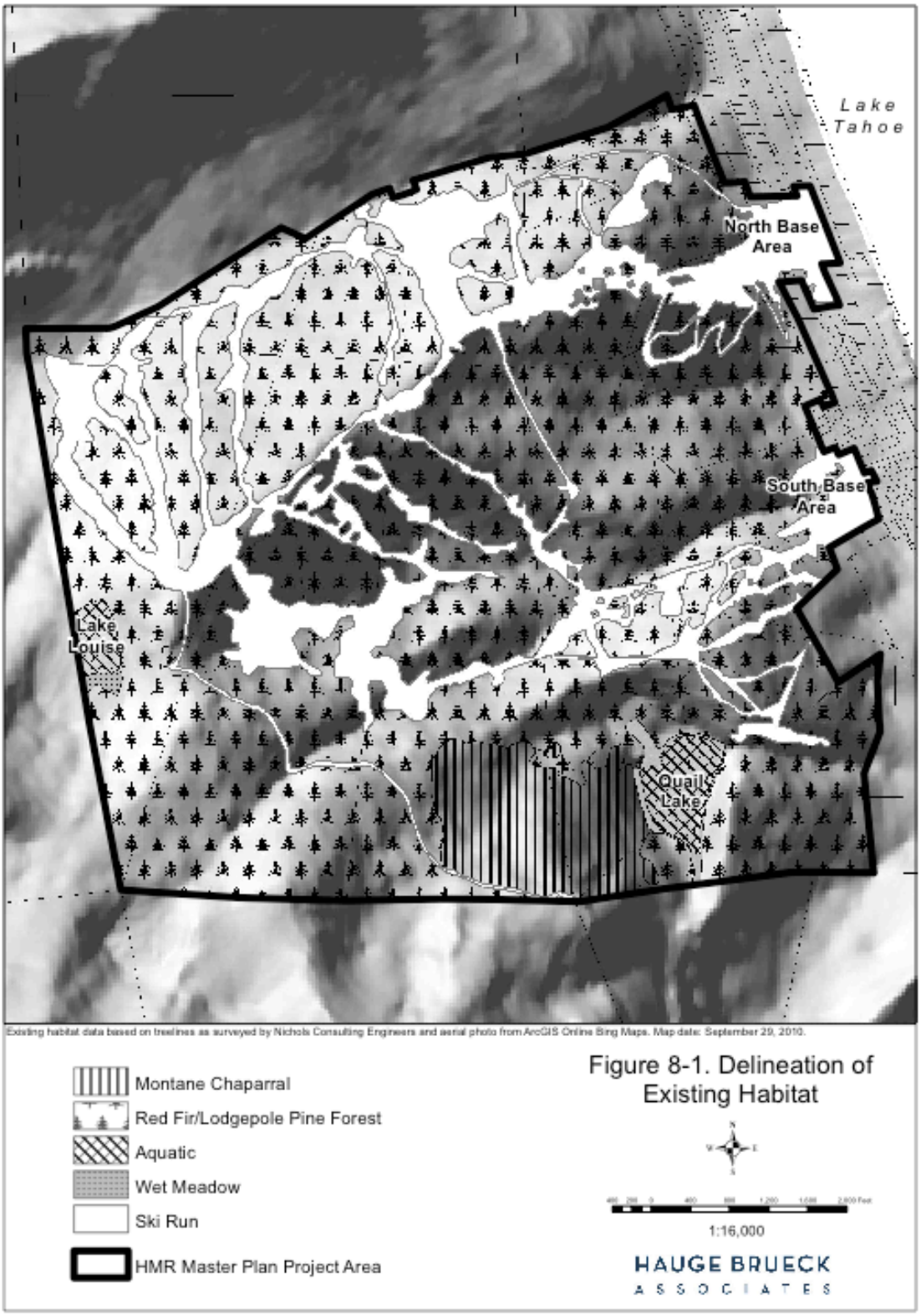
The base areas near the two lodges are disturbed ground with some landscaping. Non-native species are mostly associated with the disturbed base areas and roadways. Noxious weeds were observed in the Project area, including Klamath weed (*Hypericum perforatum*), bull thistle (*Cirsium vulgare*), cheat grass (*Bromus tectorum*), woolly mullein (*Verbascum thapsus*), and witchgrass (*Panicum capillare*). Eurasian water milfoil (*Myriophyllum spicatum*) was also identified in Quail Lake. These species are listed as weeds with the USFS LTBMU and have been identified during site surveys in August of 2007 in areas adjacent to the North Base and South Base area lodges and in Quail Lake (Botanical Field Reconnaissance Report, 2007).

Red fir forest and lodgepole pine forest have limited distribution in the Project area. Red fir forest occurs at higher elevations and is dominated by red fir or a mixture of red fir and western white pine. Lodgepole pine forest occurs generally in locations with seasonally wet soils such as meadow margins. Lodgepole pine may also occur as a component of the other forest types in the Project area.

Timber size class and density (percentage crown cover) have been mapped by the LTBMU for forested lands in the Project area. Timber size classes range from 2 (6 to 12 feet crown diameter) to 4 (25 to 40 feet crown diameter), with most forest stands having a size class of 3 (13 to 24 feet crown diameter) or 4. Timber density ranges from less than 20% crown cover to over 70%, with most stands having at least 20%.

Madden Creek, Homewood Creek, and Quail Creek flow through the Project area. Other SEZs in the Project area include one perennial seep (a moist or wet location where groundwater reaches the surface) and one seasonal seep that support minimal riparian vegetation. SEZ has been delineated within the existing gravel parking lot located behind the Maritime Museum located at the southern end of the North Base area. One unnamed ephemeral drainage is located between the North Base area and South Base area. This unnamed ephemeral drainage does not support riparian vegetation but contains seasonal flow that drains to low-lying areas with near surface groundwater. Vegetation communities associated with SEZs in the Project area include montane riparian and wet meadow. Characteristic species in the montane riparian association include mountain alder (*Alnus tenuifolia*), willows (*Salix* spp.), and mountain maple (*Acer glabrum*). Wet meadows consist of a layer of herbaceous plants that occur where water is at or near the surface most of the growing season.

Figure 8-1. Delineation of Existing Habitats



A small wet meadow area is located adjacent to the margins of Lake Louise and Quail Lakes the two open water communities located within the operational boundary of Homewood Mountain Resort.

The Project area contains small patches of montane chaparral association. Characteristic species include mountain whitethorn (*Ceanothus cordulatus*), chinquapin (*Castanopsis sempervirens*), and huckleberry oak. Characteristic understory species in the Project area include greenleaf manzanita, beardtongue (*Penstemon* spp.), currant (*Ribes* spp.), mule ears (*Wyethia mollis*), serviceberry (*Amelanchier alnifolia*), California lilac (*Ceanothus velutinus*), young white fir, willow, quaking aspen (*Populus tremuloides*), corn lily (*Veratrum californicum*), and bracken fern (*Pteridium aquilinum*).

8.1.4 Wildlife

The Lake Tahoe Region provides habitat for over 360 species of resident and migratory vertebrate wildlife species and over 860 invertebrate species. Each of these vertebrate species of mammals (66), birds (262), reptiles (8), amphibians (6) and fish (27) occur in the Lake Tahoe basin (Murphy and Knopp 2000). The quality and size of suitable habitat generally determine the abundance of any one species or animal population.

The habitats in the Project area provides habitat for numerous small mammals, including golden-mantled ground squirrel (*Spermophilus lateralis*), Belding's ground squirrel (*Spermophilus beldingi*), Douglas' squirrel (*Tamiasciurus douglasii*), several species of chipmunk (*Tamias* spp.), and a variety of smaller rodents. Several bat species may roost and/or forage in the Project vicinity and include big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), long-eared myotis (*Myotis evotis*), little brown myotis (*Myotis lucifugus*) and fringed myotis (*Myotis thysanodes*)

Larger mammals known to occur in the Project vicinity include coyote (*Canis latrans*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), American marten (*Martes americana*), black bear (*Ursus americanus*), mountain beaver (*Aplodontia rufa*), and mule deer (*Odocoileus hemionus*).

A wide variety of resident and migratory bird species nest and forage on or in the Project vicinity. Clark's nutcrackers (*Nucifraga columbiana*) and Steller's jays (*Cyanocitta stelleri*) can be found year-round throughout the Project area and surrounding forested lands. Mountain chickadee (*Parus gambeli*), evening grosbeak (*Coccothraustes vespertinus*), and white-breasted nuthatch (*Sitta carolinensis*) may also be found year-round, while other species such as western tanager (*Piranga ludoviciana*) and western wood pewee (*Contopus sordidulus*) are summer residents only. A variety of woodpeckers, including northern flicker (*Colaptes auratus*) and hairy woodpecker (*Picoides villosus*), are commonly observed in association with forested habitats in the Project area. Typical raptors include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), osprey (*Pandion haliaetus*), northern goshawk (*Accipiter gentilis*), bald eagle (*Haliaeetus leucocephalus*), great horned owl (*Bubo virginianus*), and turkey vulture (*Cathartes aura*).

Reptiles are represented in the Project area by species such as the western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Gerrhonotus coeruleus*), rubber boa (*Charina bottae*), and western terrestrial garter snake (*Thamnophis elegans*). Amphibians include western toad (*Bufo boreas*) and Pacific chorus frog (*Pseudacris regilla*).

Fish species occurring in and the Lotic habitats within the Project vicinity include rainbow trout (*Oncorhynchus mykiss*), brook trout (*Salvelinus fontinalis*), and German brown trout (*Salmo trutta*) (USFS 2008).

8.1.5 Special-Status Species

Special-status plant and wildlife species are species that have been afforded special recognition and protection by federal, state, or local resource conservation agencies and organizations. These species are generally considered rare, threatened, or endangered due to declining or limited populations. Special-status species include:

- plants and animals listed or proposed for listing under the Endangered Species Act;
- candidates for possible future listing as threatened or endangered under the ESA, or as species of concern (NMFS).
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5).
- fully protected species under the California Fish and Game Code Section 3511(birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians).
- plants and animals determined to meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380).
- Plants and animals listed as a sensitive species by USDA Forest Service, Region 5.
- plants and animals designated as special interest species by the Tahoe Regional Planning Agency (TRPA); and
- plants and animals with no formal listing status that are considered by the scientific community to be rare or in serious decline.

The following sources provided information pertaining to the occurrence or potential occurrence of special-status species in the study area:

California Natural Diversity Database (CNDDB/Rarefind August 2009). A copy of the CNDDB report for the Homewood, Rockbound Valley, Tahoe City, Meeks Bay and Wentworth Springs 7½ minute USGS topographic quadrangles are included in Appendix G.

U.S. Fish and Wildlife Service (USFWS) list of federally listed and proposed threatened and endangered species that may occur in the Project vicinity (letter dated October 27, 2009). A copy of the letter is included in Appendix H.

Tahoe Regional Planning Agency Special Interest Species. Source: Tahoe Regional Planning Agency. 1987. Regional Plan for the Lake Tahoe Basin: Code of Ordinances, Rules of Procedure. Chapters 78-79.

California Native Plant Society Inventory Database Search. The CNPS Database was searched on May 11, 2010. A copy of the database search is included in Appendix H.

California Department of Fish and Game Special Animals List (July 2009)

Tables 8-1 and 8-2 present a list of special-status plant and wildlife species, respectively, with potential to occur in the Project area or vicinity. These tables provide the current state, federal, or other agency status; a description of the habitat utilized by each of these species; and an evaluation of the potential for each species to occur in the Project area. A discussion of those species that are identified as having a moderate or high likelihood to occur in the Project area is provided in the section following Table 8-2. Those species that are listed as having no likelihood of occurrence in the Project area are included in the table as they are included in the sources as listed above.

Table 8-1

Special-Status Plants that May Occur In the Project area or Vicinity

Species	Status				Habitat Description	Bloom Period	Likelihood of Occurrence in Project area
	Federal	State	CNPS	TRPA			
Galena Creek (=Carson Range) rock cress *Arabis rigidissima* var. *demota*	FSS	--	1B	SI	Broadleaved upland forest, upper montane coniferous forest on rocky substrates. Known in CA from only two occurrences near Martis Peak, and in NV from 11 occurrences in the Carson Range. Elevation range 2,255-2,560m.	August	None; suitable habitat not present in Project area.
Upswept moonwort *Botyrchium ascendens*	FSC	--	2	--	Grassy fields and coniferous woods near springs and creeks of montane coniferous forest. Elevation range 1,500-2,060m.	Not applicable	Moderate; although not previously observed on site, potentially suitable habitat is present on site.
Shore sedge *Carex limosa*	--	--	2	--	Meadows, marshes, and swamps of upper montane coniferous forest. Possibly more widespread in the Sierra Nevada. Elevation range 1,200-2,700m.	June-August	Low; species not previously observed within the Project area.
Alpine dusty maidens *Chaenactis douglasii* var. *alpina*	--	--	2	--	Alpine boulder and rock fields of granite. Elevation range 3,000-4,000m.	July-September	None; suitable habitat not present in Project area.
Subalpine cryptantha *Cryptantha crymophila*	--	--	1B	--	Volcanic rocky sites in subalpine coniferous forest. Elevation range 2,600-3,200m.	July-August	Moderate; although not previously observed on site, potentially suitable habitat is present on site.
Tahoe draba *Draba asterophora* var. *asterophora*	--	--	1B	SI	Alpine boulder and rock fields in crevices, and open talus slopes of	July-August	None; suitable habitat not present in Project

Table 8-1

Special-Status Plants that May Occur In the Project area or Vicinity

Species	Status				Habitat Description	Bloom Period	Likelihood of Occurrence in Project area
	Federal	State	CNPS	TRPA			
					decomposed granite in subalpine coniferous forest. Elevation range 2,500-3,505m.		area.
Cup Lake draba *Draba asterophora* var. *macrocarpa*	FSC	--	1B	SI	Alpine boulder and rock fields in shade of granitic rocks in subalpine coniferous forest. Elevation range 2,500-2,815m.	July-August	None; suitable habitat not present in Project area.
Subalpine fireweed *Epilobium howellii*	--	--	1B	--	Meadows and seeps, and subalpine coniferous forests in mesic environments. Known from only four occurrences in Fresno, Mono, and Sierra counties. Elevation range 2,000-2,700m.	July-August	Moderate; although not previously observed on site, potentially suitable habitat is present on site.
Oregon fireweed *Epilobium oreganum*	FSC	--	1B	--	Bogs and fens of montane coniferous forest. Elevation range 500-2,240m.	June-September	Moderate; although not previously observed on site, potentially suitable habitat is present on site.
Marsh willowherb *Epilobium palustre*	--	--	2	--	Bogs, fens and meadows of montane coniferous forest. Elevation range 2,200m.	July-August	Moderate; potentially suitable habitat is present on site. No previous records of occurrence.
Donner Pass buckwheat *Eriogonum umbellatum* var. *torreyanum*	FSC	--	1B	--	Meadows and seeps, and upper montane coniferous forest on volcanic, rocky substrate. Elevation range 1,855-2,620m.	July-September	Moderate; potentially suitable habitat is present on site.

Table 8-1

Special-Status Plants that May Occur In the Project area or Vicinity

Species	Status				Habitat Description	Bloom Period	Likelihood of Occurrence in Project area
	Federal	State	CNPS	TRPA			
Long-petaled lewisia *Lewisia longipetala*	FSC	--	1B	SI	Alpine boulder and rock fields in subalpine coniferous forest. Elevation range 2,500-2,925m.	June-August	None; suitable habitat not present in Project area.
Mees's moss *Meesia triquetra*	--	--	2	--	Bogs and fens of montane coniferous forest. Elevation range 1,300-2,500m.	Not applicable	Moderate; although not previously observed on site, potentially suitable habitat is present on site.
Tahoe yellow cress *Rorippa subumbellata*	FC	SE	1B	SI	Lower montane coniferous forest, meadows and seeps / decomposed granitic beaches. Known in CA from less than 10 extant occurrence around Lake Tahoe. Elevation range 1,895-1,900m.	May-September	None; suitable habitat is not present in the Project area.
Water bulrush *Scirpus subterminalis*	--	--	2	--	Bogs, fens, marshes, swamps and lake margins of montane coniferous forest. Elevation range 750-2,250m.	July-August	Moderate; potentially suitable habitat is present on site. No previous records of occurrence.

Source: CDFG 2009, CNPS 2009, USFWS 2009, TRPA Code of Ordinances

Table Notes

Federal status:

FE Listed as endangered under the Federal Endangered Species Act
FT Listed as threatened under the Federal Endangered Species Act
PE Proposed for listing as endangered under the Federal Endangered Species Act
PT Proposed for listing as threatened under the Federal Endangered Species Act
FC Candidate species for listing under the Federal Endangered Species Act
D Delisted in accordance with the Federal Endangered Species Act

FSS USDA, Forest Service sensitive species

State Status:

SE Listed as endangered under the California Endangered Species Act
ST Listed as threatened under the California Endangered Species Act
CSC Species of concern as identified by the California Department of Fish and Game
CFP Listed as fully protected by the California Fish and Game Code
Rare Species identified as rare by the California Department of Fish and Game

California Native Plant Society Listing Categories (CNPS 2001):

1B Plant species that are rare, threatened, or endangered in California and elsewhere
2 Plant species that are rare, threatened, or endangered in California, but are more common elsewhere
3 Plant species that lack the necessary information to assign them to a listing status
4 Plant species that have a limited distribution or that are infrequent throughout a broader area in California

TRPA Status:

SI Sensitive Plant Species

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Fish					
Lahontan cutthroat trout *Oncorhynchus (=Salmo) clarki henshawi*	FT	--	--	Historically occurred in all accessible cold waters of the Lahonton Basin in a wide variety of water temps and conditions. Currently inhabits Fallen Leaf Lakek as it has been reintroduced in this body of water. Cannot tolerate presence of other salmonids. Gravel riffles in streams required for breeding.	None; no suitable habitat present on site. Historic Lake Tahoe population extirpated from Madden, Homewood, and Quail Creeks.
Lahontan Lake tui chub *Gila bicolor pectinifer*	FSS	CSC	--	A schooling species that inhabits large, deep lakes. Known from Lake Tahoe; Pyramid Lake, NV; and Walker Lake, NV. Populations of chubs that occur in Stampede, Boca, and Prosser reservoirs may also represent this subspecies (Moyle et al. 1995).	None; no suitable habitat present on site.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Amphibians					
Mount Lyell salamander *Hydromantes platycephalus*	--	CSC	--	Inhabits rock fields in mixed conifer, red fir, lodgepole pine, and subalpine communities, utilizing rock fissures, seeps, shade, and low-growing plants. Elevation range extends from 1,200 to 3,500m.	Low; suitable habitat present on site but the species is not known from the Lake Tahoe Region.
Sierra Nevada yellow-legged frog *Rana sierra*	FC FSS	CSC	--	Inhabits ponds, lakes, and streams associated with montane riparian, lodgepole pine, subalpine conifer, and wet meadow communities.	Moderate; montane riparian and wet meadow communities in the study area may provide suitable habitat.
Northern leopard frog *Rana pipiens*	FSS	CSC	--	Aquatic habitat in close proximity to grass- or forb-dominated community with a moist substrate. Aquatic habitat provides oviposition and overwintering sites. Grassy shelves used for foraging during the active season. In California, the known elevation range is 1,216 to 1,503m.	Low; suitable habitat present on site but the species is not known from the Lake Tahoe Region.
Yosemite toad *Bufo canorus*	--	CSC CFP	--	High mountain meadows and forest borders of the whitebark and lodgepole pine zones emerging soon after the snow melts.	None; suitable habitat is not present on site. Occurrence in the Lake Tahoe Region has not been confirmed.
Birds					
Waterfowl			SI	Avian species associated with marsh/wetland habitats.	High; Quail Lake and Lake Louise provide suitable habitat for these species.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
					Incidental observations of Mallard and common mergansers have been noted. (Personal Observation 2009)
Osprey *Pandion haliaetus*	--	CSC	SI	Uses large snags and open trees, primarily in ponderosa pine through mixed conifer community types, near large bodies of water.	High; Quail Lake and Lake Louise provide suitable foraging and nesting habitat for these species. Species observed foraging at Quail Lake in 2007. Active nest located approximately 2 miles east of Project area.
Bald eagle *Haliaeetus leucocephalus*	D	SE CFP	SI	Breeds and roosts in remote coniferous forests in close proximity to a river, stream, lake, reservoir, marsh, or other wetland area.	High; Quail Lake and Lake Louise provide suitable foraging habitat for these species. No observations of Bald Eagle have been observed in Quail Lake.
Golden eagle *Aquila chrysaetos*	--	CSC CFP	SI	Rolling foothills, mountain areas, grasslands, savannas, deserts, and early successional stages of forests and shrub communities. Cliffs and large trees are utilized for nesting.	None; no suitable nesting habitat present on site. Low quality foraging habitat may be present.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Cooper's Hawk *Accipiter cooperii*	--	CSC	--	Uses dense stands of conifer, liver oak, riparian deciduous or other forest communities. Appear to be expanding into urban areas throughout the Central Valley and foothills.	High; suitable nesting and foraging habitat is present in the Project area. Incidental observations have occurred within the Project area. (Wildlife Resource Consultants 2007)
Northern goshawk *Accipiter gentilis*	FSC FSS	CSC	SI	Breeds and forages in mature stands of coniferous, mixed, and deciduous forest. Nest sites often associated with north-facing aspects.	High; suitable habitat is present in the Project area. Active breeding population located approximately 1.5 mi south of Project area.
Sharp-shinned hawk *Accipiter striatus*	--	CSC	--	Breeds in riparian deciduous, mixed conifer, black oak, ponderosa pine, and Jeffrey pine communities. During winter may be found in a wide variety of communities.	High; suitable habitat is present in the Project area. This species was not observed during wildlife surveys.
American peregrine falcon *Falco peregrinus anatum*	D	SE CFP	SI	Inhabits open country, breeding near rivers, wetlands, lakes, or other aquatic features; nests on cliffs, banks, dunes, mounds, and human-made structures.	Low; although no suitable nesting habitat is present on site, foraging habitat is present and species is known to occur in the project vicinity.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Black tern *Chlidonias niger*	FSC	CSC	--	Nests on lakeshores and in marshes, uncommon to rare on the west coast of North America.	Low; the species may occur as a seasonal migrant. Foraging habitat and low quality nesting habitat is present.
Great gray owl *Strix nebulosa*	FSS	SE	--	A resident of mixed conifer and red fir forest communities, in or on edge of meadows. High canopy closure and large diameter snags are required.	Low; occurrence in the Lake Tahoe basin has not yet been confirmed (Murphy and Knopp 2000)
California spotted owl *Strix occidentalis occidentalis*	FSC FSS	CSC	--	Typically breeds in stands of mixed coniferous forest containing a mixture of tree sizes with a number of very large, old trees, usually at least two canopy layers, and a total canopy cover in excess of 70% (may be as low as 30-40% at high elevations). Large snags and an abundance of downed woody debris are also usually present.	High; known to occur in project vicinity; suitable foraging habitat is present in the Project area. Active breeding area located approximately 2 mi south of Project area. No California spotted owls were detected within the Project area during surveys.
Black swift *Cypseloides niger*	FSC	CSC	--	In western British Columbia, Klamath Region, northern Sierra Nevada, west-central Rocky Mountains and Sierra Madre Occidental, this species nests in colonies on cliffs and beneath waterfalls.	None; suitable nesting habitat is not present in the Project area.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Rufous hummingbird *Selasphorus rufus*	FSC	--	--	A common migrant and uncommon summer resident of California; many post-breeders migrate south through the Cascade Range and Sierra Nevada. Found in a variety of environments that provide nectar-producing flowers; including montane riparian, high mountain meadows, valley foothill hardwood-conifer, and various chaparral communities.	Moderate; suitable habitat is present in the Project area.
Lewis' woodpecker *Melanerpes lewis*	FSC	--	--	An inhabitant of open, deciduous and conifer communities with bushy understory. Snags or dead portion of a live tree are commonly used for nesting.	Moderate; suitable habitat is present in the Project area. No Lewis' woodpeckers observed during wildlife surveys.
Little willow flycatcher *Empidonax traillii brewsteri*	FSC	--	--	Typically breeds in willow-dominated riparian vegetation along perennial streams in moist meadows or spring-fed or boggy areas.	Moderate; suitable habitat is present in the Project area. No willow flycatcher observed within the Project area. WIFL observed north of the Project area, in Blackwood Creek drainage.
Hermit warbler *Dendroica occidentalis*	FSC	--	--	A summer visitor and migrant, breeds in mature ponderosa pine, montane hardwood-conifer, mixed conifer, redwood, Douglas fir, red fir, and Jeffrey pine communities.	Low; forested areas in the Project area may provide suitable habitat.
California yellow warbler *Dendroica petechia brewsteri*	--	CSC	--	Breeds in willow dominated riparian woodlands that may also include cottonwoods, alders, and	Moderate; montane riparian communities in

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
				sycamores, montane chaparral and montane shrubbery in open coniferous forests.	the Project area may provide suitable habitat.
Brewer's sparrow *Spizella breweri*	FSC	--	--	Breeds in extensive treeless shrub communities with moderate canopy coverage, especially sagebrush.	None; Project area does not contain suitable breeding habitat.
Mammals					
Townsend's big-eared bat *Corynorhinus townsendii*	FSS	CSC	--	Found in a wide variety of communities, including coastal conifer and broad-leaf forests, oak and conifer woodlands, grasslands, and high-elevation forests and meadows. Most commonly associated with mesic environments. Roosts in caves, mines, tunnels, buildings, or other man-made structures. This species is extremely sensitive to disturbance at its roosting sites.	Moderate; breeding and roosting habitat is present adjacent to the Project area. Two roosts are in close proximity to the Project area to the south of Quail Lake in the old Noonchester Mine. Occurrence in the Lake Tahoe basin has not yet been confirmed (Murphy and Knopp 2000).
Spotted bat *Euderma maculatum*	FSC	CSC	--	Occurs in a variety of environments, ranging from deserts and grasslands to mixed conifer forests; roosts in rock crevices along cliffs or caves.	Low; Project area may provide foraging habitat; however, breeding and roosting habitat is not present on site. Occurrence in the Lake Tahoe basin has not yet been confirmed

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
					(Murphy and Knopp 2000).
Small-footed myotis bat *Myotis ciliolabrum*	--	CSC	--	Inhabits relatively arid wooded and brushy uplands in close proximity to water, from 0 to 8,900 feet. Maternity colonies may occur in buildings, caves and mines.	Moderate; breeding and roosting habitat is present adjacent to the Project area. Two roosts are in close proximity to the Project area to the south of Quail Lake in the old Noonchester Mine. Occurrence in the Lake Tahoe basin has not yet been confirmed (Murphy and Knopp 2000).
Long-eared myotis bat *Myotis evotis*	--	CSC	--	May be found in a variety of brush, woodland, and forest communities, from 0 to about 9,000 feet; shows a preference toward coniferous woodlands and forests. Nursery colonies located in buildings, crevices, spaces under bark, snags; night roosting in caves.	Moderate; forested portions of Project area provide suitable breeding and foraging habitat. Bats were detected within the Project area, however their species were unable to be confirmed.
Fringed myotis bat *Myotis thysanodes*	--	CSC	--	May be found in a variety of environments; valley and foothill hardwood, hardwood-conifer and pinyon-juniper woodland provide optimal habitat.	Moderate; suitable breeding and foraging habitat occurs on site.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
				Maternity colonies and roosts located in caves, mines, buildings, and crevices.	Bats were detected within the Project area, however their species were unable to be confirmed.
Long-legged myotis bat *Myotis volans*	--	CSC	--	This species is most commonly associated with woodland and forest communities above 4,000 feet. However, may also forage in chaparral, coastal scrub, Great Basin shrub habitats, and in early successional stages of woodlands and forests. Occurrence records range from 0 to 11,400 feet. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	Moderate; suitable breeding and foraging habitat occurs on site. Bats were detected within the Project area, however their species were unable to be confirmed.
Yuma myotis bat *Myotis yumanensis*	--	CSC	--	Optimal environments include open forests and woodlands in proximity to bodies of water used for foraging; maternity colonies in caves, mines, crevices, and buildings.	Moderate; suitable breeding and foraging habitat occurs on site. Bats were detected within the Project area, however their species were unable to be confirmed.
Sierra Nevada snowshoe hare *Lepus americanus tahoensis*	--	CSC	--	Frequents early successional stages of mixed conifer, red fir, lodgepole pine forests, and deciduous riparian communities at higher elevations.	Moderate; suitable habitat is present in the Project area.
Sierra Nevada mountain beaver *Aplodontia rufa californica*	--	CSC	--	In the Sierra Nevada and East Slope, associated with dense growth of small deciduous trees and shrubs, wet soil, and an abundance of forbs. Needs an abundant supply of water.	High; species documented in Madden Creek , Homewood Creek and an unnamed

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
					tributary above Quail lake.
Sierra Nevada red fox *Vulpes vulpes necator*	FSS	ST	--	Inhabits a variety of communities from wet meadows to forested areas; preferring forests that are interspersed with meadows or alpine fell-fields. Dense vegetation and rocky areas provide cover and den sites.	Low; suitable habitat is present in the Project area. Not detected during forest carnivore studies.
California wolverine *Gulo gulo luteus*	FSS	ST CFP	--	Occurs in a variety of environments, including subalpine conifer, alpine dwarf-shrub, barren, mixed conifer, and lodgepole pine forests at or near timberline. Typically associated with areas of low human disturbance.	Low; although suitable habitat is present in the Project area, species does not typically occur in close proximity to human activity.. Not detected during forest carnivore studies.
American (=Pine) marten *Martes americana*	FSS	CSC	--	Prefers multi-storied, mature mixed coniferous forests with high canopy coverage and an abundance of large snags and downed woody debris. Riparian corridors may be used for foraging and as travelways.	High; occurrence documented in two locations within the Project area during forest carnivore studies. Forest and riparian habitats present.
Pacific fisher *Martes pennanti pacifica*	FSC FSS	CSC	--	Prefers multi-storied, mature mixed coniferous forests with high (>50%) canopy coverage and an abundance of large snags and downed woody debris. Dense riparian corridors are utilized as dispersal corridors. Foraging often occurs in small (<2 acres) forest openings with significant ground cover.	Low; potentially suitable habitat is present in the Project area. Not detected during forest carnivore studies.

Table 8-2

Special-Status Wildlife Species that May Occur In the Project area or Vicinity

Species	Status			Habitat Description	Likelihood of Occurrence In Project area
	Federal	State	TRPA		
Mule deer *Odocoileus hemionus*		--	SI	Prefers areas interspersed with diverse seral stages or edges. This includes riparian vegetation, meadows, and the early to mid-successional stage of most vegetation types.	High; suitable habitat present in the Project area. Species detected during forest carnivore studies.

Source: HBA, 2010

Federal Status:

- FE Listed as endangered under the Federal Endangered Species Act
- FT Listed as threatened under the Federal Endangered Species Act
- FC Listed as Candidate species under the Federal Endangered Species Act
- PE Proposed for listing as endangered under the Federal Endangered Species Act
- PT Proposed for listing as threatened under the Federal Endangered Species Act
- PD Proposed for delisting as threatened or endangered under the Federal Endangered Species Act
- D Delisted in accordance with the Federal Endangered Species Act
- FSS USDA Forest Service sensitive species
- MI LTBMU Management Indicator species

State Status:

- SE Listed as endangered under the California Endangered Species Act
- ST Listed as threatened under the California Endangered Species Act
- CSC Species of concern as identified by the California Department of Fish and Game
- CFP Listed as fully protected by the California Fish and Game Code
- Rare Species identified as rare by the California Department of Fish and Game

TRPA Status:

- SI Special Interest Species

Surveys for special-status wildlife species were conducted for the Project in July and August of 2007 and 2008 by Wildlife Resource Consultants (Wildlife Resource Consultants, 2008). Surveys were performed for the following species: California spotted owl, northern goshawk, willow flycatcher, osprey, mountain beaver, forest carnivore species, amphibian species, and bat species. The survey reports for 2007 and 2008 are included in Appendix I. The following section addresses special-status wildlife species that have the potential to be affected by Project implementation. For each species, a description of the species' background and general life requirements, as well as its historical presence in the Project area or vicinity, is provided.

Sierra Nevada Yellow-legged Frog

The Sierra Nevada yellow-legged frog (*Rana sierra*) is a State species of concern and a federal candidate species. This species inhabits ponds, lakes, and streams associated with montane riparian, lodgepole pine, subalpine conifer, and wet meadow communities (Zeiner et al. 1988, Jennings and Hayes 1994, USFWS 2000). Open stream and lake margins that gently slope to a depth of 2 to 3 inches appear to be preferred (Jennings and Hayes 1994). In the Sierra Nevada, the elevation range is 4,500 to 12,000 feet (Stebbins 2003, Jennings and Hayes 1994).

In the Sierra Nevada, breeding typically occurs from May to August depending on local conditions (Stebbins 2003). In still water environments, such as pools, eggs are deposited as unattached masses in shallow water; however, in streams the egg masses may be attached to the substrate (Jennings and Hayes 1994). Due to the short active season and the brevity of the intervals during which the aquatic habitat maintains warm temperatures, larvae (tadpoles) may over-winter up to two times before attaining metamorphosis (Mullally and Cunningham 1956, Jennings and Hayes 1994).

Threats to Sierra Nevada yellow-legged frogs include introduction of non-native predatory fish (Bradford 1989, Jennings and Hayes 1994), contaminant introductions (USFWS 2000), livestock grazing (Martin et al. 1994, Bohn and Buckhouse 1986, Kauffman and Krueger 1984), acidification from atmospheric deposition (Bradford et al. 1994), nitrate deposition (USFWS 2000), ultraviolet radiation (Blaustein and Wake 1995), drought (Bradford et al. 1993), disease, and other factors (USFWS 2000).

Site-specific surveys for Sierra Nevada yellow-legged frogs were conducted along Homewood and Madden Creeks and along the shorelines of Quail Lake and Lake Louise. No Sierra Nevada yellow legged frogs were detected during surveys. The closest known population is located approximately 7 miles south of the Project area in desolation wilderness. The Sierra Nevada yellow-legged frog is not assumed to occur in the Project area (Wildlife Resource Consultants 2007).

Bald Eagle

The bald eagle is a delisted species under FESA and an endangered species under California ESA. The bald eagle is known to breed and winter in the Lake Tahoe Basin, where it occurs in association with large bodies of water such as lakes, reservoirs, and river systems that provide a source of forage fish. Wintering habitat in the Lake Tahoe Basin consists of mid-to-late successional stages of montane riparian and mixed conifer forests. Bald eagle habitats are characterized by a canopy closure of less than 40% and the presence of standing dead trees or snags (USDA 1988).

The wintering population of bald eagles in the Lake Tahoe Basin is estimated at four to sixteen birds. The number of bald eagles that winter in the Lake Tahoe Basin each year is related to the success of the basin's Kokanee salmon spawning runs and to the freezing of lakes and reservoirs located elsewhere in the Sierra Nevada, which precludes eagles from foraging at these water bodies. The primary areas used by wintering bald eagles in the Lake Tahoe Basin include Taylor Creek, Emerald Bay, and Fallen Leaf Lake. A wintering Bald Eagle management area has been established along the west shore of Lake Tahoe and includes Taylor Creek, Cascade Lake, and Emerald Bay. The eastern boundary of this wintering area along Taylor Creek is located approximately 9 miles northwest of the Project site.

The breeding population of bald eagles in the Lake Tahoe Basin consists of at least 2 nesting pairs, one at Emerald Bay and one at Marlette Lake. The limiting factor to future nesting in the Lake Tahoe Basin is intensive human disturbance, especially boating and development or heavy recreational use in foraging areas. Emerald Bay was identified by Golightly et al. (1991) as a potential area for establishing bald eagle nesting habitat in the Lake Tahoe Basin. At least one bald eagle nesting territory has been active at Emerald Point since 1997 and a second nesting territory was documented at Marlette Lake in 1996 and 2000, but successful breeding at this site has not been observed in recent years.

The Project site is not located within 5 miles of Emerald Bay, a known bald eagle nesting site, and is not located in a bald eagle disturbance zone as mapped by TRPA. Potential foraging habitat is located in the Quail Lake vicinity, although no bald eagles were observed during wildlife surveys (Wildlife Resource Consultants, 2008).

Northern Goshawk

Northern goshawks (*Accipiter gentilis*) inhabit a broad range of forested communities, including mixed conifer, true fir, montane riparian, Jeffrey pine, ponderosa pine, and lodgepole pine forest. In California, this species occurs in the Sierra Nevada, Klamath, Cascade, Inyo-White, Siskiyou, and Warner Mountains, and the North Coast Ranges (Zeiner et al. 1990, USFS 2000). Goshawks may also possibly inhabit suitable habitats in the Transverse Ranges and other mountainous areas in southern California (Zeiner et al. 1990, USFS 2000).

A study conducted in the Lake Tahoe region of the Sierra Nevada found that nest-site areas used by northern goshawks were characterized by high canopy closure, high densities of trees in the >60-100 centimeter (cm) and >100 cm diameter-at-breast-height (dbh) classes, low densities of 5-30 cm dbh trees, and low shrub/sapling and ground cover (Keane 1999). Other site factors, including northerly aspects, proximity to water or meadows, forest openings, and low slope angles, have also been associated with nest sites in numerous studies, although these factors vary widely (USFS 2000). Snags and logs are considered important components of northern goshawk foraging areas, as they provide habitat for prey populations (USDA 1988).

A model of goshawk nest stands developed by Fowler (1988) for application on the west slope of the Sierra Nevada, with consideration for east side habitat conditions, indicates that canopy closure of 60 to 100 % from dominant and co-dominant trees is characteristic of goshawk nest stands. In Fowler's model, slopes of 0 to 25% are identified as optimal. Slopes of 26 to 50 % are considered suitable, while slopes greater than 50% are unsuitable. Aspect is also identified as an important component in nest stand selection, with a north to east aspect considered optimal. North to northwest and east to southeast slopes are considered suitable, while other aspects are identified as marginal (Fowler 1988).

Nesting behavior, including courtship and nest initiation, begins mid-February to early March. The average incubation period is approximately 33 days (USFS 2000). The nestling period typically extends from early June through early July, with most young fledged by mid-July. The post-fledging dependency period extends until mid/late August.

Foraging areas around nest sites generally encompass approximately 2,500 acres of forested habitat (Austin 1991, Hargis et al. 1991). Northern goshawks are known to prey on over 50 species of birds and mammals throughout their western range (Graham et al. 1994). In the Lake Tahoe region primary prey species include Douglas squirrel (*Tamiasciurus douglasii*), Steller's jay (*Cyanocitta stelleri*), northern flicker (*Colaptes auratus*), and ground squirrel (*Spermophilus* spp.) (Keane 1999). Other prey species include American robin (*Turdus migratorius*), blue grouse (*Dendragapus obscurus*), other woodpeckers, and other squirrels.

Although no northern goshawks were detected during 2007 and 2008 surveys, suitable nesting habitat is present in the Project area. The closest known active Protected Activity Centers are located 2 miles to the north in Blackwood Canyon and 2 miles to the south near General Creek (Wildlife Resource Consultants 2008).

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a summer resident of coniferous forests, woodlands, and riparian habitats in the Sierra Nevada. The species generally prefers lower elevations and is therefore found primarily in Jeffrey pine and well-developed alder-willow riparian associations in the Lake Tahoe Region. Nests are found near the trunk in large sized coniferous and deciduous trees. Cooper's hawk feeds primarily on small birds, but may also take small mammals, reptiles and amphibians. Cooper's hawks were detected during 2007 and 2008 biological surveys (Wildlife Resource Consultants 2008) and are assumed to be extant.

Sharp-shinned Hawk

Open deciduous woodlands, mixed or coniferous forests, and forest edges provide year-round habitat for sharp-shinned hawk (*Accipiter striatus*) in the Sierra Nevada. The species prefers coniferous forest associations with a high percentage of canopy closure as nesting habitat. Sharp-shinned hawk is generally found in lower elevation associations such as the Jeffrey pine and mixed conifer forests. Sharp-shinned hawks at higher elevations typically move downslope to lower elevations during fall, winter, and spring. Small birds comprise the greatest proportion of prey for the sharp-shinned hawk, while small mammals, frogs, lizards, and insects are only occasionally taken. The species nests near the trunk in large sized coniferous and deciduous trees. Sharp-shinned hawks were detected during 2007 and 2008 biological surveys (Wildlife Resource Consultants 2008) and are assumed to be extant.

American Peregrine Falcon

American peregrine falcons (*Falco peregrinus*) nest adjacent to water on high protected cliffs and ledges. This large raptor forages in woodland, forest and coastal habitats often near water. Peregrines often catch flying prey on the wing and takes a variety of avian prey up to ducks in size and occasionally mammals, insects and fish. This large raptor is known to be nesting in the Tahoe Basin at Luther Rock above Christmas Valley south of Meyers, California. This species has also been observed nesting on the cliffs at Lovers Leap located above Strawberry, California.

Osprey

Osprey (*Pandion haliaetus*) are found in a variety of habitats associated with large rivers, lakes, and coastlines. In the Sierra Nevada, the osprey is a summer resident only. Nesting sites include large coniferous and deciduous trees, cliffs, and poletops located near or over water. Osprey that nest in the Lake Tahoe Basin are thought to migrate from Central and South America (Poole 1989). Osprey lay between two to four eggs in their nest from April to May. Young hatch between 35 to 42 days later. (Ehrlich et al. 1988). Juveniles spend a total of 17 months in wintering grounds, and at 2 years old migrate north (Poole 1989). The species feeds primarily on fish, which it captures by hovering over the water and plunging feet-first after its prey. Other prey types include rodents, birds, small vertebrates, and crustaceans (Ehrlich et al. 1988, Poole 1989).

The Project site was surveyed for osprey nests and activity in 2007 (Wildlife Resource Consultants 2008). Osprey were observed foraging in Quail Lake and flying over the Project area. The Project site does not contain known osprey nesting sites and is not located within ¼-mile of a known historical osprey nest (Wildlife Resource Consultants 2008). An active nesting site is located approximately 2 miles east of the Project area.

California Spotted Owl

The range of the California spotted owl (*Strix occidentalis occidentalis*) is considered to include the southern Cascades, the entire Sierra Nevada province of California, mountainous regions of the southern California province, and the central Coast Ranges at least as far north as Monterey County (Verner et al. 1992). In the Sierra Nevada, the major forest types comprising known and potential habitat include mixed conifer, red fir, ponderosa pine/hardwood, eastside pine, and foothill riparian/hardwood forests (Verner et al. 1992). Mixed conifer forest is the most abundant forest type and contains most of the known owl sites. Habitats used for nesting typically have greater than 70% total canopy cover, except at very high elevations where canopy cover as low as 30 to 40% may occur (as in some red fir stands of the Sierra Nevada). Nest stands typically include a mixture of tree sizes with a number of very large, old trees and usually at least two canopy layers. Large snags and an accumulation of downed woody debris are usually present. Foraging habitat is similar in structure and composition, but also comprises more open stands with canopy covers down to 40%.

Home range sizes of California spotted owl tend to be smallest in lower elevation hardwood forests, intermediate in size in conifer forests of the central Sierra Nevada, and largest in true fir forests in the northern Sierra Nevada (Verner et al., 1992). Neal et al. (1990) reported that California spotted owl home ranges in Sierra Nevada mixed conifer forests average 3,400 acres, including about 460 acres in stands with 70% or greater canopy cover, and about 1,990 acres in stands with 40 to 69% canopy cover. Verner et al. (1992) generally concur with these data, indicating that Sierra National Forest owls were found to have a median home range for pairs of approximately 3,000 to 5,000 acres. However, Verner et al. (1992) cite an overall mean home range size of owl pairs during the breeding period in Sierran conifer forests of about 4,200 acres. Owl use areas designated to date by the LTBMU comprise approximately 3,500 to 4,665 acres. Radiotelemetry studies have not been undertaken for California spotted owls in the LTBMU, so more accurate home range information is currently unavailable.

Nesting pairs of California spotted owls are known to occur to the north in Blackwood Canyon and to the south in Sugar Pine State Park. The only Protected Activity Centers that was active in

2009 in close proximity to the Project area was Stanford Rock located three miles to the north of the Project area. Protocol-level surveys for California spotted owl were conducted in the Project area in 2007 and 2008. Due to lack of California spotted owl detections in the immediate Project area during protocol surveys, it is not anticipated that this species is present in the Project area (Wildlife Resource Consultants 2008).

Willow Flycatcher

Willow flycatcher (*Empidonax traillii*) is a summer resident of wet meadow and montane riparian habitats at 2,000 to 8,000 feet elevation in the Sierra Nevada and Cascade ranges (Gaines 1983). The species is typically associated with broad, open river valleys or large mountain meadows with extensive growth of shrubby willows. Dense willow thickets are required for nesting and roosting, while low exposed branches are used for singing posts and hunting perches.

Three subspecies of the willow flycatcher are currently recognized in California. These subspecies include the southwestern willow flycatcher (*E. t. extimus*), which occurs in southern California; *E. t. adastus*, which occurs east of the Sierra/Cascade crest; and the little willow flycatcher (*E. t. brewsteri*), which breeds from the coast to the Sierra Nevada crest and is the subspecies present in the Lake Tahoe basin (Craig et al. 1992).

In comparison to other passerines nesting in Sierra meadows, willow flycatchers arrive and breed late in the season (Sanders and Flett 1989). Willow flycatchers typically arrive in early to mid-June, and form pairs and establish territories by late June (Sanders and Flett 1989). Two to four eggs are laid, which are incubated by the female for a period of 12 days (King 1955, Bent 1963, Sanders and Flett 1989). The nestling period lasts approximately 14 days (King 1955, Sanders and Flett 1989). Winter migration occurs from August to mid-September.

The species was once known to breed in willow thickets throughout most of lowland and montane California (Zeiner et al 1990), but numbers have declined drastically in recent decades because of cowbird parasitism and habitat destruction. Habitat destruction and degradation has been caused by a variety of activities including livestock grazing, and agricultural and urban development.

Broadcast surveys for willow flycatcher were performed June and July of 2007. Due to lack of willow flycatcher detections in the Project area during protocol surveys, it is not anticipated that this species is present in the Project area (Wildlife Resource Consultants 2008). Historicaly willow flycatcher have occupied Blackwood Canyon to the north of the Project area. In 2010, one male was detected and monitored throughout the season (LTBMU 2009 Wildlife Program Annual Report).

California Yellow Warbler

The California yellow warbler (*Dendroica petechia brewsteri*) is designated by the California Department of Fish and Game as a species of special concern. Although once common in riparian communities throughout California, it is now an uncommon to rare breeding bird in many lowland areas (Zeiner et al. 1990). The number of breeding pairs in lowland areas, such as the Colorado River, southern coast, and San Joaquin and Sacramento Valleys, has experienced a dramatic decline in recent decades (Zeiner et al. 1990a).

Breeding occurs in willow dominated riparian communities that may also include cottonwoods, alders, aspens, and sycamores from sea level to 8,000 feet. In the Sierra Nevada, montane chaparral and montane shrubbery in open coniferous forests may also be used for breeding (Dunn and Garrett 1997, Zeiner et al. 1990). California yellow warblers typically arrive at their breeding grounds by early May and depart for their wintering grounds by early September (Dunn and Garrett 1997).

Declines of this species have largely been attributed to the loss or alteration of lowland riparian habitats and brood parasitism by brown-headed cowbirds (Dunn and Garrett 1997, Zeiner et al. 1990).

Yellow warbler were detected in the Quail lake area as well as along Madden Creek during 2007 protocol surveys for willow flycatcher and are assumed to be extant (Wildlife Resource Consultants 2008).

Mule Deer

Mule deer (*Odocoileus hemionus*) are a LTBMU Management Indicator Species (MIS). This cervid is a seasonable resident to the Lake Tahoe Basin. Mule deer often occur in open forested regions of the Basin and migrate to higher elevations during the summer months to montane meadow environments. A variety of vegetation with openings, dense trees, edge habitat and close proximity to water is important (Ahlborn 2002). In these habitats mule deer browse and graze on a variety of forbs, grasses and shrubs. Mating takes place from September to December. Bucks mate with multiple does. Mule deer fawns are born early spring to early summer. Does and fawns remain together in small groups, while bucks often remain solitary. Predators of mule deer include humans, black bears, coyotes and mountain lions.

The Project area is in the southern boundary of the Truckee-Loyalton Deer Herd. This herd's home range stretches from southern Plumas and Lassen Counties down to the Placer/El Dorado County line. Potentially suitable habitat exists within the boundaries of Homewood Mountain Resort and therefore mule deer may potentially occur. Suitable habitat for foraging includes existing ski trails and the meadow areas along the margins of Quail Lake and Lake Louise. No migration corridors have been identified within the Project area.

Townsend's Big-eared Bat

The Townsend's big eared bat (*Corynorhinus townsendii*) is found in a variety of habitats excluding alpine and subalpine habitats. C. townsendii is abundant in mesic habitats where it feeds mostly on small insects while in flight using echolocation. This species also gleans insects from foliage. Caves, mines, tunnels and other manmade structures provide roosting locations. Hibernaculum are located in similar habitats as the roosing locations and individuals may move between sites for night, day and hibernation. Two roosting sites have been identified at the southern boundary of the Project area, just south of Quail Lake at the Noonchester mine location (Personal Communication, Patrick Stone TRPA Sept. 2010). Because potential roosting habitat occurs in the Project area and the species has been observed adjacent to the Project area, it is presumed the Townsend's big-eared bat has the potential to occupy habitat in the Project area.

Long-eared Myotis

Long-eared myotis (*Myotis evotis*) are found throughout the Sierra Nevada mountains, occurring in woodland and forest habitats, particularly coniferous forests, at elevations up to approximately 9,000 feet (Harris 2002a). They feed largely on a wide variety of insects, including beetles, moths, and flies, and also spiders. Foraging consists mostly of gleaning prey items from foliage, but prey are also taken while in flight. Long-eared myotis largely forage along habitat edges in open areas over shrubs and water. Long-eared myotis roost in buildings, crevices, caves, snags, and in spaces under bark. Open meadow habitat associated with Quail Lake and Lake Louise provides potentially suitable foraging habitat for this species. Large trees and snags in the Project area may provide suitable roost sites for these bats. Because potential roosting habitat occurs in the Project area it is presumed the long-eared myotis has the potential to occupy habitat in the Project area.

Long-legged Myotis

Long-legged myotis (*Myotis volans*) are found seasonally in a wide variety of habitats including high-elevation forests and meadows of the Sierra Nevada (Williams 1986, Zeiner et al. 1988). These bats feed on flying insects, primarily moths. While foraging, these bats fly low over water close to trees and cliffs and in open meadows. Suitable roost sites include rock crevices, buildings, under tree bark, in snags, and in caves and mines. This species forms large nursery colonies consisting of hundreds of individuals, usually located under bark or in hollow trees. Open meadow habitat associated with Quail Lake and Lake Louise provides potentially suitable foraging habitat for this species. Large trees and snags in the Project area may provide suitable roost sites for these bats. Because potential roosting habitat occurs in the Project area it is presumed the long-legged myotis has the potential to occupy habitat in the Project area.

Yuma Myotis

Yuma myotis (*Myotis yumanensis*) is widespread throughout California, occurring in a wide variety of habitats from sea level up to 11,000 feet. It is uncommon to rare at elevations above 8,000 feet. Yuma myotis feed on a wide variety of insects including moths, midges, flies, termites, ants, and caddisflies. Foraging occurs primarily over water sources includes ponds, lakes and streams. Yuma myotis roost in mines, buildings, caves, or crevices. Open forests and woodlands are optimal habitat provided that suitable roosting sites are available nearby. Open meadow habitat associated with Quail Lake and Lake Louise and associated open forest provides potentially suitable foraging habitat for this species. Large trees and snags in the Project area may provide suitable roost sites for these bats. Because potential roosting habitat occurs in the Project area it is presumed the Yuma myotis has the potential to occupy habitat in the Project area.

Fringed Myotis

Fringed myotis (*Myotis thysanodes*) is found in a variety of habitats throughout California and has been known to occur from sea level to 9,350 feet. Habitats that are most often preferred are pinion-juniper, valley foothill hardwood and hardwood conifer. (Harris, 2002b) Diet consists of beetles, moths, arachnids and crickets. Fringed myotis roost in mines, crevices, buildings and caves. Foraging activity often occurs over water and open habitats, and includes gleaning off leaves. Open meadow habitat associated with Quail Lake and Lake Louise provides potentially suitable foraging habitat for this species. Large trees and snags in the Project area may provide

suitable roost sites for these bats. Because potential roosting habitat occurs in the Project area it is presumed the fringed myotis has the potential to occupy habitat in the Project area.

Sierra Nevada Snowshoe Hare

The Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*) occurs in the higher elevations of the northern and central Sierra Nevada where optimum habitat is provided by the early successional stages of mixed conifer, red fir, and lodgepole pine forests. In addition, high elevation deciduous riparian and herbaceous habitats are also utilized by this species. A key component of each of these habitats is dense thickets of vegetation that can provide refuge from predators. Although the large tree stages of the coniferous forest associations do not provide optimum habitat, these associations can provide suitable habitat for snowshoe hares where sufficient shrub or herbaceous cover exists. Forested habitat in the Project area in early successional stages provides suitable habitat for this species. Because potential habitat occurs in the Project area it is presumed the Sierra Nevada showshoe hare has the potential to occupy habitat in the Project area.

Sierra Nevada Red Fox

Sierra Nevada red fox (*Vulpes vulpes necator*) inhabit forested areas interspersed with riparian and meadow habitats and brush fields. The range of this species is described as the northern California Cascades eastward to the northern Sierra Nevada, then south along the Sierra Nevada crest to Tulare County. In the Sierra Nevada, preferred forest types include red fir, lodgepole pine, and subalpine fir. Jeffrey pine, eastside pine, and montane hardwood-conifer habitats are also used. The species occurs mainly at elevations greater than 7,000 feet, and seldom is observed below 5,000 feet.

The Sierra Nevada red fox moves seasonally from higher elevations in winter to mid-elevation forests during the summer. Predator avoidance in the open may not be a problem for this native fox, as they are known to hunt in open areas (Duncan Furbearer Interagency Workgroup 1989). Although little is known about this subspecies and no specific criteria for analyzing its habitat have been developed, it has been assumed that the Sierra Nevada red fox, like other subspecies of red fox, may be more adaptable and opportunistic than other forest carnivores. Further, it has been assumed that if the more restrictive habitat requirements of Pacific fisher, American marten, willow flycatcher and California spotted owls are provided, the habitat requirements of Sierra Nevada red fox will also be met (Freel 1991).

As of 1977, Sierra Nevada red fox populations were thought to be either maintaining themselves at a reduced level or slowly declining. There is little current information available to either justify or counter this assumption. No Sierra Nevada red fox were found during the forest carnivore surveys conducted at Homewood in 2007 (Wildlife Resource Consultants 2008). The habitat within the Project area is heavily fragmented due to existing ski trails and mountain operations and is of lower quality than the surrounding area which is relatively unfragmented. Therefore, based on this information and lack of historical detections in the Project area the Sierra Nevada red fox is presumed absent from the Project area.

California Wolverine

The California wolverine (*Gulo gulo luteus*), which is generally considered to be a wilderness mammal, occurs in a variety of open terrain habitats at or near timberline. The species is known

to have historically occurred in mountainous areas of California from the north coast to the Cascades, and south to the southern Sierra Nevada. The wolverine is a wide-ranging animal and may travel great distances in a home range that encompasses several hundred square miles (CDFG 1990).

Extensive trapping in the late 19th and early 20th centuries is thought to have severely reduced wolverine populations. The California Cooperative Wolverine Study, led by the Department of Forestry and Resource Management at the University of California, Berkeley is using remote photographic bait stations in areas of historic range and recent reported occurrences to document the current existence of wolverines in California.

One confirmed sighting of a wolverine (photograph and fur samples) occurred in early 2008 in the Sagehen Creek area (25 miles to the north of the Project area), on the Tahoe National Forest (CDFG News Release March 2008). In addition, there have been numerous sightings reported by USFS employees in recent years. The majority of the sightings have been reported from the southern Plumas National Forest and the northern Tahoe National Forest. There is also at least one sighting from the Mammoth area. No wolverines were detected during forest carnivore surveys in 2007 (Wildlife Resource Consultants 2008). Due to lack of detections in the 2007 study, relatively high human activity in the Project area, and lack of recent detections in the Tahoe Basin, this species has a low potential to occur in the Project area.

American Marten

The American (=Pine) marten (*Martes americana*) is known to occur in suitable habitat throughout the Sierra Nevada Province. Based on an extensive review of scientific literature and expert opinion, Freel (1991) described preferred habitat as dense (60 to 100% canopy closure), multi-storied, multi-species late seral stage coniferous forest of red fir, red fir/white fir mixtures, lodgepole, and mixed conifer. A high number of large snags and downed logs are associated with preferred habitat. Habitat areas are generally in close proximity to dense riparian corridors, which are used as travelways. An interspersion of small (<1 acre) openings with good ground cover is required for foraging. For the northern Sierra Nevada, Freel (1991) cites elevation records of 3,400 to 10,400 feet, with an average elevation of 6,000 feet.

According to Freel (1991), numerous and heavily traveled roads are not desirable in American marten habitat areas as they are associated with habitat disruption and animal mortality. Roads may also reduce food availability for American marten by increasing road kills in prey populations and creating behavioral barriers to foraging movements (Allen 1987). Occasional one and two lane forest roads with moderate levels of traffic are not believed to limit American marten movements (Freel 1991).

Forest carnivore surveys detected a minimum of two marten and possibly a total of four marten during the 2007 survey (Wildlife Resource Consultants 2007) at the Dutch Treat ski run station as well as the lake Louise station. Due to detections in the 2007 study and past observations in the Project area, it is assumed this species is extant in the Project area.

Pacific Fisher

In California, Pacific fisher (*Martes pennanti pacifica*) most often occurs at somewhat lower elevations than the American marten. These elevations are typically between 2,000 and 5,000 feet in the North Coast region and between 4,000 feet and 8,000 feet in the southern Sierra

Nevada. Based on Freel's (1991) literature review, preferred habitat for the fisher is characterized by dense (60 to 100 % canopy), multi-storied, multi-species late seral stage coniferous forest with a high number of large (>30 inches dbh) snags and downed logs. Preferred habitat types in the Sierra Nevada include montane hardwood-conifer, mixed conifer, montane riparian, Jeffrey pine, ponderosa pine, lodgepole pine, subalpine conifer, aspen, eastside pine and possibly red fir. Habitat areas also include close proximity to dense riparian corridors, saddles between major drainages, or other landscape linkage patterns that are used as dispersal corridors. An interspersion of small (< 2 acres) openings with good ground cover is required for foraging.

Although studies have indicated that fishers apparently use greater percentages of early to mid-seral stage forest stands for foraging in summer months, they still appear to need and utilize the mature, old growth stands for denning, especially in areas with high snowfall (Freel 1991). Numerous and heavily traveled roads are not desirable, as they are associated with habitat disruption and animal mortality. However, occasional one and two lane forest roads with moderate levels of traffic are not believed to limit fisher movements.

The CNDDB contains a single occurrence record of fisher in the Lake Tahoe Region from 1967. This occurrence was recorded approximately four miles south of Meyers which is over 13 miles from the Project area. It is assumed this species is not present in the Project area due to lack of historic presence, relatively poor habitat quality, and it not being detected in the Project area during forest carnivore surveys (Wildlife Resource Consultants 2008).

Fisheries

LTBMU inventoried the streams within the Project area in 1994 (Kleinfelder 2007). Based on the LTBMU information, it appears that most of Madden creek may provide better potential habitat for adult trout than the other streams in the assessment due to its greater proportion of pools and their greater depth. The lower portion of Madden Creek, outside of the Project area, does not provide good fish habitat due to alterations of the streambed for flood control. Homewood (Homewood) Creek provides limited habitat for adult trout lifestages, but contains substantial suitable spawning habitat. High gradients in Homewood Creek in the upper reaches could result in natural barriers for migration in low flow years. The culvert located in the parking area at the south base could be a barrier for migration of fish species. The streams within the project area were surveyed in 2008 by the USDA Forest Service, Lake Tahoe Basin Management Unit. Brook, brown and rainbow trout were found within streams (Madden and Homewood Creeks) in the project area.

8.1.6 Sensitive Habitats

Waters of the U.S.

A “no net loss of wetland acreage or value” policy is established in both the state and federal executive branches (California Wetlands Conservation Policy 1993). Ditching, draining, or other activities that could alter the characteristic physical, chemical, biological or public interest values (as defined by 40 CFR 230 Subparts C-F) associated with wetlands and other waters of the U.S. (WoUS) are considered impacts under USACE authority. For the purposes of this document, fill, excavation, or other disturbance in a jurisdictional lake, stream, wetland, or other water of the U.S. is considered significant.

Placement of fill material in WoUS is regulated through §404 of the Clean Water Act of 1972 (CWA), under jurisdiction of the USACE. WoUS defined under §404 include, but are not limited to, areas subject to the ebb and flow of the tide, streams, and wetlands (33 CFR §328.23[3]). The extent of the waters in streams is defined by elevations along the stream bank above which water normally does not rise (ordinary high water). Wetlands are defined as areas that are saturated or inundated by surface or ground water for a frequency and duration sufficient to support the prevalence of plants adapted for life in saturated soil conditions (33 CFR §328 [(b)b]).

The goal of the CWA is to maintain, restore, and enhance the physical, chemical, and biological integrity of the Nation's waters. In reviewing projects with impacts to wetlands, the USACE requires no net loss of wetland functions and values. Compensatory mitigation for unavoidable impacts to wetlands permitted by the USACE requires replacement acreage, preferably in-kind and in the same watershed, sufficient to achieve the goal of no net loss. The USACE determines replacement acreage is based on the functions and values of the area being filled, the functions and values of the mitigation site, and the likelihood of success of the mitigation. Wetland mitigation includes restoration, creation, and/or preservation. The mitigation is based on the functions and values of wetlands that are affected and the local opportunities to utilize these three approaches. Compensation is completed before or concurrent with the impact, as near to the site of impact as practicable, and the mitigation site must be protected from subsequent loss or degradation.

Since 1984, the USACE began to regulate the discharge of fill into isolated waters. The 1984 draft regulations also included the now expired Nationwide permit (NWP) 26 for discharges into isolated waters and other waters above the headwaters. NWP 26 has been replaced, in large part, by NWP 39, and other NWPs, effective June 1, 2000. Lacking information about migratory bird use, the USACE assumed jurisdiction over seasonal wetlands, including seasonal pools and ponds, that are isolated or above the headwaters hinging its regulatory authority on the Migratory Bird Species Act. The USACE operated under the assumption until the January 2001 United States Supreme Court decision Solid Waste Agency of Northwestern Cook County versus United States Army Corps of Engineers et al. (SWANCC decision). The Court apparently removed the jurisdictional status of isolated intrastate waters including vernal pools, abandoned, water-filled quarry pits, some ponds and lakes without outlets, isolated wetlands, seeps and seasonally wet depressions. The State RWQCB exercises jurisdiction and control over waters of the State under applicable Basin Plan wetland protection and water quality control policies.

Current policy statements issued by USACE General Counsel assert that, "the Corps' ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for legal judgment that adjacent wetlands may be defined as waters under the CWA. In sum, the holding, the facts, and the reasoning of United States versus Riverside Bayview Homes continues to provide authority for the USEPA and the USACE to assert CWA jurisdiction over of the traditional navigable waters, interstate waters, and tributaries to navigable or interstate waters, upstream to the highest reaches of the tributary systems, and over wetlands adjacent to any and all of these waters."

To date, no wetland delineations have been performed in the Project to determine which water bodies, i.e. Quail Lake, Lake Louise or the streams in the Project area fall under §404 of the CWA. However, the lakes and creeks in the Project area likely satisfy the definition of Waters of the U.S.

Riparian Areas/Stream Environment Zones

The TRPA defines a Stream Environment Zone (SEZ) as a biological community that derives its characteristics from the presence of riparian vegetation, alluvial soil, surface water or a seasonal high groundwater table. An SEZ is delineated by the presence of riparian vegetation, soil type, elevated groundwater, drainage ways and floodplains, including adjacent marshes, meadows, and riparian areas.

SEZs provide wildlife habitat, purification of water and scenic enjoyment. Protection and restoration of stream environment zones are essential for improving and maintaining the environmental amenities of the Lake Tahoe Basin and for achieving environmental thresholds for water quality , vegetation preservation, and soil conservation (TRPA Goals and Policies). SEZs are identified by the presence of at least one key indicator or the intersection of three secondary indicators (TRPA Code Section 37.3.B), which include:

SEZ Key Indicators:

- Evidence of surface water flow, including perennial, ephemeral and intermittent streams, but not including rills or human-made channels;
- Primary riparian vegetation;
- Near surface groundwater (less than 20 inches from the surface);
- Lakes or ponds;
- Beach soil; or
- One of the following alluvial soils:
    - Elmira coarse sand, wet variant; or
    - Marsh.

Secondary Indicators:

- Designated flood plain;
- Groundwater in 20-40 inches of the surface;
- Secondary riparian vegetation; and
- One of the following alluvial soils:
    - Loamy alluvial land;
    - Celio gravely loamy coarse sand; or
    - Gravely alluvial land.

Madden Creek, Homewood Creek, and Quail Creek flow through the Project area. Other SEZs in the Project area include one perennial seep and one seasonal seep that support minimal riparian vegetation and a SEZ located in the gravel parking lot at the southern end of the North Base area. One unnamed ephemeral drainage is located between the North Base area and South Base area. This unnamed ephemeral drainage does not support riparian vegetation but contains seasonal flow that drains to low-lying areas with near surface groundwater. A small wet meadow area is located

adjacent to the margins of Lake Louise and Quail Lakes. Other ephemeral SEZ are located on the mountain and within the overall Project area but have not been formally delineated by TRPA.

8.2 REGULATORY SETTING

8.2.1 TRPA Environmental Thresholds

The TRPA has established Environmental Thresholds for common vegetation (including richness, relative abundance, and pattern), uncommon plant communities, and sensitive plants. Furthermore, Environmental Thresholds for wildlife have been established that address special interest species, habitats of special significance, stream habitats, and instream flows. Environmental Thresholds are used to establish the significance of an environmental effect to vegetation and wildlife resources in the Lake Tahoe Basin. Applicable TRPA Environmental Thresholds for vegetation and wildlife resources, as cited in TRPA Resolution 82-11 Exhibit A, are as follows:

Common Vegetation

Increase plant and structural diversity of forest communities through appropriate management practices as measured by diversity indices of species richness, relative abundance, and pattern.

Richness

Maintain the existing species richness of the basin by providing for the perpetuation of the following plant associations:

- *Yellow Pine Forest:* Jeffrey pine, white fir, incense cedar, sugar pine.
- *Red Fir Forest:* red fir, Jeffrey pine, lodgepole pine, western white pine, mountain hemlock, western juniper.
- *Subalpine Forest:* whitebark pine, mountain hemlock, mountain mahogany.
- *Shrub Associations:* greenleaf and pinemat manzanita, tobacco brush, Sierra chinquapin, huckleberry oak, mountain whitethorn.
- *Sagebrush Scrub Vegetation:* basin sagebrush, bitterbrush, Douglas chamise.
- *Deciduous Riparian:* quaking aspen, mountain alder, black cottonwood, willow.
- *Meadow Association (wet and dry meadow):* mountain squirrel tail, alpine gentian, whorled penstemon, asters, fescues, mountain brome, corn lilies, mountain bentgrass, hairgrass, marsh marigold, elephant heads, tinker's penney, mountain Timothy, sedges, rushes, buttercups.
- *Wetland Associations (marsh vegetation):* pond lilies, buckbean, mare's tail, pondweed, common bladderwort, bottle sedge, common spikerush.
- *Cushion Plant Association (alpine scrub):* alpine phlox, dwarf ragwort, Draba.

Relative Abundance

Of the total amount of undisturbed vegetation in the Lake Tahoe Basin:

- Maintain at least 4% meadow and wetland vegetation.
- Maintain at least 4% deciduous riparian vegetation.
- Maintain no more than 24% dominant shrub association vegetation.
- Maintain 15 to 25% of the Yellow Pine Forest in several stages other than mature.
- Maintain 15 to 25% of the Red Fir Forest in several stages other than mature.

Pattern

Provide for the proper juxtaposition of vegetation communities and age classes by:

- Limiting acreage size of new forest openings to no more than eight acres.
- Adjacent openings shall not be of the same relative age class of successional stage to avoid uniformity in stand composition and age.

A non-degradation standard to preserve plant communities shall apply to native deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations to be consistent with the SEZ threshold.

Native vegetation shall be disturbed to the minimum extent feasible to be consistent with the limits defined in the Land Capability Classification of the Lake Tahoe Basin, California-Nevada, A Guide for Planning, Bailey, 1974, for allowable impervious cover and permanent site disturbance.

Uncommon Plant Communities

Provide for the non-degradation of the natural qualities of any plant community that is uncommon to the Basin or of exceptional scientific, ecological, or scenic value.

This threshold shall apply but not be limited to:

1. The deepwater plants of Lake Tahoe;
2. Grass Lake (sphagnum bog);
3. Osgood swamp;
4. The Freel Peak cushion plant community;
5. Taylor Creek Marsh;
6. Pope Marsh;
7. Upper Truckee Marsh; and
8. Hell Hole.

Sensitive Plants

Maintain a minimum number of population sites for each of the sensitive plant species identified in Table 8-3.

Table 8-3

TRPA Sensitive Plants

Species	Number of Population Sites
Arabis rigidissima var. *demota*	7
Lewisia longipetala	2
Draba asterophora var. *macrocarpa*	2
Draba asterophora var. *asterophora*	5
Rorippa subumbellata	26

Source: TRPA Regional Plan for the Lake Tahoe Basin: Resolution No. 82-11 as Amended

Wildlife

Special Interest Species

Provide a minimum number of population sites and disturbance zones for the species identified in Table 8-4:

Table 8-4

TRPA Environmental Thresholds for Special Interest Species

Species of Interest	Population Sites	Disturbance Zone	Influence Zone
Northern goshawk	12	0.50 miles	3.50 miles
Osprey	4	0.25 miles	0.60 miles
Bald eagle (winter)	2	Mapped Areas	Mapped Areas
Bald eagle (nesting)	1	0.50 miles	Variable
Golden eagle	4	0.25 miles	9.0 miles
Peregrine falcon	2	0.25 miles	7.6 miles
Waterfowl	18	Mapped Areas	Mapped Areas
Deer	--	Meadows	Mapped Areas

Source: TRPA Regional Plan for the Lake Tahoe Basin: Resolution No. 82-11 as Amended

Habitats of Special Significance

A non-degradation standard shall apply to significant wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations.

Stream Habitat

Maintain the 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat as indicated by the map on page 76 of the EIS for the Environmental Thresholds Study.

Instream Flows

Until instream flow standards are established in the Regional Plan to protect fishery values, a non-degradation standard shall apply to instream flows.

TRPA Goals and Policies

Vegetation

Goal #1: Provide for a wide mix and increased diversity of plant communities in the Tahoe Basin.

Policies:

1. Forest management practices shall be allowed when consistent with acceptable strategies for the maintenance of forest health and diversity, prevention of fire, protection of water quality, and enhancement of wildlife habitats.
2. Opportunities to improve the age structure of the pine and fir plant communities shall be encouraged when consistent with other environmental considerations.
3. Forest pattern shall be manipulated whenever appropriate as guided by the size and distribution of forest openings.
4. Edge zones between adjacent plant communities will be maximized and treated for their special value relative to plant diversity and wildlife habitat.
5. Permanent disturbance or unnecessary alteration of natural vegetation associated with development activities shall not exceed the approved boundaries (or footprints) of the building, driveway, or parking structures, or that which is necessary to reduce the risk of fire or erosion.
6. The management of vegetation in urban areas shall be in accordance with the policies of this plan and shall include provisions that allow for the perpetuation of the natural-appearing landscape.
7. Disturbance or removal of forest litter should be avoided to promote the natural catchment of nutrients.
8. Revegetation of disturbed sites shall require the use of species approved by the agency. TRPA shall prepare specific policies designed to avoid the unnecessary use of landscaping which requires long-term irrigation and fertilizer use.

9. All proposed actions shall consider the cumulative impact of vegetation removal with respect to plant diversity and abundance, wildlife habitat and movement, soil productivity and stability, and water quality and quantity.

Goal #2: Provide for the maintenance and restoration of such unique ecosystems as wetlands, meadows, and other riparian vegetation.

Policies:

1. Riparian plant communities shall be managed for the beneficial uses of passive recreation, groundwater recharge, and nutrient catchment, and as wildlife habitats.
2. Riparian plant communities shall be restored or expanded whenever and wherever possible.

Goal #3: Conserve threatened, endangered, and sensitive plant species and uncommon plant communities on the Lake Tahoe Basin.

Policies:

1. Uncommon plant communities shall be identified and protected for their natural values.
2. The population sites and critical habitat of all sensitive plant species in the Lake Tahoe Basin shall be identified and preserved.

Wildlife

Goal #1: Maintain suitable habitats for all indigenous species of wildlife without preference to game or non-game species through maintenance of habitat diversity.

Policies:

1. All proposed actions shall consider impacts to wildlife.
2. Riparian vegetation shall be protected and managed for wildlife.
3. Non-native wildlife and exotic species shall be controlled and release of such animals into the wild is forbidden.
4. Domestic animals and pets shall be controlled and appropriately contained.

Goal #2: Preserve, enhance and where feasible, expand habitats essential for threatened, endangered, rare, or sensitive species found in the Basin.

Policies:

1. Endangered, threatened, rare, and special interest species shall be protected and buffered against conflicting land use.

Fisheries

Goal #1: Improve aquatic habitat essential for the growth, reproduction, and perpetuation of existing and threatened fish resources in the Lake Tahoe Basin.

Policies:

1. Development proposals affecting streams, lakes and adjacent lands shall evaluate impacts to the fishery.
2. Unnatural blockages and other impediments to fish movement will be prohibited and removed wherever appropriate.
3. An instream maintenance program should be developed and implemented.
4. In-stream flows shall be regulated, when feasible, to maintain fishery values.

TRPA Code of Ordinances

Chapter 65 – Vegetation Protection During Construction

65.2.A Vegetation: Vegetation shall not be disturbed, injured, or removed except in accordance with the Code or conditions of Project approval. All trees, major roots, and other vegetation, not specifically designated and approved for removal, in connection with a project, shall be protected according to methods approved by TRPA.

Chapter 71 – Tree Removal

71.2.A Standards for Conservation and Recreation Lands: In lands classified by TRPA as conservation or recreation land use or Stream Environment Zones, any live, dead or dying tree greater than or equal to 30 inches diameter at breast height (dbh) in westside forest types shall not be cut, and any live, dead or dying tree greater than or equal to 24 inches diameter at breast height in eastside forest types shall not be cut. Except as follows:

(1) Trees and snags larger than 30 inches dbh in the westside forest types and 24 inches dbh in eastside forest types may be cut in urban interface areas if TRPA determines that they would unreasonably contribute to fuel conditions that would pose a fire threat or hinder defense from fire in an urbanized area. In the urban interface areas, fire management strategies favoring the retention of healthy trees 30 inches dbh or larger in the westside forest types and 24 inches dbh or larger in eastside forest types trees shall be fully considered. Urban interface areas are defined as: all undeveloped lands in a 1,250 foot zone immediately adjacent to TRPA residential, commercial, or public service plan area boundaries.

(2) A tree larger than 30 inches dbh in westside forest types and larger than 24 inches dbh in eastside forest types may be felled, treated or removed if TRPA and the land manager determine the tree pose an unacceptable risk to occupied or substantial structures or areas of high human use. Examples of areas of high human use are campgrounds, parking lots, ski trails, and developed beaches. . Where a land manager determines that a tree constitutes a physical emergency (e.g. imminent threat of falling on occupied or substantial structures, or people), the land manager may remove the tree but must provide photographic documentation to TRPA in two working days.

(3) Where immediate treatment and removal is warranted to help control an outbreak, severely insect-infested or diseased trees may be removed. Trees to be felled, treated or removed require TRPA review on a tree by tree basis, in 30 working days of written notification by the land manager.

(7) In case of extreme fuel loading some snags larger than 30 inches dbh in the westside forest types and 24 inches dbh in eastside forest types may be cut if the removal is consistent with 78.2.D.

(8) Large trees may be removed for large public utilities projects if TRPA finds there is no other reasonable alternative.

(9) Tree Removal During Emergency Fire Suppression Activities: Trees may be removed when an emergency fire suppression need exists as determined by the local, state or federal fire suppression agency involved in a fire suppression activity.

71.2.B Standards for Non-SEZ Urban Lands: In non-SEZ urban areas: Individual trees larger than 30 inches dbh that are healthy and sound shall be retained as desirable specimen trees having aesthetic and wildlife value, unless 1) all reasonable alternatives are not feasible to retain the tree, including reduction of parking areas or modification of the original design, or 2) paragraphs 71.2.A (1), 71.2.A (2), 71.2.A (3), 71.2.A (7), 71.2.A (8), or 71.2.A (9) can be applied.

71.3 General Standards: The cutting, moving, removing, killing, or materially damaging of live trees, the removal of disease-infested and hazardous trees, and the attachment of appurtenances to trees, shall comply with this chapter. The removal of trees 14 inches d.b.h. or less is exempt from TRPA approval under subsection 4.2.A (13) and requirements of this chapter. A TRPA permit is required for the removal of trees 6-inch dbh and greater on lakefront properties where the trees to be removed provide vegetative screening of existing structures, as viewed from Lake Tahoe. Except as provided in subsections 71.5.B, and 71.5.J§§, removal of trees greater than fourteen inches dbh shall require approval by TRPA. Permits shall be granted or denied in conformity with the provisions of this chapter. Such tree-related projects and activities also shall conform to the other provisions of the Code.§§§

71.3.A Findings: Before tree-related projects and activities are approved by TRPA, TRPA shall find, based on a report from a qualified forester, that the Project or activity is consistent with this chapter and the Code. TRPA may delegate permit issuance to a federal, state, or other qualified agency through a memorandum of understanding.§§§§

71.3.B Harvest Or Tree Removal Plan: In cases of substantial tree removal, as set forth in subsection 71.4.I, the applicant shall submit a harvest plan or tree removal plan, prepared by a qualified forester. The plan shall set forth prescriptions for tree removal, water quality protection, vegetation protection, residual stocking levels, reforestation, slash disposal, fire protection, and other appropriate considerations. The plan, as approved by TRPA, shall become a part of the project and prescriptions contained in the plan shall be conditions of approval.

71.4.I Substantial Tree Removal: Substantial tree removal shall be activities on Project areas of twenty acres or more and proposing the removal of more than 100 live trees ten inches dbh or larger, or proposing the removal of more than 100 live trees 10 inches dbh or larger in land capability districts 1a, 1b, 1c, 2, or 3 regardless of the Project area, or proposing tree removal that, as determined by TRPA after a joint inspection with appropriate State or federal forestry staff, does not meet the minimum acceptable stocking standards set forth in Subsection 71.4.B. Substantial tree removal projects shall be processed by the appropriate State and federal agencies in coordination with TRPA in the following manner:

(2) Review process for private parcels:

(a) Harvest plan shall be written by a qualified forester;

(b) Harvest plan shall be submitted to the appropriate state and federal agencies and TRPA with an initial environmental checklist or environmental assessment;

(c) Preparation of environmental impact statement if necessary;

(d) Pre-approval field review;

(e) Approval of project by TRPA;

(f) Pre-harvest field review; and

(g) Post-harvest review.

Chapter 75 – Sensitive and Uncommon Plant Protection and Fire Hazard Reduction

75.2.A Sensitive Plants: Projects and activities in the vicinity of sensitive plants and their associated habitat, shall be regulated to preserve sensitive plants and their habitat. All projects or activities that are likely to harm, destroy, or otherwise jeopardize sensitive plants or their habitat, shall fully mitigate their significant adverse effects. Those projects and activities that cannot fully mitigate their significant adverse effects are prohibited. Measures to protect sensitive plants and their habitat include, but are not limited to:

1. Fencing to enclose individual populations or habitat;
2. Restrictions on access or intensity or use;
3. Modifications to project design as necessary to avoid adverse impacts;
4. Dedication of open space to include entire areas of suitable habitat; or
5. Restoration of disturbed habitat.

75.2.B Uncommon Plant Communities: Uncommon plant communities shall be managed and protected to preserve their unique ecological attributes and other associated values. Projects and activities that significantly adversely impact uncommon plant communities, such that normal ecological functions or natural qualities of the community are impaired, shall not be approved.

Chapter 77 – Revegetation

77.2 Approved Species: Revegetation programs shall use TRPA-approved plant species listed on the TRPA Recommended Native and Adapted Plant List.

77.3 Soil Stabilization: Site preparation for revegetation shall include measures necessary to stabilize the soil until the vegetation is reestablished.

77.4 Revegetation Plans: Where revegetation is required to stabilize soils, replace removed vegetation, or for rehabilitation of areas where runoff or soil erosion needs to be controlled, the applicant shall provide a revegetation plan.

Chapter 78 – Wildlife Resources

78.2A Stream Environment Zones: No project or activity shall be undertaken in the boundaries of a SEZ except as otherwise permitted for habitat improvement, dispersed recreation, vegetation management, or as approved in Chapter 20 of the TRPA Code of Ordinances, Rules of Procedure.

78.2.B Movement and Migration Corridors: Movement and migration corridors shall be protected as follows:

1. Stream environment zones adjoining creeks and major drainages link islands of habitat and shall be managed, in part, for use by wildlife as movement corridors. Structures, such as bridges, proposed in these movement corridors shall be designed so as not to impede the movement of wildlife.

78.2.C Critical Habitat: Any element of the overall habitat for any species of concern, which, if diminished, could reduce the existing population or impair the stability or viability of the population, shall be considered critical habitat. This shall apply also to habitat for special interest species indigenous to the Region whose breeding populations have been extirpated but could return or be reintroduced.

1. No project or activity shall cause, or threaten to cause, the loss of any habitat component considered critical to the survival of a particular wildlife species.
2. No project or activity shall threaten, damage, or destroy nesting habitat of raptors and waterfowl or fawning habitat for deer.
3. Wetlands shall be preserved and managed for their ecological significance, including their value as nursery habitat to fishes, nesting and resting sites for waterfowl, and as a source of stream recharge, except as permitted pursuant to Chapter 20.

78.3 Special Interest, Threatened, Endangered, And Rare Species: Special interest species which are locally important because of rarity or other public interest, and threatened, endangered or rare species as designated under state and federal endangered species acts, shall be protected from habitat disturbance from conflicting land uses. These special interest species are: goshawk, osprey, bald eagle, golden eagle, peregrine, water fowl, and deer. The habitat locations of these species are depicted on TRPA maps. At a minimum, the following standards shall apply for the protection of special interest, threatened, endangered and rare species and associated habitat:

78.3.A Disturbance Zones: Perching sites and nesting trees of goshawks, peregrines, eagles, and osprey as shown on the TRPA Regional Plan Overlay Maps shall not be physically disturbed in any manner nor shall the habitat in the disturbance zone be manipulated in any manner unless such manipulation is necessary to enhance the quality of the habitat. The threshold applies not only to the number of known population sites, but will also apply to the disturbance and influence zone buffers to sites found in the future.

(1) The disturbance zones for goshawks are 0.5 mile radius around each nest site.

(2) The disturbance zones for osprey and peregrines are 0.25 mile radius around each nest site.

(3) The disturbance zones for wintering bald eagles are as shown on the TRPA maps.

(4) The disturbance zones for nesting bald eagles are 0.5 mile radius around each nest.

(5) The disturbance zones for golden eagles are 0.25 mile radius around each nest site.

78.3.B Adverse Impacts: Uses, projects or activities, outside existing urban areas and within the disturbance zone of special interest, threatened, endangered or rare species, shall not, directly or indirectly, significantly adversely affect the habitat or cause the displacement or extirpation of the population.

78.3.C Environmental Documents: Applicants for projects within disturbance zones shall submit, with their applications, appropriate environmental documentation prepared by a biologist, which includes specific recommendations for avoiding significant adverse impacts to the special interest, threatened, endangered or rare species.

78.3.D Special Conditions: Special conditions of project approval may be required to mitigate or avoid significant adverse impacts to special interest species listed by TRPA or the U.S. Forest Service for the Lake Tahoe Basin, or for threatened, endangered and rare species.

78.3.E Developed Parcels: Subsections 78.3.A through 78.3.C, inclusive, shall not apply to situations where special interest, threatened, endangered or rare species choose to live in close proximity to existing developed parcels.

Chapter 78 – Fish Resources

79.2.B Stream Habitat: Stream habitat shall be protected as follows:

(1) Artificial modifications to stream channels, or other projects, activities or uses in stream environment zones that may physically alter the natural characteristics of the stream, shall not be permitted unless TRPA finds that such actions avoid significant adverse impacts to the fishery or are otherwise allowed under the Code.

(2) All stream crossings shall be constructed so as to allow unrestricted upstream and downstream movement of fishes.

(3) Existing structures within stream environment zones which are barriers to fish migration may be removed or modified to permit fish passage. (See Chapters 9 and 32).

(4) Development adjacent to tributaries shall be required to fully mitigate significant adverse impacts to the fishery.

(5) Proposals for stream habitat improvement shall include at a minimum, the following information:

(a) Purpose of the project;

(b) Species to be benefited;

(c) Time and methods of construction or other work;

(d) Materials: their use, source, placement, and quantity; and

(e) A vegetation plan for fish cover, shading, and bank protection as needed.

(6) Wildlife habitat improvement projects or activities, or other projects or activities requiring the diversion of stream water, shall mitigate significant adverse impacts to the tributary by:

(a) Maintaining adequate instream flows adjacent and downstream from the Project area;

(b) Preventing the introduction or reentry of nutrients or sediment-enriched water to the tributary;

(c) Providing for unobstructed migration or fishes through the main stream channel;

(d) Protecting or restoring fish habitat;

(e) Protecting or restoring riparian vegetation; and

(f) Protecting or restoring other relevant instream values such as recreation, aesthetics, and wildlife habitat.

(7) Fish and wildlife stream habitat projects or activities shall be developed in coordination with the appropriate fish and wildlife agencies.

(8) Whenever possible, existing points of water diversion from streams shall be transferred to Lake Tahoe when the diversions significantly and adversely impact instream beneficial uses.

(9) An instream beneficial use assessment, such as the type established by Title 23, Section 670.6 of the California Administrative Code, shall be required for all projects and activities involving the diversion of water from a stream where instream flow standards have not been established. The assessment also may be required on streams where existing diversions are creating identified problems such as non- compliance with environmental thresholds. Prior to TRPA approval, standards of stream flow shall be established pursuant to the results of the assessment. Approval shall be conditioned on compliance with those standards and other mitigation necessary to achieve and maintain the environmental thresholds.

8.2.2 Federal Regulations

Endangered Species Act

FESA recognizes that many species of fish, wildlife, and plants are in danger of or threatened with extinction and established a national policy that all federal agencies should work toward conservation of these species. The Secretary of the Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitats, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on endangered species. FESA also outlines what constitutes unlawful taking, importation, sale, and possession of endangered species and specifies civil and criminal penalties for unlawful activities.

Biological assessments are required under Section 7(c) of FESA if listed species or critical habitat may be present in the area affected by any major construction activity conducted by, or subject to issuance of a permit from, a federal agency as defined in Part 404.02. Under Section 7(a)(3) of FESA every federal agency is required to consult with the United States Fish and Wildlife Service or National Marine Fisheries Service on a proposed action if the agency determines that its proposed action may affect an endangered or threatened species.

Section 9 of FESA prohibits acts of disturbance, which result in the "take" of threatened or endangered species. "Take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Violation of this section can result in penalties of up to $250,000 and up to one-year imprisonment. Sections 7 and 10(a) of FESA

provide a method for permitting an action that may result in an "incidental take" of a federally listed species. Incidental take refers to take of a listed species that is incidental to, but not the primary purpose of, an otherwise lawful activity. Incidental take is permitted under Section 7 for projects on federal land or involving a federal action, while Section 10(a) provides a method for permitting an incidental take resulting from a state or private action.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

Wetlands and Other Jurisdictional Waters of the United States

Ditching, draining, or other activities which could alter the characteristic physical, chemical, biological or public interest values (as defined by 40 CFR 230 Subparts C-F) associated with wetlands and other waters of the U.S. are considered impacts under U.S. Army Corps of Engineers (ACOE) authority. For the purposes of this document, any destruction of wetlands or other waters of the U.S. (either in fill or other disturbance) is considered significant. Although waters of the U.S. have not been delineated, it is assumed Grass Lake Creek is considered a water of the U.S. Delineation of said waters will be required prior to Project initiation.

Placement of fill material in waters of the United States is regulated through Section 404 of the Clean Water Act (CWA), under jurisdiction of the ACOE. Waters defined under Section 404 include, but are not limited to, areas subject to the ebb and flow of the tide, streams, and wetlands (33 CFR §328.23[3]). The extent of the waters in streams is defined by elevations along the stream bank above which water normally does not rise (ordinary high water). Wetlands are defined as areas that are saturated or inundated by surface or ground water for a frequency and duration sufficient to support the prevalence of plants adapted for life in saturated soil conditions (33 CFR §328 [(b)b]).

The goal of the CWA is to maintain, restore, and enhance the physical, chemical, and biological integrity of the Nation's waters. In reviewing projects involving impacts to wetlands, the ACOE requires no net loss of wetland functions and values. Compensatory mitigation for unavoidable impacts to wetlands permitted by the ACOE requires replacement acreage, preferably in-kind and in the same watershed, sufficient to achieve the goal of no net loss. Replacement acreage is determined by the ACOE based on the functions and values of the area being filled, the functions and values of the mitigation site, and the likelihood of success of the mitigation. Wetland mitigation may include restoration, creation, and/or preservation. The mitigation must be based on the functions and values of wetlands that are affected and the local opportunities to utilize these three approaches. Compensation should be completed before or concurrent with the impact, as near to the site of impact as practicable, and the mitigation site must be protected from subsequent loss or degradation.

Wetlands impacts are considered significant if implementation of the Project would result in the disturbance of wetlands based on:

1. The objective (Chapter 5) of the Water Quality Control Plan for the Lahontan Region (Basin Plan, 1995), which prohibits degradation of aquatic communities or populations.

2. State prohibitions against discharge to SEZs or 100-year flood plains.

8.2.3 Placer County General Plan

The Placer County General Plan was adopted in 1994. The following Goals and Policies apply to the Homewood Mountain Resort Ski Area Master Plan Project:

Water Resources

Goal 6.A: To protect and enhance the natural qualities of Placer County's streams, creeks and groundwater.

Policies

6.A.1. The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species (see discussion of sensitive habitat buffers in Part I of this Policy Document). Based on more detailed information supplied as a part of the review for a specific project, the County may determine that such setbacks are not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public;

c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar

infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

6.A.3. The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind); and/or

d. Pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).

6.A.4. Where creek protection is required or proposed, the County should require public and private development to:

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protection. If a creek is proposed to be

included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, which shall be used as necessary to minimize siltation, sedimentation, and erosion, and shall be left in place until disturbed areas; and/or are stabilized with permanent vegetation that will prevent the transport of sediment off site: and 2) temporary vegetation sufficient to stabilize disturbed areas.

f. Provide for long-term creek corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.

6.A.8. Where the stream environment zone has previously been modified by channelization, fill, or other human activity, the County shall require project proponents to restore such areas by means of landscaping, revegetation, or similar stabilization techniques as a part of development activities.

Wetland and Riparian Areas

Goal 6.B: To protect wetland communities and related riparian areas throughout Placer County as valuable resources.

Policies

6.B.1. The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of Project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

6.B.2. The County shall require new development to mitigate wetland loss in both regulated and non- regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

6.B.3. The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.

6.B.4. The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.

6.B.5. The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.

Fish and Wildlife Habitat

Goal 6.C: To protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

Policies

6.C.1. The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:

a. Wetland areas including vernal pools.

b. Stream environment zones.

c. Any habitat for rare, threatened or endangered animals or plants.

d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl in the Pacific Flyway.

g. Important spawning areas for anadramous fish.

6.C.2. The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.

6.C.3. The County shall encourage the control of residual pesticides to prevent potential damage to water quality, vegetation, and wildlife.

6.C.4. The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.

6.C.5. The County shall require mitigation for development projects where isolated segments of stream habitat are unavoidably altered. Such impacts should be mitigated on-site with in-kind habitat replacement or elsewhere in the stream system through stream or riparian habitat restoration work.

6.C.6. The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.

6.C.7. The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.

6.C.8. The County shall support the preservation or reestablishment of fisheries in the rivers and streams in the County, whenever possible.

6.C.9. The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat in or near the Project area.

6.C.10. The County will use the California Wildlife Habitat Relationships (WHR) system as a standard descriptive tool and guide for environmental assessment in the absence of a more detailed site- specific system.

6.C.11. Prior to approval of discretionary development permits involving parcels in a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites by a wildlife biologist, the evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the decisionmaking body shall determine the feasibility of the identified mitigation measures.

Significant ecological resource areas shall, at a minimum, include the following:

a. Wetland areas including vernal pools.
b. Stream environment zones.
c. Any habitat for rare, threatened or endangered animals or plants.
d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat.

e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl in the Pacific Flyway.

g. Important spawning areas for anadramous fish.

6.C.12. The County shall cooperate with, encourage, and support the plans of other public agencies to acquire fee title or conservation easements to privately-owned lands in order to preserve important wildlife corridors and to provide habitat protection of California Species of Concern and state or federally listed rare, threatened, or endangered plant and animal species.

6.C.13. The County shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, wildlife migration corridors, and locally-important species/communities.

6.C.14. The County shall support the management efforts of the California Department of Fish and Game to maintain and enhance the productivity of important fish and game species (such as the Blue Canyon and Loyalton Truckee deer herds) by protecting identified critical habitat for these species from incompatible suburban, rural residential, or recreational development.

Vegetation

Goal 6.D: To preserve and protect the valuable vegetation resources of Placer County.

Policies

6.D.1. The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides, ridges, and along important transportation corridors.

6.D.2. The County shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.

6.D.3. The County shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.

6.D.4. The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.

6.D.5. The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects.

6.D.6. The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.

6.D.7. The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored or expanded, where possible.

6.D.8. The County shall require that new development preserve natural woodlands to the maximum extent possible.

6.D.9. The County shall require that development on hillsides be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion.

6.D.10. The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

6.D.11. The County shall support the continued use of prescribed burning to mimic the effects of natural fires to reduce fuel volumes and associated fire hazard to human residents and to enhance the health of biotic communities.

6.D.12. The County shall support the retention of heavily vegetated corridors along circulation corridors to preserve their rural character.

6.D.13. The County shall support the preservation of native trees and the use of native, drought-tolerant plant materials in all revegetation/landscaping projects.

6.D.14. The County shall require that new development avoid, as much as possible, ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.

8.2.4 State of California

California Endangered Species Act

The California Endangered Species Act (Fish and Game Code Sections 2050-2098) established a State policy to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The Fish and Game Commission is charged with establishing a list of endangered and threatened species. State agencies must consult with the CDFG to determine if a proposed Project is likely to jeopardize the continued existence of any endangered or threatened species. The California Fish and Game Code defines “take” (Section 86) and prohibits “taking” of a species listed as endangered or threatened under the California Endangered Species Act (California Fish and Game Code Section 2080) or identified as fully protected in California Fish and Game Code Sections 3511, 4700, and 5050. Impacts on individuals of those species are considered significant if they result in the following effects: a) direct mortality; b) permanent or temporary loss of occupied habitat that would result in mortality to or reduced productivity of at least one individual of the species; c) avoidance of biologically important habitat for substantial periods resulting in mortality to or reduced productivity of at least one individual of the species.

Section 2081 of the Fish and Game Code allows the "take" of a species listed as threatened or endangered by the California Endangered Species Act provided that a habitat management program is implemented resulting in a net benefit to the species. Take may also be authorized for scientific or educational purposes.

California Fish and Game Code, Native Plant Protection Policy

The goals of the Chapter 10 of the California Native Plant Protection Policy are as follows:

8.2.3. The intent of the Legislature and the purpose of this chapter is to preserve, protect, and enhance endangered or rare plants of this state (Fish and Game Code, Section 1900). For purposes of this Chapter, a 'native plant' means a plant that grows in a wild uncultivated state, which is normally found native to the plant life of this state (Fish and Game Code, Section 1901).

No person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the commission determines to be an endangered native plant or a rare native plant, except as otherwise provided in this chapter (Fish and Game Code, Section 1908).

All state departments and agencies shall, in consultation with the department, utilize their authority in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered or rare native plants. Such programs include, but are not limited to, the identification, delineation, and protection of habitat critical to the continued survival of endangered or rare native plants (Fish and Game Code, Section 1911).

8.3 EVALUATION CRITERIA WITH POINTS OF SIGNIFICANCE

Justification to accompany the points of significance of impacts to the natural environment is from the major regulatory policies, ordinances, and rules that govern the Tahoe Basin region. The primary federal and state laws and ordinances include the TRPA Code of Ordinances, Placer County Master Plan, FESA, and CESA.

Table 8-5 presents the evaluation criteria for Biological Resources. These criteria are drawn primarily from local plans, adapted where necessary to reflect CEQA and TRPA requirements. For the purpose of this analysis, the stated applicable points of significance determine whether implementing the Project will result in a significant impact. These points of significance are based upon Appendix G of the State CEQA Guidelines and the TRPA Initial Environmental Checklist. A Biological Resources impact is significant if implementation of the Project exceeds the point of significance shown in Table 8-5.

Table 8-5

Evaluation Criteria with Point of Significance – Biological Resources

Evaluation Criteria	Significance Threshold	Justification
BIO-1. Will the Project, directly or indirectly (including through spread of noxious weeds and habitat modification), cause a loss of individuals or occupied habitat of endangered or threatened fish or wildlife species[1]?	a) Greater than 0 endangered, threatened, or rare fish or wildlife individuals that are lost. b) Greater than 0 acres of occupied or designed critical habitat disturbed.	TRPA Initial Environmental Checklist II (5b) TRPA Threshold Carrying Capacities (Resolution # 82-11) TRPA Code of Ordinances Chapter 78 FESA CESA (Sections 2062 and 2067) CEQA Appendix G Checklist IV (a) CEQA Guidelines Section 15065 California Native Plant Protection Act (Fish and Game Code Sections 1900-1913) Placer County General Plan Section 6
BIO-2. Will the Project cause loss of raptor nests, migratory bird nests, or wildlife nursery sites?	Greater than 0 active nest sites or wildlife nursery sites lost	CEQA Guidelines Section 15065 CDFG Wildlife Habitat Relationships model - (Version 8.2) Fish and Game Code Section 3503.5 TRPA Threshold Carrying Capacities (Resolution # 82-11) TRPA Code of Ordinances Chapter 78 Placer County General Plan Section 6 Migratory Bird Treaty Act of 1918
BIO-3. Will the Project substantially block or disrupt major fish or wildlife migration or travel corridors[3]?	Greater than 0 fish or wildlife corridors blocked or disrupted	TRPA Initial Environmental Checklist II (5c) TRPA Code of Ordinances Chapter 78 & Chapter 79 CEQA Appendix G Checklist IV (d) Placer County General Plan Section 6
BIO-4. Will the Project cause a permanent loss of sensitive wildlife individuals or habitat, as defined by the Tahoe Regional Planning Agency, Placer County General Plan Section 6, or California Department of Fish and Game or cause a decline in population levels below a viable population level?	a) Greater than 0 sensitive wildlife species lost b) Greater than 0 acres of sensitive wildlife habitat disturbed by direct habitat modification or indirectly from increased human presence c) Greater than 0 populations decreased in size, to a level that is not viable d) Greater than 0 populations of MIS decreased in size to a level that is not viable	TRPA Code of Ordinances Chapters 65, 78, and 79 and Threshold Carrying Capacities (Resolution # 82-11) TRPA Initial Environmental Checklist II (5a,b) CEQA Guidelines Section 15065 CEQA Appendix G Checklist IV a CDFG Wildlife Habitat Relationships model - (Version 8.2) CDFG Interim (CNDDB 1994, 1995) Wildlife/Hardwood Management Guidelines (February 1, 1989) Placer County General Plan Section 6
BIO-5. Will the Project affect wetlands or waters of the U.S.	a) Greater than 0 square feet and/or 0 linear feet of disturbance	CEQA Appendix G Checklist IV (b, c) USACE Jurisdictional Waters

Table 8-5

Evaluation Criteria with Point of Significance – Biological Resources

Evaluation Criteria	Significance Threshold	Justification
and/or riparian and Stream Environment Zones (SEZ) through direct removal, filling, hydrologic interruption, encroachment, removal of streamside vegetation or other means?	or discharge to wetland and/or riparian and stream environment zones (Acreage of SEZ includes setbacks as identified in TRPA Subsection 37.3.D). b) Greater than 0 square feet of streamside vegetation removed. c) Greater than 0 square feet of permanent fill in jurisdictional wetlands or other waters of the U.S.	Regulations Clean Water Act, 404 CFR 230 Section 404(b)(1) TRPA Initial Environmental Checklist II (4b) TRPA Code or Ordinance Chapter 37, 74, 78 and 79 TRPA 208 Plan Lahontan Basin Plan, Chapter 3, Water Quality Objectives Fish and Game Code, Section 1600 et seq. U.S. EPA and State of California no net loss policies Placer County General Plan Section 6
BIO-6. Will the Project, directly or indirectly (including through spread of noxious weeds), cause a loss of individuals or occupied habitat of endangered, threatened, or CNPS List 1b, 2, and 3, or TRPA listed plant species[1]?	a) Greater than 0 individuals of a CNPS List 1b, 2, and 3 plant species that would be lost b) Greater than 0 acres of occupied or designated critical habitat that would be disturbed through construction or operation of the project	TRPA Initial Environmental Checklist II (4d, e) TRPA Threshold Carrying Capacities (Resolution # 82-11) TRPA Code of Ordinances Chapter 78 FESA CESA (Sections 2062 and 2067) CEQA Guidelines Section 15065 California Native Plant Protection Act (Fish and Game Code Sections 1900-1913) Placer County General Plan Section 6
BIO-7. Will the Project have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or the US Fish and Wildlife Service?	Greater than 0 acres of sensitive natural communities impacted directly or indirectly	CEQA Appendix G Checklist IV (b) Placer County General Plan Section 6
BIO-8. Will the Project cause a change in diversity or distribution of species or result in permanent loss of sensitive native plant communities (including Stream Environment Zones [SEZ] and communities	a) Overall decrease in diversity of species in a community b) Greater than 0 acres of sensitive native plant community lost	TRPA Environmental Checklist (4b, d, f) TRPA Code of Ordinances Chapters 65, 78, and 79 and Threshold Carrying Capacities (Resolution # 82-11) CEQA Guidelines Section 15065 CDFG Wildlife Habitat Relationships

Table 8-5

Evaluation Criteria with Point of Significance – Biological Resources

Evaluation Criteria	Significance Threshold	Justification
defined as sensitive in the California Natural Diversity Data Base), including trees, shrubs, grass, crops, micro flora and aquatic plants through direct removal or indirect lowering of the groundwater table?	c) Greater than 0 riparian hardwood species lost	model - (Version 8.2) California Native Plant Protection Act (Fish and Game Code, Sections 1900-1913) CDFG Interim (CNDDB 1994, 1995) Placer County General Plan Section 6
BIO-9. Will the Project introduce new vegetation that will require excessive fertilizer or water, or will provide a barrier to the normal replenishment of existing species?	a) Greater than 0 noxious species introduced into the Project area b) Introduction of new vegetation that requires excessive fertilizer or water	TRPA Environmental Checklist II (4c)
BIO-10. Will the Project result in the removal of any native live, dead or dying trees 30 inches or greater in diameter at breast height (dbh) in TRPA's Conservation or Recreational land use classifications, remove native vegetation in excess of the area utilized for the actual development permitted by the land capability, or cause a change in the natural functioning of an old growth ecosystem?	a) Greater than 0 trees removed 30 inches or greater in dbh from a Recreation or Conservation Plan Area without an acceptable Forest Plan b) Greater than 0 acres of native vegetation removed in excess of the area utilized for the actual development permitted by the land capability	TRPA Environmental Checklist II (4a, g, h) TRPA Code of Ordinances Chapter 65 and 71 Placer County General Plan 6.D.4

Source: Hauge Brueck Associates, 2010

Notes:

FESA Federal Endangered Species Act
NDOW Nevada Division of Wildlife
NNHP Nevada Natural Heritage Program
TRPA Tahoe Regional Planning Agency
USFWS United States Fish and Wildlife Service

1. Endangered, threatened, or rare is defined here as:
   - federally listed endangered, threatened, or proposed plant or wildlife species
   - state listed endangered, threatened, or proposed plant or wildlife species or rare plant species
   - federal candidates for listing
   - CNPS List 1B plant species
2. Sensitive wildlife are defined here as:
   - wildlife designated at "special concern" by TRPA
   - wildlife designated as "vulnerable" by NNHP
   - wildlife listed as "fully protected" in California
3. In terms of habitats, a "major corridor", for purposes of the EIS, is defined as any habitat which serves as a movement corridor for entire populations of a given species, essential to completion of their life cycle.

8.4 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION

IMPACT: BIO-1. Will the Project, directly or indirectly (including through spread of noxious weeds and habitat modification), cause a loss of individuals or occupied habitat of endangered or threatened fish or wildlife species?

Analysis: *Less Than Significant Impact; Proposed Project (Alternative 1) and Alternatives 2, 3, 4, 5 and 6*

Sierra Nevada red fox (*Vulpes vulpes necator*) and California wolverine (*Gulo gulo luteus*) are both Threatened in the State of California. Bald Eagle (*Haliaeetus leucocephalus*) is Endangered in the State of California. Sierra Nevada yellow-legged frog is a candidate for federal endangered status. While the Project area contains potentially suitable habitats for these species, occurrences for Sierra Nevada red fox, California wolverine and Sierra Nevada yellow-legged frog have not been recorded in or adjacent to the Project area. Forest carnivore surveys did not reveal the presence of either California wolverine or Sierra Nevada red fox during the survey in 2007 by Wildlife Resource Consultants. Sierra Nevada yellow-legged frogs were not detected during amphibian surveys within the Project area (Wildlife Resource Consultants 2007). Bald eagle have been observed foraging at Quail Lake, however no changes to the Quail Lake area will occur with implementation of the project and associated alternatives. The Quail Lake Parcel has been sold to the USDA Forest Service and will continue to be utilized as skiable terrain, however no improvements or modifications to the habitats are proposed at this time, therefore no impacts to Bald Eagle will occur.

The Proposed Project (Alternative 1) and Alternatives 3, 5 and 6 would result in the construction of the Mid-Mountain Lodge and associated water tanks. In addition, the 16 townhomes (Proposed Project and Alternative 3) or the 16 residential lots (Alternatives 4 and 5) would also result in the removal of habitat that may be utilized by these species. Construction would remove forested habitat that would be suitable for foraging for both the California wolverine and Sierra Nevada red fox. However, due to existing human activities associated with existing recreational and operational uses onsite, the suitability of the habitat mountain-wide is severely diminished as both species prefer habitats undisturbed by human influences. No habitat for Sierra Nevada yellow-legged frog would be impacted as a result of the 16 residential lots or Mid-Mountain Lodge. Therefore, this impact is considered less than significant.

Mitigation: No mitigation is required.

IMPACT: BIO-2. Will the Project cause loss of raptor nests, migratory bird nests, or wildlife nursery sites?

Analysis: *No Impact; No Project (Alternative 2)*

With the continued operation and associated recreational use of the resort, Alternative 2 will not result in new disturbance in the Project area. Therefore, Alternative 2 will not impact potential nest sites.

Mitigation: No mitigation is required.

Analysis: *Significant Impact; Proposed Project (Alternative 1) and Alternatives 3, 4, 5, and 6*

The Proposed Project (Alternative 1) and Alternatives, 3, 4, 5, and 6 each include tree removal associated with development at the North Base and South Base areas (the Proposed Project and Alternatives 3, 5 and 6), on the mid-mountain areas associated with estate residential development (Alternative 4), and the Mid-Mountain Lodge and gondola (the Proposed Project and Alternatives 3, 5 and 6). Table 8-6 identifies trees to be removed by alternative. Trees that are equal to or over 24 inch dbh are the most suitable for raptor nests. These older trees contain a higher degree of structural anomalies such as dead leaders, rotten portions of boles and deformities due to mistletoe or other infectious growths. These characteristics are attractive to many bird and bat species. Older trees often contain deadwood that is suitable for excavation by cavity nesters.

Table 8-6

Estimated Tree Removal By Alternative (diameter at breast height)

Alternative	15 to 29 inches	30 inches and greater
Project (Alternative 1) and Alternative 3		
North Base	6	9
Town Homes/Access Road	71	4
South Base	6	13
Mid-Mountain	79	7
Total	*162*	*33*
Alternative 2 and 4*		
Total	*0*	*0*
Alternative 5		
North Base	6	13
Town Homes/Access Road	71	4
South Base	6	13
Mid-Mountain	79	7
Total	*162*	*37*
Alternative 6		
North Base	6	9
South Base	6	13
Mid-Mountain	79	7
Total	*91*	*29*

Source: HBA 2010

Notes:

* Alternative 2 would maintain existing conditions. Alternative 4 includes development of single family homes in currently open ski trails and utilization of existing roadways, therefore no tree removal will be necessary.

Tree removal and construction activities associated with the new buildings may result in direct removal of active nests for migratory birds, raptors, or other wildlife and may result in disturbance or abandonment of nesting, roosting, or breeding sites in adjacent habitat. While no active nests or roosting sites were detected during previous surveys, the potential exists for nests or roosts to be present before construction commences in the future; therefore, this impact is considered to be significant.

Mitigation: **BIO-2. Active Raptor, Migratory Bird Nest Site, Wildlife Nursery/Den Site, and Bat Roost Protection Program**

Pre-construction surveys, conducted during the nesting/breeding season (spring) immediately prior to initial Project construction (e.g., where excavation and tree removal is required), shall be conducted to identify active raptor nest sites, migratory bird nests, mammal den sites, and bat roost sites in the proposed construction area. If no nests, den sites or roosts are found, then mitigation requirements are complete. If nests or roosts are located within the Project area during the pre-construction surveys, additional monitoring shall be required as follows. During initial construction activities (tree removal and excavation for the construction), a qualified biological monitor will be onsite to evaluate whether raptors are occupying trees, sensitive den sites are within the Project area or bats are occupying identified roosts. The biological monitor will have the authority to stop construction near occupied trees/den sites if he/she determines proposed activities could have a negative impact on nesting raptors, migratory birds or their young, or bats observed in the construction zone. If construction must be stopped, the monitor must consult with TRPA and CDFG staff within 24 hours to determine appropriate actions (minimum setbacks and avoidance measures appropriate to specific species present and individual situations) to restart construction while reducing impacts to identified raptors, migratory bird nests, den sites or bats. If a potential American marten den is located, an appropriate method will be used to confirm whether American marten occupy the den. This may involve placing a tracking medium at the den entrance to determine use of the den or using motion sensing camera stations. Monitoring for den occupancy shall be conducted for a minimum of two consecutive nights. Other devices such as fiber optic scope may be utilized to determine occupancy. If no marten occupy the potential den, the entrance shall be blocked to ensure no marten occupy the area during the construction period. If the den is found to be occupied by American marten, the California Department of Fish and Game shall be notified of the observation and shall be consulted regarding approach to addressing the den site. A potential option includes providing a no-disturbance buffer around the den during the breeding season (May 1 through July 31).

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alts 3, 4, 5 and 6*

Implementation of mitigation measure BIO-2 will reduce project-related impacts to a less-than-significant level by allowing for surveys to be performed in the season prior to construction activities to ensure protection of active nests, dens or roosts.

IMPACT: BIO-3. Will the Project substantially block or disrupt major fish or wildlife migration or travel corridors?

Analysis: *Significant Impact; Proposed Project (Alternative 1) and Alternative 3*

Analysis: *Less than Significant Impact; Alternatives 2, 4, 5 and 6*

Three perennial creeks occur in the Project area including Madden Creek, Homewood Creek and Quail Creek. A portion of Homewood Creek is confined to a 60-foot long culvert that runs beneath the portion of Tahoe Ski Bowl Way (Placer County ROW) that crosses the South Base parking lot. The Proposed Project (Alternative 1) and Alternative 3 includes the removal of the culvert and restoration of the SEZ associated with Homewood Creek in this area. Under Alternatives 2, 4, 5 and 6, the existing roadway and associated culvert will remain in place. Under Alternatives 1 and 3, a new bridge would span the Homewood Creek SEZ and allow for establishment of riparian vegetation. Restoration will include design measures to allow for fish passage. Riparian vegetation associated with stream environment zones are often utilized by wildlife species as travel corridors as they contain more dense vegetation and provide connectivity to other suitable habitats. Restoration would allow for enhanced functioning of the SEZ through increased diversity of riparian plant species, increased habitat for wildlife, and increased sinuosity of the stream channel thereby slowing flows. Increased suitability of habitat will allow for the riparian corridor to be better utilized for travel by wildlife species. The restored SEZ will allow for connectivity of habitats above the South Base area to habitats that exist below the existing parking area. Through widening of the SEZ and the addition of step pools, utilization of the habitats may increase and result in unhindered passage of fish and wildlife species. Specific design of the restored SEZ has not been provided and therefore it cannot be determined that there would be no impact to the movement of fish species within the restored creek area. The remaining creeks in the Project area (Madden Creek and Quail Creek) would not be modified under the Proposed Project (Alternative 1) or Alternatives. Further, no other changes to the flow of the creeks or vegetation associated with them will occur.

The mule deer in the area are members of the Loyalton-Truckee Deer Herd. The closest travel corridor associated with the Loyalton-Truckee Deer Herd is located 4 miles to the Northwest of the HMR. No impacts to deer migration corridors will result from implementation of the Proposed Project (Alternative 1) or Alternatives, as no corridors exist in the Project area.

Mitigation: **BIO-3. Fish Passage Protection and Enhancement**

Removal of the culvert within Homewood Creek located in the South Base area under Alternatives 1 and 3 shall be performed in such a manner to protect fish passage during and after construction. Protection measures include installation of creek flow bypass measures to maintain flows below the Project area. The Stream Environment Zone restoration plan for Homewood Creek (Appendix C) shall be modified to include fish passage measures in the design so as to not inhibit movement upstream or downstream of fish and other aquatic species. The restoration plan shall include design elements that will enhance fish habitat. Prior to finalization of the restoration plans, TRPA and Placer County staff shall review and approve the design to ensure adequate habitat improvements are included and fish passage is provided.

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alternative 3*

Implementation of mitigation measure BIO-3 will reduce project-related impacts to a less-than-significant level by protecting fish access and movement in Homewood Creek during project construction.

IMPACT: BIO-4. Will the Project cause a permanent loss of sensitive wildlife individuals or habitat, as defined by the Tahoe Regional Planning Agency, Placer County General Plan Section 6, or California Department of Fish and Game or cause a decline in population levels below a viable population level?

Analysis: *No Impact; No Project (Alternative 2)*

The No Project Alternative will not result in the removal of habitats, nest trees or ground disturbance. Therefore, the No Project (Alternative 2) will not cause a permanent loss of sensitive wildlife individuals, habitats or nest sites.

Analysis: *Significant Impact; Proposed Project (Alternative 1), Alts 3, 4, 5, and 6*

Sensitive wildlife species in the Project area include California yellow warbler, waterfowl, osprey, Townsend's big-eared bat, Sierra Nevada mountain beaver, American marten, and mule deer. Sensitive species with suitable habitat in the Project area but not observed during wildlife surveys include Sierra Nevada yellow-legged frog, bald eagle, northern goshawk, coopers hawk, sharp-shinned hawk, California spotted owl, willow flycatcher, Myotis bat species, Sierra Nevada showshoe hare, Sierra Nevada red fox, California wolverine, and Pacific fisher.

California yellow warbler were detected during willow flycatcher surveys along Madden Creek and at Quail Lake (Wildlife Resource Consultants 2008). This species occupies riparian, lake shore, and meadow habitats. Detected yellow warblers are assumed to be extant in the Project area during the summer breeding months. The Proposed Project (Alternative 1) and Action Alternatives (Alternatives 3, 4, 5, and 6) would not modify riparian vegetation at Quail Lake or along Madden Creek where this species was observed. A stream channel will be restored at the South Base area with the Proposed Project and Alternative 3. Restoration may provide new suitable habitat for this species; however, due to close proximity of human habitation, activity, and presence, the suitability of nesting habitat for this species is considered low. The Proposed Project (Alternative 1) and Action Alternatives would not modify other riparian, lake, or meadow habitats at HMR, so this impact is considered less than significant for this species.

American marten were detected within the Project area during forest carnivore surveys in 2007. The marten were detected at the Ditch Treat Ski run station and at the Lake Louise station. Appendix I includes a map that shows the location of the detections. Due to the detection of marten within the Project area and in surrounding locations, it is anticipated marten are extant within the Project area. Construction activities associated with installation of the mid mountain lodge, water tanks and gondola will result in the disturbance of existing forest which is suitable foraging habitat for American marten. This minor loss of habitat will not likely have a negative impact on the local marten population but may have an impact on individuals. Mitigation measure BIO-2 includes protection of den sites and requires the area be surveyed prior to construction activities.

With the introduction of a mid-mountain lodge within the Project area the opportunity arises for existing wildlife species to be impacted from increased human presence. The mid-mountain lodge will result in higher numbers of people using the area in both summer and winter seasons. This increase in human presence is associated with higher volumes of trash and refuse generated by food service and recreational activities.

Wildlife species (black bear, marten, *Spermophilus sp*, *Tamais sp*., and many avian species) are often attracted to trash and refuse as a food source. Introduction of anthropogenic foods to wildlife can modify their natural foraging behavior and result in habituation to humans. Wildlife species that become dependent on human food lose the ability to forage for food in their natural setting and can become aggressive toward humans as an association is made between humans and food. Limiting the exposure of refuse and food to wildlife species is vital to protect the wildlife and humans alike and decreases the potential negative interaction between the two. Potential impacts to sensitive individuals may occur due to prolonged exposure of wildlife species to refuse generated by the new development.

Sierra Nevada mountain beaver have been documented in three drainages in the Project area: Madden Creek, Homewood Creek (Homewood Canyon Creek), and a small drainage above Quail Lake (Wildlife Resource Consultants 2007). The Proposed Project (Alternative 1) and Alternatives 3 and 5 will remove upland forest due to construction activities associated with the Mid-Mountain Lodge, water tanks, sewer line and gondola. No further modifications to upland forest will occur for the estate single-family dwellings under Alternative 4. Mountain beavers occupy riparian corridors and do not often range into upland forested habitat. The proposed stream restoration located at the South Base would impact existing riparian habitat, however this area is heavily disturbed and is not suitable for mountain beaver. As no proposed activities would impact existing riparian habitats that are suitable for mountain beavers, impacts to this species are considered less than significant.

Osprey requires large trees for nesting that are located in close proximity to water bodies that provide foraging habitat. Suitable habitat for osprey nest sites are widespread throughout the Project area as Quail Lake and Lake Louise are suitable bodies of water containing fish for foraging. Lake Tahoe is in close proximity to the Project area and is actively utilized by osprey for foraging. While no active or inactive nests have been located in the Project area, construction may result in the removal of suitable nesting trees for osprey. The Proposed Project (Alternative 1), Alternative 3, and Alternative 5 will result in the removal of large trees for construction of the South and North Base area development and Mid-Mountain Lodge, water tanks, gondola and associated utility alignments. Construction of roads and single-family dwellings under Alternative 4 would not remove large trees. Due to the large number of trees in the Project area, and the high degree of human activity associated with the North and South Base areas proposed for a majority of the development, the loss of the large trees will not have a substantial impact on availability of nest trees for osprey. As no nests were located during surveys in the Project area, it is likely no individuals will be impacted or lost. While currently there are no active osprey nests in the Project area, the potential exists for the establishment of nests in the Project area prior to construction, therefore, this impact is considered to be potentially significant.

Wildlife surveys determined bat species are roosting within the Homewood Lodge (Wildlife Resource Consultants 2007). Due to noise interference from machinery within the building the species of bat could not be determined roosting within the Homewood Lodge. As there are a number of sensitive species with suitable habitat (Townsend's big-eared bat, Spotted bat, small-footed myotis bay, long-eared myotis bat, fringed myotis bat, long-legged myotis, yuma myotis bat) the potential to disturb individuals during demolition is high. Alternatives 1, 3, 5 and 6 would each result in the demolition of

Homewood Lodge at the north base. Due to this potential impact to individuals and the uncertainty of species to be impacted this impact is considered potentially significant.

Mitigation: **BIO-2. Active Raptor, Migratory Bird Nest Site, Wildlife Nursery/Den Site, and Bat Roost Protection Program**

BIO-4a. Bat Roost Relocation Program

Prior to demolition of the Homewood Lodge located at the north base, the building shall be surveyed using acoustic survey methods as well as visual searches of the building to determine the presence or absence of bat species. The survey shall determine if the roost is a maternity roost (if survey is being performed in the spring), hibernacula or day roost. If a maternity roost is present, delay of the demolition may be necessary until after the roost is vacated. If bat species are detected/observed within the building, measures shall be taken to clear the bats prior to demolition activities. Measures to disturb resident bats within may include but are not limited to: disturbance to roosting individuals through introduction of light and/or noise to create an undesirable setting and to encourage the bats to vacate the roost. Upon removal of the bats, access points to the building shall be sealed to prevent reentry of bat species. Once it has been concluded that no bat species are present, demolition may commence upon final approval of TRPA. To offset the loss of the occupied bat roost, Homewood Mountain Resort shall install bat boxes in the vicinity of the North Base to provide roosting opportunities and locations for the displaced bats. Homewood Mountain Resort shall work together with Placer County and TRPA biologists to agree upon the number of bat boxes and their respective installation locations prior to removal of the bat roost/demolition activities.

BIO-4b. Trash Management Program

Prior to finalization of construction permits for the new mid-mountain lodge, HMR shall prepare a Trash Management Program for review and approval by the TRPA and Placer County. The Trash Management Program shall include measures to prevent wildlife access to trash and refuse generated by the new lodge and associated facilities. Measures to be included at a minimum are wildlife proof trash containers in all outside areas, scheduling for removal of refuse from the lodge area on a daily basis and educational signage outlining the dangers of feeding wildlife.

After Mitigation: *Less than Significant Impact; Alternatives 1, 3, 4, 5 and 6*

Implementation of mitigation measures BIO-2 and BIO-4a and BIO-4b will reduce Project related impacts to a less-than-significant level by allowing for surveys to be performed in the season prior to construction activities to ensure protection of active osprey nests should one be detected.

IMPACT: BIO-5. Will the Project affect wetlands or waters of the U.S. and/or riparian and Stream Environment Zones (SEZ) through direct removal, filling, hydrologic interruption, encroachment, removal of streamside vegetation or other means?

Analysis: *No Impact; No Project (Alternative 2)*

The No Project Alternative will not result in the construction of new facilities or modifications to existing structures in delineated SEZ areas as identified by the TRPA. Therefore, the No Project (Alternative 2) will not further impact SEZ or WoUS.

Mitigation: No mitigation is required.

Analysis: *Less Than Significant Impact, Alternative 4*

Alternative 4 will not result in construction in SEZ areas as single-family dwellings will be constructed within existing ski trails and outside of onsite drainages and SEZ areas. Roadway improvements for access to the estate single-family residences will utilize existing roadway alignments, but may result in minor impacts to SEZs. However existing regulations require implementation of best management practices, which will protect the SEZ areas and will not result in significant impacts as no new roadway alignments will be created. Implementation of Alternative 4 will not result in new SEZ disturbance and therefore this impact is considered less than significant.

Mitigation: No mitigation is required.

Analysis: *Significant Impact, Proposed Project (Alternative 1) and Alternative 3*

The Project area contains SEZs associated with the streams that flow through or originate in the Project area. Streams include Madden Creek, Homewood Creek (Homewood Canyon Creek), Quail Creek, and an unnamed ephemeral drainage between the North Base and South Base areas.

Proposed Project (Alternative 1) and Alternative 3 do not include new development in areas delineated as SEZ with the exception of the replacement of the existing roadway and culvert at the South Base area (see Impact BIO-3) and construction of an improved access roadway for the townhouse located to the west of the North Base area. The removal of the existing culvert and roadway at the South Base area will result in a reduction in total disturbance of the existing SEZ. The access roadway leading from the South Base to the townhomes located to adjacent to the North Base area will cross a narrow SEZ. The proposed paved roadway utilizes the same alignment as the existing dirt roadway that leads from the South Base area to the North Base area. BMPs for the roadway in the form of rolled curb and drainage basins will prevent stormwater from reaching the drainage. Construction will be restricted to the existing roadway, and no riparian vegetation will be impacted due to paving.

As described under Impact BIO-3, the SEZ in the South Base area will be restored to a more natural state with the removal of the culvert and the day lighting of the stream channel under Alternatives 1 and 3. In its existing condition, Homewood creek is highly constrained with steep banks and a culverted section under the South Base parking area. The SEZ restoration plan for Homewood Creek (see Appendix C) includes widening of the creek to allow for increased cross sectional area and will contain primary and secondary flood plains (IERS, April 2010). Widening of the stream cross-section results in a reduction of the kinetic energy and creates benefits to the SEZ. The following benefits have been taken from a memo prepared by Integrated Environmental Restoration Services dated April 3, 2010:

- Flood Attenuation – Widening of the stream channel allows for more space for the water to be contained in and allows flood water to stay within the banks.
- Culvert Removal – Culverts present an increased potential for clogging by debris in large flow events. Clogging often lead to failure of the culvert and can result in channel incision, increased sediment delivery to the creek, overtopping of

culvert and/or stream banks, destruction of adjacent infrastructure and/or habitats. Removal of the culvert will eliminate the potential for clogging.

- Bed Contact – Expansion of the SEZ allows for increase area for groundwater recharge and increase aquatic invertebrate habitat.
- Ground Water Recharge – Widening of the SEZ channel and reduction of flow rates allows for increased residence time for water to infiltrate into the groundwater system. Increased width of the SEZ channel also allows for lateral rewatering of the soil profile in the restoration area.
- Bank Erosion Reduction – Widening of the SEZ channel results in decreased flow rates which thereby decreases the energy available for bank cutting and erosion.
- Fish Passage – Passage of fish will be enhanced though the expansion of aquatic habitat. The restoration plan includes step pools and removal of the culvert which drastically improves habitat in the area.
- Aeration – Water moving through the restored area will pass through step pools which results in the infusion of oxygen. This reintroduction of oxygen into the water column results in increased availability of oxygen to aquatic species, carbon dioxide reduction and ammonia and hydrogen sulfide reduction.
- Habitat – Improvements to riparian habitat and function in the area are likely to result from restoration activities. Increased diversity of plant species will be planted which will result in improved avian habitat. Shading of the creek bed will become more consistent, thereby maintaining water temperature for aquatic species.
- Sediment Load and Transport Reduction– Velocity reduction of the stream will allow for decreased transport of sediment.

The restoration allows for better functioning of the SEZ habitat and will likely result in an increase of SEZ habitat in the Project area. Restoration of the Homewood Creek SEZ in the South Base area will not have negative impacts to downstream areas. The stream is currently contained by the culvert running through the parking lot. The proposed restoration will provide a connection to two day lighted areas that exist above and below the South Base development area. The restoration may have a positive impact on downstream floodplains as it will allow for increased area for groundwater recharge and also allow for the floodplain downstream to retain its character. The restoration of the Homewood Creek SEZ will likely result in improvements to the SEZ however the proposed Restoration Plan included in Appendix C does not provide sufficient detail to substantiate a conclusion that impacts will be beneficial and no negative impacts will occur to the SEZ below the Project area. Therefore this impact is considered potentially significant.

Under the Proposed Project (Alternative 1) and Alternative 3, the proposed North Base area parking garage has been designed to locate the footprint of the building completely outside of the SEZ delineated by TRPA during the HMR Land Capability Challenge (2008). While there are no plans provided by HMR for the restoration of the SEZ portions of the gravel parking lot, it is assumed that the gravel parking lot fill will be removed and restored during construction of the proposed parking garage and that the

project will result in a benefit to the SEZ. Therefore, this impact is considered less than significant for the Proposed Project (Alternative 1) and Alternative 3.

Mitigation: **BIO-5a: Final Homewood Creek SEZ Restoration Plan**

The Project Applicant shall modify the Homewood Creek SEZ Restoration Plan - April 3, 2010 to include supplemental information necessary for TRPA project approval and permitting. The Revised Homewood Creek SEZ Restoration Plan shall add the following information:

- List of existing constraints of the Project area;
- Channel location;
- Channel substrate composition;
- In-channel features such as logs or rocks to act as flow separators (if necessary) to encourage braiding of the channel and sediment deposition;
- A profile of the restored stream channel in conjunction with existing cross sections;
- A narrative of construction techniques that describe modifications to channel geometry;
- A comprehensive planting plan identifying species and planting locations of riparian and wetland plants shall be incorporated into the restoration plan, including species that are known to occur in the existing undisturbed SEZ above the proposed restoration site;
- Soil stabilization and erosion control measures and other permanent BMPs; and
- A long-term maintenance and monitoring plan to measure establishment of plants and to monitor the progress of restoration activities.

The desired condition shall mirror historic site conditions, adjacent plant community composition, and habitat value. Goals shall be identified to ensure parameters such as plant density, percent plant cover, and stage of maturity of planted plant species are achieved. The revised restoration plan shall be review and approved by appropriate permitting agencies prior to implementation to ensure restoration goals and success criteria are acceptable, sufficient and attainable for the site-specific conditions.

After Mitigation: *Less than Significant Impact; Alternatives 1 and 3*

Implementation of mitigation measures BIO-5a will provide sufficient detail for approval of the restoration project and provide evidence on impacts to the SEZ below the Project area. This plan will reduce potential impacts to a less-than-significant level.

Analysis: *Significant Impact, Alternatives 5 and 6*

The Project area contains SEZs associated with the streams that flow through or originate in the Project area. Streams include Madden Creek, Homewood Creek (Homewood Canyon Creek), Quail Creek, and an unnamed ephemeral drainage between the North Base and South Base areas. Alternatives 5 and 6 do not include changes to existing SEZ

disturbance at the South Base area or in the area located between the South Base and North Base areas.

At the North Base area, Alternatives 5 and 6 include construction of a residential building on a parcel west of the Maritime Museum and Sacramento Street (see building number C, Figures 3-16 and 3-19, Chapter 3) currently used as a gravel parking lot that contains 7,504 square feet of existing and verified land coverage; a small portion of which is in TRPA verified SEZ. This SEZ is not associated with a mapped stream channel, but was verified during the HMR Land Capability Challenge (TRPA File #LLAD20080083). As currently designed, up to 2,161 square feet of the southwest corner of the residential structure would be located in the delineated SEZ, representing a 5,343 square foot reduction in land coverage in the SEZ. The gravel parking contains a small area of riparian vegetation along the southern border of the parcel, the only area that does not have existing coverage or development. Restoration plans have not been prepared to date by HMR to show how the SEZ will be restored and its associated habitat enhanced. While disturbance in the SEZ would remain under Alternatives 5 and 6, the overall disturbance would be less than the existing disturbance associated with maintenance of the gravel parking lot and therefore the overall function of the SEZ would likely benefit from the implementation of Alternatives 5 and 6. However, without detailed plans to document the restoration of the SEZ adjacent to the proposed structure, the level of improvement cannot be determined and this impact is considered to be potentially significant for Alternatives 5 and 6.

Mitigation: **BIO-5b. SEZ Restoration Plan for Gravel Parking Lot**

HMR shall develop a detailed SEZ restoration plan for the portion of the North Base area gravel parking lot that will be restored during development of the residential housing under Alternatives 5 and 6. This plan shall be in alignment with the overall adaptive management strategy for HMR. This SEZ plan shall also be consistent with TRPA guidelines, and include a monitoring plan. The monitoring program will include clear success criteria and management responses if criteria are not met thus insuring goal achievement. This plan must include site maintenance for a minimum of three years, and a geomorphic/stability, groundwater monitoring, and vegetation monitoring plan consisting of two site assessments per year for five years. The vegetation monitoring components shall include measurements of species type and density, percent survival, plant vigor/health, and survival rate. An annual report shall be prepared presenting the results of the monitoring for the previous year. The annual report shall be presented to TRPA and Lahontan Regional Water Quality Control Board.

After Mitigation: *Less than Significant Impact Alternatives 5 and 6*

Implementation of mitigation measure BIO-5b will reduce Project related impacts to a less-than-significant level by ensuring that existing SEZ disturbance is successfully restored.

IMPACT: BIO-6. Will the Project, directly or indirectly (including through spread of noxious weeds), cause a loss of individuals or occupied habitat of endangered, threatened, or CNPS List 1b, 2, and 3, or TRPA listed plant species?

Analysis: *Less Than Significant Impact; No Project (Alternative 2)*

The No Project Alternative will not result in the construction of new facilities or ground disturbance. Catherine Schnurrenberger performed a botanical field reconnaissance for construction areas in early August 2007 (Botanical Field Reconnaissance Report, 2007). No special-status plant species were observed during the survey in the Project area. Noxious weeds were observed in the Project area, including Klamath weed (*Hypericum perforatum*), bull thistle (*Cirsium vulgare*), Eurasian watermilfoil (*Myriophyllum spicatum*), cheat grass (*Bromus tectorum*), woolly mullein (*Verbascum thapsus*), and witchgrass (*Panicum capillare*). HMR does not have a noxious weed management plan in place to eradicate and control weeds onsite. While there were no special-status plant species detected during surveys, the potential exists for species to colonize suitable habitat present at HMR. With no vegetation removal or new ground disturbance under Alternative 2, the No Project Alternative is not expected to create new opportunities for the introduction or expansion of existing weed populations that may displace native species. Therefore, this impact is considered less than significant.

Mitigation: No mitigation is required.

Analysis: *Significant Impact; Proposed Project (Alternative 1) and Alternatives 3, 4, 5 and 6*

The Proposed Project (Alternative 1) and Alternatives 3, 4, 5, and 6 include construction activities which may introduce additional noxious weed species or create conditions that increase the probability for the spread of existing weed populations. Catherine Schnurrenberger performed a botanical field reconnaissance for construction areas in early August 2007 (Botanical Field Reconnaissance Report, 2007). No special-status plant species were observed during the survey in the Project area. Noxious weeds were observed in the Project area, including Klamath weed (*Hypericum perforatum*), bull thistle (*Cirsium vulgare*), cheat grass (*Bromus tectorum*), woolly mullein (*Verbascum thapsus*), and witchgrass (*Panicum capillare*). Eurasian watermilfoil (*Myriophyllum spicatum*) was also noted to be present in Quail Lake. HMR does not have a noxious weed management plan in place to eradicate and control weeds onsite. While there were no special-status plant species detected during surveys, the potential exists for species to colonize suitable habitat present at HMR. Vegetation removal and ground disturbance associated with construction may introduce new weed species or result in the spread of existing noxious weeds that may exclude native plant species. Therefore, this impact is considered significant for the Proposed Project (Alternative 1) and Alternatives 3, 4, and 5.

Mitigation: **BIO-6a. Noxious Weed Risk Assessment and Eradication**

HMR shall develop and implement a Noxious Weed Eradication and Control Program to protect suitable sensitive plant habitat and to protect future populations of sensitive plants from invasive terrestrial and aquatic noxious weeds. The plan shall identify a noxious weed coordinator for HMR and include abatement measures to decrease and eradicate known populations of noxious weeds and prevention measures as follows:

- Known populations of terrestrial and aquatic noxious weeds shall be identified and a plan shall be implemented to control and eradicate weed populations and restore native plant cover.

- Equipment used in the Project must be sanitized and free of non-native invasive species before moving into the Project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of non-native invasive species. Vehicles, especially large, off-road and/or earthmoving vehicles shall be cleaned when they come into the Lake Tahoe Basin or come from a Basin area known to contain non-native invasive species. Equipment will be considered clean when visual inspection finds no soil, seeds, plant material, or other such debris.
- Gravel, fill, or other materials shall be "weed-free." Use onsite sand, gravel, rock, or organic matter when possible. Otherwise, obtain "weed-free" materials from gravel pits and fill sources that have been surveyed and approved by the CDFA or Nevada Department of Agriculture or by the noxious weed coordinator.
- Use "weed-free" mulches, and seed sources. Salvage topsoil from Project area for use in onsite revegetation, unless contaminated with non-native invasive species. Do not use soil or materials from areas contaminated by cheat grass.
- After construction, the noxious weed coordinator shall be notified. The Project area shall be monitored for 3 years subsequent to Project implementation to ensure additional non-native invasive species do not become established in the areas affected by the Project, that native species are established on re-seeded or restored habitats, and that known non-native invasive species do not spread.

BIO-6b. Pre-Construction Rare Plant Surveys

HMR shall hire an approved botanist/biologist to perform rare plant surveys in Project areas proposed for development prior to construction. The survey shall identify species observed and include locations of rare plant species identified. TRPA and Placer County staff shall be notified of the location of rare plant species present within the proposed Project area. If rare plants are identified, measures shall be taken to avoid disturbance and impacts to the plants. Protection measures shall be developed in conjunction with TRPA, CDFG and Placer County staff as necessary and shall be specific to the species present and the potential disturbance that may result from construction activities (habitat modification, direct removal, blasting activities, noxious weed introduction, etc.). If avoidance of rare plant species is not possible, compensation measures shall be developed prior to disturbance/constructions activities. These compensation measures shall be tailored to the specific species to be disturbed and to the location in which the disturbance is to occur. If agency staff determines that compensation measures are not feasible, then the project shall be modified to avoid the disturbance.

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alts 3, 4, 5, and 6*

Implementation of mitigation measured BIO-6a and BIO-6b will reduce/eliminate known populations of noxious weeds and protect sensitive plant habitats and individuals from potential infestation and impacts associated with construction activities. This impact is considered less than significant after mitigation.

IMPACT: **BIO-7. Will the Project have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or the US Fish and Wildlife Service?**

Analysis: *No Impact; No Project (Alternative 2) and Alternative 4*

The No Project Alternative will not result in the construction of new facilities or modifications to existing structures in sensitive natural communities identified by the TRPA or Placer County. Alternative 4 will not result in additional adverse effects on SEZ areas as no construction will occur in delineated SEZ boundaries. Therefore, the No Project (Alternative 2) and Alternative 4 will not impact sensitive natural communities.

Mitigation: No mitigation is required.

Analysis: *Significant, Proposed Project (Alternative 1) and Alternatives 3, 5 and 6*

Sensitive natural communities in the Project area include SEZs as defined by TRPA. No uncommon plant communities identified by TRPA are present. As discussed under Impact BIO-5, mitigation measures BIO-5a and BIO-5b ensure that onsite SEZs are properly restored with the Proposed Project (Alternative 1) and Alternatives 3, 5 and 6. The Proposed Project (Alternative 1) and Alternative 3 will increase the amount and function of SEZ due to the restoration of Homewood Creek in the South Base area and restoration of a portion of the gravel parking lot located in SEZ at the North Base area. Due to construction in the SEZs at the South Base and North Base areas, the Proposed Project (Alternative 1) and Alternatives 3 and 5 would have potentially significant impacts to sensitive natural communities, and mitigation is required.

Mitigation: **BIO-5a. Final Homewood Creek SEZ Restoration Plan (Alternatives 1 and 3)**

BIO-5b. SEZ Restoration Plan for Gravel Parking Lot (Alternatives 5 and 6)

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alts 3, 5 and 6*

Implementation of mitigation measures BIO-5a and BIO-5b will reduce Project related impacts to a less than significant level by ensuring that existing SEZ disturbance is successfully restored.

IMPACT: **BIO-8. Will the Project cause a change in diversity or distribution of species or result in permanent loss of sensitive native plant communities (including Stream Environment Zones [SEZ] and communities defined as sensitive in the California Natural Diversity Data Base), including trees, shrubs, grass, crops, micro flora and aquatic plants through direct removal or indirect lowering of the groundwater table?**

Analysis: *No Impact; No Project (Alternative 2) and Alternative 4*

The No Project Alternative will not result in the construction of new facilities or modifications to existing structures in delineated SEZs or other sensitive native plant communities. Alternative 4 will not result in adverse effects on sensitive native plant communities as no construction will occur in previously undisturbed areas. Therefore, the No Project (Alternative 2) and Alternative 4 will not result in impacts.

Analysis: *Less than Significant Impact, Proposed Project (Alternative 1), Alternatives 3, 5 and 6*

The Project area does not contain sensitive native plant communities as defined by the CNDDB. The Project area contains SEZs as defined by the TRPA (Figure 8-2). The Proposed Project (Alternative 1) and Alternatives 3, 5 and 6 will improve SEZ function and habitat through the restoration of Homewood Creek in the South Base area (Alternatives 1 and 3) and a portion of the gravel parking lot in the North Base area (Alternatives 1, 3, 5, and 6). Based on the increase of SEZ area and enhancement of riparian habitat on site (as compared to the existing conditions) associated with these Alternatives, this is considered a beneficial impact. The remainder of the development would occur in existing disturbed areas and/or on common upland habitat types, such as conifer forests. These common upland habitat types are not considered sensitive native plant communities.

Mitigation: No mitigation is required.

IMPACT: BIO-9. Will the Project introduce new vegetation that will require excessive fertilizer or water, or will provide a barrier to the normal replenishment of existing species?

Analysis: *No Impact; No Project (Alternative 2)*

The No Project Alternative will not result in the planting of new vegetation associated with construction of new facilities. Therefore, the No Project (Alternative 2) will not result in impacts.

Analysis: *Significant Impact, Proposed Project (Alternative 1) and Alternatives 3, 4, 5, and 6*

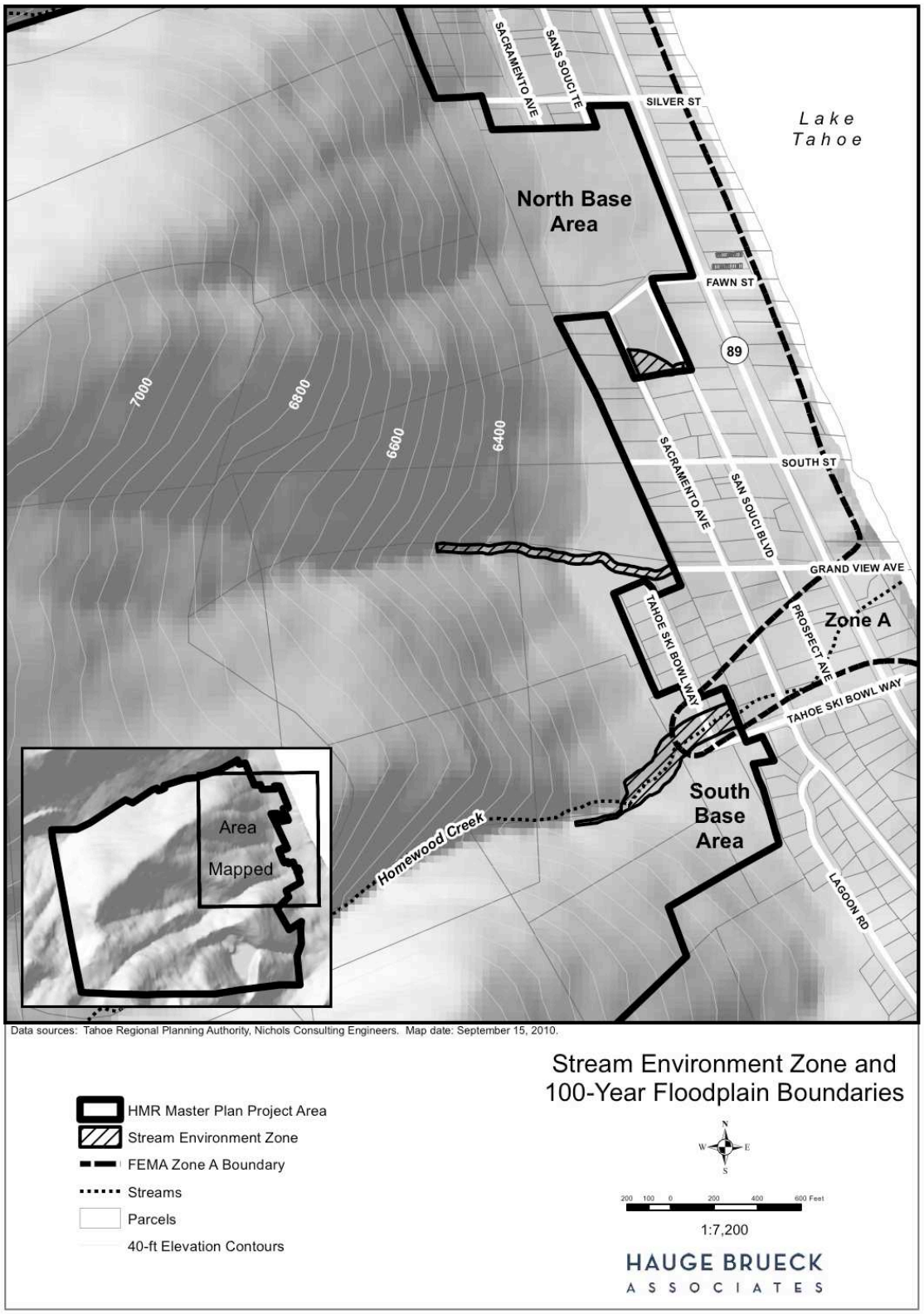
Landscape plans and fertilizer plans have not been developed for the Action Alternatives. Under Alternatives 1, 3, 5 and 6, landscaping and fertilizer management would be the responsibility of HMR. Under Alternative 4, the Project area would be divided up and sold to individual owners, increasing the potential for inappropriate vegetation and mismanagement of fertilizers. Therefore, the level of impact that may result due to introduction of new vegetation or types of fertilizer cannot be determined with certainty. Therefore, this impact is considered to be potentially significant and mitigation is required.

Mitigation: **BIO-9. Final Landscape/Revegetation Plan and Fertilizer Management Plan**

HMR shall prepare and implement a final landscape/revegetation plan and fertilizer management plan for the Project area in accordance with Sections 3.5.19 and 3.5.20 of this document. This plan shall comply with TRPA Code of Ordinances Section 31.7 Landscaping Standards and Section 81.7 Fertilizer Management. The landscape plan shall include replacement of trees in accordance with Placer County regulations. The plan shall be reviewed and approved by TRPA and Placer County Planning Department prior to issuance of the final Project approval. Under Alternative 4, the landscape and fertilizer management would fall upon owners of the residential and commercial parcels sold by HMR.

The revegetation/landscaping plan shall require the use of native or TRPA-approved nonnative shrubs and trees in the project area, as these plants are most adapted to the conditions of the Project area and require less irrigation for establishment and upkeep.

Figure 8-2. Stream Environment Zones and 100-Year Floodplain Boundaries



Bioretention areas for stormwater treatment are proposed for use throughout the project area in-line with stormwater conveyance and retention systems. Runoff shall be directed into bioretention areas, where it can pond and infiltrate into the soil. The engineered soil mix and vegetation in the bioretention areas shall provide water quality treatment and infiltration similar to undeveloped areas.

High traffic groomed turf areas are designed and located to allow for controlled irrigation and fertilization throughout the Project area. Irrigation shall be installed and managed to minimize the potential for runoff to the stormwater treatment systems.

Fertilizer shall be managed carefully and used in dry, slow release form when applications are necessary. Special measures to avoid over spraying onto paved surfaces, which could result in wash off of nutrient rich water to the stormwater treatment systems, shall be taken. To ensure minimal escape of nutrients, fertilizer and irrigation shall be monitored closely. The Plan shall include, but shall not be limited to the following measures to minimize the potential for nutrients entering surface water or escaping the root zone and being delivered to groundwater:

- Use of non-mowed or slow-growing turf grass species, locally native or adapted species with annual fertilizer requirements that do not exceed 1.5 pounds per 1,000 square feet;
- Implementation of a Fertilizer Management Plan that meets the requirements of Section 81.7 of TRPA Code or Ordinances;
- Determination of appropriate fertilizer rates by a soil/revegetation specialist and based on the results of soil nutrient testing;
- Incorporation of fertilizer into soils prior to seed application to prevent burning and low germination rates;
- Use of Biosol or other organic, slow-release fertilizers that do not contain nitrate or ammonium with careful application to avoid application on hardscape;
- Prohibit fertilizer use on bioretention areas for stormwater treatment after initial establishment; and
- Installation of a highly controlled spray irrigation system to avoid over irrigation and overspray onto hardscape.

The Revegetation Plan shall apply to areas disturbed during construction activities, the steep slopes above the North and South Base areas and the bioretention areas for stormwater treatment. The objective of the soil and revegetation treatments is to control sediment at its source, to maximize hydrologic and biological function in the soil and to develop and support a robust vegetation community. Specific treatment outcomes shall include:

- Maximize soil infiltration rates and minimize runoff;
- Protect the soil surface with functional mulch cover;
- Reestablish soil nutrient cycling; and
- Reestablish an appropriate, self-sustaining native plant community.

Bioretention areas shall receive similar treatments as disturbed areas. Bioretention areas are not expected to be wet during much of the growing season and are therefore not under the influence of a mesic or wet hydrologic regime. Soil treatments shall be the same as

for the disturbed areas. Since runoff will be routed into bioretention areas for stormwater treatment, bioretention areas shall be designed such that concentrated flow will be routed through energy dissipaters using rocks or other landscape elements to eliminate scouring flows. More specific seeding and planting strategies in bioretention areas shall be developed in conjunction with the landscape architect developing the final landscaping plan, as discussed below.

Slow-release, organic fertilizer shall be used and irrigation shall be applied so that water penetrates to at least eight inches below ground surface (bgs) within 24 hours of irrigation. The irrigation system shall be designed to meet this specification without displacing mulch or causing erosion. The final Plan shall include site-specific fertilizer and irrigation rates and a monitoring plan and shall be submitted to TRPA for project approval and permitting.

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alts 3, 4, 5, and 6*

Implementation of mitigation measure BIO-9 will require the creation of a landscape plan and fertilizer management plan that complies with TRPA Code of Ordinances to retain native species where applicable and regulate the use of fertilizer. Implementation of this measure will reduce the impact to less than significant.

IMPACT: BIO-10. Will the Project result in the removal of any native live, dead or dying trees 30 inches or greater in diameter at breast height (dbh) in TRPA's Conservation or Recreational land use classifications, remove native vegetation in excess of the area utilized for the actual development permitted by the land capability, or cause a change in the natural functioning of an old growth ecosystem?

Analysis: *No Impact; No Project (Alternative 2)*

The No Project Alternative will not result in the removal of trees or removal of native vegetation. The No Project Alternative will also not have an effect on old growth ecosystem as none exists in the Project area. Therefore, the No Project (Alternative 2) will not result in impacts.

Analysis: *Significant Impact, Proposed Project (Alternative 1) and Alternatives 3, 4, 5, and 6*

The Proposed Project (Alternative 1) involves tree removal for construction of facilities at the North Base, South Base, townhome sites, gondola alignment and Mid-Mountain Lodge. Table 8-6 details tree removal numbers associated with the base areas and Mid-Mountain Lodge, including the water tank. Detailed plans have not been provided for the utility corridor that would connect the North Base and the Mid-Mountain Lodge. Therefore, accurate tree removal estimates cannot be developed for utility alignments. However, it is anticipated that utilities would utilize existing roadway alignments or ski trails, which have been previously cleared of trees.

The trees to be removed are located in PAS 157 Homewood/Tahoe Ski Bowl, which is a recreational plan area. Table 8-6 identifies a total of 33 trees 30 inches or greater for removal for the Proposed Project (Alternative 1) and Alternative 3. Alternative 5 will result in the removal of 37 trees that are 30 inches dbh or larger. Alternative 6 will result in the removal of 29 trees that are 30 inches dbh or larger. Of these 33, 37 and 29 trees proposed for removal under the Action Alternatives, a total of nine trees have been identified for potential preservation in the North Base area based on a memorandum from

Nichols Consulting Engineers dated May 21, 2009. However, at present, it cannot be determined with certainty that these trees can be retained based on potential modifications to construction activities or building locations. Therefore, they are included in the estimated total tree removal count. It is noted on the May 21, 2009 memo that "Trees proposed to be removed fall in the parameters of the proposed building footprint or hardscape. Building development location was analyzed and selected in order to minimize impacts on scenic, ground water, grading and land coverage criteria." However, no development area is considered an old growth forest.

TRPA Code Section 71.2.A identifies the standards for tree removal on conservation and recreation plan areas:

71.2.A - Standards for Conservation and Recreation Lands: In lands classified by TRPA as conservation or recreation land use or Stream Environment Zones, any live, dead or dying tree greater than or equal to 30 inches diameter at breast height (dbh) in westside forest types shall not be cut, and any live, dead or dying tree greater than or equal to 24 inches diameter at breast height in eastside forest types shall not be cut.

The one exception that applies to Homewood is TRPA Code Section 71.2.A(6) which states:

71.2.A(6) - In ski areas with existing TRPA-approved master plans, trees larger than 30 inches dbh in the westside forest types and 24 inches dbh in eastside forest types may be removed for facilities that are consistent with that master plan. For activities that are consistent with a TRPA-approved master plan, trees larger than 30 inches dbh in the westside forest types and 24 inches dbh in eastside forest types may be removed when it is demonstrated that the removal is necessary for the activity.

While 71.2.A(6) may apply to the proposed project, because the Project is located on private land, TRPA Code Section 71.2.C can be applied, which states:

71.2.C - Alternative Private Landowner Process: A private landowner may follow the regulations in Subsections 71.2.A or a private landowner may follow one of the following planning processes to achieve or maintain the late seral/old growth threshold, goals, and polices.

(2) Private landowners may prepare a limited forest plan when there is limited proposed impact to large trees.

(a) A limited forest plan may be prepared if 10% or less of the trees over 30 inches dbh in the westside forest types and 24 inches dbh in eastside forest types in the project site are proposed to be cut in the life of the plan.

(b) The content of a limited forest plan shall include:

(i) The relative state permit application, if available;

(ii) Description of harvest activities;

(iii) Description of management activities;

(iv) Explanation of how thresholds, goals and policies will be attained under the forest plan;

(v) The expiration date of the plan. A minimum lifespan of 10 years and a maximum lifespan of 50 years will be accepted.

The removal of 33 (Alternative 1 and 3) and 37 (Alternative 5) trees larger than 30 inches dbh would be much less than 10 percent of the total large trees in the Project area and therefore Subsection 71.2.C(2) could be applied for the Project. However, because a limited forest plan has not been generated for the Project area, this impact is considered significant and mitigation is required.

A number of trees larger than 30 inches dbh are proposed to be saved and to remain onsite at the North Base area. The potential exists for these trees to be damaged during construction and result in increased loss of large mature trees onsite.

The Project does not conflict with the Placer County Tree Preservation ordinance adopted in October of 1991. The tree preservations Ordinance applies to all projects where discretionary permit approvals are required by the County provided, however, no Landmark Tree may be removed without obtaining a tree permit pursuant to Section 12.16.060. However, there are no Landmark Trees proposed for removal within the HMR project area.

Mitigation: **BIO-10. Prepare Forest Plan and Tree Protection Plan For Homewood Mountain Resort**

HMR shall prepare and implement a Forest Plan for the Project area that complies with TRPA Code of Ordinances Chapter 71 and incorporates the Fire Suppression and Management Plan compliance measure as described in Section 3.12.12 of this document. The Forest Plan shall be produced by a Registered Professional Forester and be submitted to TRPA for review and approval to confirm that the plan complies with Chapter 71. The forest plan shall identify and detail trees for removal and other forested areas which may require treatment (thinning) in order to increase the overall health of the forest.

In addition, a Tree Protection Plan shall be prepared for the Project. Included in the Tree Protection Plan shall be tree protection measures to prevent damage to trees that are proposed to remain. The Project applicant shall hire a Certified Arborist to develop specific measures to ensure adequate protection to trees slated for retention in the vicinity of proposed development. The tree protection measures shall include the establishment of tree protection zones, and protection measures to prevent damage to the trees (bole, roots and branches). Additionally the Tree Protection Plan shall identify areas where tree roots are to be protected and proper methods for pruning, irrigation and limb removal during construction activities. The Tree Protection Plan shall include monitoring of the trees slated for retention for a period of three years. Mortality of any of the retained trees shall require the replacement of trees lost utilizing the same species and relative location.

The Tree Protection Plan shall be submitted to Placer County and the TRPA for review and approval prior to removal of any trees associated with the Project.

After Mitigation: *Less than Significant Impact; Proposed Project (Alternative 1) and Alts 3, 4, 5 and 6*

Implementation of mitigation measure BIO-10 will ensure Homewood Mountain Resort will comply with TRPA regulations regarding removal of trees larger than 30 inches dbh prior to construction. This impact will be less than significant after mitigation.

8.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact: **BIO-C1: Will the Project have significant cumulative impacts to biological resources?**

Analysis: *Less than Significant; No-Project (Alternative 2)*

Under the No Project alternative, the combined effect of reasonable and foreseeable future projects on biological resources, wildlife and fisheries would be beneficial due to the nature of the projects being implemented. Future projects include projects that will result in the enhancement of habitat through the restoration of riparian habitats forest thinning projects. These restoration and enhancement projects would not necessarily result in immediate increase in quality of habitat, however over time would result in higher quality habitats for sensitive vegetation communities (i.e. riparian) and wildlife species that are associated with such habitats. Other types of projects in the Project area (outlined in Table 20.1-1) are development projects that will not result in significant impacts to sensitive plant or wildlife species. Other known erosion control project and fuels reduction projects will result in modifications to habitats but will require compliance with regulatory measures to avoid or minimize impacts to sensitive species and their respective habitats.

Mitigation: No mitigation is required.

Analysis: *Less than Significant; Proposed Project (Alternative 1) and Alternatives 3, 4, 5, and 6*

Under the action alternatives (Alternatives 1, 3, 4, 5 and 6) the combined effect of reasonably foreseeable future projects on biological resources (as listed in Table 20.1-1), would not result in a significant impact. Many of the future projects that are proposed in the vicinity Project area include development projects that will not result in significant impacts to sensitive plant or wildlife species. These development projects involve redevelopment of existing disturbed areas and structures, including, but not limited to, the NTPUD infrastructure replacements on existing sites and in area roadways, Kings Beach Commercial Core Area Improvements (aesthetic, accessibility, and water quality improvements) Project within the existing commercial area, the Tahoe Vista Affordable Housing and Interval Ownership Project on an existing campground site, the Kings Beach Gas Station Project on a disturbed site, the Rippey Commercial Building Project in Tahoe City on a disturbed site, and the Denny's Trailer Park Project that will reconfigure existing lots to conform to manufactured home layouts. Additionally, the proposed development projects are located within and surrounded by existing urban uses and do not contain high quality habitats for sensitive wildlife and plant species. Other known erosion control project and fuels reduction projects will result in modifications to habitats but will require compliance with regulatory measures to avoid or minimize impacts to sensitive species and their respective habitats.

Cumulative timber losses that occur as a result of fire within and adjacent to the project vicinity would reduce available habitat for wildlife and plant species and would compound effects of the action alternatives. Homewood Mountain Resort has treated over 400 acres of forested areas to reduce the threat of catastrophic fire, including the 12 acres northwest of the South Base area and the area immediately west of Tahoe Ski Bowl Way between the South and North Base areas. There is a plan to continue the forest thinning/fuels management for forested areas within the 1,253-acre Homewood Mountain Resort. In addition, the Tahoe City Public Utility District, in cooperation with HMR,

conducted forest fuels reduction on 110 acres of their property located south of the HMR South Base. These fuels reduction projects cover most of the urban interface between HMR and adjacent residential areas, with the exception of the residential areas just to the north of the North Base area. This loss of timber as a result of the thinning projects will have an overall increase in the quality of forested habitat and additionally significantly reduces the potential of catastrophic wildfire in the area. Continued timber thinning practices that are proposed in conjunction with Master Plan installation will reduce the chances of catastrophic fire and will result in a benefit to the surrounding forested lands. Forest fuels reduction projects, restoration project and erosion control projects listed in Table 20-1 will result in ground disturbance that could result in impacts to undiscovered rare plant species and sensitive vegetation types. However, existing regulatory measures require surveys to determine presence/absence of rare plants species and other sensitive vegetation communities. Discovery of these species would allow for the avoidance or mitigation of impacts from the cumulative project list.

The projects identified in Table 20-1 may impact wildlife and vegetation resources in a negative manner through the increased human presence in the area and minor loss of habitats. However, standard compliance measures, mitigation measures and design features that will be required for implementation of the projects will offset potential cumulative impacts to biological resources. The proposed fuels reduction projects, restoration projects and erosion control projects will result in improvements to the biological environment. Therefore this impact is considered less than significant.

Mitigation: No mitigation is required.

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