Appendix B Human Environment, Table 2.1.1-1

Table 2.1.1-1. Existing Land Uses and Impacts

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-1	023-181-191	905 and 913 Emerald Bay Road	Tahoe Outdoor Living; United Gas/Swiss Mart	TCE	Yes	None
L-1	023-182-281	NA	Vacant lot		NA	None
L-1	023-191-071	NA	Vacant lot	TCE	Yes	None
L-1	023-191-181 023-191-191	921 Emerald Bay Road	Alpine Animal Hospital	TCE(181)/ PRW (191)	Yes	None
L-1	023-191-211	949, 945, 955, and 961 Emerald Bay Road	Tahoe Y Center—Laundromat, SOS Repair, Keep Tahoe Blue Office, Fibromyalgia Relief Center	TCE	Yes	None
L-1	023-192-061	924 Emerald Bay Road	El Dorado County offices—Child Support/DOT Engineering		No	None
L-1	023-421-011	2016 and 2019 Emerald Bay Road	Miller's Outpost; Levi's Outlet		Yes	None
L-1	023-522-091	950 Emerald Bay Road	U.S. Post Office	TCE	Yes	None
L-1	023-522-121	960 Emerald Bay Road	Vacant building	TCE	Yes	None
L-1	023-522-131	NA	Vacant	TCE	NA	None
L-1	023-522-141	942 Emerald Bay Road	El Dorado Savings Bank	TCE	Yes	None
L-1	023-523-051 023-523-091 023-523-101	986 Emerald Bay Road	Runnel's Automotive Repair Business	TCE	Yes	None
L-2	023-182-291	906 Emerald Bay Road	Hunan Garden—Restaurant		Yes	None
L-2	023-181-211	NA	Vacant lot	PRW	NA	None
L-2	023-181-221	887 Emerald Bay Road	McFarlane Mortuary	TCE	Yes	None
L-2	023-182-051	884 Emerald Bay Road	Aspen Hollow Retail Store (home/garden)		Yes	None
L-2	023-182-061	888 Emerald Bay Road	The Brother's Place—Bar and Restaurant		Yes	None
L-2	023-171-091	NA	Vacant	TCE	NA	None
L-2	023-171-101	871 Emerald Bay Road and 2013 Seventh Street	Burgers a Go Go; SFR	TCE	Yes	None
L-2	023-171-111	835 James Avenue	Storage Sheds and SFR		Yes	None
L-2	023-171-131	NA	Vacant	TCE	NA	None
L-2	023-171-141	NA	Vacant	TCE	NA	None
L-2	023-171-181	807 Emerald Bay Road	Vacant building for lease	TCE	Yes	None
L-2	023-171-201	NA	Vacant	TCE	NA	None
L-2	023-171-221	823 James Avenue	SFR	TCE	Yes	None
L-2	023-171-251	NA	Vacant	TCE	NA	None
L-2	023-171-261	828 Eloise	Tahoe Outdoor Living—supply area		Yes	None

Table 2.1.1-1. Continued

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-2	023-172-011	800 Emerald Bay Road	7-11 Store; Tahoe Tot Spot; Rudy's Energy Works; Nixon's Heating and Air/Plumbing; Ted's Fix It	TCE	Yes	None
L-2	023-172-221	808 Emerald Bay Road	Fast Print	TCE	Yes	None
L-2	023-172-311	836 Emerald Bay Road	SFR		Yes	None
L-2	023-172-341	812 Emerald Bay Road	Emerald Bay Physical Therapy	TCE	Yes	None
L-2	023-172-351	822 Emerald Bay Road	Alpina Café and Spray Tan (two buildings)	TCE	Yes	None
L-2	023-181-431	871 Emerald Bay Road	Lake Tahoe Chinese Buffet		Yes	None
L-2	023-181-451	879 Emerald Bay Road	MFR		Yes	None
L-2	023-181-461	855 and 861 Emerald Bay Road	Old Stage Trailer Park (mobile homes); Pandora's Trunk Boutique		Yes	None
L-2	023-182-011	854-868 Emerald Bay Road	Tahoe Business Center (retail/service stores); Redwood Printing		Yes	None
L-2	023-182-301	870 Emerald Bay Road	Plaza 89—two-building business park		Yes	None
L-3	023-161-341	765 Emerald Bay Road	Cantina Restaurant		Yes	None
L-3	023-161-331	787 Emerald Bay Road	Murphy's Irish Pub and Rockwater Restaurant		Yes	None
L-3	023-162-031	NA	Vacant	PRW	NA	Full parcel
L-3	023-151-061	701 James Avenue	SFR		Yes	None
L-3	023-151-091	717 Emerald Bay Road	Burger Lounge		Yes	None
L-3	023-151-111	2028 B 12th Street	MFR		No	None
L-3	023-151-201	846, 847, 864, 865 Emerald Bay Road	MFR (four-unit)		Yes	Partial parcel
L-3	023-151-211	NA	Vacant	PRW	NA	Full parcel
L-3	023-152-031	NA	Vacant		NA	None
L-3	023-152-081	702 Emerald Bay Road	SFR		Yes	None
L-3	023-161-051	735 Emerald Bay Road	Pine Cone Acre Motel		Yes	None
L-3	023-161-061	751 Emerald Bay Road	Washoe Motel		Yes	None
L-3	023-151-351	NA	Vacant		NA	None
L-3	023-162-011	750 Emerald Bay Road	Vacant, but undergoing construction for Senior Housing		Yes	None
L-3	023-162-021	NA	Vacant		NA	None
L-4	023-131-051	591 Emerald Bay Road	SFR		Yes	None
L-4	023-141-081	NA	Vacant (potential staging area)	TCE	NA	None
L-4	023-142-031	NA	Vacant		NA	None
L-4	023-151-031	675 Emerald Bay Road	Rendezvous Restaurant		Yes	None

Table 2.1.1-1. Continued

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-4	023-131-121	561 James Avenue	SFR		Yes	None
L-4	023-131-131	565 James Avenue	SFR		Yes	None
L-4	023-131-141	553 James Avenue	SFR	PRW	Yes	None
L-4	023-131-151	NA	Vacant	PRW	NA	None
L-4	023-131-171	579 James Avenue	MFR (four-unit)		Yes	None
L-4	023-131-191	575 James Avenue	SFR		Yes	None
L-4	023-152-061	NA	Vacant		NA	None
L-4	023-152-091	NA	Vacant		NA	None
L-4	023-152-121	1995 A and B, 12th Street	SFR (two)		No	None
L-4	023-131-201	569 James Avenue	MFR (two-unit)		Yes	None
L-4	023-132-041	580 Emerald Bay Road	MFR (eight-unit)		Yes	None
L-4	023-141-031	2011 13th Street	MFR	PRW	Yes	Partial parcel
L-4	023-141-051	NA	Vacant	PRW	NA	Full parcel
L-4	023-141-061	609 Emerald Bay Road	Lazy "S" Lodge		Yes	None
L-4	023-141-181	645 Emerald Bay Road	Anderson Bicycle Rental		Yes	None
L-4	023-141-261	621, 623 James Avenue	MFR		Yes	None
L-4	023-142-011	608 Emerald Bay Road	Mountain House Lodge		Yes	None
L-4	023-142-021	NA	Vacant		NA	None
L-5	023-531-011	554 James Avenue SFR	SFR	PRW	Yes	None
L-5	023-531-021	NA	Vacant	PRW	NA	None
L-5	023-531-031	564 James	SFR		Yes	None
L-5	023-531-041	568 A and B James Avenue	MFR (two-unit)		Yes	None
L-5	023-111-301	541 Emerald Bay Road	Aspen Hollow Landscape and Nursery	TCE	No	None
L-5	023-531-051	572 A and B James Avenue	MFR (two-unit)		Yes	None
L-5	023-531-061	576 James Avenue	SFR		Yes	None
L-5	023-531-071	580 James	SFR		Yes	None
L-5	023-531-081	581	MFR (two-unit)		Yes	None
L-5	023-531-091	NA	Vacant		NA	None
L-5	023-531-101	NA	Vacant	PRW	NA	Full parcel
L-5	023-531-111	NA	Vacant	PRW	NA	Full parcel
L-5	023-531-121	NA	Vacant	PRW	NA	None

Table 2.1.1-1. Continued

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-5	023-531-131	NA	Vacant	PRW	NA	None
L-5	023-531-141	NA	Vacant	PRW	NA	None
L-5	023-532-011	NA	Vacant	PRW	NA	Full parcel
L-5	023-532-021	NA	Vacant	PRW	NA	Full parcel
L-5	023-132-211	536 Emerald Bay Road	Evan's Gourmet Café	TCE	Yes	None
L-5	023-132-311	556 Emerald Bay Road	SFR		Yes	None
L-5	023-132-321	NA	Vacant	PRW	NA	None
L-5	023-532-031	NA	Vacant	PRW	NA	Full parcel
L-5	023-532-041		Vacant		NA	None
L-5	023-111-371	515 Emerald Bay Road	Fireside Lodge	TCE	No	None
L-5	023-111-461	2030 West Street	Tahoe Village Campground	TCE	No	None
L-5	023-111-471	531 Emerald Bay Road	SFR	TCE	Yes	None
L-5	023-132-231	532 Emerald Bay Road	Manzanita Group Retreats	TCE	Yes	Full parcel
L-5	023-830-511	516 Emerald Bay Road	St. Francis of the Woods Condominiums	TCE	Yes	None
L-5	023-111-391	2030 Lukins Way	MFR		Yes	None
L-5 L-6	032-030-011	NA	Vacant; bike path	PRW	NA	Partial parcel
L-5 L-6 L-7 L-8	032-020-011	NA	Vacant; bike path	PRW	NA	
L-8 L-9	032-010-011	NA	Vacant; seasonal campground; bike path	PRW	Yes	Partial parcel
L-9 L-10	032-130-081		Vacant; campgrounds; bike path; Camp Richardson - General Store; Ice Cream Parlor; Business Center; Old Time Portraits.	PRW	Yes	None
L-10 L-11	019-050-101		Camp Richardson—seasonal campground, RV area; vacant	TCE	Yes	None
L-10	032-130-091		Camp Richardson—Richardson House; bike path; vacant	PRW	Yes	Partial parcel
L-11	019-081-041	NA	Vacant; utility/maintenance building	TCE	NA	None
L-11	019-081-111	NA	Vacant; bike path	TCE	NA	None

Table 2.1.1-1. Continued

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-11 L-12 L-13 L-14	019-050-151	NA	Vacant; bike path; electrical substation; access to Camp Richardson Corral and Pack Station	PRW	NA	None
L-14 L-15 L-16 L-17 L-18 L-19	019-041-031	NA	Vacant; bike path	PRW	NA	Partial parcel
L-18	018-300-061	NA	Vacant	TCE	NA	None
L-18 L-19	018-300-041	NA	Vacant	TCE	NA	None
L-19	018-130-271	NA	Vacant	TCE	NA	None
L-19 L-20	018-130-201	NA	Vacant	PRW	NA	None
L-19 L-20	019-020-051	NA	Vacant	PRW	NA	None
L-20	018-090-031	NA	Vacant	TCE	NA	None
L-20	018-090-571	NA	Vacant	TCE	NA	None
L-21	023-321-051	NA	Vacant	TCE	NA	None
L-21	023-573-061	850 Patricia Lane	SFR		Yes	None
L-21	023-171-161	828 Eloise	Tahoe Outdoor Living—Sales offices	TCE	Yes	None
L-21	023-573-071	846 Patricia Lane	SFR	TCE	Yes	None
L-22	023-131-211	NA	Vacant		NA	None
L-22	023-131-221	590 Eloise	SFR	TCE	Yes	None
L-22	012-131-081	546 Eloise	MFR		Yes	None
L-22	023-111-061	2038 Lukins Way	SFR		No	None
L-22	023-131-221	590 Eloise	SFR		Yes	None
L-22	023-131-111	572 Eloise	SFR		Yes	None
L-22	023-131-161	578 Eloise	SFR		Yes	None
L-22	023-261-051	609 Eloise	SFR		Yes	None
L-22	023-261-181	571 Eloise	Vacant		NA	None

Table 2.1.1-1. Continued

Map Page	APN	Address	Existing Use	Impacts		
				ROW	Access Points	Basin Impact
L-22	023-261-271	559 Eloise	Vacant		NA	None
L-22	023-261-261	555 Eloise	SFR		Yes	None
L-22	023-261-191	561 Eloise	SFR		Yes	None
L-22	023-261-201	567 Eloise	SFR		Yes	None
L-22	023-261-041	575 Eloise	SFR		Yes	None

Notes: MFR = Multi-Family Residential
PRW = Permanent Right of Way Take
SFR = Single-Family Residential
TCE = Temporary Construction Easement

Appendix C Physical Environment, Tables 2.2.5-1 and 2.2.5-2

Table 2.2.5-1. Ambient Air Quality Standards Applicable in California

Pollutant	Symbol	Average Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
			California	National	California	National	California	National
Ozone*	O_3	1 hour	0.09	NA	180	NA	If exceeded	NA
		8 hours	0.070	0.08	137	157	If exceeded	If fourth highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor within an area
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
(Lake Tahoe only)		8 hours	6	NA	7,000	NA	If equaled or exceeded	NA
Nitrogen dioxide	NO_2	Annual average	0.030	0.053	56	100	NA	If exceeded on more than 1 day per year
		1 hour	0.18	NA	338	NA	If exceeded	NA
Sulfur dioxide	SO_2	Annual average	NA	0.03	NA	80	NA	If exceeded
		24 hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.25	NA	655	NA	If exceeded	NA
Hydrogen sulfide	H_2S	1 hour	0.03	NA	42	NA	If equaled or exceeded	NA
Vinyl chloride	C_2H_3Cl	24 hours	0.01	NA	26	NA	If equaled or exceeded	NA
Inhalable particulate matter	PM10	Annual arithmetic mean	NA	NA	20	50	NA	If exceeded at each monitor within area
		24 hours	NA	NA	50	NA	If exceeded	If exceeded on more than 1 day per year
	PM2.5	Annual arithmetic mean	NA	NA	12	15	NA	If 3-year average from single or multiple community-oriented monitors is exceeded
		24 hours	NA	NA	NA	35	NA	If 3-year average of 98^{th} percentile at each population-oriented monitor within an area is exceeded
Sulfate particles	SO_4	24 hours	NA	NA	25	NA	If equaled or exceeded	NA
Lead particles	Pb	Calendar quarter	NA	NA	NA	1.5	NA	If exceeded no more than 1 day per year
		30-day average	NA	NA	1.5	NA	If equaled or exceeded	NA

Source: California Air Resources Board 2006.

Notes: All standards are based on measurements at 25ºC and 1 atmosphere pressure.
National standards shown are the primary (health effects) standards.
NA = not applicable.

* The U.S. Environmental Protection Agency recently replaced the 1-hour ozone standard with an 8-hour standard of 0.08 part per million. It issued a final rule that revoked the 1-hour standard on June 15, 2005. However, the California 1-hour ozone standard will remain in effect.

Table 2.2.5-2. Ambient Air Quality Monitoring Data

Pollutant Standards	Echo Summit			South Lake Tahoe			Tahoe City		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Ozone									
Maximum 1-hour concentration (ppm)	0.096	0.079	0.096	0.066	–	–	0.065	–	–
Maximum 8-hour concentration (ppm)	0.082	0.070	0.083	0.058	–	–	0.061	–	–
Number of days standard exceeded[a]									
CAAQS 1-hour (>0.09 ppm)	1	0	1	0	–	–	0	–	–
NAAQS 8-hour (>0.08 ppm)	0	0	0	0	–	–	0	–	–
Carbon Monoxide (CO)									
Maximum 8-hour concentration (ppm)	4.35	–	–	1.18	–	–	0.53	–	–
Number of days standard exceeded[a]									
NAAQS 8-hour (≥9.0 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0	0	0	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0	0	0	0	0	0	0
Particulate Matter (PM10)[b]									
National[c] maximum 24-hour concentration (μg/m^3)	24.0	–	–	47.0	38.0	66.6	–	–	–
National[c] second-highest 24-hour concentration (μg/m^3)	23.0	–	–	45.0	38.0	59.3	–	–	–
State[d] maximum 24-hour concentration (μg/m^3)	19.0	–	–	41.0	33.0	–	–	–	–
State[d] second-highest 24-hour concentration (μg/m^3)	18.0	–	–	41.0	32.0	–	–	–	–
National annual average concentration (μg/m^3)	8.3	–	–	15.2	17.5	17.1	–	–	–
State annual average concentration (μg/m^3)[e]	–	–	–	–	14.8	–	–	–	–
Number of days standard exceeded[a]									
CAAQS 24-hour (>50 μg/m^3)[f]	0	–	–	0	0	–	–	–	–

Source: California Air Resources Board 2006.

Notes: CAAQS = California ambient air quality standards.
NAAQS = national ambient air quality standards.
– = insufficient data available to determine the value.

[a] An exceedance is not necessarily a violation.

[b] Measurements usually are collected every 6 days.

[c] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

[d] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.

[e] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored.

Appendix D Biological Environment, Tables 2.3.3-1 and 2.3.4-1

Table 2.3.3-1. Special-Status Plants with Potential to Occur in the Project Vicinity

Common and Scientific Name	Legal Status[a] (Federal/State/CNPS)	Geographic Distribution/Floristic Province	Habitat Requirements	Occurrence in Study Area
Upswept moonwort *Botrychium ascendens*	–/–/2.3	Southern high Cascade Range and scattered occurrences elsewhere: Butte, El Dorado, Mono, Modoc, Plumas, Shasta, Tehama, and Tulare Counties; Idaho, Oregon, Nevada, Washington, and elsewhere.	Wet areas in lower montane coniferous forest; 1,500–2,285 meters; blooms July–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Scalloped moonwort *Botrychium crenulatum*	–/–/2.2	Mountains of California, with scattered occurrences in Butte, Colusa, Lake, Los Angeles, Mono, Modoc, Placer, Plumas, San Bernardino, Shasta, Tehama, and Tulare Counties; Arizona, Idaho, Nevada, Oregon, Utah, Washington, and Wyoming.	Bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps; 1,500–3,280 meters; blooms June–July.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Western goblin *Botrychium montanum*	–/–/2.1	Southern high Cascade Range and Sierra Nevada, with occurrences in Butte, El Dorado, Fresno, Modoc, Plumas, Shasta, and Tehama Counties; Idaho, Oregon, and Washington.	Wet areas in lower and upper montane coniferous forest; 1,500–2,130 meters; blooms July–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Shore sedge *Carex limosa*	–/–/2.2	High Sierra Nevada, with occurrences in Butte, El Dorado, Fresno, Lassen, Nevada, Plumas, Siskiyou, and Tuolumne Counties; Nevada and elsewhere.	Lower and upper montane coniferous forest, meadows and seeps, bogs and fens, marshes and swamps; 1,200–2,700 meters; blooms June–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence 7 miles north of the study area.
Alpine dusty maidens *Chaenactis douglasii* var. *alpina*	–/–/2.3	Northern high Sierra Nevada and northern desert mountains, with occurrences in Alpine, El Dorado, Inyo, Mono, Siskiyou, and Tuolumne Counties.	Granitic soils in alpine boulder and rock field; 3,000–3,400 meters; blooms July–September.	None. Occurs outside the elevational range of the study area. No known occurrences within 10 miles of the study area.
Fell-fields claytonia *Claytonia megarhiza*	–/–/2.3	Northern and central high Sierra Nevada and Warner Mountains, with occurrences in Alpine, Lassen, Mariposa, Mono, Modoc, Nevada, and Tuolumne Counties; Colorado, Montana, Wyoming, New Mexico, and Canada.	Alpine boulder and rock field, rocky or gravely substrate in subalpine coniferous forest; 2,600–3,300 meters; blooms July–August.	None. Occurs outside the elevational range of the study area. Closest occurrence within 5 miles southwest of the study area.
Subalpine cryptantha *Cryptantha crymophila*	–/–/1B.3	Alpine, Mono, and Tuolumne Counties.	Subalpine coniferous forest on volcanic, rocky substrates; 2,600–3,200 meters; blooms July–August.	None. Occurs outside the elevational range of the study area. No known occurrences within 10 miles of the study area.

Table 2.3.3-1. Continued

Common and Scientific Name	Legal Status[a] (Federal/State/CNPS)	Geographic Distribution/Floristic Province	Habitat Requirements	Occurrence in Study Area
Tahoe draba *Draba asterophora* var. *asterophora*	–/–/1B.3	Northern and central high Sierra Nevada, with occurrences in Alpine, El Dorado, Mono, and Tuolumne Counties; Nevada.	Alpine boulder and rock field in subalpine coniferous forest; 2,500–3,505 meters; blooms July–August.	None. Occurs outside the elevational range of the study area. Closest occurrence 4 miles east of the study area.
Cup Lake draba *Draba asterophora* var. *macrocarpa*	–/–/1B.3	Endemic to El Dorado County.	Rocky areas in subalpine coniferous forest; 2,500–2,815 meters; blooms July–August.	None. Occurs outside the elevational range of the study area. Closest occurrence within 7 miles south of the study area.
Subalpine fireweed *Epilobium howellii*	–/–/1B.3	Fresno, Madera, Mariposa, Mono, Nevada, and Sierra Counties.	Wet areas in meadows and mossy seeps, subalpine coniferous forest; 2,000–2,700 meters; blooms July–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Oregon fireweed *Epilobium oreganum*	–/–/1B.2	Klamath Range and outer north Coast Ranges, with occurrences in Del Norte, El Dorado, Glenn, Humboldt, Mendocino, Nevada, Placer, Shasta, Siskiyou, Tehama, and Tuolumne Counties; Oregon.	Bogs and fens, wet areas in lower and upper montane coniferous forest; 500–2,240 meters; blooms June–September.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence within 4 miles northwest of the study area.
Marsh willowherb *Epilobium palustre*	–/–/1B.2	Central high Sierra Nevada in El Dorado and Plumas Counties; Idaho and elsewhere.	Bogs and fens, meadows and seeps; 2,200 meters; blooms July–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence within 9 miles southeast of the study area.
Short-leaved hulsea *Hulsea brevifolia*	–/–/1B.2	Central and southern high Sierra Nevada, with occurrences in El Dorado, Fresno, Madera, Mariposa, Tulare, and Tuolumne Counties.	Gravelly or sandy soils derived from granitic or volcanic substrate in lower and upper montane coniferous forest; 1,500–3,200 meters; blooms May–August.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Long-petaled lewisia *Lewisia longipetala*	–/–/1B.3	Northern high Sierra Nevada, with occurrences in El Dorado, Nevada, and Placer Counties.	Alpine boulder and rock field, wet, rocky areas in subalpine coniferous forest in soils derived from granite; 2,500–2,925 meters; blooms July–August.	None. Occurs outside the elevational range of the study area. Closest occurrence 3 miles west of the west end of the study area.

Table 2.3.3-1. Continued

Common and Scientific Name	Legal Status[a] (Federal/State/CNPS)	Geographic Distribution/Floristic Province	Habitat Requirements	Occurrence in Study Area
Three-ranked hump moss *Meesia triquetra*	–/–/2.2	Widespread with occurrences from Humboldt and Lassen Counties south to Riverside County; Nevada, Oregon, and elsewhere.	Soils in bogs and fens, meadows and seeps, subalpine coniferous forest, wet areas in upper montane coniferous forest; 1,300–2,953 meters.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence within 7 miles southeast of the study area.
Broad-nerved hump-moss *Meesia uliginosa*	–/–/2.2	Known from El Dorado, Fresno, Madera, Mariposa (?), Nevada, Plumas, Riverside, Sierra, Siskiyou, and Tulare Counties; Nevada, Oregon, and elsewhere.	On damp soils in bogs and fens, meadows and seeps, subalpine and upper montane coniferous forest; 1,300–2,800 meters.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence 3 miles southeast of the east end of the study area.
Stebbin's phacelia *Phacelia stebbinsii*	–/–/1B.2	El Dorado, Nevada, and Placer Counties.	Meadows and seeps, cismontane woodland, and lower montane coniferous forest; 610–2,010 meters; blooms June–July.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Holly fern *Polystichum lonchitis*	–/–/3	Alpine, El Dorado, Plumas (?),Siskiyou, and Trinity (?) Counties; Arizona, Idaho, Nevada, Oregon, Utah, and Washington.	Granitic or carbonate soils in subalpine coniferous forest, upper montane coniferous forest; 1,800–2,600 meters; blooms June–September.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. No known occurrences within 10 miles of the study area.
Nuttall's pondweed *Potamogeton epihydrus* ssp. *nuttallii*	–/–/2.2	El Dorado, Mariposa, Mendocino, Modoc, and Plumas Counties; Oregon and elsewhere.	Marshes and assorted shallow freshwater swamps; 370–1,900 meters; blooms July–August.	None. Suitable habitat is not present in the study area. Not observed in the study area. Closest occurrence within 10 miles southwest of the study area.
Slender-leaved pondweed *Potamogeton filiformis*	–/–/2.2	Scattered occurrences in Contra Costa, El Dorado, Lassen, Merced, Mariposa, Modoc, Mono, Placer, Santa Clara, and Sierra Counties; Arizona, Nevada, Oregon, and Washington.	Freshwater marshes and assorted shallow swamps, shallow emergent wetlands and freshwater lakes, and drainage channels; 300–2,150 meters; blooms May–July.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence within 3 miles northwest of the west end of the study area.

Table 2.3.3-1. Continued

Common and Scientific Name	Legal Status[a] (Federal/State/CNPS)	Geographic Distribution/Floristic Province	Habitat Requirements	Occurrence in Study Area
Tahoe yellow cress *Rorippa subumbellata*	C/E/1B.1	Lake Tahoe Basin with occurrences in El Dorado, Nevada, and Placer Counties; Nevada.	Decomposed granitic beaches in lower montane coniferous forest, meadows and seeps; 1,859–1,900 meters; blooms May–September.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence 0.4 mile north of SR 89 in the study area along shore of Lake Tahoe.
Water bulrush *Scirpus subterminalis*	–/–/2.3	Klamath Range and northern high Sierra Nevada.	Bogs and fens, marshes and swamps in montane lake margins; 750–2,250 meters; blooms July–August.	None. Suitable habitat is not present in the study area. Not observed in the study area. Closest occurrence 5 miles south of the study area.
Marsh skullcap *Scutellaria galericulata*	–/–/2.2	Northern high Sierra Nevada, Modoc Plateau, with occurrences in El Dorado, Lassen, Modoc, Nevada, Placer, Plumas, Shasta, San Joaquin, and Siskiyou Counties; Oregon and elsewhere.	Lower montane coniferous forest, meadows and seeps, marshes and swamps; below 2,100 meters; blooms June–September.	Moderate. Suitable habitat is present, but occurrence unlikely due to human and road maintenance activities. Not observed in the study area. Closest occurrence 0.4 mile north of SR 89 in the study area near Tallac Creek.
Cream-flowered bladderwort *Utricularia ochroleuca*	–/–/2.2	El Dorado and Plumas Counties; Oregon, Washington, and elsewhere.	Shallow water in meadows, seeps, marshes, swamps, and lake margins; 1,435–1,440 meters; blooms June–July.	None. Occurs outside the elevational range of the study area. No known occurrences within 10 miles of the study area.

[a] Status explanations:

– = no listing.
? = population location within county uncertain.

Federal

C = candidate for listing under federal Endangered Species Act.

State

E = listed as endangered under California Endangered Species Act.

California Native Plant Society

1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
2 = List 2 species: rare, threatened, or endangered in California, but more common elsewhere.
3 = List 3 species: plants about which more information is needed to determine their status.

California Native Plant Society Code Extensions

.1 = seriously endangered in California (more than 80% of occurrences threatened, or high degree and immediacy of threat).
.2 = fairly endangered in California (20–80% of occurrences threatened).
.3 = not very endangered in California (less than 20% of occurrences threatened or no current threats known).

Table 2.3.4-1. Special-Status Wildlife and Fish Species That Could Occur in the Project Vicinity

Common and Scientific Name	Status (Federal/State/Other)	California Distribution	Habitats	Occurrence in Study Area
Great Basin rams-horn *Helisoma newberryi*	–/–/FS	Lakes and larger, slow streams in and around the periphery of the northern Great Basin. Occur in Sheepy Creek (Siskiyou County), Pit River, Eagle Lake, and Lake Tahoe/Truckee River.	Larger lakes and slow rivers, including larger spring sources and spring-fed creeks. These snails may be invisible even when abundant, either because of being in deep water or burrowing in soft mud.	Low. Not known to occur in Taylor and Tallac Creeks, and these do not provide ideal habitat.
Lahontan cutthroat trout *Oncorhynchus clarki henshawi*	T/–/FS, MI, TRPA	Restricted to a few lakes and streams within and outside their historic range. Occur in Independence Lake, Meiss Lakes basin in upper Truckee River watershed. Stocked in Fallen Leaf Lake.	Lakes and streams of the Lahontan basin.	High. Known to occur in Fallen Leaf Lake. Potential suitable habitats present in the study area.
Central Valley steelhead *Oncorhynchus mykiss*	T/–/–	Sacramento River and tributary Central Valley rivers.	Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 7.8 to 18°C (Moyle 2002). Habitat types are riffles, runs, and pools.	None. Study area is outside the species' known range.
Rainbow trout–non-anadromous *Oncorhynchus mykiss*	–/–/MI	Widely distributed in California, from Baja California to Oregon. Native to Pacific slope upstream to first impassable barriers. Widely transplanted, including hatchery fish, to areas outside historic range, including the Lake Tahoe Basin.	Cold, perennial freshwater systems statewide.	High. Suitable habitat present in study area.
Brook trout *Salvelinus fontinalis*	–/–/MI	Native to east coast of U.S. Occurs from the San Bernardino Mountains in southern California north to the Oregon border. Most abundant in the Sierra Nevada, where they have been widely introduced.	High mountain lakes and streams, generally above 4,000 feet in elevation.	High. Occurs in Lake Tahoe and may spawn in study area streams.
Mount Lyell salamander *Hydromantes platycephalus*	–/SSC/–	High Sierra Nevada, mostly above 8000 feet (4,000-12,000 feet, overall), from Sonora Pass, Alpine County, to Franklin Pass area, Tulare County; low elevation records are from the south side of Yosemite Valley. Isolated population at Smith Lake, Desolation Wilderness, El Dorado County.	Granite rock exposures, talus, and rock fissures, near seepages from streams or melting snow, also in spray zone of waterfalls. Apparently prefers north-facing slopes.	Low. No suitable habitat in the study area. No known locations within 10 miles of the study area.
Yosemite toad *Bufo canorus*	C/SSC/–	Sierra Nevada from Blue Lake region north of Ebbets Pass in Alpine County to 5 kilometers south of Kaiser Pass in the Evolution Lake/Darwin Canyon area in Fresno County; 4,800–12,000 feet, mostly above 9,000 feet.	Inhabits montane wet meadows and seasonal ponds associated with lodgepole pine and subalpine conifer forests. Breeds in shallow pools or lake margins, shelters in burrows or clumps of grass, sedges or willows.	Low. Meadow and wetland areas do not appear to contain water long enough to support breeding. No known locations within 10 miles of the study area.

Table 2.3.4-1. Continued

Common and Scientific Name	Status (Federal/State/Other)	California Distribution	Habitats	Occurrence in Study Area
Mountain yellow-legged frog *Rana muscosa*	C/SSC/FS	Found in the Sierra Nevada above 4,500 feet from Plumas County to southern Tulare County. Isolated populations in Butte County and near Mono Lake, Mono County.	Associated with streams, lakes, and ponds in montane riparian, lodgepole pine, subalpine conifer, and wet meadow habitats.	Moderate. Meadow and wetland areas do not appear to contain water long enough to support breeding. Limited amount of breeding habitat in Taylor and Tallac Creeks. One historic occurrence within 1 mile of study area (CNDDB 2007).
Golden eagle *Aquila chrysaetos*	PR/SSC, FP/TRPA	Foothills and mountains throughout California. Uncommon non-breeding visitor to lowlands such as the Central Valley.	Nests on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals.	Low. Unlikely to nest in the study area, and no suitable foraging habitat in the study area.
Osprey *Pandion haliaetus*	–/SSC/TRPA	Nests along the north coast from Marin County to Del Norte County, east through the Klamath and Cascade Ranges, and in the upper Sacramento Valley. Important inland breeding populations at Shasta Lake, Eagle Lake, and Lake Almanor, and small numbers elsewhere south through the Sierra Nevada. Winters along the coast from San Mateo County to San Diego County.	Nests in snags, trees, or utility poles near the ocean, large lakes, or rivers with abundant fish populations.	High. Many records for locations of nests adjacent to the study area. May nest in or adjacent to study area.
Bald eagle *Haliaeetus leucocephalus*	D,PR/E, FP/MI, TRPA	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties, and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean.	Moderate. May occur in study area, but unlikely to nest because of proximity of study area to SR 89 and continuous human disturbance.
Northern goshawk *Accipiter gentilis*	–/SSC/FS, MI, TRPA	Permanent resident in the Klamath and Cascade Ranges, in the north Coast Ranges from Del Norte County to Mendocino County, and in the Sierra Nevada south to Kern County. Winters in Modoc, Lassen, Mono, and northern Inyo Counties.	Nests and roosts in older stands of red fir, Jeffrey pine, Ponderosa pine, lodgepole pine, Douglas fir, and mixed conifer forests.	High. Suitable foraging and nesting habitat in the study area. Unlikely to nest because of proximity of study area to SR 89 and continuous human disturbance.

Table 2.3.4-1. Continued

Common and Scientific Name	Status (Federal/State/Other)	California Distribution	Habitats	Occurrence in Study Area
American peregrine falcon *Falco peregrinus anatum*	D/E/FS, MI, TRPA	Permanent resident along the north and south Coast Ranges. May summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County. Winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range.	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations.	Low. No suitable nesting habitat in the study area. Historic occurrence in the basin; no known occurrences since 1990s failed reintroductions (Thayer pers. comm.).
Great gray owl *Strix nebulosa*	–/E/FS	Permanent resident of the Sierra Nevada from Plumas County south to the Yosemite area. Occasionally occurs in northwestern California in winter and the Warner Mountains in summer.	Old growth red fir, mixed conifer, or lodgepole pine forests bordering meadows.	Low. No known records of breeding in the Lake Tahoe Basin (Thayer pers. comm.). Two unconfirmed records in the basin (Lyon pers. comm.).
California spotted owl *Strix occidentalis occidentalis*	–/SSC/FS, MI	Sierra Nevada from Lassen County south to northern Kern County, and in the Transverse Range, Peninsular Range, and southern coastal mountains.	Mature forest with suitable nesting trees. In southern California, occurs in oak and oak-conifer habitats, in addition to mature conifer forest.	Moderate. May occur in study area, but unlikely to nest because of proximity of study area to SR 89 and continuous human disturbance. Records exist in the Lake Tahoe Basin (Lyon pers. comm.)
Bank swallow *Riparia riparia*	–/T/–	Occurs along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley, and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco to Monterey County.	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam.	Moderate. May occasionally forage in the study area. A limited amount of nesting habitat may occur along Taylor and Tallac Creeks. Known occurrence at Tahoe Keys within 1 mile of the study area.
Willow flycatcher *Empidonax traillii*	–/E/FS, MI	Summers along the western Sierra Nevada from El Dorado to Madera County, in the Cascade Range and northern Sierra Nevada in Trinity, Shasta, Tehama, Butte, and Plumas Counties, and along the eastern Sierra Nevada from Lassen to Inyo County.	Riparian areas and large wet meadows with abundant willows. Usually found in riparian habitats during migration.	Moderate. May occasionally forage in the study area. Unlikely to nest in study area because of limited dense willow thickets and proximity to human disturbance. Known occurrence at Taylor Marsh within 1 mile of the study area (CNDDB 2007).

Table 2.3.4-1. Continued

Common and Scientific Name	Status (Federal/State/Other)	California Distribution	Habitats	Occurrence in Study Area
Waterfowl	–/–/TRPA	Throughout California in suitable habitat.	Aquatic habitat, wetlands, and edges of wetlands.	Low. Aquatic and wetland habitat generally associated with waterfowl is not present in the study area. However marsh habitats adjacent to the study area are known to support breeding pairs of many species within this group (Thayer pers. comm.).
Sierra Nevada snowshoe hare *Lepus americanus tahoensis*	–/SSC/–	In the Cascade Range in Siskiyou and Del Norte Counties and the Sierra Nevada from Mt. Lassen south to Mono and Tulare Counties, generally between 4,800 and 8,000 feet.	Found in dense thickets of conifers, riparian vegetation, or chaparral in boreal life zones.	Moderate. Suitable habitat is present within the study area. One historic record within 5 miles of the study area (CNDDB 2007).
Sierra Nevada red fox *Vulpes vulpes necator*	–/T/FS	In the Cascade Range, in Siskiyou County, and in the Sierra Nevada from Lassen County south to Tulare County.	Alpine dwarf-shrub, wet meadow, subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. In the Sierra Nevada, most sightings have been above 7,000 feet.	Low. Unlikely to occur because of proximity of study area to SR 89 and continuous human disturbance.
Pacific fisher *Martes pennanti pacifica*	C/SSC/–	Coastal mountains from Del Norte County to Sonoma County, east through the Cascade Range to Lassen County, and south in the Sierra Nevada to Kern County.	Late successional coniferous forests and montane riparian habitats.	Low. Study area is located within a gap of fisher distribution. Three records for occurrences from 1967 to 1984 within 10 miles of the study area (CNDDB 2007).
American badger *Taxidea taxus*	–/SSC/–	Throughout California, except for the humid coastal forests of northwestern California in Del Norte County and northwestern Humboldt County.	Requires sufficient food, friable soils, and relatively open uncultivated ground; preferred habitat includes grasslands, savannas, and mountain meadows near timberline.	Low. Sufficient open habitat not present in the study area. Incidental observation by USFS in the Meeks Bay area in past 5 years (Thayer pers. comm.)
California wolverine *Gulo gulo luteus*	–/T, FP/FS	Klamath and Cascade Ranges south through the Sierra Nevada to Tulare County.	Found in a variety of mountain habitats. In north coastal areas, most sightings have been between 1,600 and 4,800 feet. The species has been found between 4,300 and 7,300 feet in the northern Sierra Nevada and between 6,400 and 10,800 in the southern Sierra Nevada. Most common in open terrain above timberline and subalpine forests.	Low. Unlikely to occur because of proximity of study area to SR 89 and continuous human disturbance. Sighting in 1990 within 2 miles of the study area (CNDDB 2007).

Table 2.3.4-1. Continued

Common and Scientific Name	Status (Federal/State/Other)	California Distribution	Habitats	Occurrence in Study Area
American marten *Martes americana*	–/–/FS	Klamath Range, Cascade Range, and Sierra Nevada from Del Norte to Tulare County, and a small portion of the north Coast Ranges around Mendocino, Glenn, and Lake Counties.	Red fir, lodgepole pine, subalpine conifer, mixed conifer, Jeffrey pine, and eastside pine habitats. Habitat with limited human use is important.	High. Suitable habitat is present in the study area. Several records for sightings within the study area (CNDDB 2007).
Mule deer *Odecoileus hemionus*	–/–/MI, TRPA	Throughout California, except in intensively farmed areas without cover (Central Valley) and in deserts.	Early to intermediate stages of most forest, woodland, and brush habitats. Prefers a mixture of a various aged vegetation that provides woody cover, meadow, and shrubby openings and open water.	High. The Truckee/Loyalton and Carson deer herds occur in the Lake Tahoe Basin (Thayer pers. comm.)

[a] Status explanations:

– = no status.

Federal

T = listed as threatened under federal Endangered Species Act.
C = candidate for threatened or endangered status.
PR = protected by Bald and Golden Eagle Protection Act.
D = delisted (delisted species are monitored for 5 years).

State

E = listed as endangered under California Endangered Species Act.
T = listed as threatened under California Endangered Species Act.
SSC = species of special concern in California.
FP = fully protected under California Fish and Game Code.

Other

FS = U.S. Forest Service sensitive species
MI = Lake Tahoe Basin Management Unit Management Indicator Species
TRPA = Tahoe Regional Planning Agency Special Interest Species