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Appendix B4. Special-Status Species Tables

The special-status species tables have been divided into plants (Table 1) and wildlife (Table 2).

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
Amsinckia lunaris	Bent-flowered fiddleneck	-	-	1B.2	Cismontane woodland, and valley and foothill grassland.	March to June	**High.** Quality habitat exists throughout the BSA. There are several CNDDB occurrences within 5 miles of the BSA; the closest (Occurrence #8, 2007) is located approximately 0.13 mile south of the isolated staging areas. However, this species was not observed during the seasonally appropriate botanical surveys.
Androsace elongata ssp. *acuta*	California androsace	-	-	4.2	Chaparral, cismontane woodland, coastal sage scrub and, valley and foothill grassland. Highly localized and often overlooked plant.	March to June	**Moderate.** Quality habitat exists throughout the BSA. This species is not tracked in the CNDDB and only historical records (>100 yrs) have been documented within 10 miles (CCH 2021b). This species was not observed during the seasonally appropriate botanical surveys.
Arctostaphylos pallida	Pallid manzanita	FT	SE	1B.1 *A1	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. Grows on uplifted marine terraces on siliceous shale or thin chert. May require fire.	December to June	**Present.** Four colonies were observed along and adjacent to Manzanita Drive and Huckleberry Botanic Regional Preserve during the botanical surveys. This occurrence is associated with multiple collections dating from at least 1923 (Occurrence #4; CDFW 2021b).
Astragalus tener var. *tener*	Alkali milk vetch	-	-	1B.2	Alkali playa, valley and foothill grassland, and vernal pools. Low ground, alkali flats, and flooded	March to June	**Low.** Low quality habitat exists within the BSA. There are CNDDB occurrences within 5 miles of the BSA, but all are extirpated (or possibly

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
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					lands. In annual grassland or in playas or vernal pools.		extirpated). This species was not observed during the seasonally appropriate botanical surveys.
Balsamorhiza macrolepis	Big-scale balsamroot	-	-	1B.2	Found in alkali playa, valley and foothill grasslands, and vernal pools. Sometimes on serpentine.	March to June	**Low.** Some quality habitat exists within the BSA. The closest CNDDB occurrence (Occurrence #2, 2002) is located 7.75 miles southeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Blepharizonia plumosa	Big tarplant	-	-	1B.1	Dry hills and plains in annual grassland. Clay to clay-loam soils; usually on slopes and often in burned areas.	July to October	**Low.** Marginal habitat exists within the BSA. A historical CNDDB occurrence (Occurrence #12, 1937) is located 5.5 miles northeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Calochortus pulchellus	Mt. Diablo fairy-lantern	-	-	1B.2	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. On wooded and brushy slopes.	April to June	**Low.** Minimal quality habitat exists within the BSA. The closest CNDDB occurrence (Occurrence #22, 1970) is located 4.1 miles northeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Calochortus umbellatus	Oakland star-tulip	-	-	4.2 *A2	Chaparral, lower montane coniferous forest, broadleafed upland forest, and valley and foothill grassland. Often on serpentine.	March to May	**Present.** One colony was observed growing in the opening near two transmission towers immediately east of Mountain Boulevard near SR 13 during the seasonally appropriate botanical surveys. This species is not tracked in the CNDDB.

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
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Calystegia purpurata ssp. *saxicola*	Coastal bluff morning-glory	-	-	1B.2	Coastal dunes and coastal scrub.	(March) April to September	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Carex comosa	Bristly sedge	-	-	2B.1	Coastal prairie, marshes, and swamps (lake margins), and valley and foothill grassland.	May to September	**Low.** Marginal habitat exists within the BSA. A historical CNDDB occurrence (Occurrence #10, 1866) is located 8.8 miles west of the project (across the bay) and is extirpated. This species was not observed during the seasonally appropriate botanical surveys.
Castilleja ambigua var. *ambigua*	Johnny-nip	-	-	4.2	Coastal bluff scrub, coastal prairie, and vernal pools (margins).	March to August	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	-	-	1B.2	Valley and foothill grassland. Found in alkaline soils, sometimes described as heavy white clay.	May to October (November)	**Low.** Marginal habitat exists within the BSA. The closest presumed extant CNDDB occurrence (Occurrence #95, 1999) is located approximately 10 miles southeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Chloropyron maritimum ssp. *palustre*	Point Reyes bird's-beak	-	-	1B.2	Marshes and swamps (coastal salt).	June to October	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Chloropyron molle ssp. *molle*	Soft salty bird's-beak	FE	SR	1B.2	Found in coastal salt marsh.	June to November	**Not expected.** No suitable habitat exists in the BSA. This species was not

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
							observed during the seasonally appropriate botanical surveys.
Chorizanthe cuspidata var. *cuspidata*	San Francisco Bay spineflower	-	-	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Sandy soil on terraces and slopes.	April to July (August)	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Chorizanthe robusta var. *robusta*	Robust spineflower	FE	-	1B.1	Coastal dunes and coastal scrub. Sandy terraces and bluffs or in loose sand.	April to September	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	-	-	2B.1	Marshes and swamps (brackish, coastal, freshwater).	July to September	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Cirsium andrewsii	Franciscan thistle	-	-	1B.2	Coastal bluff scrub, coastal broadleaved upland forest, and coastal scrub.	March to July	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Clarkia concinna ssp. automixa	Santa Clara red ribbons	-	-	4.3	Cismontane woodland, chaparral. On slopes near drainages.	May to July	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Clarkia franciscana	Presidio clarkia	FE	SE	1B.1	Coastal scrub. Serpentine outcrops in grassland or shrub.	May to July	**Low.** Marginal habitat exists throughout the BSA. The closest CNDDB occurrence (Occurrence #4, 2010) is located approximately 1.7 miles south of the project. However, this species was not observed during the seasonally appropriate botanical surveys.

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
Dirca occidentalis	Western leatherwood	-	-	1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland.	January to March (April)	**High.** Quality habitat exists throughout the BSA. A CNDDB occurrence (Occurrence #13, 2021) is located on the east-facing slopes to the east of Manzanita Drive in the Huckleberry Botanical Regional Preserve. However, this species was not observed during the seasonally appropriate botanical surveys.
Eriogonum luteolum var. *caninum*	Tiburon buckwheat	-	-	1B.2	Chaparral, valley and foothill grassland, cismontane woodland, and coastal prairie. Serpentine soils. Sandy to gravelly sites.	May to September	**Low.** Marginal habitat exists within the BSA. The closest CNDDB occurrence (Occurrence #20, 2009) is located approximately 0.7 mile southeast of the project. However, this species was not observed during the seasonally appropriate botanical surveys.
Eryngium jepsonii	Jepson's button thistle	-	-	1B.2 *A2	Valley and foothill grassland. Vernal pools.	April to August	**Present.** One colony was observed west of Moraga Substation during the seasonally appropriate botanical surveys. This occurrence represents a previously unrecorded population.
Erythranthe laciniata	Cut-leaved monkeyflower	-	-	4.3	Chaparral, lower montane coniferous forest, and upper montane coniferous forest.	April to July	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Extriplex joaquinana	San Joaquin spearscale	-	-	1B.2	Alkaline soils. Chenopod scrub, meadows, seeps, and playas. Valley and foothill grassland.	April to October	**Low.** Marginal habitat exists within the BSA. There is a historical CNDDB occurrence (Occurrence #77, 1929) within 5 miles of the BSA, but it is possibly extirpated. This species was

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
							not observed during the seasonally appropriate botanical surveys.
Fritillaria agrestis	Stinkbells	-	-	4.3	Cismontane woodland, chaparral, valley and foothill grassland. Sometimes on serpentine but mostly found in non-native grassland or in grassy openings in clay soil.	March to June	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Fritillaria liliacea	Fragrant fritillary	-	-	1B.2	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine. Various soils usually reported though clay and in grassland.	February to April	**High.** Quality habitat exists throughout the BSA. An undated, presumed extant CNDDB occurrence (Occurrence #66) overlaps the project footprint. However, this species was not observed during the seasonally appropriate botanical surveys.
Gilia capitata ssp. *chamissonis*	Blue coast gilia	-	-	1B.1	Coastal dunes and coastal scrub.	April to July	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Gilia millefoliata	Dark-eyed gilia	-	-	1B.2	Coastal dunes.	April to July	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Helianthella castanea	Diablo helianthella	-	-	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, and riparian woodland. Valley and foothill grassland.	March to June	**High.** Quality habitat exists throughout the BSA. There are several CNDDB occurrences within 5 miles of the BSA; the closest (Occurrence #102, 2014) located approximately 1.5 miles north of the project. However, this species was not observed during the seasonally appropriate botanical surveys.

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
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Hemizonia congesta ssp. *congesta*	Congested-headed hayfield tarplant	-	-	1B.2	Valley and foothill grassland.	April to November	**Low.** Marginal habitat exists within the BSA. There is an undated, presumed extant CNDDB occurrence (Occurrence #2) located approximately 8.8 miles east of the project (across the bay). This species was not observed during the seasonally appropriate botanical surveys.
Hesperevax caulescens	Hogwallow starfish	-	-	4.2	Valley and foothill grassland (mesic clay) and vernal pools (shallow).	March to June	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Heteranthera dubia	Water star-grass	-	-	2B.2	Marshes and swamps (alkaline, still, and slow-moving water). Requires a pH of 7 or higher, usually in slightly eutrophic waters.	July to October	**Low.** Marginal habitat exists within the BSA. A historical CNDDB occurrence (Occurrence #1, 1876) is located 8.8 miles west of the project (across the bay) This species was not observed during the seasonally appropriate botanical surveys.
Hoita strobilina	Loma Prieta hoita	-	-	1B.1	Chaparral, cismontane woodland, riparian woodland. Serpentine and mesic sites	May to July (August to October)	**Low.** Marginal habitat exists within the BSA. **A** historical CNDDB occurrence (Occurrence #1, 1865) is located approximately 0.5 mile southeast of the project, but is possibly extirpated. However, this species was not observed during the seasonally appropriate botanical surveys.
Holocarpha macradenia	Santa Cruz tarplant	FT	SE	1B.1	Coastal prairie and valley and foothill grassland.	June to October	**Low.** Although suitable habitat exists throughout the BSA, the closest

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
							presumed extant CNDDB occurrence (Occurrence #31, 2009) is located approximately 6 miles northwest of the project in Wildcat Canyon Park. This species populations are monitored by EBRPD, and it has not been identified in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Horkelia cuneata var. *sericea*	Kellogg's horkelia	-	-	1B.1	Closed-cone coniferous forest, coastal scrub, and chaparral. Old dunes, coastal sandhills, and openings.	April to September	**Low.** Marginal habitat exists throughout the BSA. There are two historical CNDDB occurrences (Occurrence #35, 1863; Occurrence #34, 1894) within 5 miles of the BSA; but are presumed extirpated. This species was not observed during the seasonally appropriate botanical surveys.
Iris longipetala	Coast iris	-	-	4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Mesic sites with heavy clays.	March to May (June)	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Isocoma arguta	Carquinez goldenbush	-	-	1B.1	Valley and foothill grassland. Alkaline soils, flats, and lower hills. On low benches near drainages and on tops and sides of mounds in swale habitat.	August to December	**Low.** Marginal habitat exists within the BSA. An undated CNDDB occurrence is located approximately 9 miles north of the project (Occurrence #14). This species was not observed during the seasonally appropriate botanical surveys.

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
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Juglans californica	Southern California black walnut	-	-	4.2	Riparian forest and riparian woodland. Few extant native stands remain and are widely naturalized. Deep alluvial soil associated with a creek or stream.	March to August	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Lasthenia conjugens	Contra Costa goldfields	FE	-	1B.1	Valley and foothill grasslands, vernal pools, and woodlands. Extirpated from most of its range. Vernal pools, swales, low depressions, and in open grassy areas.	March to June	**Low.** Marginal habitat exists within the BSA. The closest presumed extant CNDDB occurrence (Occurrence #37, 1959) is located approximately 12.5 miles south of the project. This species was not observed during the seasonally appropriate botanical surveys.
Layia carnosa	Beach layia	FT	SE	1B.1	Coastal dunes. Hugely reduced in range along California's north coast dunes.	March to July	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Leptosiphon acicularis	Bristly leptosiphon	-	-	4.2	Chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland.	April to July	**Moderate.** Quality habitat exists throughout the BSA. This species is not tracked in the CNDDB and only historical records have been documented in the area (CCH 2021b). This species was not observed during the seasonally appropriate botanical surveys.
Leptosiphon grandiflorus	Large-flowered leptosiphon	-	-	4.2	Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub. Valley and foothill grassland.	April to August	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
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Leptosiphon rosaceus	Rose leptosiphon	--	--	1B.1	Coastal bluff scrub.	April to July	**Not expected.** No suitable habitat exists in the BSA.
Malacothamnus hallii	Hall's bush-mallow	-	-	1B.2	Chaparral. Some populations on serpentine.	(April) May to September (October)	**Low.** Marginal habitat exists within the BSA. A CNDDB occurrence (Occurrence #21, 2023) is located approximately 9.5 miles east from the project. This species was not observed during the seasonally appropriate botanical surveys.
Meconella oregana	Oregon meconella	-	-	1B.1	Coastal prairie and coastal scrub. Open, moist places.	March to April	**Moderate.** Some suitable habitat exists in the BSA. A CNDDB occurrence (Occurrence #3, 2015) is located approximately 0.05 mile from the isolated staging areas. This species was not observed during the seasonally appropriate botanical surveys.
Monolopia gracilens	Woodland woollythreads	-	-	1B.2	Chaparral, valley and foothill grasslands (serpentine), cismontane woodland, broadleafed upland forests, and north coast coniferous forest. On grassy sites and sandy to rocky substrates.	(February) March to July	**Low.** Marginal habitat exists within the BSA. A historical, presumed extant CNDDB occurrence (Occurrence #45, 1888) is located approximately 0.5 mile southeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Oenothera deltoides ssp. *howellii*	Antioch Dunes evening-primrose	FE	SE	1B.1	Interior dunes. Remnant river bluffs and sand dunes east of Antioch.	March to September	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Piperia michaelii	Michael's rein orchid	-	-	4.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff	April to August	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
					scrub, coastal scrub, and lower montane coniferous forest.		during the seasonally appropriate botanical surveys.
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	-	-	1B.2	Chaparral, coastal scrub, and coastal prairie. Mesic sites.	March to June	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Plagiobothrys diffusus	San Francisco popcornflower	-	SE	1B.1	Valley and foothill grassland, and most often in coastal prairie.	March to June	**Low.** Marginal habitat exists within the BSA. A CNDDB occurrence (Occurrence #13, 1997) is located approximately 2.5 miles southeast of the project. This species was not observed during the seasonally appropriate botanical surveys.
Plagiobothrys glaber	Hairless popcornflower	-	-	1A	Meadows and seeps, marshes, and swamps. Coastal salt marshes and alkaline meadows.	March to May	**Not expected.** Species is likely extinct. This species was not observed during the seasonally appropriate botanical surveys.
Polygonum marinense	Marin knotweed	-	-	3.1	Marshes and swamps (brackish, coastal salt).	(April) May to August (October)	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Ranunculus lobbii	Lobb's aquatic buttercup	-	-	4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, and vernal pools.	February to May	**Low.** Marginal habitat exists within the BSA. This species is not tracked in the CNDDB and was not observed during the seasonally appropriate botanical surveys.
Sanicula maritima	Adobe sanicle	-	SR	1B.1	Meadows, seeps, and coastal prairie. Moist clay or ultramafic soils.	February to May	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.

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Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
Spergularia macrotheca var. *longistyla*	Long-styled sand-spurrey	-	-	1B.2	Alkaline marshes, swamps, meadows, and seeps.	February to May	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Streptanthus albidus ssp. *peramoenus*	Most beautiful jewelflower	-	-	1B.2	Valley and foothill grassland. Serpentine outcrops on ridges and slopes.	(March) April to September (October)	**High.** Quality habitat exists throughout the BSA. There are several CNDDB occurrences within 5 miles of the BSA; the closest (Occurrence #68, 2004) is located approximately 1 mile southeast of the project. In addition, there is one unprocessed occurrence in the CNDDB from 2019, located 0.15 miles north of the project footprint. However, this species was not observed during the seasonally appropriate botanical surveys.
Stuckenia filiformis ssp. *alpina*	Northern slender pondweed	-	-	2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels.	May to July	**Low.** Marginal habitat exists throughout the BSA. A historical CNDDB occurrence (Occurrence #7, 1992) is located approximately 0.7 miles from the isolated staging areas. This species was not observed during the seasonally appropriate botanical surveys.
Suaeda californica	California seablite	FE	-	1B.1	Marshes and swamps. Margins of coastal salt marshes.	July to October	**Not expected.** No suitable habitat exists in the BSA. This species was not observed during the seasonally appropriate botanical surveys.
Trifolium hydrophilum	Saline clover	-	-	1B.2	Occurs in marshes and swamps, vernal pools, and valley and foothill grassland. Mesic and alkaline sites.	April to June	**Low.** Marginal habitat exists within the BSA. A historical but presumed extant CNDDB occurrence (Occurrence #31, 1900) is located

Table 1. Special-status Plant Species Identified in the Records Searches and their Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA
		Federal	State	CNPS			
							approximately 9.5 miles northwest of the project. This species was not observed during the seasonally appropriate botanical surveys.
Triphysaria floribunda	San Francisco owl's-clover	-	-	1B.2	Coastal prairie and valley and foothill grassland.	April to June	**Low.** Marginal habitat exists within the BSA. A historical CNDDB occurrence (Occurrence #51, 1957) is located approximately 8.8 miles west of the project (across the bay). This species was not observed during the seasonally appropriate botanical surveys.
Viburnum ellipticum	Oval-leaved viburnum	-	-	2B.3	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest.	May to June	**Low.** Marginal habitat exists within the BSA. A CNDDB occurrence (Occurrence #28, 2002) is located approximately 5 miles east of the project. This species was not observed during the seasonally appropriate botanical surveys.

Sources: CCH 2021b; CDFW 2024; CNPS 2021; USFWS 2024

[a] Status designations are as follows:

Federal status: FE = listed as endangered under Endangered Species Act
FT = listed as threatened under Endangered Species Act

State Status: SE = listed as endangered under the California Endangered Species Act
SR = listed as rare under the California Endangered Species Act

CNPS California Rare Plant Rank (CRPR) codes:

1A Plants presumed extirpated in California and either rare or extinct elsewhere
1B Rare, Threatened, or Endangered in California and elsewhere
2B Rare, Threatened, or Endangered in California but more common elsewhere
3 Plants about which more information is needed (a review list)
4 Plants of limited distribution – Watch list

CNPS CRPR threat codes:

.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Database of Rare, Unusual, and Significant Plants of Alameda and Contra Costa Counties rarity rankings:

A1 Species known from 2 or less botanical regions in Alameda and Contra Costa Counties, either currently or historically

A2 Species currently known from 3 to 5 regions in the two counties, or, if more, meeting other important criteria such as rare statewide, small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc.

*A Species in Alameda and Contra Costa counties listed as rare, threatened, or endangered statewide by federal or state agencies, or by state CNPS (Includes *A1, *A1x, and *A2 species)

Notes:
BSA = Biological Survey Area
CDFW = California Department of Fish and Wildlife
CNDDB = California Natural Diversity Database
CNPS = California Native Plant Society
SR = State Route

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
Invertebrates (5)						
Bombus crotchii	Crotch's bumble bee	--	SCE	--	Grassland and scrub habitats with wildflower foraging habitat; occurs at relatively warm and dry sites, including the Inner Coast Range of California and margins of the Mojave Desert.	**Moderate.** Suitable habitat is present within or adjacent to all work areas where grassland, scrub, and foraging habitat is present. The project footprint is within the current range of the species (CDFW 2023c). Floral resources were documented during Nomad Ecology's 2021 botanical surveys although SBI surveys were conducted outside of appropriate season. There is one CNDDB record within 5 miles of the project footprint which includes an individual photographed in Berkeley in 2015 (Occurrence #308). There are no current occurrence records within the BSA in the Xerces Bumble Bee Watch (Hatfield et al 2020).
Bombus occidentalis	Western bumble bee	--	SCE	--	Wet or moist meadows with abundant floral resources, roadside areas, and other areas containing forage species preferred by bumble bees. May occur in grassland and scrub areas and forest openings.	**Low.** Current California populations are mostly restricted to high elevation sites in the Sierra Nevada.
Branchinecta lynchi	Vernal pool fairy shrimp	FT	--	--	Endemic to the grasslands of Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Not expected.** No suitable habitat is present within or adjacent to the project footprint.
Danaus plexippus plexippus	Monarch butterfly	FC	--	--	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves	**Low (breeding, overwintering) to Moderate (foraging).** Potential suitable overwintering sites in eucalyptus trees are found within or adjacent to the

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
					(eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	project footprint including a eucalyptus grove near the Shepherd Canyon staging area and in the McCosker sub-area. There are two CNDDB occurrences approximately 5 miles to the west that are associated with established overwintering sites. One (Occurrence #415) is at Berkeley Aquatic Park, the second (Occurrence #322) is next to the Oakland International Airport. No known overwintering sites occur inland in the Berkeley/Oakland Hills area that overlaps with the project footprint (Xerces 2024). Suitable grassland habitat may support nectar plants for foraging. No native host plants (native milkweed) were found during botanical surveys conducted by Nomad in 2021.
Euphydryas editha bayensis	Bay checkerspot butterfly	FT	--	--	Native grasslands on serpentine outcrops. Primary larval host plant is California plantain (*Plantago erecta*). May also use purple owl's clover (*Castilleja densiflora*) and exserted paintbrush (*C. exserta*).	**Not expected.** Species is thought to be extirpated from the area.
Fish (3)						
Acipenser medirostris	Green sturgeon – southern DPS	FT	--	--	San Francisco Bay estuary and associated rivers. Spawns in the Sacramento, Feather, and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine or estuarine waters. Delta Estuary is important for rearing juveniles.	**Not expected.** No suitable habitat is present within or adjacent to the project footprint.

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
Ecyclogobius newberryi	Tidewater goby	FE	--	--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River.	**Not expected.** No suitable habitat is present within or adjacent to the project footprint.
Spirinchus thaleichthys	Longfin smelt	FC	ST	--	Found along the Pacific coast of the United States from Alaska to California. In California, Longfin Smelt is historically found in the San Francisco Estuary and the Sacramento and San Joaquin Delta, Humboldt Bay, and the estuaries of the Eel River and Klamath River. Uses a variety of habitats from nearshore waters to estuaries and lower portions of freshwater streams.	**Not expected.** No suitable habitat is present within or adjacent to the project footprint.
Amphibians (3)						
Ambystoma californiense	California tiger salamander (Central California DPS)	FT	ST	SSC	Ponds and vernal pools in grassland and oak woodland.	**Low**. Suitable aquatic and upland habitat is present within or adjacent to the project footprint but no extant occurrences within 5 miles. The one CNDDB occurrence (Occurrence #435, 1886) within 5 miles is a historic observation from Alameda Island.
Rana boylii,	Foothill yellow-legged frog (Central Coast DPS)	FT	ST	SSC	Perennial and ephemeral streams and rivers with rocky substrates and open, sunny banks in forests, chaparral, and woodlands. Utilize adjacent moist terrestrial habitats for foraging and refugia.	**Low to Moderate.** Potential for occurrence in western portion of project footprint is low, eastern portion of the project footprint is moderate. There are three CNDDB records within 5 miles of the BSA. *Western portion – east of Manzanita Drive and McCosker Subarea, Attachment B Map B-5 through B-9 (Attachment D3 - Wildlife Assessment Report)*

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
						Potentially suitable habitat is present in portions of the project area east of Manzanita Drive and unnamed tributaries of San Leandro Creek west of Pinehurst Road. There are two extirpated occurrence records in this area (Occurrences #4 [1891] and #5 [1909, 1947]). The habitat is highly fragmented within the project footprint east of Manzanita Drive and the species has not been encountered in the McCosker Subarea by EBRPD during recent surveys (EBRPD 2018). Therefore, the potential for the species to be encountered within the portions of the project that occur east of Manzanita Drive and upper San Leandro Creek tributaries near McCosker Subarea west of Pinehurst Road is low. *Eastern portion – Wilder LZ/SA and Moraga Substation, Attachment B Map B-2 and B-3* (Attachment D3 - Wildlife Assessment Report) Potentially suitable habitat is also present in portions of the project footprint near Moraga Creek and unnamed tributary streams near Moraga Substation. The only extant CNDDB record (Occurrence #6, 1997) is in Moraga Creek northwest of Moraga Substation. The potential for the species to be encountered in the portions of the project footprint in and near the Wilder LZ/SA and Moraga Substation is moderate.

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
Rana draytonii	California red-legged frog	FT	--	SSC	Lowlands and foothills in or near permanent sources of water (ponds, creeks, marshes) with emergent or dense riparian vegetation. Riparian, upland habitat, and small mammal burrows important for movement and refugia.	**Moderate to High.** Suitable habitat is present within and adjacent to the work areas where stream habitat is present, which includes all eight drainages within the project footprint. BAHCP modeled breeding habitat is present throughout the project footprint east of Park Boulevard. The nearest extant CNDDB record (Occurrence #226, 1997) is 0.5 mile northwest of the isolated staging areas. A historical but presumed extant record (Occurrence #8, 1931) is also located within 1 mile of the project footprint.
Reptiles (2)						
Actinemys marmorata	Northwestern pond turtle	FC	--	SSC	Permanent and intermittent freshwater aquatic habitats including rivers, streams, lakes, ponds, marshes, and vernal pools. Prefers habitats with abundant basking sites, underwater refugia, and standing or slow-moving water. Nesting sites are on sandy banks and bars or in fields or sunny spots up to a few hundred meters from water.	**Low to Moderate.** Suitable aquatic habitat, breeding upland habitat, and winter refugia is present in urban creeks in the Sausal Creek Watershed. In the San Leandro Creek Watershed east of Manzanita Drive/Skyline Boulevard; tributary streams may provide suitable habitat if pools are present. There are four CNDDB records within 2 miles. The closest, an undated CNDDB occurrence (Occurrence #63), is from Lake Temescal approximately 1.8 miles northwest of the project footprint and is separated by dense urban development. A research grade iNaturalist record in 2022 from Montclair Park is located within 0.5 miles northwest of the project footprint near Shepherd Canyon Park.

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
Masticophis lateralis euryxanthus	Alameda whipsnake	FT	ST	--	Chaparral; northern coastal sage scrub; coastal sage; and grassland communities.	**High to Present.** Suitable core and perimeter habitat is present within and adjacent to the project footprint. BAHCP modeled movement habitat is present within and adjacent to the project footprint at all work locations east of SR-13. The BAHCP movement habitat includes smaller areas of core and perimeter core habitat present within the project area and wildlife BSA that were not modeled as such in the HCP or this report. Based on the presence of suitable habitat for this species that was not captured in the BAHCP modeling, this species has the potential to occupy area outside the modeled habitat. CNDDB occurrence #33 (1990) overlaps with the project footprint near the McCosker Creek Restoration area. Two presumed extant CNDDB occurrences (#60, 2022; #95, 2006) are located within 500 feet and 2,500 feet of the project footprint.
Birds (9)						
Accipiter cooperii.	Cooper's hawk	--	--	WL	Associated with deciduous, mixed, and coniferous forest, and deciduous stands of riparian habitat in woodlands, riparian corridors, and along habitat edges, will nest in urban areas. They use mature trees with moderate to high crown-depths and canopy cover for nesting.	**Moderate (foraging/nesting).** Suitable habitat is present within or adjacent to the project footprint including trees for nesting and urban areas, riparian corridors and oak woodland forest. There are two CNDDB records within 5 miles of the project footprint (Occurrence #84, 2003; Occurrence #115, 2006).
Aquila chrysaetos	Golden eagle	--	--	FP	Open mountains, foothills, plains, open country. Requires open terrain. In the north and west, found over	**High (foraging/nesting).** Suitable habitat is present within or adjacent to the project footprint including large trees for

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
					tundra, prairie, rangeland, or desert; very wide-ranging in winter, more restricted to areas with good nest sites in summer.	nesting and foraging habitat prevalent in all areas east of Manzanita Drive. There is one CNDDB record within 5 miles of the project footprint (Occurrence # 43, 1993). This occurrence corresponds with a known golden eagle nest site has been used consistently since 2005 in Sibley Volcanic Regional Preserve (EBRPD 2018).
Athene cunicularia	burrowing owl	--	--	SSC	Open arid and semi-arid habitats with short emergent vegetation; including grasslands, deserts, agricultural fields, ruderal areas, and open landscaped areas.	**Low:** Suitable foraging habitat present but no burrows greater than 4 inches were observed during site visits. There have only been two CNDDB occurrences within 5 miles of the project footprint (#52, #19). Both occurrences are from the 1980s and occurred near the Oakland Airport.
Charadrius nivosus nivosus	Western snowy plover	FT	--	SSC	Sandy beaches; large alkali lake shorelines; and salt pond levees; dunes. Require sandy; gravelly or friable soils for nesting.	**Not expected**. No habitat suitable to support this species is present within the project footprint.
Coturnicops noveboracensis	Yellow rail	--	--	SSC	Freshwater marsh.	**Not expected.** No habitat suitable to support this species is present within the project footprint.
Laterallus jamaicensis coturniculus	California black rail	--	ST	FP	Tidal salt marshes of the northern San Francisco Bay, primarily in San Pablo and Suisun Bays. Prefers marshes close to the water (bay or river); large; away from urban areas; and saline to brackish with a high proportion of *Salicornia*, *Scirpus maritimus*, *Juncus,* and *Typha.*	**Not expected.** No habitat suitable to support this species is present within the project footprint.
Melospiza melodia pusillulai	Alameda song sparrow	--	--	SSC	Restricted to tidal marshes along the fringes of South San Francisco Bay.	**Not expected.** No habitat suitable to support this species is present within the project footprint.

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
Rallus obsoletus obsoletus	California Ridgway's rail	FE	SE	FP	Salt marshes and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay. Associated with pickleweed.	**Not expected.** No habitat suitable to support this species is present within the project footprint.
Sterna antillarum browni	California least tern	FE	SE	FP	Abandoned salt ponds and along estuarine shores in San Francisco Bay. Feeds primarily in shallow estuaries or lagoons where small fish are abundant. Nests on barren to sparsely vegetated site near water; usually on sandy or gravelly substrate.	**Not expected**. No suitable breeding habitat is present within or adjacent to the project footprint.
Mammals (7)						
Antrozous pallidus	Pallid bat	--	--	SSC	Low elevation arid or semi-arid open areas near water, rocky outcrops, and cliffs. Breeds and roosts in crevices in caves, mines, and cavities.	**Moderate.** Suitable roosting and foraging habitat is present within or adjacent to the project footprint wherever trees and structures are present to support roosting, especially along creeks in the Sausal Creek and San Leandro Creek watersheds. There are five CNDDB records within 5 miles of the project footprint.
Corynorhinus townsendii	Townsend's big-eared bat	--	--	SSC	Mesic habitats, forages around trees and brush along habitat edges. Breeds and roosts in caves, mines, tunnels, cavities, or buildings.	**Moderate.** Suitable roosting and foraging habitat is present within or adjacent to the project footprint wherever trees and structures are present to support roosting, especially along creeks in the Sausal Creek and San Leandro Creek watersheds. There is one historical CNDDB record (Occurrence #293, 1938) within 5 miles but is possibly extirpated.
Lasiurus blossevillii	western red bat	--	--	SSC	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. Roost sites often are in	**Moderate.** Suitable roosting and foraging habitat is present within or adjacent to the project footprint. There are no CNDDB records within 5 miles.

Table 2. Special-status Wildlife Species with Potential to Occur in the BSA

Scientific Name	Common Name	Status[a]			Habitat	Potential for Occurrence within the BSA
		Federal	State	CDFW		
					edge habitats adjacent to streams, fields, or urban areas. Requires water.	The majority of the project work areas is within the CDFW predicted habitat (CDFW 2021c).
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	--	--	SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**Present.** Suitable habitat is present within or adjacent to the project footprint. Nests were observed adjacent to the project footprint during the wildlife assessment and during a November 2023 site visit. There are 12 unprocessed CNDDB occurrences documenting individuals, active nests and observed nest structures in 2020 and 2021 at the McCosker Creek Restoration Area.
Reithrodontomys raviventris	Salt marsh harvest mouse	FE	SE	FP	Salt and brackish marshes of San Francisco; San Pablo; and Suisun Bay. Pickleweed is primary habitat. Requires upland areas for flood escape.	**Not expected.** No suitable breeding habitat is present within or adjacent to the project footprint.
Scapanus latimanus parvus	Alameda Island mole	--	--	SSC	Only known from Alameda Island. Found in a variety of habitats, especially annual and perennial grasslands.	**Not expected.** Project footprint outside known range of the species and species is thought to be extirpated.
Taxidea taxus	American badger			SSC	Open areas; plains and prairies; farmland and woodland edges. Constructs deep burrows for the pursuit of prey and for sleeping.	**Low**. Suitable habitat is present within or adjacent to the project footprint but no large burrows observed. Only CNDDB records within 5 miles of project footprint are historical (~100 yrs.; #135, #136) and land cover has been converted to woodland, brushland, and development, altering the potential for occurrence.

Sources: CDFW 2024; USFWS 2024

[a] Status designations are as follows:
Federal status: FE = listed as endangered under Endangered Species Act

	FT = listed as threatened under Endangered Species Act
	FC = candidate for listing under Endangered Species Act
State Status:	SE = listed as endangered under the California Endangered Species Act
	ST = listed as threatened under the California Endangered Species Act
	SCE = candidate for listing as endangered under the California Endangered Species Act
CDFW Status	SSC = species of special concern
	FP = fully protected
	WL = watch list

Notes:
BAHCP = PG&E Bay Area O&M Habitat Conservation Plan
BSA = Biological Survey Area
CDFW = California Department of Fish and Wildlife
CNDDB = California Natural Diversity Database
DPS = distinct population segment
PG&E = Pacific Gas and Electric Company
SBI = Swaim Biological, Inc.

Appendix B5. Species Lists

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Oakland East (3712272) OR Hayward (3712261) OR San Leandro (3712262) OR Hunters Point (3712263) OR Las Trampas Ridge (3712271) OR Oakland West (3712273) OR Walnut Creek (3712281) OR Briones Valley (3712282) OR Richmond (3712283))
 AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Anomobryum julaceum slender silver moss	NBMUS80010	None	None	G5	S2	4.2
Arctostaphylos pallida pallid manzanita	PDERI04110	Threatened	Endangered	G1	S1	1B.1
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Calochortus pulchellus Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
Calystegia purpurata ssp. saxicola coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Carex comosa bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chorizanthe cuspidata var. cuspidata San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cicuta maculata var. bolanderi Bolander's water-hemlock	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Cirsium andrewsii Franciscan thistle	PDAST2E050	None	None	G3	S3	1B.2
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Clarkia franciscana Presidio clarkia	PDONA050H0	Endangered	Endangered	G1	S1	1B.1
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eriogonum luteolum var. caninum Tiburon buckwheat	PDPGN083S1	None	None	G5T2	S2	1B.2
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Fissidens pauperculus minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Gilia capitata ssp. chamissonis blue coast gilia	PDPLM040B3	None	None	G5T2	S2	1B.1
Gilia millefoliata dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R0W1	None	None	G5T2	S2	1B.2
Heteranthera dubia water star-grass	PMPON03010	None	None	G5	S2	2B.2
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Isocoma arguta Carquinez goldenbush	PDAST57050	None	None	G1	S1	1B.1
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Layia carnosa beach layia	PDAST5N010	Threatened	Endangered	G2	S2	1B.1
Leptosiphon rosaceus rose leptosiphon	PDPLM09180	None	None	G1	S1	1B.1
Malacothamnus hallii Hall's bushmallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Meconella oregana Oregon meconella	PDPAP0G030	None	None	G2	S2	1B.1
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Oenothera deltoides ssp. howellii Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plagiobothrys diffusus San Francisco popcornflower	PDBOR0V080	None	Endangered	G1Q	S1	1B.1
Plagiobothrys glaber hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Sanicula maritima adobe sanicle	PDAPI1Z0D0	None	Rare	G2	S2	1B.1
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Triphysaria floribunda San Francisco owl's-clover	PDSCR2T010	None	None	G2?	S2?	1B.2
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3	2B.3

Record Count: 51

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Oakland East (3712272))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	SSC
Actinemys marmorata northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Dipodomys heermanni berkeleyensis Berkeley kangaroo rat	AMAFD03061	None	None	G4T1	S2	
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G4G5T1	S3	
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2T3	S2	SSC
Microcina leei Lee's micro-blind harvestman	ILARA47040	None	None	G1	S1	
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
Pomatiopsis californica Pacific walker	IMGASJ9020	None	None	G1	S1	
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Threatened	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Scapanus latimanus parvus Alameda Island mole	AMABB02031	None	None	G5T1Q	SH	SSC
Spirinchus thaleichthys pop. 2 longfin smelt - San Francisco Bay-Delta DPS	AFCHB03040	Endangered	None	G5TNRQ	S1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 30

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Oakland East (3712272))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Northern Maritime Chaparral	CTT37C10CA	None	None	G1	S1.2	
Northern Maritime Chaparral						
Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Serpentine Bunchgrass						

Record Count: 2

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 11/01/2024 21:48:53 UTC
Project Code: 2025-0014498
Project Name: PGE MOX

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

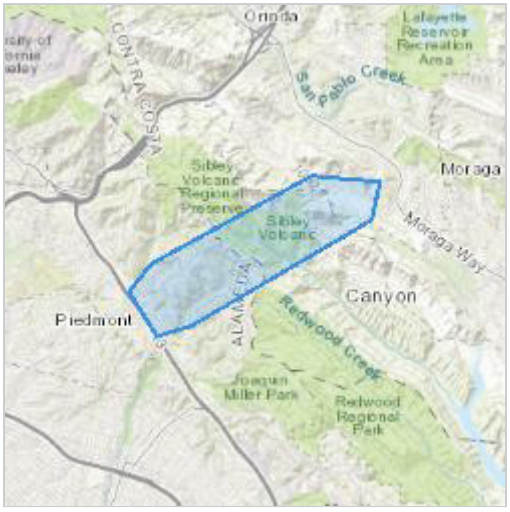
This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2025-0014498
Project Name: PGE MOX
Project Type: Operations and Maintenance - Electric Power Transmission and Distribution Facilities
Project Description: PGE tower repair.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.840801049999996,-122.18428416960612,14z



Counties: Alameda and Contra Costa counties, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

BIRDS

NAME	STATUS
California Least Tern *Sternula antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
California Ridgway"s Rail *Rallus obsoletus obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

REPTILES

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
Foothill Yellow-legged Frog *Rana boylii* Population: Central Coast Distinct Population Segment (Central Coast DPS) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5133	Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/57

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/498

FLOWERING PLANTS

NAME	STATUS
Pallid Manzanita *Arctostaphylos pallida*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8292

Presidio Clarkia *Clarkia franciscana*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3890

Robust Spineflower *Chorizanthe robusta var. robusta*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9287

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus*	Final

https://ecos.fws.gov/ecp/species/5524#crithab

IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Gabrielle Smith
Address:	155 Grand Ave
Address Line 2:	Suite 800
City:	Oakland
State:	CA
Zip:	94612
Email	gabrielle.smith@jacobs.com
Phone:	4085005454

Appendix B6. Nesting Birds: Species-Specific Buffers for PG&E Activities

Nesting Birds: Species-Specific Buffers for PG&E Activities

Within PG&E's Avian Program, standard nest buffers were developed for all common and special-status birds present within its Service Territory. There are no standard nest buffers specified in the Migratory Bird Treaty Act (MBTA) or within California Fish and Game Code. Table 1 provides nest buffers based on the best available information, including relevant literature review and avian biology. Disturbance factors including *nest location*, *human activity*, *activity duration*, and *noise level* may influence nesting behavior and reproductive success, and were each considered in establishing standard buffer distances for individual species. Where regulatory agencies have provided information on nest buffer distances for special-status species, those buffer distances are primarily used as *standard buffers* in Table 1. *Standard buffers* are species-specific buffer distances between occupied nest sites and work activities where work will not occur while the nest is active (containing eggs or young). These standard buffers are intended to be applied to nests located in proximity to PG&E activities at a sufficient distance to provide suitable nest protection. For example, a nesting black-crowned night heron has a standard buffer distance of 400 feet (Table 1).

Because it is not always possible to apply the standard buffer, non-standard species-specific buffer distances have also been established. As part of the determination of these non-standard buffers, PG&E activities are assigned disturbance rankings (Low, Medium, or High) for each factor identified above. Evaluation of all disturbance factors combined produces an overall disturbance category by assessing each disturbance factor for one or more PG&E activities. If the overall disturbance category is high, the standard buffer will generally apply. If the evaluation results in low or medium overall disturbance categories, the standard buffer is applied as feasible or reduced buffers may be appropriate. For example, in some circumstances it may be necessary to perform certain types of work within the standard buffer. In these cases, biologists consider all relevant site-specific conditions, including the species' tolerance for disturbance, work activity type, noise levels, and distance to nest to determine if reducing the standard buffer is appropriate. Alternatively, the buffer may be increased beyond the standard buffer for certain exceptions. Helicopters are the main exception that may require increased buffers.

Table 1 lists the standard buffers and non-standard buffer ranges for activities with low-medium and medium-high disturbances. Nest buffers will be implemented and adjusted by the biologist[1].

The following site-specific conditions are considered in determining if a reduced or increased buffer is appropriate:

- **Disturbance**. Evaluate nest disturbance, including consideration of activity intensity and duration, construction type, amount of habitat disturbance, level of human disturbance or acclimation, activity length, and the amount of noise generated by the activity.
- **Existing Conditions**. Assess site conditions to determine if there is acclimation to human disturbance.
- **Nest Concealment**. Evaluate surrounding habitat for its ability to provide visual and/or acoustic barriers between the nest and construction.
- **Species Natural History**. Consider individual species' natural history, nest stage (incubation, rearing, fledging), and known tolerances to disturbance.
- **Habituation**. Consider species habituation to new or ongoing activities.
- **Environmental Conditions**. Consider weather and other related factors.
- **Helicopter Use.** Consider helicopter type, flight plans, and duration.

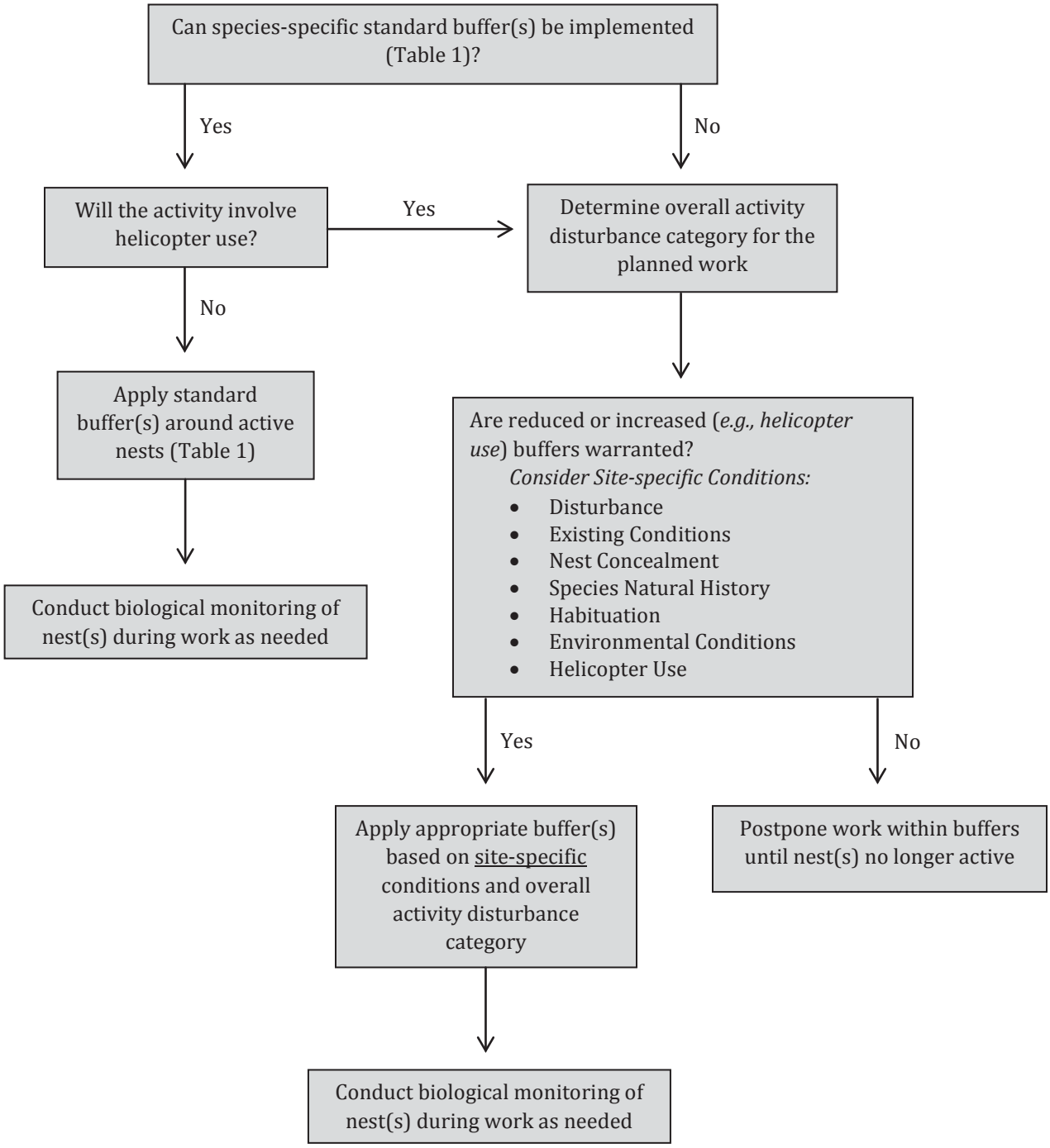
Nest Buffer Implementation Guidelines

Step/Task/Responsible	Outcome and Components
1. Desktop review *Biologist*	• Assess habitat types and potential nesting bird species • Identify potentially appropriate buffers for the species that may nest
2. Preconstruction nesting bird surveys *Biologist*	• Conduct preconstruction surveys within the standard buffers • Document species detections including nests and active nests
3. Assign Buffers *Biologist*	• Assess intensity/duration of activity • Assess acclimation to human disturbance • Assess site-specific conditions • Consider species' natural history, reproductive stage, tolerances to disturbance, and observed behavior • Evaluate and assign standard, reduced, or increased buffers
4. Implement Buffers *Biologist/Biological Monitor*	• Implement buffers when work activities are occurring • Conduct periodic biological monitoring where needed • Adjust buffers as appropriate

[1] Biologist refers to an individual with a bachelor's degree or above in a field related to biological sciences and demonstrated field expertise in ornithology, in particular, nesting behavior; these qualified biologists may be PG&E employees or contractors.

Species-Specific Buffers for PG&E Activities

Buffer Assignment Process – Quick Reference



Other Biological Considerations in Determining Buffers

- Provisioning frequency of hatchlings or older young
- Egg turning
- Egg incubation (female or male or combination)
- Egg hardiness
- Ambient Temperatures
- Heat tolerance (eggs or nestlings)
- Cold tolerance (eggs or nestlings)
- Unsheltered nest risk
- Premature fledging risk
- Unattended nests and predation risk

Time on Nest is Important. An egg initially requires a controlled heat input, but later in incubation the embryo may produce more heat and may need to be cooled rather than heated. Ambient temperatures need to be considered. Unattended unsheltered nests may experience temperature extremes (heat or cold). Egg turning during incubation is also a critical component for successful hatching; absence of turning during incubation will result in reduced and delayed hatching. During the nestling stage for altricial birds (i.e., birds that typically require feeding by adults), adults must provision food to nestlings. Provisioning rate is highly variable between species and is correlated to clutch size and body size, but most birds make frequent trips to attend nestlings. Collectively referred to as brooding, these forms of parental care are essential for reproductive success. Unattended nests also may experience increased rates of predation. Premature fledging is more likely to occur during later nest stages, when young are nearing fledging stage but not yet capable of flight.

Table 1. Species-specific Nest Buffers for PG&E Work Activities

**Atypically high-intensity activities, such as helicopter use usually require increased buffers beyond the standard buffer*

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Mallard	*Anas platyrhynchos*	Scrapes under overhanging cover or in dense vegetation in uplands near water.	Ground	March through June; single brood.	Clutch incubated for 26–29 days by female; young are precocial.	100	30–100	15–30
Cinnamon Teal	*Anas cyanoptera*	Scrapes under overhanging cover or in dense vegetation in uplands near water.	Ground	April through August; single brood.	Clutch incubated for 24–25 days by female; young are precocial.	100	30–100	15–30
Canada Goose	*Branta canadensis*	Scrapes on slightly elevated, firm ground in uplands near water.	Ground	February through June; single brood.	Clutch incubated for 27–28 days by female; young are precocial.	100	30–100	15–30
Wood Duck	*Aix sponsa*	Cavities in riparian woodlands and other woodland habitats near water.	Up to 60 feet	April through August; single or double brood.	Clutch incubated for 27–35 days by female; young are precocial.	100	30–100	15–30
Blue-winged Teal	*Anas discors*	Scrapes in dense grass or forbs in wetlands or grasslands near water.	Ground	June through July; single brood	Clutch incubated for 23–24 days by female; young are precocial.	100	30–100	15–30
Northern Shoveler	*Anas clypeata*	Scrapes in low grasses or forbs in uplands near water.	Ground	March through July; single brood.	Clutch incubated for 25–27 days by female; young are precocial.	100	30–100	15–30
Gadwall	*Anas strepera*	Scrapes in dense, low emergent vegetation or grasses in uplands near water.	Ground	April through July; single brood.	Clutch incubated for 22–29 days by female; young are precocial.	100	30–100	15–30
American Wigeon	*Anas americana*	Scrapes in dense vegetation cover in uplands near water.	Ground	May through July; single brood.	Clutch incubated for 24–25 days by female; young are precocial.	100	30–100	15–30

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Redhead	*Aythya americana*	Platform nests over water in dense vegetation; occasionally nests in uplands near water.	Ground	April through June; single brood.	Clutch incubated for 24–26 days by both sexes; young are precocial.	100	30–100	15–30
Ring-necked Duck	*Aythya collaris*	Platform nests over water in dense emergent vegetation in wetlands.	Ground	May through August; single brood.	Clutch incubated for approximately 26 days by female; young are precocial.	100	30–100	15–30
Common Merganser	*Mergus merganser*	Cavities in trees, snags and stumps in riparian woodlands.	Up to 200 feet	March through September; single brood.	Clutch incubated for 28–32 days by female; young are precocial.	100	30–100	15–30
Ruddy Duck	*Oxyura jamaicensis*	Platform nests constructed on shallow water in dense, tall emergent vegetation.	Ground	April through October; single or double brood.	Clutch incubated for approximately 23 days by female; young are precocial.	100	30–100	15–30
Pied-billed Grebe	*Podilymbus podiceps*	Platform nests constructed in emergent vegetation bordering open water.	Ground	March through July; double brood.	Clutch incubated for approximately 23 days by both sexes; young are precocial.	100	30–100	15–30
Eared Grebe	*Podiceps nigricollis*	Platform nests in water on emergent wetland vegetation.	Ground	April through July; single brood.	Clutch incubated for approximately 21 days by both sexes by both sexes; young are precocial.	100	30–100	15–30
Western Grebe	*Aechmophorus occidentalis*	Platform nests in emergent vegetation or open water or, less frequently, on dry land near water.	Ground	May through August; single brood.	Clutch incubated for approximately 23 days by both sexes; young are precocial.	100	30–100	15–30

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Clark's Grebe	*Aechmophorus clarkii*	Platform nests constructed in emergent vegetation or open water or, less frequently, on dry land near water.	Ground	May through August; single brood.	Clutch incubated for approximately 23 days by both sexes; young are precocial.	100	30–100	15–30
Double-crested Cormorant	*Phalacrocorax auritus*	Platform nests on islands, on the ground or in trees; also in power poles and other artificial structures. Colonial nester.	Ground	March through August; single brood.	Clutch incubated for 25–29 days by both sexes; altricial young fledge at 37–44 days.	400	75–400	50–75
Pelagic Cormorant	*Phalacrocorax pelagicus*	Platform nests on steep cliffs along rocky and exposed shorelines along outer coasts, bays, inlets, estuaries, rapids, coves, surge narrows, harbors, lagoons, and coastal log-storage sites. Colonial nester.	Ground	April through August; single or double brood	Clutch incubated for 28–32 days by both sexes; altricial young fledge at approximately 47 days	400	75–400	50–75
American Bittern	*Botaurus lentiginosus*	Platform nests in shallow water or on ground near water.	Ground	April through July; single brood.	Clutch incubated for approximately 24 days by female; altricial young fledge at approximately 14 days.	100	50–100	25–50
Least Bittern	*Ixobrychus exilis*	Platform nests about a foot above the water in freshwater marshes.	Ground	March through July; double brood.	Clutch incubated for 16–19 days by both sexes; altricial young fledge at 13–15 days.	100	50–100	25–50

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Great Blue Heron	*Ardea herodias*	Platform nests in tall trees or other types of vegetation near water. Colonial nester.	Up to 130 feet	January through July; single brood.	Clutch incubated for 25–29 days by both sexes; altricial young fledge at approximately 60 days.	400	75–400	50–75
Great Egret	*Ardea alba*	Platform nests in tall trees or other types of vegetation near water. Colonial nester.	10–80 feet	March through July; single brood.	Clutch incubated for approximately 26 days; semi-altricial young fledge at approximately 35–42 days.	400	75–400	50–75
Snowy Egret	*Egretta thula*	Platform nests in tall trees or other types of vegetation near water. Colonial nester.	Up to 30 feet but usually 10–15 feet	March through July; single brood.	Clutch incubated for 20–24 days by both sexes; semi-altricial young fledge at 21–28 days.	400	75–400	50–75
Cattle Egret	*Bubulcus ibis*	Platform nests in tall shrubs and trees near water.	Up to 30 feet but usually 5–15 feet	April to July; single brood.	Clutch incubated for 23–25 days; semi-altricial young fledge at about 40 days.	400	75–400	50–75
Green Heron	*Butorides striatus*	Platform nests in shrubs, trees, thickets, or other vegetation near water.	10–30 feet, sometimes higher	March through July; single or double brood.	Clutch incubated for 19–21 days by both sexes; semi-altricial young fledge at 21–23 days.	100	50–100	25–50
Black-crowned Night-Heron	*Nycticorax*	Platform nests in shrubs, trees, thickets, or other vegetation near water. Colonial nester.	Up to 150 feet	January through June; double brood.	Clutch incubated for approximately 24 days by female; semi-altricial young fledge at 42–49 days.	400	75–400	50–75
White-faced Ibis	*Plegadis chihi*	Platform nests of emergent wetland vegetation in extensive wetlands. Colonial nester.	Ground	May to July; single brood.	Clutch incubated for 20–26 days by both sexes; altricial young fledge at 10–12 days.	400	75–400	50–75

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Turkey Vulture	*Cathartes aura*	Caves, rock crevices, possibly abandoned buildings, or other dark, secluded sites.	Up to 20 feet	March through June; single brood.	Clutch incubated for 37–41 days by both sexes; semi-altricial young fledge at approximately 77 days.	300	100–300	50–100
California Condor	*Gymnogyps californianus*	Caves on high, remote cliff-faces or in hollow in large redwood snag.	Cliff	Year-round, with egg-laying usually occurring in January or February; single brood.	Clutch incubated for 42–50 days by both sexes; semi-altricial young fledge at 35–49 days.	3,960	CR[a]	CR
White-tailed Kite	*Elanus caeruleus*	Platform nests in tall trees near grasslands, oak savannah, or other open habitats.	12–60 feet	February through July; sometimes double brood.	Clutch incubated for 28–30 days by both sexes; semi-altricial young fledge at 34–40 days.	300	200–300	100–200
Osprey	*Pandion haliaetus*	Platform nests on treetops, rocky outcrops, or utility poles near water.	Up to 60 feet	Mid-March through August; single brood.	Clutch incubated for 32–33 days by both sexes; semi-altricial young fledge at 51–59 days.	300	100–300	50–100
Bald Eagle	*Haliaeetus leucocephalus*	Platform nests in large trees or rocky outcrops close to lakes and large rivers.	50–180 feet	January to August; single brood.	Clutch incubated for 35–46 days by both sexes; semi-altricial young fledge at 70–77 days.	2,640	CR	CR
Northern Harrier	*Circus cyaneus*	Platform nests on ground in grasslands and open marshland with vegetative cover.	Ground	March through August; single brood.	Clutch incubated for 29–39 days by both sexes; altricial young fledge at 37 days.	300	200–300	100–200
Sharp-shinned Hawk	*Accipiter striatus*	Platform nests in trees in riparian woodland or other forested habitat with thick cover.	10–60 feet	April through August; single brood.	Clutch incubated for 30–35 days by both sexes; semi-altricial young fledge at approximately 23 days.	300	100–300	50–100

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Cooper's Hawk	*Accipiter cooperii*	Platform nests in trees in riparian woodlands or other forested habitat.	20–60 feet	March through July; single brood.	Clutch incubated for 36 days by female while male provisions her; semi-altricial young fledge at 30–34 days.	300	100–300	50–100
Northern Goshawk	*Accipiter gentilis*	Platform nests in top of tall coniferous or deciduous trees in mature forest.	Up to 75 feet	April through August; single brood.	Clutch incubated for 36–41 days by female while male provisions her; semi-altricial young fledge at 45 days old	1,320	200–1,320	100–200
Red-shouldered Hawk	*Buteo lineatus*	Platform nests below canopy in a variety of tree species.	20–60 feet	March through June; single brood.	Clutch incubated for 23–25 days by both sexes; semi-altricial young fledge at 35–42 days.	300	100–300	50–100
Swainson's Hawk	*Buteo swainsoni*	Platform nests in isolated trees in grasslands and agricultural areas.	5–30 feet	April through late June; single brood.	Clutch incubated for approximately 28 days by both sexes; semi-altricial young fledge at 28–35 days.	1,320–2,640	CR	CR
Red-tailed Hawk	*Buteo jamaicensis*	Platform nests in tall trees and other structures in a variety of open habitats.	35–90 feet	February through September; single brood.	Clutch incubated for 28–32 days by both sexes; semi-altricial young fledge at approximately 42 days.	250	100–300	50–100
Ferruginous Hawk	*Buteo regalis*	Nest in substrates ranging from cliffs, trees, utility structures, and farm buildings to haystacks and relatively level ground.	Up to 70 feet	Early March through May; single brood	Clutch incubated for 32–33 days by both sexes; altricial and nidicolous young fledge at 38–50 days.	300	100–300	50–100

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Golden Eagle	*Aquila chrysaetos*	Platform nests on rock ledges of outcrops or cliffs, and occasionally trees, in proximity to grassland, farmland, oak savannah, and other foraging grounds.	10–100 feet or higher on cliffs	February through July; single brood.	Clutch incubated for 43–45 days by female and occasionally male; semi-altricial young fledge at 63–70 days.	2,640	CR	CR
American Kestrel	*Falco sparverius*	Cavities in trees or other structures near grasslands, agricultural areas, oak savannah, or other open areas.	7–80 feet	March through July; may double brood.	Clutch incubated for 29–30 days by female while male provisions her; semi-altricial young fledge at approximately 30 days.	200	50–200	25–50
Prairie Falcon	*Falco mexicanus*	Ledges under overhangs on rock outcrops or cliffs near grassland, farmland, oak savannah, or other foraging habitat.	30–40 feet	March to May; single brood.	Clutch incubated for 29–31 days by female while male provisions her; semi-altricial young fledge at 40 days.	300	100–300	50–100
American Peregrine Falcon	*Falco peregrinus*	Cliff ledges, tall buildings, high bridges, and other high locations near open habitats.	High on cliffs or tall structures	March through June; single brood.	Clutch incubated for 28–29 days by both sexes; semi-altricial young fledge at 35–42 days.	500	CR	CR
Mount Pinos Sooty Grouse	*Dendragapus fuliginosus*	Scrapes near logs, shrubs, or other cover in coniferous forests, shrub-steppe habitat, and subalpine forests.	Ground	April through August; single brood.	Clutch incubated for 26–28 days by female; young are precocial.	100	50–100	25–50
Ruffed Grouse	*Bonasa umbellus*	Scrapes near the base of stumps, trees, or logs in forested habitat.	Ground	February through August; single brood.	Clutch incubated for approximately 24 days by female; young are precocial.	100	50–100	25–50

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Wild Turkey	*Meleagris gallopavo*	Scrapes in thick, low vegetation in oak woodlands and forest edges and clearings.	Ground	March through August; single brood.	Clutch incubated for approximately 28 days by female; young are precocial.	100	30–100	15–30
Gambel's Quail	*Callipepla gambellii*	Scrapes under shrubs in desert habitats.	Ground	April through June; single or (rarely) double brood	Clutch incubated for 21–23 days by female while male guards; young are precocial.	100	50–100	25–50
California Quail	*Callipepla californica*	Scrapes under shrubs in riparian woodland, coastal scrub, chaparral, shrub-steppe, and mixed-hardwood forest.	Ground	March through July; single or double brood.	Clutch incubated for 21–23 days by female; young are precocial.	100	50–100	25–50
Mountain Quail	*Oreortyx pictus*	Scrapes under shrubs in mountain woodland and scrub habitats, usually near water.	Ground	April through June; single brood.	Clutch incubated for 24–25 days by female; young are precocial.	100	50–100	25–50
California Black Rail	*Laterallus jamaicensis coturniculus*	Cup nests on or near ground at upper edges of tidal marshes.	0–1 foot	March through July; single brood.	Clutch incubated for 17–20 days by both sexes; young are semi-precocial.	300–600	CR	CR
Clapper Rail (California, Yuma, Light-footed)	*Rallus longirostris obscurus/yumanensis/levipes*	Platform nests in dense tidal marsh vegetation dominated by cordgrass or gumplant.	0–1 foot	February through August; single or double brood.	Clutch incubated for 23–29 days by both sexes; young are semi-precocial.	700	CR	CR
Virginia Rail	*Rallus limicola*	Platform nests in dense emergent vegetation in freshwater or estuarine marshes.	0–1 foot	April through June; single or double brood.	Clutch incubated for 14–16 days by both sexes; young are precocial.	100	50–100	25–50
Sora	*Porzana carolina*	Cup nests secured to reeds and rushes in freshwater or estuarine marshes.	0–1 foot	April through August; single brood.	Clutch incubated for approximately 14 days by both sexes; young are precocial.	100	50–100	25–50

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Common Gallinule	*Gallinula galeata*	Platform nests in dense vegetation at edge of marshes and other freshwater habitats.	Ground or water level	April through June; single or double brood.	Clutch incubated for 19–22 days by both sexes; young are precocial.	100	50–100	25–50
American Coot	*Fulica americana*	Platform nests in dense vegetation at edge of marshes and other freshwater habitats.	Ground or water level	March through July; single or double brood.	Clutch incubated for 21–24 days by both sexes; young are precocial.	100	30–100	15–30
Greater Sandhill Crane	*Grus canadensis tabida*	Platform nests in wetland vegetation on dry ground or shallow water in extensive marsh systems or grasslands.	Ground	April through August; single brood.	Clutch incubated for approximately 30 days by both sexes; young are precocial.	500	CR	CR
Western Snowy Plover	*Charadrius alexandrinus nivosus*	Scrapes on sand beaches/bars, salt pannes, or dry river beds.	Ground	April through August; double or triple brood.	Clutch incubated for approximately 24 days by both sexes; young are precocial.	600 (coastal) 300 (interior)	CR (coastal) 200–300 (interior)	CR (coastal) 100–200 (interior)
Killdeer	*Charadrius vociferus*	Scrapes in open places usually in areas with short grass, sand, or gravel.	Ground	March through June; sometimes double brood.	Clutch incubated for 24–26 days by both sexes; young are precocial.	75	30–75	15–30
Black-necked Stilt	*Himantopus mexicanus*	Scrapes or plant tufts/ tussocks in fresh, brackish, or salt marshes.	Ground	April through June; single brood.	Clutch incubated for 25–26 days by both sexes; young are precocial.	150	50–150	25–50
American Avocet	*Recurvirostra americana*	Scrapes on salt pannes, dikes, levees, and bare islands.	Ground	April through June; single brood.	Clutch incubated for 22–24 days by both sexes; young are precocial.	150	50–150	25–50

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Spotted Sandpiper	*Actitis macularia*	Scrapes in grasses among rocks, wrack, or driftwood.	Ground	April through August; single brood.	Clutch incubated for approximately 21 days by male; young are precocial.	75	30–75	15–30
Wilson's Snipe	*Gallinago gallinago*	Scrapes in dense, medium to tall marshy or wet meadow vegetation.	Ground	April to August; single brood.	Clutch incubated for 17–20 days by female; young are precocial.	75	30–75	15–30
Lesser Yellowlegs	*Tringa flavipes*	Scrapes on shallow wetlands, trees or shrubs, and open areas.	Ground	Late April to mid-May; single brood.	Clutch incubated for 22–23 days by both sexes; young are precocial.	75	30–75	15–30
Whimbrel	*Numenius phaeopus*	Hummocks or mounds near dwarfed shrub, flat heath tundra, in grass or sedge tussocks, and on gravel.	Ground	Early June to early July; single brood.	Clutch incubated 22–28 days by both sexes; young are precocial.	75	30–75	15–30
Black Skimmer	*Rynchops niger*	Saucer-shaped depressions on beaches, bars, dredge deposition, salt marsh.	Ground	May through August; single brood.	Clutch incubated 21–23 days by both sexes; young are semi-precocial.	300	100–300	50–100
Long-billed Curlew	*Numenius americanus*	Scrapes in short-grass or mixed-prairie habitat with flat to rolling topography.	Ground	Mid-late March to early July; single brood.	Clutch incubated for 27–29 days by both sexes; young are precocial.	75	30–75	15-30
Marbled Godwit	*Limosa fedoa*	Scrapes in short, sparsely to moderately vegetated landscapes that include native grassland and wetland complexes with a variety of wetland classes (ephemeral to semipermanent).	Ground	Mid-May to late June; single brood.	Clutch incubated for 23–26 days by both sexes; young are precocial	75	30–75	15–30

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California Gull	*Larus californicus*	Scrapes on islands in alkali or freshwater lakes and ponds or salt ponds.	Ground	April through August; single brood.	Clutch incubated for 23–27 days by both sexes; young are precocial.	150	50–150	25–50
Western Gull	*Larus occidentalis*	Ledges on cliffs, bluffs, bridges, buildings, and other areas inaccessible to nest predators.	Ground/cliff	April through August; single brood.	Clutch incubated for 30–32 days by both sexes; young are semi-precocial.	150	50–150	25–50
Caspian Tern	*Sterna caspia*	Scrapes on islands, beaches, and levees.	Ground	April through August; single brood.	Clutch incubated for approximately 20 days by both sexes; semi-precocial young fledge at approximately 14 days.	300	100–300	50–100
Forster's Tern	*Sterna forsteri*	Scrapes on open levees, islands, and occasionally reed beds.	Ground	April through September; single brood.	Clutch incubated for approximately 23 days by both sexes; semi-altricial young fledge after approximately 7 days.	300	100–300	50–100
California Least Tern	*Sterna antillarum*	Scrapes on bare sandy or gravelly substrates in undisturbed areas.	Ground	May through June; single brood.	Clutch incubated for 20–25 days by both sexes; young are semi-precocial.	600	CR	CR
Black Tern	*Chlidonias niger*	Platform nests constructed of dead plant stems in freshwater wetlands and flooded rice fields.	Ground	May through August; single brood.	Clutch incubated for 20–22 days by both sexes; semi-precocial young fledge at approximately 14 days.	300	100–300	50–100

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Marbled Murrelet	*Brachyramphus marmoratus*	Horizontal limbs of large, old-growth conifers.	20–250 feet	March through September; likely a single brood.	Clutch incubated for approximately 30 days by both sexes; semi-precocial young fledge at approximately 21 days.	1,320 (high disturbance)[b]	CR	CR
Cassin's Auklet	*Ptychoramphus aleuticus*	Excavates burrows in soft soil, sod or natural cavities such as rock crevices and under trees, cacti or logs. Colonial nester.	Ground/cliff	Varies within November through May; single and double brood.	Clutch incubated 37–42 days by both sexes; altricial young confined to nest for 30 days.	400	75–400	50–75
Band-tailed Pigeon	*Columba fasciata*	Platform nests in trees or shrubs in oak woodlands, mixed hardwood forests, and mixed coniferous forests, usually in areas with oak trees.	5–180 feet	March through November; double or triple brood.	Clutch incubated for 18–20 days by both sexes; altricial young fledge at 25–30 days.	75	50–75	25–50
Mourning Dove	*Zenaida macroura*	Platform nests in a tree or shrub, but also on buildings or on ground, in a variety of habitats.	0–25 feet	February through September; several broods.	Clutch incubated for 14–15 days by both sexes; altricial young fledge at 13–15 days.	50	20–50	10–20
Western Yellow-billed Cuckoo	*Coccyzus americanus*	Platform nests in bushes or trees in dense, wide riparian woodlands.	2–20 feet	June through July; single brood.	Clutch incubated for 9–11 days by both sexes; altricial young fledge at 21 days.	500	CR	CR
Greater Roadrunner	*Geococcyx californianus*	Cup nests in dense, brushy habitats in desert, sagebrush, and chaparral habitats.	3–15 feet	April through June; double brood.	Clutch incubated for 16–20 days by male; altricial young fledge at 18–30 days.	100	50–100	25–50

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Barn Owl	*Tyto alba*	Cavities in trees, buildings, crevices in rocks, outcrops, cliffs and quarries.	1–400 feet	January through May; often double broods.	Clutch incubated for 32–34 days by female while male provisions her; altricial young fledge at 60 days.	150	100–150	50–100
Flammulated Owl	*Otus flammeolus*	Cavities in trees, including aspens, oaks, pines, or other trees in forested areas.	10–40 feet	May through October; single brood.	Clutch incubated for 21–24 days by female while male provisions her; altricial young fledge at 20–26 days	200	100–200	50–100
Western Screech Owl	*Otus kennicottii*	Cavities in trees, particularly cottonwoods, in open woodlands.	10–30 feet	March through June; single brood.	Clutch incubated for 21–30 days by female while male provisions her; altricial young fledge at approximately 28 days.	200	100–200	50–100
Great Gray Owl	*Strix nebulosa*	Near high elevation meadows, on broken top trees or stick nests of other species.	30-50 feet	Late March through early July; single brood	Average clutch incubated for 29.7 days by female, with male provisioning her; semi-precocial young fledge at 21-28 days but can be dependent on nest site and male parent until fall.	1,320	CR	CR
Great Horned Owl	*Bubo virginianus*	Cavities or large nest platforms of other species in trees, rock ledges, or caves.	Uses existing platforms at various heights	January through May; single brood.	Clutch incubated for 26–35 days by female while male provisions her; altricial young fledge at 28–35 days.	300	100–300	50–100

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Northern Pygmy Owl	*Glaucidium gnoma*	Cavities in trees in oak woodlands and coniferous forests.	8–20 feet	April through August; number of broods unknown.	Clutch incubated for 25–30 days by female while male provisions her; semi-altricial young fledge at approximately 23 days.	200	50–200	25–50
Spotted Owl (Northern/California)	*Strix occidentalis caurina/occidentalis*	Cavities or platforms (natural or old nests of other species) in coniferous or mixed hardwood forests.	30–165 feet	March through August; single brood.	Clutch incubated for 29–30 days by female while male provisions her; altricial young fledge at 34–36 days.	1,320 (high disturbance)[b]	CR	CR
Burrowing Owl	*Athene cunicularia*	Small mammal burrows in open grasslands or at the edge of agricultural areas.	Ground	February through August; single brood.	Clutch incubated for 27–30 days by female while male provisions her; altricial young fledge at 40–45 days.	250	CR	CR
Long-eared Owl	*Asio otus*	Platform nests built by other species high in trees in coniferous forests or mixed woodlands.	10–30 feet	February through May; single brood.	Clutch incubated for 25–30 days by female while male provisions her; altricial young fledge at 23–24 days.	300	100–300	50–100
Short-eared Owl	*Asio flammeus*	Scrapes in tall, dense vegetation in grasslands and freshwater or brackish marshes.	Ground	March through July; single or possibly double brood.	Clutch incubated for 21–28 days by female while male provisions her; semi-altricial young leave nest at 31–36 days.	300	100–300	50–100
Northern Saw-whet Owl	*Aegolius acadicus*	Cavities in trees in forested areas.	5–50 feet	March through August; single or double brood.	Clutch incubated for 21–28 days by female; semi-altricial young fledge at approximately 30 days.	200	100–200	50–100

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Lesser Nighthawk	*Chordeiles acutipennis*	Scrapes on bare gravelly or sandy ground in desert and sparsely vegetated habitats.	Ground	April through July; single or double brood.	Clutch incubated for 18–19 days by female; semi-precocial young fledge after 3 weeks.	75	30–75	20–30
Common Nighthawk	*Chordeiles minor*	Scrapes on bare gravelly or sandy ground in open areas within chaparral, grasslands, and forest openings.	Ground	June through July; double brood.	Clutch incubated for 18–20 days by female; semi-precocial young fledge after about 21 days.	75	30–75	20–30
Common Poorwill	*Phalaenoptilus nuttallii*	Scrapes on bare gravelly, sandy, or leaf-litter-covered ground in grasslands and desert habitats.	Ground	March through August; double brood.	Clutch incubated for 20–21 days by both sexes; young are precocial.	75	30–75	20–30
Black Swift	*Cypseloides niger*	Sheltered crevices or ledges on cliff faces on coast or under waterfall.	20–45 feet	May through September; single brood.	Clutch incubated for 21–27 days by both sexes; altricial young fledge at 45–49 days.	75	30–75	15–30
Vaux's Swift	*Chaetura vauxi*	Cavities in redwoods, other conifers, and occasionally sycamores, chimneys, and buildings.	Up to 50 feet	May through August; single brood.	Clutch incubated for 18–20 days; altricial young fledge at approximately 28 days.	75	30–75	15–30
White-throated Swift	*Aeronautes saxatalis*	Rock cracks and crevices on cliffs and tall bridges.	10–195 feet	May through July; single brood.	Clutch incubated for 20–27 days; altricial young fledge at 40–46 days.	75	30–75	15–30
Black-chinned Hummingbird	*Arcgilochus alexandri*	Cup nests in trees and shrubs in woodlands, urban areas, and other habitats with nectar sources.	4–10 feet	April through June; two or three broods.	Clutch incubated for 13–16 days by female; altricial young fledge at approximately 21 days.	50	20–50	15–20

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Anna's Hummingbird	*Calypte anna*	Cup nests in trees and shrubs in woodlands, urban areas, and other habitats with nectar sources.	1–30 feet	December through June; two or three broods.	Clutch incubated for 16–17 days by female; altricial young fledge at 25–26 days.	50	20–50	15–20
Costa's Hummingbird	*Calypte costae*	Cup nests in trees and shrubs in riparian scrub, urban areas, and other habitats with nectar sources.	4–5 feet	April through July; single or occasionally double brood.	Clutch incubated for 15–18 days by female; altricial young fledge at 20–23 days.	50	20–50	15–20
Calliope Hummingbird	*Stellula calliope*	Cup nests in montane or riparian woodlands.	2–70 feet	May through August; single brood.	Clutch incubated for 15–16 days by female; altricial young fledge at 21–23 days.	50	20–50	15–20
Allen's Hummingbird	*Selasphorus sasin*	Cup nests in shrubs, trees, or vines in a variety of forest and woodland types, as well as coastal scrub.	1–10 feet; occasionally as high as 90 feet	February through August; double brood.	Clutch incubated for 16–22 days by female; altricial young fledge at approximately 22 days.	50	20–50	15–20
Belted Kingfisher	*Ceryle alcyon*	Burrow in banks near fresh water.	Ground	April through July; single brood.	Clutch incubated for 23–24 days by both sexes; altricial young fledge at 30–35 days.	100	50–100	25–50
Lewis's Woodpecker	*Melanerpes lewis*	Cavities in snags or dead branches in oak woodlands and mixed hardwood forests.	5–80 feet	May through July; single brood.	Clutch incubated for 13–14 days by both sexes; altricial young fledge at 28–34 days.	50	15–50	10–15
Acorn Woodpecker	*Melanerpes formicivorous*	Cavities in trees or snags in open woodlands, partly wooded areas, or utility poles near a source of acorns.	5–25 feet	April through July; two or three broods.	Clutch incubated for approximately 11 days by both sexes; altricial young fledge at approximately 31 days.	50	15–50	10–15

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Red-breasted Sapsucker	*Sphyrapicus ruber*	Cavities in trees or snags in coniferous or mixed forest.	5–45 feet	May through June; single brood.	Clutch incubated for 12–14 days by both sexes; altricial young fledge at 23–28 days.	50	15–50	10–15
Williamson's Sapsucker	*Sphyrapicus thyroideus*	Tree cavities in conifer and mixed conifer-deciduous forests.	8–52 feet	Late April through late July; single brood.	Clutch incubated 12–14 days by both sexes; altricial young fledge at 31–32 days.	50	15–50	10–15
Ladder-backed Woodpecker	*Picoides scalaris*	Cavities in trees and cactus.	4-20 feet	Unknown in CA; single brood.	Clutch incubated 14 days by both sexes; altricial young with unknown fledging period.	50	15–50	10–15
Nuttall's Woodpecker	*Picoides nuttallii*	Cavities in trees or snags in oak woodlands, or less frequently riparian or other woodlands.	2–60 feet	April through June; single brood.	Clutch incubated for approximately 14 days by both sexes; altricial young fledge at approximately 29 days.	50	15–50	10–15
Downy Woodpecker	*Picoides pubescens*	Cavities in trees or snags in riparian or other deciduous woodlands, or less frequently in coniferous forests.	3–44 feet	April through May; double brood.	Clutch incubated for approximately 12 days by both sexes; altricial young fledge at 20–22 days.	50	15–50	10–15
Hairy Woodpecker	*Picoides villosus*	Cavities in snags or dead branches in woodlands and coniferous forests.	3–102 feet	March through August; single brood.	Clutch incubated for 11–15 days by both sexes; altricial young fledge at 28–30 days.	50	15–50	10–15
White-headed Woodpecker	*Picoides albolarvatus*	Cavities in snags or stumps at least 2 feet in diameter in pine forests.	6–50 feet	April through August; single brood.	Both sexes incubate clutch for 13–15 days; altricial young fledge at approximately 26 days.	50	15–50	10–15

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Northern Flicker	*Colaptes auratus*	Cavities in tree trunks or snags in open or sparsely wooded areas; more often in live wood.	8–45 feet	April through June; single brood.	Clutch incubated for 11–13 days by both sexes; altricial young fledge at 25–28 days.	50	15–50	10–15
Pileated Woodpecker	*Dryocopus pileatus*	Cavities in snags or dead branches in mature forests.	15–70 feet	March to July; single brood	Clutch incubated for approximately 18 days by both sexes; altricial young fledge at 26–28 days.	50	15–50	10–15
Olive-sided Flycatcher	*Contopus cooperi*	Cup nest in trees in open conifer forest or mixed woodland.	5–70 feet	June through July; single brood.	Clutch incubated for 16–17 days by female; altricial young fledge at 15–19 days.	75	30–75	15–30
Western Wood-Pewee	*Contopus sordidulus*	Cup nests in trees, mainly coniferous but sometimes deciduous woodlands near watercourses.	15–30 feet	May through July; single brood.	Clutch incubated for approximately 12 days by female; altricial young fledge at 14–18 days.	75	30–75	15–30
Willow Flycatcher (Southwestern, Little, *adastus*)	*Empidonax traillii extimus/brewsteri/adastus*	Cup nests in densely vegetated riparian associations of cottonwoods and willows.	5–20 feet	May through July; single brood.	Clutch incubated for 12–13 days by female; altricial young fledge at 14 days.	300	CR	CR
Vermilion Flycatcher	*Pyrocephalus rubinus*	Loosely constructed nest in wooded riparian areas.	8-55 feet	Mid-March through mid-July; single or double brood.	Clutch incubated for 14-15 days by female; altricial young fledge at 14-16 days.	75	30–75	15–30
Hammond's Flycatcher	*Empidonax hammondii*	Cup nests in trees in forests and woodlands.	6–65 feet	May through July; single brood.	Clutch incubated for 12–15 days by female; altricial young fledge at 17–18 days .	75	30–75	15–30

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Dusky Flycatcher	*Empidonax oberholseri*	Cup nests in small trees or shrubs pine forests	3–20 feet	May through July; single brood.	Clutch incubated for 12–15 days by female; altricial young fledge at approximately 18 days.	75	30–75	15–30
Western (Pacific-slope and Cordilleran) Flycatcher	*Empidonax difficilis/occidentalis*	Cup nests in cavities or tree stumps or on ledges or crevices in woodlands and forests often in riparian areas.	0–30 feet	April through July; sometimes double brood.	Clutch incubated for 14–15 days by female; altricial young fledge at 15–18 days.	75	30–75	15–30
Black Phoebe	*Sayornis nigricans*	Cup nests of mud cemented to vertical structures, often under an overhang.	3–10 feet	March through June; double brood.	Clutch incubated for 15–18 days by female; altricial young fledge at approximately 21 days.	75	30–75	15–30
Say's Phoebe	*Sayornis saya*	Cup nests on ledges with overhang or under a bridge; nest not made of mud like black phoebe.	0–79 feet	March through June; double brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 14–18 days.	75	30–75	15–30
Ash-throated Flycatcher	*Myiarchus cinerascens*	Cavities in trees and other structures in open deciduous woodland.	2–70 feet	May through July; single brood.	Clutch incubated for approximately 15 days by female; altricial young fledge at 16–17 days.	50	15–50	10–15
Cassin's Kingbird	*Tyrannus vociferans*	Cup nests in trees in savannahs and other open habitats.	25–74 feet	April through June; double brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 14 days.	75	30–75	15–30
Western Kingbird	*Tyrannus verticalis*	Cup nests in trees and artificial structures (e.g., power poles) in variety of open habitats.	13–55 feet	April through June; double brood.	Clutch incubated for 12–14 days by both sexes; altricial young fledge at 13–19 days.	75	30–75	15–30

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Loggerhead Shrike	*Lanius ludovicianus*	Cup nests in dense shrubs near grasslands and other open habitats.	3–8 feet	February through June; two or three broods.	Clutch incubated for 14–16 days by female while male provisions her; altricial young fledge at 17–21 days.	75	30–75	15–30
Least Bell's Vireo	*Vireo bellii pusillus*	Cup nests in dense shrubs and small trees in dense riparian areas.	1–3 feet	April through August; double brood.	Clutch incubated for approximately 14 days by both sexes; altricial young fledge at 10–12 days.	500	CR	CR
Arizona Bell's Vireo	*Vireo bellii arizonae*	Cup nests in dense shrubs and small trees in dense riparian areas.	1–3 feet	April through August; double brood.	Clutch incubated for approximately 14 days by both sexes; altricial young fledge at 10–12 days.	500	CR	CR
Cassin's Vireo	*Vireo cassinii*	Cup nests in a trees or shrubs in oak or oak-coniferous or mixed riparian woodland.	5–35 feet	April through July; single brood.	Clutch incubated for approximately 15 days by both sexes; altricial young fledge at 13 days.	75	30–75	15–30
Hutton's Vireo	*Vireo huttoni*	Cup nests on a twig forks in oaks and other trees along streams and canyons.	3–45 feet	March thorugh June; single or double brood.	Clutch incubated for 14–16 days by both sexes; altricial young fledge at approximately 14 days.	75	30–75	15–30
Warbling Vireo	*Vireo gilvus*	Cut nests high in trees in mature oak woodlands and mixed deciduous forests.	20–60 feet	May through July; double brood.	Clutch incubated for 12–13 days by both sexes; altricial young fledge at approximately 14 days.	75	30–75	15–30
Gray Vireo	*Vireo vicinior*	Nests in thorn scrub or pinyon-juniper woodland, low in thorny or twiggy shrub or tree.	2–8 feet	Mid-April through mid-August	Clutch incubated 13-14 days by both sexes; altricial young fledge at 13-14 days.	75	30–75	15–30

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Gray Jay	*Perisoreus canadensis*	Cup nests in shrubs or trees in coniferous forests and sometimes oak woodlands.	5–30 feet	March through July; single brood.	Clutch is incubated for 16–18 days; altricial young fledge at approximately 15 days.	75	30–75	15–30
Steller's Jay	*Cyanocitta stelleri*	Cup nests in trees or shrubs in coniferous or mixed hardwood forests or other woodlands.	7–16 feet	April through June; likely single brood.	Clutch incubated for approximately 16 days by female while male provisions her; altricial young fledge at 18 days.	75	30–75	15–30
Western Scrub-jay	*Aphelocoma californica*	Platform nests in shrubs, trees, bushes or vine tangles in a wide variety of habitats, including oak woodlands, savannah, agricultural, and suburban.	2–50 feet	March through June; single brood.	Clutch incubated for 15–17 days by female while male provisions her; altricial young fledge at 18 days.	75	30–75	15–30
Pinyon Jay	*Gymnorhinus cyanocephalus*	Cup nests in trees in ponderosa-pine forest.	3–115 feet	Mid-March through late June; single brood.	Clutch incubated 17 days by female, male provisions female; altricial young fledge at 21–22 days.	75	30–75	15–30
Clark's Nutcracker	*Nucifraga columbiana*	Cup nests in pines, junipers, and firs in mountain coniferous forests.	8–45 feet	February through August; single brood.	Clutch incubated for 16–18 days by both sexes; altricial young fledge at approximately 22 days.	75	30–75	15–30
Yellow-billed Magpie	*Pica nuttallii*	Platform nests in oak trees and occasionally other trees in savannah.	30–80 feet	February through July; single brood.	Clutch incubated for 16–18 days by female while male provisions her; altricial young fledge at approximately 30 days.	75	30–75	15–30

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American Crow	*Corvus brachyrhynchos*	Platform nests in variety of large trees, usually near the trunk, and artificial structures in a wide variety of habitats.	10–70 feet	February through July; single brood.	Clutch incubated for approximately 18 days by female and possibly helpers; altricial young fledge at 35 days.	50	30–50	15–30
Common Raven	*Corvus corax*	Platform nests on sheltered rock ledges or in forks of large trees and artificial structures in a wide variety of habitats.	45–80 feet	February through July; single brood.	Clutch incubated for 20–21 days by female while male provisions her; altricial young fledge at 35–42 days.	50	30–50	15–30
Western Bluebird	*Sialia mexicana*	Cavities in woodland clearings, savannahs, and other open habitats.	4–48 feet	April through June; double brood.	Clutch incubated for 13–14 days by female; altricial young fledge at approximately 20 days.	50	15–50	10–15
Townsend's Solitaire	*Myadestes townsendi*	Cup nests on ground usually on cutbanks and other slopes in mountain coniferous forests.	0–12 feet	April through June; single or double brood.	Clutch incubated for 11–14 days by female; altricial young fledge at 10–14 days.	75	30–75	15–30
Swainson's Thrush	*Catharus ustulatus*	Cup nests in dense shrubs, often in riparian woodlands and mixed coniferous forests.	2–20 feet	April through August; single or (rarely) double brood.	Clutch incubated for 10–13 days by female; altricial young fledge after 10–12 days.	75	30–75	15–30
Hermit Thrush	*Catharus guttatus*	Cup nests in dense shrubs variety of forests and woodlands.	2–10 feet	June through July; single or double brood.	Clutch incubated for 12–13 days by female; altricial young fledge at 12–13 days.	75	30–75	15–30
American Robin	*Turdus migratorius*	Cup nests in trees or shrubs, ledges of buildings, or in a tree forks in variety of open habitats.	3–25 feet	May through July; two or three broods.	Clutch incubated for 11–14 days by female; altricial young fledge at 14–16 days.	75	30–75	15–30

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Varied Thrush	*Ixoreus maevius*	Cup nests on horizontal branches of trees in moist coniferous forests.	5–20 feet	April through August; double brood.	Clutch incubated for approximately 14 days by female; altricial young fledge at 13–15 days.	75	30–75	15–30
Horned Lark	*Eremophila alpestris*	Scrapes in a small hollow usually sheltered by plant tufts in grasslands and other open habitats.	Ground	February through August; two or three broods.	Clutch incubated for 10–14 days by female; altricial young fledge at 9–12 days.	75	30–75	15–30
Purple Martin	*Progne subis*	Cavities in trees in mountain forests, particularly burned areas with snags.	10–34 feet	April through August; single brood	Clutch incubated for 15–18 days by the female; altricial young fledge at 24–31 days.	75	30–75	15–30
Tree Swallow	*Tachycineta bicolor*	Cavities in open habitats, such as grasslands or wetlands with dead standing trees; usually near water.	10–16 feet	April through August; double brood.	Clutch is incubated for 13–16 days; altricial young fledge at 16–20 days.	50	30–50	15–30
Violet-green Swallow	*Tachycineta thalassina*	Cavities or occasionally on cliffs or banks in deciduous, coniferous, and mixed woodlands.	9–17 feet	April through August; single brood.	Clutch is incubated for 13–15 days; altricial young fledge at 16–24 days.	50	30–50	15–30
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	Cavities on a steep slope or use crevices and holes in bridges and buildings.	Ground/cliff	April through June; single brood.	Clutch incubated for 15–16 days by female; altricial young fledge at 18–21 days.	75	30–75	15–30
Bank Swallow	*Riparia riparia*	Cavities in sandy banks or cliffs along rivers.	Ground/cliff	May through July; single brood.	Clutch incubated for 12–16 days by both sexes; altricial young fledge at 18–24 days.	100	CR	CR

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Barn Swallow	*Hirundo rustica*	Cup nests often on buildings and bridges in open habitats near water.	6–40 feet	April through July; double brood.	Clutch incubated for 14–16 days by both sexes; altricial young fledge at 17–24 days.	50	30–50	15–30
Cliff Swallow	*Petrochelidon pyrrhonota*	Closed mud nests often on cliff faces, buildings, or bridges in open habitats near water.	5 feet and higher	April through June; double brood.	Clutch incubated for 12–14 days by both sexes; altricial young fledge at approximately 23 days.	50	30–50	15–30
Mountain Chickadee	*Poecile gambeli*	Cavities in trees in coniferous mountain forests.	16–50 feet	April through August; single or double brood.	Clutch is incubated for 14 days; altricial young fledge at 20 days.	50	15–50	10–15
Chestnut-backed Chickadee	*Poecile rufescens*	Cavities trees in coniferous forests and deciduous woodlands.	0–80 feet	March through July; single or (rarely) double brood.	Clutch is incubated for 12–14 days by female; altricial young fledge at 18–21 days.	50	15–50	10–15
Oak Titmouse	*Baeolophus inornatus*	Cavities in trees in oak woodlands.	2–40 feet	March through June; single brood.	Clutch incubated for 14–16 days by female; altricial young fledge at 17 days.	50	15–50	10–15
Bushtit	*Psaltriparus minimus*	Pendulous nests in trees and shrubs in a variety of habitats.	3–98 feet	February through June; double brood.	Clutch incubated for 12–13 days by both sexes; altricial young fledge at 14–15 days.	50	30–50	15–30
Red-breasted Nuthatch	*Sitta canadensis*	Cavities in trees in coniferous forests and mixed woodlands.	5–40 feet	April through July; single or (rarely) double brood.	Clutch incubated for approximately 12 days by female while male provisions her; altricial young fledge at 18–21 days.	75	30–75	15–30
White-breasted Nuthatch	*Sitta carolinensis*	Cavities in trees in deciduous woodlands and mixed coniferous forests.	1–50 feet	March through June; single brood.	Clutch incubated for 12–14 days by female while male provisions her; altricial young fledge at 14–16 days.	50	15–50	10–15

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Pygmy Nuthatch	*Sitta pygmaea*	Cavities in dead trees or dead portions of trees in long-needled pine forests.	20–70 feet	May through July; single or double brood.	Clutch incubated for 15–16 days by female while male provisions her; altricial young fledge at 20–21 days.	75	30–75	15–30
Brown Creeper	*Certhia americana*	Cup nests concealed behind loose bark, in crevices on a trees in coniferous forests and mixed coniferous forests..	5–15 feet	May through July; single brood.	Clutch incubated for 15–18 days by female while male provisions her; altricial young fledge at 21 days.	75	30–75	15–30
Rock Wren	*Salpinctes obsoletus*	Cavities on rocky slopes	Ground/cliff	March through June; double or triple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 14–16 days.	75	30–75	15–30
Canyon Wren	*Catherpes mexicanus*	Cup nests in rock crevices or ledges in rocy habitats.	Ground/cliff	March through July; double brood.	Clutch incubated for 12–18 days by female; altricial young fledge at approximately 15 days.	75	30–75	15–30
Bewick's Wren	*Thryomanes bewickii*	Cavities in trees, brush, or between rocks in open woodlands and shrubby areas.	0–20 feet	March through July; double or triple brood.	Clutch incubated for approximately 14 days by female while male provisions her; altricial young fledge at approximately 14 days.	75	30–75	15–30
House Wren	*Troglodytes aedon*	Cavities in shrubby cover and thickets in open woodlands and hedgerows.	0–20 feet	April through July; double brood.	Clutch incubated for 13–15 days by female; altricial young fledge at 12–18 days.	50	30–50	15–30
Pacific Wren	*Troglodytes pacificus*	Cavities or crevices in logs, stumps, root balls, or trees in variety of forests.	0–10 feet	March through August; single or double brood.	Clutch is incubated for 14–17 days by female; altricial young fledge at approximately 19 days.	75	30–75	15–30

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Marsh Wren	*Cistothorus palustris*	Domed nests over the water in tall rushes and marsh grasses in wetland habitats.	1–5 feet	March through July; double or triple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 13–15 days.	75	30–75	15–30
American Dipper	*Cinclus mexicanus*	Domed nests in crevices in rocks, logs, bridges, or other protected areas immediately adjacent to water.	0–30 feet	March through August; single or double brood.	Clutch is incubated for approximately 16 days by female; altricial young fledge at 18–25 days.	75	30–75	15–30
Golden-crowned Kinglet	*Regulus satrapa*	Hanging nests woven onto conifer twigs in coniferous forests and mixed woodlands.	6–50 feet	May through August; single or double brood.	Clutch is incubated for 14–15 days by female; altricial young fledge at 16–19 days.	75	30–75	15–30
Ruby-crowned Kinglet	*Regulus calendula*	Cup nests in trees in coniferous woodlands.	4–100 feet	May through July; single brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 16 days.	75	30–75	15–30
Blue-gray Gnatcatcher	*Polioptila caerulea*	Cup nests in trees or shrubs in a variety of habitats from shrublands to mature forests.	3–80 feet	April through July; double brood.	Clutch incubated for approximately 15 days by both sexes; altricial young fledge at 12–13 days.	75	30–75	15–30
Coastal California Gnatcatcher	*Polioptila californica californica*	Cup nests in coastal sage scrub and chaparral.	2–3 feet	February through August; double brood.	Clutch incubated for approximately 14 days by both sexes; altricial young fledge at 15–16 days.	500	CR	CR
Wrentit	*Chamaea fasciata*	Cup nests in coastal sage scrub and chaparral.	1–4 feet	March through July; double brood.	Clutch incubated for 15–16 days by both sexes; altricial young fledge at 15–16 days.	75	30–75	15–30

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Northern Mockingbird	*Mimus polyglottos*	Cup nests in shrubs and trees in variety of habitats, including woodlands and in developed areas.	3–10 feet	March through July; double or triple brood.	Clutch incubated for 11–14 days by female; altricial young fledge at 12–14 days.	75	30–75	15–30
Sage Thrasher	*Oreoscoptes montanus*	Cup nests in low shrubs in sagebrush habitat.	2–3 feet	April through August; single or double brood.	Clutch is incubated for 13–17 days; altricial young fledge at approximately 11 days.	75	30–75	15–30
Le Conte's Thrasher	*Toxostoma lecontei*	Cup nests in cholla or a low tree, in desert areas with shrubby growth.	2–8 feet	February through June; double or triple brood.	Clutch incubated for 14–20 days by both sexes; altricial young fledge at 14–17 days.	75	30–75	15–30
California Thrasher	*Toxostoma redivivum*	Cup nests in low trees or shrubs in sage scrub and chaparral.	2–4 feet	February through July; double brood.	Clutch incubated for approximately 14 days by both sexes; altricial young fledge at 12–14 days.	75	30–75	15–30
Bendire's Thrasher	*Toxostoma bendirei*	Cup nests in shrubs, cacti, or trees.	2–5 feet	Late February through April; single, double, or triple brood.	Clutch incubated 12–14 days by both parents; altricial young fledge at 12–13 days.	75	30–75	15–30
Cedar Waxwing	*Bombycilla cedrorum*	Cup nests in forks of trees in riparian or redwood forests.	5–50 feet	June through August; single or double brood.	Clutch is incubated for 12–14 days; altricial young fledge at 16–18 days	75	30–75	15–30
Phainopepla	*Phainopepla nitens*	Cup nests in trees in desert scrub and coastal chaparral.	6–11 feet	Late February—desert; April through June—coastal; double brood.	Clutch incubated for 14–15 days by both sexes; altricial young fledge at 18–19 days.	75	30–75	15–30

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Orange-crowned Warbler	*Oreothlypis celata*	Cup nests on the ground or in crevices near ground in a variety of habitats, often where woodland and chaparral habitats meet.	Ground	April through July; single or double brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 12–13 days.	75	30–75	15–30
Nashville Warbler	*Oreothlypis ruficapilla*	Cup nests on ground concealed in bushes or small trees in woodland edges or shrubby areas.	Ground	May through July; single brood.	Clutch incubated for 11–12 days by female; altricial young fledge at 11 days.	75	30–75	15–30
Yellow Warbler	*Setophaga petechia*	Cup nests in trees or shrubs in shrubby growth in riparian areas.	2–12 feet	April through July; single brood.	Clutch incubated for 11–12 days by female; altricial young fledge at days.	75	30–75	15–30
Yellow-rumped Warbler	*Setophaga coronata*	Cup nests in trees in coniferous woodlands.	4–50 feet	April through July; single or (rarely) double brood.	Clutch incubated for 12–13 days by female; altricial young fledge at 12–14 days.	75	30–75	15–30
Black-throated Gray Warbler	*Setophaga nigrescens*	Cup nests in trees or shrubs in open woodlands in mountainous areas.	8–35 feet	May through July; single or double brood.	Clutch incubated by female; young are altricial. Length of incubation period and age at fledging undocumented.	75	30–75	15–30
Hermit Warbler	*Setophaga occidentalis*	Cup nests high in trees in coniferous forests	20–40 feet	May through July; single brood.	Clutch incubated for approximately 12 days by both sexes; altricial young fledge at 8–10 days.	75	30–75	15–30

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MacGillivray's Warbler	*Geothlypis tolmiei*	Cup nests in low thick shrub in riparian woodlands and coniferous or mixed forests.	1–5 feet	May through July; single brood.	Clutch incubated for 11–13 days by female; altricial young fledge at 8–10 days.	75	30–75	15–30
Common Yellowthroat	*Geothlypis trichas*	Cup nests in reeds and other wetland vegetation over water or near water.	1–3 feet	April through July; single brood.	Clutch incubated for approximately 12 days by female; altricial young fledge at 9–10 days.	75	30–75	15–30
Wilson's Warbler	*Cardellina pusilla*	Cup nests on ground, hidden by vegetation in shrub habitats in forests and chaparral.	Ground	April through June; single or (rarely) double brood.	Clutch incubated for 11–13 days by female; altricial young fledge at 10–11 days.	75	30–75	15–30
Yellow-breasted Chat	*Icteria virens*	Cup nests in a dense shrub or tangle in thick riparian vegetation.	1–8 feet	April through July; single or (rarely) brood.	Clutch incubated for 11–12 days by female; altricial young fledge at 8–11 days.	75	30–75	15–30
Western Tanager	*Piranga ludoviciana*	Cup nests high in trees on outer branches in coniferous and mixed hardwood forests.	8–75 feet	May through July; single brood.	Clutch incubated for approximately 13 days by female; altricial young fledge at 10–11 days.	75	30–75	15–30
Green-tailed Towhee	*Pipilo chlorulus*	Cup nests in or at base of low shrubs in chaparral and disturbed (low growth) forest habitats.	0–2 feet	April through August; single or double brood.	Clutch incubated for 11–13 days by female; altricial young fledge at 11–14 days.	75	30–75	15–30
Spotted Towhee	*Pipilo maculatus*	Cup nests usually on the ground or very low in bushes shrubby habitats.	2–12 feet	April through July; single or double brood.	Clutch incubated for 12–13 days by female; altricial young fledge at approximately 9 days.	75	30–75	15–30

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California Towhee	*Melozone crissalis*	Cup nests in shrubs or small trees in brushy habitats.	4–12 feet	March through July; double or triple brood.	Clutch incubated for approximately 14 days by female; altricial young fledge at approximately 10 days.	75	30–75	15–30
Rufous-crowned Sparrow	*Aimophila ruficeps*	Cup nests at the base of a grass clumps, in dry rocky areas with sparse undergrowth.	0–2 feet	April through June; single or double brood.	Clutch incubated for 11–13 days by female; altricial young fledge at 9 days.	75	30–75	15–30
Chipping Sparrow	*Spizella passerina*	Cup nests in trees or shrubs in open woodlands.	3–20 feet	April through July; double brood.	Clutch incubated for 11–14 days by female; altricial young fledge at 9–12 days.	75	30–75	15–30
Black-chinned Sparrow	*Spizella atrogularis*	Cup nests in shrubs in chaparral habitat.	1–3 feet	April through August; single brood.	Clutch incubated for 12–13 days by female; altricial young fledge at approximately 10 days.	75	30–75	15–30
Lark Sparrow	*Chondestes grammacus*	Cup nests usually in scrapes on ground in open grasslands, or cup nests in herbaceous or woody shrubs.	0–9 feet	April through July; double brood.	Clutch incubated for 11–13 days by female; altricial young fledge at 9–10 days.	75	30–75	15–30
Black-throated Sparrow	*Amphispiza bilineata*	Cup nests in thorny shrubs or cactus in chaparral or desert habitats.	1 foot	April through June; single or double brood.	Clutch incubated for 12–13 days by female; altricial young fledge at approximately 9.5 days.	75	30–75	15–30
Sage Sparrow	*Artemisiospiza belli*	Cup nests in thick bushes in chaparral and desert habitats.	1 foot	March through June; double brood.	Clutch incubated for 10–16 days by female; altricial young fledge at 9–10 days.	75	30–75	15–30

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Bryant's Savannah Sparrow	*Passerculus sandwichensis alaudinus*	Cup nests on ground in dense, moist grasslands, ruderal vegetation, or saltmarsh vegetation.	Ground	April through July; single or double brood.	Clutch incubated for 10–13 days; altricial young fledge at 7–14 days.	75	30–75	15–30
Belding's Savannah Sparrow	*Passerculus sandwichensis beldingi*	Cup nests on ground in dense, moist grasslands, ruderal vegetation, or saltmarsh vegetation.	Ground	April through July; single or double brood.	Clutch incubated for 10–13 days; altricial young fledge at 7–14 days.	75	CR	CR
Grasshopper Sparrow	*Ammodramus savannarum*	Ground nest at the base of bunchgrass or other vegetation in grasslands.	Ground	April through July; double or triple brood.	Clutch incubated for 11–12 days by female; altricial young fledge after 9 days.	75	30–75	15–30
Song Sparrow	*Melospiza melodia*	Cup nests in low grass and shrubs or thickets in a variety of forest, shrub, grassland, marsh, and riparian habitats.	1–3 feet	March through July; double, triple, or quadruple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 10 days.	75	30–75	15–30
Suisun Song Sparrow	*Melospiza melodia maxillaris*	Cup nests in low grass and shrubs or thickets in a variety of forest, shrub, grassland, marsh, and riparian habitats.	1–3 feet	March through July; double, triple, or quadruple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 10 days.	75	30–75	15–30
Alameda Song Sparrow	*Melospiza melodia pusillula*	Cup nests in low grass and shrubs or thickets in a variety of forest, shrub, grassland, marsh, and riparian habitats.	1–3 feet	March through July; double, triple, or quadruple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 10 days.	75	30–75	15–30

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
San Pablo Song Sparrow	*Melospiza melodia samuelis*	Cup nests in low grass and shrubs or thickets in a variety of forest, shrub, grassland, marsh, and riparian habitats.	1–3 feet	March through July; double, triple, or quadruple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 10 days.	75	30–75	15–30
Lincoln's Sparrow	*Melospiza lincolnii*	Cup nests in depressions on the ground in shrubby growth at forest edges, clearings; often near wet areas	Ground	May through July; double brood.	Clutch incubated for 13–14 days by female; altricial young fledge at 10–12 days.	75	30–75	15–30
White-crowned Sparrow	*Zonotrichia leucophrys*	Cup nests on ground or in shrubs or small trees in coastal or mountain chaparral and mountain forests.	0–5 feet	May through September; double or triple brood.	Clutch incubated for 9–15 days; altricial young fledge at 9–11 days	50	30–50	15–30
Dark-eyed Junco	*Junco hyemalis*	Cup nests in depressions on the ground among tree roots or brush in variety of woodland habitats; also on building ledges or in trees.	Ground, but up to 8 feet on ledges or trees	April through July; double or triple brood.	Clutch incubated for 12–13 days by female; altricial young fledge at 10–13 days.	50	30–50	15–30
Black-headed Grosbeak	*Pheucticus melanocephalus*	Cup nests in trees or shrubs in thickets, under trees along streams in riparian woodlands or coniferous or mixed forests near edges.	6–12 feet	April through July; single brood.	Clutch incubated for 12–13 days by both sexes; altricial young fledge at 12 days.	75	30–75	15–30

Common Name	Scientific Name	Nest Location, Substrate, and Habitat	Vertical Height	Peak Breeding Season/Number of Broods per Season	Incubation Duration/Chick-rearing Duration	Standard Buffer* (feet)	Medium to High Disturbance Category Buffer (feet)	Low to Medium Disturbance Category Buffer (feet)
Blue Grosbeak	*Guiraca caerulea*	Cup nests small trees, shrubs, or other low vegetation, usually near open areas in desert, chaparral, savannah, and forest edge habitats.	<1–16 feet	April through August; single or double brood.	Clutch incubated for 11–12 days by female; altricial young fledge at 9–13 days.	75	30–75	15–30
Lazuli Bunting	*Passerina amoena*	Cup nests in low thick shrubby riparian or chaparral habitat.	1–10 feet	May through July; double brood.	Clutch incubated for approximately 12 days by female; altricial young fledge at 10–15 days.	75	30–75	15–30
Red-winged Blackbird	*Agelaius phoeniceus*	Cup nests in cattails, bulrushes, and other marsh vegetation or in shrubs in grasslands and shrubby habitats.	1–13 feet	March through June; double brood.	Clutch incubated for 10–12 days by female; altricial young fledge at 10–11 days.	75 350 (Kern Red-winged Blackbird)	30–75 200–350 (Kern Red-winged Blackbird)	15–30 100–200 (Kern Red-winged Blackbird)
Tricolored Blackbird	*Agelaius tricolor*	Cup nests in cattails and bulrushes in marshes and shrubby areas in uplands and agricultural areas. Colonial nester.	1–5 feet	April through June; double brood.	Clutch incubated for approximately 11 days by female; altricial young fledge at 13 days.	350	CR	CR
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	Cup nests cattails or other emergent vegetation over water in marshes with thick vegetative growth. Colonial nester.	2–3 feet	May through June; single brood.	Clutch incubated for 10–13 days by female; altricial young fledge at 9–12 days old	350	200–350	100–200
Brewer's Blackbird	*Euphagus cyanocephalus*	Cup nests high in trees or shrubs near water in agricultural or suburban/urban areas.	8–43 feet	March through July; single or double brood.	Clutch incubated for 12–13 days by female; altricial young fledge at approximately 13 days.	50	30–50	15–30

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Western Meadowlark	*Sturnella neglecta*	Domed nests on ground in open grasslands.	Ground	March through June; double brood.	Clutch incubated for 13–15 days by female; altricial young fledge at 10–12 days.	75	30–75	15–30
Hooded Oriole	*Icterus cucullatus*	Closed cup nests high in trees (often palm treets) or shrubs, often in riparian habitat and in suburban areas.	10–45 feet	April through August; double or triple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at approximately 14 days.	75	30–75	15–30
Bullock's Oriole	*Icterus bullockii*	Pensile cup nests in twig fork of trees in riparian and oak woodlands.	6–15 feet	April through July; single brood.	Clutch incubated for approximately 14 days by female; altricial young fledge at approximately 14 days.	75	30–75	15–30
Pine Grosbeak	*Pinicola enucleator*	Cup nests near the end of horizontal tree branches in coniferous forests.	16–35 feet	May through August; single brood.	Clutch incubated for 13–14 days by female; altricial young fledge at approximately 14 days.	75	30–75	15–30
Purple Finch	*Haemorhous purpureus*	Cup nests high in trees well hidden by foliage, in coniferous forests and woodlands.	5–60 feet	April through June; double brood.	Clutch incubated for approximately 13 days by female; altricial young fledge at approximately 14 days.	75	30–75	15–30
House Finch	*Haemorhous mexicanus*	Cup nests in trees, building ledges, and other locations in urban/suburban, agriculture, woodlands, desert, and chaparral habitats.	5–7 feet	March through July; double or triple brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 14–16 days.	50	15–30	10–15
Red Crossbill	*Loxia curvirostra*	Loose cup constructed near the end of horizontal branch in coniferous forests.	6–60 feet	February through June; single brood.	Clutch incubated for 12–16 days by female; altricial young fledge at 17–22 days.	75	30–75	15–30

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Pine Siskin	*Spinus pinus*	Cup nest constructed on conifer or hardwood in coniferous or mixed hardwood forests.	3–50 feet	April through July; single or double brood.	Clutch incubated for approximately 13 days; altricial young fledge at 14–15 days.	75	30–75	15–30
Lesser Goldfinch	*Spinus psaltria*	Cup nests in trees and shrubs in a variety of open habitats including oak woodlands, mixed coniferous forests, riparian woodlands, chaparral, agricultural and suburban habitats.	3–36 feet	April through July; single or double brood.	Clutch incubated for approximately 12 days by female; altricial young fledge at 11 days.	75	30–75	15–30
Lawrence's Goldfinch	*Spinus lawrencei*	Cup nests in scattered trees in oak woodlands and savannahs.	3–40 feet	April through July; single or (rarely) double brood	Clutch incubated for 12–13 days by female; altricial young fledge at approximately 11 days.	75	30–75	15–30
American Goldfinch	*Spinus tristis*	Cup nests in a variety of shrubs in variety of open habitats including ruderal fields and grasslands with shrub component nearby.	3–10 feet	April through August; single or double brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 11–17 days.	75	30–75	15–30
Evening Grosbeak	*Coccothraustes vespertinus*	Cup nests in fir or other conifers in coniferous forests.	30–60 feet	June through August; single or (rarely) double brood.	Clutch incubated for 12–14 days by female; altricial young fledge at 13–14 days.	75	30–75	15–30

[a] Consultation recommended to perform work within the standard buffer. Confer internally on avoidance and minimization approach.

[b] The 1,320-foot (0.25-mile) buffer applies to the highest noise level category (90 dB or greater measured at 50 feet). Smaller buffers may be appropriate based on the noise levels of the project. Biologists should follow the methodology found in *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (U.S. Fish and Wildlife Service 2006) to determine the noise level and appropriate buffer for their specific project.