# Appendix F

## Special-Status Species Potentially Occurring within the Biological Study Area

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## Table F-1. Special-Status Plant Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Agrostis blasdalei* | Blasdale's bent grass | None/None/1B.2 | Coastal bluff scrub, Coastal dunes, Coastal prairie/ perennial rhizomatous herb/ May–July/0–490 | **Moderate potential to occur.** The biological study area supports suitable coastal bluff habitat for this species. | **Not expected to occu**r. Suitable coastal bluff habitat for this species is absent from the infrastructure study area. |
| *Amsinckia lunaris* | bent-flowered fiddleneck | None/None/1B.2 | Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland/annual herb/Mar–June/5–1,640 | **Moderate potential to occur.** Although the biological study area supports suitable steep-sloped grassland habitat, there are only a few CNDDB occurrences along the shore of North Coast and Swanton/Scott Creek watersheds (CDFW 2020). | **Low potential to occur.** Marginally suitable grassland habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. Any suitable habitat that may have been present in the remaining infrastructure study area has been eliminated by intensive human use. The closest CNDDB occurrence was documented approximately 2.5 miles northeast of the City/SVWD intertie site in 1990 (CDFW 2020; No. 1). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Arctostaphylos andersonii* | Anderson's manzanita | None/None/1B.2 | Broadleafed upland forest, Chaparral, North Coast coniferous forest; openings, edges/perennial evergreen shrub/Nov–May/195–2,490 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists 58 occurrences throughout the Santa Cruz Mountains (CDFW 2020). | **Low potential to occur.** Marginally suitable forest, woodland, and/or scrub habitat is present within the new ASR facilities sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area is located below the elevational range of the species. The closest CNDDB occurrence was documented approximately two miles northwest of the SqCWD/CWD intertie south in 1980 (CDFW 2020; No. 46). |
| *Arctostaphylos silvicola* | Bonny Doon manzanita | None/None/1B.2 | Closed-cone coniferous forest, Chaparral, Lower montane coniferous forest; endemic found locally on Santa Margarita sandstone in Sandhills; inland marine sands/perennial evergreen shrub/Jan–Mar/390–1,965 | **High potential to occur.** The biological study area supports suitable habitat for this species. The CNDDB lists 16 occurrences of this species, several of them within the vicinity of Felton/Scotts Valley. | **High potential to occur.** Suitable forest and shrub habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area is outside of the elevational range of this species. The closest CNDDB occurrence was documented within chaparral/sandhill habitat approximately 0.5-mile west of the City/SVWD intertie site in 2014 (CDFW 2020; No. 1). |

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|---|---|---|---|---|---|
| *Arenaria paludicola* | marsh sandwort | FE/SE/1B.1 | Marshes and swamps (freshwater or brackish); sandy, openings/perennial stoloniferous herb/May–Aug/ 5–560 | **High potential to occur.** The biological study area supports suitable habitat for this species in Wilder State Park, where this species was introduced back into native habitat in 2013 (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Calyptridium parryi* var. *hesseae* | Santa Cruz Mountains pussypaws | None/None/1B.1 | Chaparral, Cismontane woodland; sandy or gravelly, openings/annual herb/ May–Aug/1,000–5,015 | **High potential to occur**. The biological study area supports suitable habitat for this species. | **Not expected to occur.** The infrastructure study area is below the elevational range of this species. |
| *Campanula californica* | swamp harebell | None/None/1B.2 | Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Marshes and swamps (freshwater), North Coast coniferous forest; mesic/ perennial rhizomatous herb/ June–Oct/0–1,325 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species, however, only one historic occurrence of this species was documented within the biological study area. | **Not expected to occur.** The infrastructure study area does not support suitable habitat. The only CNDDB occurrence was documented in a bog near Camp Evers within the City/SVWD intertie site in 1944. This occurrence has since been extirpated (CDFW 2020; No. 1). |
| *Carex comosa* | bristly sedge | None/None/2B.1 | Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland/ perennial rhizomatous herb/ May–Sep/0–2,050 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. However, only one historic occurrence of this species was documented within the biological study area. | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. The only CNDDB occurrence of this species was mapped to a bog in the Forest of Nisene Marks State Park in 1994, approximately eight miles east of the City/SVWD Intertie (CDFW 2020; No. 2) |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Carex saliniformis* | deceiving sedge | None/None/1B.2 | Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps (coastal salt); mesic/perennial rhizomatous herb/June(July)/5–755 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species, although modern and historical CNDDB occurrences are scarce. | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. The only CNDDB occurrence was documented in a bog near the City/SVWD intertie site (Camp Evers) in 1944. This occurrence has since been extirpated (CDFW 2020; No. 1). |
| *Chorizanthe pungens* var. *hartwegiana* | Ben Lomond spineflower | FE/None/1B.1 | Lower montane coniferous forest (maritime ponderosa pine sandhills)/annual herb/ Apr–July/295–2,000 | **High potential to occur.** The biological study area supports suitable habitat for this species, and the CNDDB lists several occurrences within the vicinity of Felton/Scotts Valley/Ben Lomond (CDFW 2020). This sandhills endemic species is restricted to the Zayante soils near the towns of Ben Lomond, Olympia, Scotts Valley, Felton, Bonny Doon, Zayante, and Boulder Creek (Ebbin, Moser + Skaggs LLP et al. 2021). Additionally, this species is known to occur at the Bonny Doon mitigation site (Ebbin, Moser + Skaggs LLP and Entomological Consulting Services, Ltd. 2013). | **Moderate potential to occur.** Suitable sandhills and Zayante soils are present within the new ASR facility sites and City/SVWD intertie site. The remaining infrastructure study area lacks suitable habitat for this species. The closest CNDDB occurrence was documented approximately 1.5 miles west of the City/SVWD intertie site in 1988 (CDFW 2020; No. 3). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Chorizanthe pungens* var. *pungens* | Monterey spineflower | FT/None/1B.2 | Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy/ annual herb/Apr–June(July–Aug)/5–1,475 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists several occurrences within the vicinity of Aptos (CDFW 2020). | **Moderate potential to occur.** Marginally suitable to suitable scrub, woodland, and grassland habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. Potentially suitable habitat within the remaining infrastructure study area has been eliminated by intensive human use. Although there are a couple CNDDB occurrences for this species within a mile of the City/SqCWD/CWD intertie site, they are from 2006 and may no longer be present (CDFW 2020). |
| *Chorizanthe robusta* var. *hartwegii* | Scotts Valley spineflower | FE/None/1B.1 | Meadows and seeps (sandy), Valley and foothill grassland (mudstone and Purisima outcrops)/annual herb/Apr-July/330–750 | **High potential to occur.** The biological study area supports suitable habitat for this species. Three modern CNDDB occurrences have been documented in the vicinity of Scotts Valley (CDFW 2020). | **High potential to occur.** Suitable grassland habitat is present within the new ASR facility sites and City/SVWD intertie site. The remainder of the infrastructure study area lacks suitable habitat and/or is below the elevational range of this species. Modern occurrences of this species are limited to mudstone outcroppings approximately two miles northeast of the City/SVWD intertie site (CDFW 2020; No. 1-3). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Chorizanthe robusta* var. *robusta* | robust spineflower | FE/None/1B.1 | Chaparral (maritime), Cismontane woodland (openings), Coastal dunes, Coastal scrub; sandy or gravelly/annual herb/Apr–Sep/5–985 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists 20 occurrences within the region (CDFW 2020). Three populations are located on sandy soils of coastal and near coastal habitats at Pogonip Park, Branciforte, and north of Wilder Ranch State Park (Ebbin, Moser + Skaggs LLP et al. 2021). | **Moderate potential to occur.** Moderately suitable woodland and coastal scrub habitats are present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. Potentially suitable habitat within the remainder of the infrastructure study area has been eliminated by intensive human use. The closest CNDDB occurrence was documented approximately 0.3-mile northeast of the City/SqCWD/CWD intertie site (CDFW 2020; No. 16). |
| *Dacryophyllum falcifolium* | tear drop moss | None/None/1B.3 | North Coast coniferous forest; carbonate/moss/N.A./ 160–900 | **High potential to occur.** The biological study area supports suitable habitat for this species. | **Low potential to occur.** Marginally suitable forest habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area is below the elevational range of the species. The closest CNDDB occurrence was documented approximately 1.5 miles west of the Felton Diversion site in 2013 (CDFW 2020; No. 7). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Eriogonum nudum* var. *decurrens* | Ben Lomond buckwheat | None/None/1B.1 | Chaparral, Cismontane woodland, Lower montane coniferous forest (maritime ponderosa pine sandhills); sandy/perennial herb/ June–Oct/160–2,620 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists nine occurrences in the vicinity of Felton, Scotts Valley, and Ben Lomond. | **High potential to occur**. Marginally suitable to suitable scrub, woodland, forest and/or ponderosa pine sandhill habitat is present within the new ASR facility sites and City/SVWD intertie site. Suitable sandhill soils are absent from the remainder of the infrastructure study area. The closest CNDDB occurrence was documented near the Felton Diversion site in 1981 (CDFW 2020; No. 8). |
| *Erysimum teretifolium* | Santa Cruz wallflower | FE/SE/1B.1 | Chaparral, Lower montane coniferous forest; inland marine sands/perennial herb/ Mar–July/390–2,000 | **High potential to occur**. The biological study area supports suitable habitat for this species and the CNDDB lists 15 occurrences within the vicinity of Felton/Scotts Valley (CDFW 2020). | **High potential to occur.** This species was documented south of the Mt. Hermon Road exit along La Madrona Road in 1995 (CDFW 2020, No. 29) and suitable coniferous forest habitat is present within the new ASR facility sites and City/SVWD intertie site. The remainder of the infrastructure study area is below the elevational range of the species. |

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|---|---|---|---|---|---|
| *Fissidens pauperculus* | minute pocket moss | None/None/1B.2 | North Coast coniferous forest (damp coastal soil)/moss/ N.A./30–3,355 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists two occurrences within Santa Cruz County (CDFW 2020). | **Low potential to occur.** Marginally suitable forest habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area lacks suitable habitat for this species. The closest CNDDB occurrence was documented approximately two miles south of the Felton Diversion site in 2001 (CDFW 2020; No.11). |
| *Grimmia torenii* | Toren's grimmia | None/None/1B.3 | Chaparral, Cismontane woodland, Lower montane coniferous forest; Openings, rocky, boulder and rock walls, carbonate, volcanic/moss/ N.A./1,065–3,805 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. The CNDDB only lists one occurrence documented within the northernmost limits of the biological study area in 2008 (CDFW 2020; No. 3). | **Not expected to occur.** The infrastructure study area is outside of the elevational range of this species. |
| *Grimmia vaginulata* | vaginulate grimmia | None/None/1B.1 | Chaparral (openings); Rocky, boulder and rock walls, carbonate/moss/N.A./ 2,245–2,245 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. The CNDDB only lists one occurrence documented within the northernmost limits of the biological study area in 2008 (CDFW 2020; No. 1). | **Not expected to occur.** The infrastructure study area is outside of the elevational range of this species. |

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|---|---|---|---|---|---|
| *Hesperocyparis abramsiana* var. *abramsiana* | Santa Cruz cypress | FT/SE/1B.2 | Closed-cone coniferous forest, Chaparral, Lower montane coniferous forest; sandstone or granitic/perennial evergreen tree/N.A./915–2,620 | **High potential to occur.** The biological study area supports suitable habitat for this species, and the CNDDB lists nine occurrences within the vicinity of Boulder Creek to Felton (CDFW 2020). | **Not expected to occur.** The infrastructure study area is outside of the elevational range of this species. One occurrence of this species was documented within the CNDDB near Mount Hermon from 1940 (CDFW 2020; No. 13). Modern occurrences are absent from the infrastructure study area. |
| *Holocarpha macradenia* | Santa Cruz tarplant | FT/SE/1B.1 | Coastal prairie, Coastal scrub, Valley and foothill grassland; often clay, sandy/annual herb/ June–Oct/30–720 | **High potential to occur.** The biological study area supports suitable coastal grasslands and prairies for this species, and the CNDDB lists 17 occurrences documented in the vicinity of Santa Cruz and Aptos (CDFW 2020). | **High potential to occur.** Marginally suitable to suitable grassland habitat is located within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. Potentially suitable habitat within the remaining infrastructure study area has been eliminated by intensive human use. The closest CNDDB occurrence was documented near the Beltz Well system in 1986, but has since been extirpated by urban development (CDFW 2020; No. 3). Several populations of this species occur on marine terraces of Arana Gulch and Twin Lakes, near Watsonville, and along Graham Hill Road (Ebbin, Moser + Skaggs LLP et al. 2021). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Horkelia cuneata* var. *sericea* | Kellogg's horkelia | None/None/1B.1 | Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub; sandy or gravelly, openings/perennial herb/Apr–Sep/30–655 | **Moderate potential to occur**. The biological study area supports suitable habitat for this species, although only historic CNDDB occurrences occur within the biological study area (CDFW 2020). | **Low potential to occur.** Marginally suitable to suitable scrub habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. However, modern CNDDB occurrences of this species are absent from the infrastructure study area. |
| *Horkelia marinensis* | Point Reyes horkelia | None/None/1B.2 | Coastal dunes, Coastal prairie, Coastal scrub; sandy/perennial herb/May–Sep/15–2,475 | **High potential to occur.** The biological study area supports suitable habitat for this species. The CNDDB lists two occurrences in the vicinity of UC Santa Cruz campus (CDFW 2020). | **Low potential to occur.** Marginally suitable to suitable scrub habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. However, CNDDB occurrences are absent from the infrastructure study area. |
| *Lasthenia californica* ssp. *macrantha* | perennial goldfields | None/None/1B.2 | Coastal bluff scrub, Coastal dunes, Coastal scrub/ perennial herb/Jan–Nov/ 15–1,705 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. However, the CNDDB documents only one historic occurrence of this species within Seacliff State Park (CDFW 2020; No. 42). | **Low potential to occur.** Marginally suitable to suitable scrub habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. However, the infrastructure study area is outside of the historic distribution of this species which is limited to Seacliff State Park. |

## Table F-1. Special-Status Plant Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Malacothamnus arcuatus* | arcuate bush-mallow | None/None/1B.2 | Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–Sep/45–1,160 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. However, CNDDB occurrences are limited to the northern and easternmost limits of Santa Cruz County (CDFW 2020). | **Not expected to occur.** The infrastructure study area is outside of known distribution of this species. |
| *Microseris paludosa* | marsh microseris | None/None/1B.2 | Closed-cone coniferous forest, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial herb/ Apr–June(July)/15–1,160 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. However, the three CNDDB occurrences within Santa Cruz County are historic and/or lack specific locational information (CDFW 2020). | **Moderate potential to occur.** Marginally suitable to suitable scrub, woodland and/or grassland habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The closest CNDDB occurrence was documented approximately 0.7-mile north of the Tait Diversion site in 1957 (CDFW 2020; No. 7). |

## Table F-1. Special-Status Plant Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Monardella sinuata* ssp. *nigrescens* | northern curly-leaved monardella | None/None/1B.2 | Chaparral (SCR Co.), Coastal dunes, Coastal scrub, Lower montane coniferous forest (SCR Co., ponderosa pine sandhills); Sandy/annual herb/ (Apr)May–July(Aug–Sep)/ 0–985 | **High potential to occur.** The biological study area supports suitable habitat for this species | **High potential to occur.** Marginally suitable to suitable scrub, woodland, grassland, and/or Ponderosa pine sandhill habitat is present within the new ASR facility sites and City/SVWD intertie site. Suitable sandhill soils are absent from the remainder of the infrastructure study area. The closest CNDDB occurrence was documented immediately to the north of the City/SVWD intertie site in 1938 (CDFW 2020; No. 7). |
| *Monolopia gracilens* | woodland woolythreads | None/None/1B.2 | Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland; Serpentine/annual herb/ (Feb)Mar–July/325–3,935 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists 31 occurrences throughout Santa Cruz County (CDFW 2020). | **High potential to occur.** Marginally suitable to suitable woodland, forest, and/or grassland habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The rest of the infrastructure study area is located outside of the elevational range of the species. The closest CNDDB occurrences were mapped near the Tait Diversion in 1935 and Felton Diversion site in 1930 (CDFW 2020; No. 10 and 19). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Orthotrichum kellmanii* | Kellman's bristle moss | None/None/1B.2 | Chaparral, Cismontane woodland; sandstone, carbonate/moss/Jan–Feb/ 1,125–2,245 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species, although CNDDB occurrences are absent. | **Not expected to occur.** The infrastructure study area is outside of the elevational range of this species. |
| *Penstemon rattanii* var. *kleei* | Santa Cruz Mountains beardtongue | None/None/1B.2 | Chaparral, Lower montane coniferous forest, North Coast coniferous forest/perennial herb/May–June/1,310–3,605 | **High potential to occur.** The biological study area supports suitable habitat for this species. One occurrence for this species is documented within the CNDDB at the western boundary of the biological study area from 2019 (CDFW 2020; 4). | **Not expected to occur.** The infrastructure study area is below the elevational range of this species. |
| *Pinus radiata* | Monterey pine | None/None/1B.1 | Closed-cone coniferous forest, Cismontane woodland/ perennial evergreen tree/N.A./ 80–605 | **Moderate potential to occur.** The current range of this species is limited to three stands, the northernmost of which is located east of point Año Nuevo, outside of the biological study area. However, this population appears to be expanding to the south (CDFW 2020; No. 5), and this species was documented within the biological study area in 2017 (Calflora 2020; cbo69316). | **Not expected to occur.** The infrastructure study area is outside of the known distribution of this species. |

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|---|---|---|---|---|---|
| *Piperia candida* | white-flowered rein orchid | None/None/1B.2 | Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes serpentinite/perennial herb/ (Mar)May–Sep/95–4,295 | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. However, the only CNDDB occurrence within the biological study area is historic (CDFW 2020; No. 4). | **Moderate potential to occur.** Suitable forest habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area lacks suitable habitat and/or is below or at the lower elevational limit of the species. Modern occurrences of this species are absent. |
| *Plagiobothrys chorisianus* var. *chorisianus* | Choris' popcornflower | None/None/1B.2 | Chaparral, Coastal prairie, Coastal scrub; mesic/annual herb/Mar–June/5–525 | **High potential to occur.** The biological study area supports suitable habitat for this species, and the CNDDB lists several occurrences, modern and historic, within wetlands from Boulder Creek to Scotts Valley (CDFW 2020). | **Low potential to occur.** Marginally suitable habitat may be present within the new ASR facility sites or City/SVWD intertie site, but is unlikely in the area where improvements would occur. The closest CNDDB occurrence was documented within a vernal swale approximately 0.2-mile north of the City/SVWD intertie site (CDFW 2020; No. 2). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Plagiobothrys diffusus* | San Francisco popcornflower | None/SE/1B.1 | Coastal prairie, Valley and foothill grassland/annual herb/ Mar–June/195–1,180 | **High potential to occur.** The biological study area supports suitable coastal prairie habitat for this species, and the CNDDB lists 12 occurrences, modern and historic, within the vicinity of Santa Cruz (CDFW 2020). Populations of this species occur at UC Santa Cruz Marshall Field, near Wilder Ranch State Park, Moore Creek Preserve, and Pogonip (Ebbin, Moser + Skaggs LLP et al. 2021). | **Low potential to occur.** Marginally suitable to suitable grassland habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area is below the elevational range of this species. The closest CNDDB occurrence was documented approximately one mile north of the Tait Diversion site in 2010 (CDFW 2020; No. 10). |
| *Polygonum hickmanii* | Scotts Valley polygonum | FE/SE/1B.1 | Valley and foothill grassland (mudstone and sandstone)/ annual herb/May–Aug/ 685–820 | **High potential to occur.** The biological study area supports suitable habitat for this species. This species is endemic to Santa Cruz County. | **Moderate potential to occur.** Suitable grassland habitat is present within and adjacent to the new ASR facility sites and City/SVWD intertie sites. The remainder of the infrastructure study area is located outside of the elevational range of the species. CNDDB occurrences of this species are limited to mudstone soils located approximately three miles northeast of the City/SVWD intertie site (CDFW 2020; No.1 and 2). |

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| Scientific Name | Common Name | Status Federal/State/ CRPR | Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet amsl) | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Trifolium buckwestiorum* | Santa Cruz clover | None/None/1B.1 | Broadleafed upland forest, Cismontane woodland, Coastal prairie; gravelly, margins/ annual herb/Apr–Oct/ 340–2,000 | **High potential to occur.** The biological study area supports suitable habitat for this species and the CNDDB lists several occurrences from the vicinity of Boulder Creek down to Santa Cruz (CDFW 2020). | **High potential to occur.** Marginally suitable to suitable woodland and/or forest habitat is present within the new ASR facility sites, City/SVWD intertie site, and City/SqCWD/CWD intertie site. The remainder of the infrastructure study area is located outside of the elevational range of the species. The closest CNDDB occurrence was documented 0.7-mile north of the City/SqWCD intertie site in 1995 (CDFW 2020; No. 14). |
| *Trifolium polyodon* | Pacific Grove clover | None/SR/1B.1 | Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Valley and foothill grassland; mesic, sometimes granitic/annual herb/ Apr–June(July)/15–1,390 | **High potential to occur.** The biological study supports suitable habitat for this species. The CNDDB lists two modern occurrences of this species within wet meadows (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat. The closest CNDDB occurrence was documented approximately two miles south of the Felton Diversion site in 2017 (CDFW 2020; No. 21), but similar habitat (i.e., wet depression in coastal prairie) is absent from the infrastructure study area. |

**Notes:** amsl = above mean sea level; CNDDB = California Natural Diversity Database; CWD = Central Water District; SqCWD = Soquel Creek Water District; SVWD = Scotts Valley Water District.

**Status Legend**
**Federal**
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal candidate for listing as threatened or endangered
**State**
SE: State listed as endangered
ST: State listed as threatened
SR: State listed as rare
**CRPR (California Rare Plant Rank)**
CRPR 1A: Plants presumed extinct in California and either rare or extinct elsewhere
CRPR List 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR List 2A: Plants rare, threatened, or endangered in California but common elsewhere
CRPR List 2B: Plants rare, threatened, or endangered in California but more common elsewhere

**Threat Rank**
.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 Fairly endangered in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat)
.3 Not very endangered in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

## References

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Ebbin, Moser + Skaggs LLP and Entomological Consulting Services, Ltd. 2013. Low-Effect Habitat Conservation Plan for the Issuance of an Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act for the Federally Endangered Mount Hermon June Beetle Zayante Band Winged Grasshopper and Ben Lomond Spineflower for the City of Santa Cruz Graham Hill Water Treatment Plant Operations, Maintenance, and Construction Activities. June 2013.

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Amphibians* | | | | | |
| *Dicamptodon ensatus* | California giant salamander | None/SSC | Known from wet coastal forests and chaparral near streams and seeps from Mendocino Co. south to Monterey Co. and east to Napa Co. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many CNDDB occurrences for this species have been documented in coniferous and riparian forests in the region, including the North Coast Diversions (Liddell Spring, Reggiardo Creek, Laguna Creek, and Majors Creek) (CDFW 2020). | **Moderate potential to occur.** Suitable riparian habitat present at Felton Diversion and Tait Diversion. Urban riparian areas near regional interties are likely too disturbed (i.e., dominated by nonnative understory plants and predators) to support this species. |
| *Rana draytonii* | California red-legged frog | FT/SSC | Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many CNDDB occurrences for this species have been documented in ponds, wetlands, and riparian woodlands in the region (CDFW 2020). This species occurs in all the coastal creeks north of Santa Cruz, including Moore Creek, Wilder Creek, Old Dairy Gulch Creek, Lombardi Creek, Baldwin Creek, Majors Creek, Laguna Creek, Yellow Bank Creek, and Liddell Creek (Ebbin, Moser + Skaggs LLP et al 2021). | **Low potential to occur.** Marginally suitable riparian habitat present at Felton Diversion and Tait Diversion sites, but there are no recent occurrences in the San Lorenzo River watershed. Additionally, protocol-level surveys on City watershed lands in 2001 did not detect this species (City of Santa Cruz Water Department 2013). Urban riparian areas near City/SVWD and City/SqCWD/CWD intertie sites are likely too disturbed (i.e., dominated by nonnative understory plants and predators) to support this species. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Ambystoma californiense* | California tiger salamander | FT/ST | Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent. | **Low potential to occur.** The biological study area supports suitable habitat for this species but it is limited to seasonal ponds west of Watsonville (CDFW 2020). | **Not expected to occur.** The infrastructure study area is outside of the species' known distribution in the county. |
| *Rana boylii* | foothill yellow-legged frog | None/SSC, PST | Rocky streams and rivers with open banks in forest, chaparral, and woodland. | **Low potential to occur.** The biological study area supports suitable habitat for this species. Many CNDDB occurrences for this species have been documented in streams in the region, including Soquel Creek upstream from Soquel and Wilder Creek on the UC Santa Cruz campus (CDFW 2020). | **Low potential to occur.** Individuals from Soquel Creek population may occasionally venture downstream near the City/SqCWD intertie site but such movements would be rare and sporadic, if they occur. |
| *Aneides flavipunctatus niger* | Santa Cruz black salamander | None/SSC | Restricted to mesic forests in the fog belt of the outer Coast Range of San Mateo, Santa Cruz, and Santa Clara counties. Mixed deciduous and coniferous woodlands and coastal grasslands. Occurs in moist streamside microhabitats and is found under rocks, talus, and damp woody debris. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many CNDDB occurrences for this species have been documented in coniferous and riparian forests in the region (CDFW 2020). | **Moderate potential to occur.** Suitable riparian habitat present at Felton Diversion and Tait Diversion sites. Urban riparian areas near regional interties are likely too disturbed (i.e., dominated by nonnative understory plants and predators) to support this species. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Ambystoma macrodactylum croceum* | Santa Cruz long-toed salamander | FE/FP, SE | Temporary ponds for breeding and adjacent riparian vegetation, coastal scrub, and oak woodland during the nonbreeding season. This subspecies is restricted to southern Santa Cruz and northern Monterey Counties. Its entire distribution spans no more than 15 miles. | **Low potential to occur.** The biological study area supports suitable habitat for this species. Several CNDDB occurrences for this species have been documented in the southern part of the county (CDFW 2020). | **Moderate potential to occur.** CNDDB occurrence no. 5 at Valencia Lagoon is located approx. 1,000 feet southwest of the potential new pump station site at Rob Roy Junction (City/SqCWD/CWD intertie site) and marginal riparian habitat is present along a stormwater channel between Sabina Way and Soquel Drive. |
| *Birds* | | | | | |
| *Falco peregrinus anatum* | American peregrine falcon (nesting) | None/FP | Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present. | **High potential to occur.** The biological study area supports suitable nesting habitat for this species, especially along the coast. It has been observed at Loch Lomond Reservoir (Berry 2021). | **Not expected to occur.** The Infrastructure Study Area does not support suitable nesting habitat. |
| *Haliaeetus leucocephalus* | bald eagle (nesting & wintering) | BGEPA/SE, FP | Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains. | **High potential to occur.** The biological study area supports suitable habitat for this species, which has been observed at Loch Lomond Reservoir (Berry 2021). | **Moderate potential to occur.** Suitable nesting and foraging habitat present at Felton Diversion and Tait Diversion sites. High noise and visual disturbance levels associated with urban areas likely preclude occurrence at regional intertie sites. |
| *Riparia riparia* | bank swallow (nesting) | None/ST | Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration. | **Low potential to occur.** The biological study area does not support suitable habitat for the species. The only CNDDB occurrences for this species are historic (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Cypseloides niger* | black swift (nesting) | None/SSC | Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats. | **High potential to occur.** The biological study area supports suitable habitat for this species. A few CNDDB occurrences for this species have been documented along the coast (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Athene cunicularia* | burrowing owl | None/SSC | Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows. | **Low potential to occur (wintering).** The biological study area supports suitable habitat for this species. A few historic CNDDB occurrences for this species have been documented along the coast during the nonbreeding season. | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Laterallus jamaicensis coturniculus* | California black rail | None/FP, ST | Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Gymnogyps californianus* | California condor | FE/FP, SE | Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (*Sequoiadendron giganteus*); forages in relatively open habitats where large animal carcasses can be detected. | **Low potential to occur.** The biological study area is just outside the species' known geographic range. None of the experimental reintroduction sites are located in the biological study area. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Sternula antillarum browni* | California least tern (nesting colony) | FE/FP, SE | Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Rallus obsoletus* | California Ridgway's rail | FE/SE, FP | Tidal salt marshes of the San Francisco Estuary. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Aquila chrysaetos* | golden eagle (nesting & wintering) | BGEPA/FP | Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats. | **High potential to occur.** The biological study area supports suitable habitat for this species. A few CNDDB occurrences for this species have been documented in the Santa Cruz Mountains and Sierra Azul (CDFW 2020) and it has been observed at Loch Lomond Reservoir (Berry 2021). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Ammodramus savannarum* | grasshopper sparrow (nesting) | None/SSC | Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several eBird occurrences for this species have been documented in coastal grasslands west of Santa Cruz (eBird 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Vireo bellii pusillus* | least Bell's vireo (nesting) | FE/SE | Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. |
| *Asio otus* | long-eared owl (nesting) | None/SSC | Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats. | **High potential to occur.** The biological study area supports suitable habitat for this species. A few eBird occurrences for this species have been documented in the Santa Cruz Mountains (eBird 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Brachyramphus marmoratus* | marbled murrelet (nesting) | FT/SE | Nests in old-growth coastal forests, forages in subtidal and pelagic habitats. | **Moderate potential to occur.** The southwestern portion of the biological study area supports suitable habitat for this species but most known nesting areas are located in higher-quality habitat northwest of the BSA (CDFW 2020, Singer 2017). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Contopus cooperi* | olive-sided flycatcher (nesting) | None/SSC | Nests in mixed-conifer, montane hardwood–conifer, Douglas-fir, redwood, red fir, and lodgepole pine habitats; usually close to water. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many eBird occurrences for this species have been documented in the region (eBird 2020). | **Low potential to occur.** Marginally suitable habitat is present at the Felton Diversion site and near the City/SVWD intertie site. |
| *Progne subis* | purple martin (nesting) | None/SSC | Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways. | **High potential to occur.** The biological study area supports suitable habitat for this species. A few eBird occurrences for this species have been documented in the Santa Cruz Mountains (eBird 2020). | **Low potential to occur.** Marginally suitable habitat is present at the Felton Diversion site and near the City/SVWD intertie site. |
| *Phoebastria albatrus* | short-tailed albatross | FE/SSC | Nests on isolated, windswept islands of the western Pacific; extremely rare in migration offshore along the California coast. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Empidonax traillii extimus* | southwestern willow flycatcher (nesting) | FE/SE | Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Agelaius tricolor* | tricolored blackbird (nesting colony) | None/SSC, ST | Nests in freshwater, emergent wetlands with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture. | **High potential to occur.** The biological study area supports suitable habitat for this species. A few CNDDB occurrences for this species have been documented in freshwater wetlands near the coast (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Charadrius alexandrinus nivosus* | western snowy plover (nesting) | FT/SSC | On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds. | **Low potential to occur.** The biological study area supports suitable habitat for this species. A few CNDDB occurrences for this species have been documented at coastal beaches (CDFW 2020). | **Not expected to occur.** The infrastructure study area does not support suitable habitat for this species. |
| *Elanus leucurus* | white-tailed kite (nesting) | None/FP | Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several occurrences for this species have been documented in the region (CDFW 2020, eBird 2020). | **Moderate potential to occur.** The infrastructure study area supports trees that provide suitable nest sites, although no individuals were detected during the May 6, 2020 site visit. |
| *Setophaga petechia* | yellow warbler (nesting) | None/SSC | Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many eBird occurrences for this species have been documented in the region (eBird 2020). | **High potential to occur.** The Felton Diversion and Tait Diversion sites contain suitable riparian habitat. Individual heard singing north of Felton Diversion site during the May 6, 2020 site visit. |
| *Icteria virens (nesting)* | yellow-breasted chat | None/SSC | Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many eBird occurrences for this species have been documented in the region (eBird 2020). | **Moderate potential to occur.** The Felton Diversion and Tait Diversion sites contain marginal riparian habitat for this species. No individuals were detected during the May 6, 2020 site visit. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Fishes* | | | | | |
| *Oncorhynchus kisutch* pop. 4 | coho salmon - central California coast ESU | FE/SE | Coho spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat is small streams with stable gravel substrates. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean. They feed on plankton and insects in freshwater and switch to a diet of small fishes while in the ocean. Southern limit of range is in central Santa Cruz County. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several CNDDB occurrences for this species have been documented throughout the Laguna, Liddell, Majors, San Lorenzo, and Soquel watersheds (Berry 2021; CDFW 2020). | **Low potential to occur.** The reach of the San Lorenzo River near the proposed Felton Diversion and Tait Diversion sites may support suitable habitat for this species. |
| *Thaleichthys pacificus* | eulachon | FT/None | Found in Klamath River, Mad River, and Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Lavinia symmetricus subditus* | Monterey roach | None/SSC | Tributaries to Monterey Bay, specifically the Salinas, Pajaro, & San Lorenzo drainages. Generally found in small, intermittent streams, where dense populations are often observed in isolated pools. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several CNDDB occurrences for this species have been documented within the San Lorenzo River and Soquel Creek (CDFW 2020). | **High potential to occur.** Suitable habitat for this species occurs within San Lorenzo River near the Felton Diversion and Tait Diversion sites, as well as within Soquel Creek at Porter Street near the City/SqCWD/CWD intertie site. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Entosphenus tridentatus* | Pacific lamprey | None/SSC | Freshwater habitat includes lakes, rivers, and creeks; soft substrates in shallow areas along banks. | **High potential to occur.** The biological study area supports suitable habitat for this species. This species is present in several areas of the San Lorenzo River watershed (including lagoon and lower river), but are absent from the City's other flowing streams, including Laguna Creek, Liddell Creek, and Majors Creek (Berry 2021; City of Santa Cruz 2015). | **High potential to occur.** The reach of the San Lorenzo River near the proposed Felton Diversion and Tait Diversion sites support suitable habitat for this species. This species has been caught or observed in numerous reaches of San Lorenzo River (estuary to Kings Creek) and its major tributaries including Zayante Creek, Bean Creek, Fall Creek, Boulder Creek, Bear Creek, and Branciforte Creek (Ebbin, Moser + Skaggs LLP et al 2021). |
| *Oncorhynchus mykiss irideus* pop. 8 | steelhead - central California coast DPS | FT/None | Spawns in streams from the Russian River, Sonoma County, to Aptos Creek, Santa Cruz County, California (inclusive). Also occur in drainages tributary to San Francisco and San Pablo Bays. Regardless of life history strategy, for the first year or two of life rainbow trout and steelhead are found in cool, clear, fast-flowing permanent streams and rivers where riffles predominate over pools, there is ample cover from riparian vegetation or undercut banks, and invertebrate life is diverse and abundant. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several CNDDB occurrences for this species have been documented throughout the Laguna, Liddell, Majors, San Lorenzo and other watersheds (CDFW 2020). | **High potential to occur.** The reach of the San Lorenzo River near the proposed Felton Diversion and Tait Diversion sites support suitable habitat for this species. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Oncorhynchus mykiss irideus* pop. 9 | steelhead - south-central California coast DPS | FT/None | Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. |
| *Eucyclogobius newberryi* | tidewater goby | FE/SSC | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. | **High potential to occur.** The biological study area supports suitable habitat for this species. Several CNDDB occurrences for this species have been documented within lower reaches of coastal streams in the region (CDFW 2020). Additionally, this species is known to inhabit, or recently inhabit, several coastal lagoons within Santa Cruz County, including Laguna Creek, Baldwin Creek, Lombardi Gulch, Old Dairy Gulch, Wilder Creek, Younger Lagoon, Moore Creek, San Lorenzo River, Corcoran Lagoon, and Moran Lake (Ebbin, Moser + Skaggs LLP et al 2021). | **Low potential to occur.** This species is limited to the coastal lagoons and mouths of San Lorenzo River and Soquel Creek (Ebbin, Moser + Skaggs LLP et al 2021). CNDDB occurrences of this species are documented 1.7 and 0.1 miles downstream of the Tait Diversion site and City/SqCWD/CWD intertie site, respectively (CDFW 2020). |
| *Invertebrates* | | | | | |
| *Euphydryas editha bayensis* | Bay checkerspot butterfly | FT/None | Serpentine grassland in Santa Clara and San Mateo Counties. Primary host plant is native plantain (*Plantago erecta*) with two secondary host plants: purple owl's-clover (*Castilleja densiflora*) and exserted paintbrush (*Castilleja exserta*). | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area occurs outside the species' known geographic range. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Polyphylla barbata* | Mount Hermon (=barbate) June beetle | FE/None | Known only from sand hills in vicinity of Mount Hermon, Santa Cruz County, where it occurs in sparsely vegetated ponderosa pine and chaparral habitat with sandy sedimentary derived soils in the Zayante Sandhills formation. | **High potential to occur.** The biological study area supports suitable Zayante Sandhills habitat. There are several CNDDB occurrences for this species within the sandhills near Mount Hermon (CDFW 2020). Additionally, this species is known to occur at the Graham Hill Water Treatment Plant (Ebbin, Moser + Skaggs LLP and Entomological Consulting Services, Ltd. 2013). | **Moderate potential to occur.** Although portions of the Zayante Sandhills formation overlap the infrastructure study area, the proposed City/SVWD intertie alignment supports poor quality habitat adjacent to La Madrona Drive where improvements would occur. |
| *Cicindela ohlone* | Ohlone tiger beetle | FE/None | Remnant native grasslands with California oatgrass (*Danthonia californica*) and purple needlegrass (*Stipa pulchra*) in Santa Cruz County. | **High potential to occur.** The biological study area supports suitable grassland habitat near the coast. This species is known to occur at the Moore Creek Open Space and Younger Ranch (Ebbin, Moser + Skaggs LLP et al 2021). | **Moderate potential to occur.** Although portions of the Zayante formation overlap the infrastructure study area, the proposed City/SVWD intertie alignment supports poor quality habitat adjacent to La Madrona Drive where improvements would occur. |
| *Callophrys mossii bayensis* | San Bruno elfin butterfly | FE/None | Restricted to San Mateo County; known colonies occur at San Bruno Mountain, the Montara Mountain region, and Milagra Ridge. Within these areas it occurs in coastal grasslands and low scrub on north-facing slopes that support stonecrop (*Sedum sphathulifolium*), its only known larval host plant. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Euphilotes enoptes smithi* | Smith's blue butterfly | FE/None | Restricted to Monterey and Santa Cruz Counties, where they occur in coastal sand dunes, coastal sage scrub, chaparral, grassland, and their ecotones. | **High potential to occur.** Suitable habitat for this species occurs within the biological study area. Historic CNDDB occurrences for this species have been documented at Mount Hermon in 1983 and along Loma Prieta Road in 1999 (CDFW 2020). | **Not expected to occur.** The infrastructure study area lacks suitable dune, coastal sage scrub, chaparral, or grassland habitat to support this species. |
| *Bombus occidentalis* | western bumble bee, southern subspecies | None/PSE | Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease. Current known locations are high elevation sites in northern California and a few sites on the northern California coast. Nests underground in squirrel burrows, in mouse nests, and in open west-southwest facing slopes bordered by trees. | **Low potential to occur.** The biological study area is outside of this subspecies' known geographic range. There are CNDDB occurrences in the project area but most are historic and lack specific locality information. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |

Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Trimerotropis infantilis* | Zayante band-winged grasshopper | FE/None | Open sandy areas with sparse, low annual and perennial herbs on high ridges and hills with sparse ponderosa pine within the Zayante Sandhills formation in Santa Cruz County. | **High potential to occur.** The biological study area supports suitable Zayante Sandhills habitat. Six CNDDB occurrences of this species have been documented within the region (CDFW 2020). Additionally, this species may occur at the Bonny Doon mitigation site, but has not been detected during focused surveys conducted to date (Ebbin, Moser + Skaggs LLP and Entomological Consulting Services, Ltd. 2013). | **Moderate potential to occur.** Although portions of the Zayante Sandhills formation overlap the infrastructure study area, the proposed City/SVWD intertie alignment supports poor quality habitat adjacent to La Madrona Drive where improvements would occur. |
| *Mammals* | | | | | |
| *Taxidea taxus* | American badger | None/SSC | Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils. | **Low potential to occur.** The biological study area supports suitable habitat for this species. A few historic CNDDB occurrences have been documented in the region. | **Low potential to occur.** The infrastructure study area supports low-quality habitat within 500 feet of La Madrona Drive (i.e., City/SVWD intertie) but no dens were observed in the areas where improvements would occur during the May 6, 2020 site visit. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Antrozous pallidus* | pallid bat | None/SSC | Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees. | **High potential to occur.** The biological study area supports suitable habitat for this species. | **Moderate potential to occur.** Except for the Beltz well system, the infrastructure study area supports suitable habitat for this species. Trees with large hollows and structures within 500 feet of programmatic components could support roosting bats but no such features were observed in the areas where improvements would occur during the May 6, 2020 site visit. |
| *Neotoma fuscipes annectens* | San Francisco dusky-footed woodrat | None/SSC | Forest habitats with a moderate canopy and moderate to dense understory. | **High potential to occur.** The biological study area supports suitable habitat for this species. | **High potential to occur.** Except for the Beltz Well System, the infrastructure study area supports suitable habitat for this species. A single stick nest was observed 110 feet west of the intersection of Huntington Drive and Valencia Road (i.e., City/SqCWD/CWD intertie site) on May 6, 2020. No nests were observed in the areas where proposed improvements would occur at this and other locations on May 6 but may be present in riparian or forested habitat within 500 feet. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Enhydra lutris nereis* | southern sea otter | FT/SSC, FP | Nearshore marine environments. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area is outside of the species' known geographic range. |
| *Corynorhinus townsendii* | Townsend's big-eared bat | None/SSC | Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels. | **Moderate potential to occur.** The biological study area supports suitable habitat for this species. A few historic CNDDB occurrences have been documented in the region but no recent occurrences. | **Low potential to occur.** The infrastructure study area may support structures suitable for roosting within 500 feet of La Madrona Drive (i.e., City/SVWD intertie site), Felton Diversion site, Tait Diversion site, and the SqCWD/CWD intertie site but no structures were observed in the areas where improvements would occur during the May 6, 2020 site visit. |
| ***Reptiles*** | | | | | |
| *Phrynosoma blainvillii* | coast horned lizard | None/SSC | Wide range of habitats, most common in lowlands along sandy washes with scattered low bushes. | **Low potential to occur.** The biological study area does not support suitable habitat for the species. The closest known occurrence is approx. 9 miles to the south in Marina (CDFW 2020). | **Not expected to occur.** The infrastructure study area is outside of the species' known distribution in the county. |
| *Anniella pulchra* | northern California legless lizard | None/SSC | Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils. | **High potential to occur.** The biological study area supports suitable habitat for this species but it is limited to coastal dunes on Sunset State Beach west of Watsonville (CDFW 2020). | **Not expected to occur.** The infrastructure study area is outside of the species' known distribution in the county. |

## Table F-2. Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

| Scientific Name | Common Name | Status Federal/State | Primary Habitat Associations | Potential to Occur in Biological Study Area | Potential to Occur in Infrastructure Study Area |
|---|---|---|---|---|---|
| *Thamnophis sirtalis tetrataenia* | San Francisco garter snake | FE/SE, FP | Endemic to San Francisco Peninsula from northern San Mateo County along eastern Santa Cruz Mountains and west to Point Año Nuevo. Most commonly associated with emergent vegetation along the borders of ponds, marshes, and lakes. Rodent burrows in adjacent uplands are an important habitat component as they provide hibernation sites and escape cover. | **Not expected to occur.** The biological study area is outside of the species' known geographic range. | **Not expected to occur.** The infrastructure study area occurs outside the species' known geographic range. |
| *Emys (=Actinemys) marmorata* | western pond turtle | None/SSC | Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter. | **High potential to occur.** The biological study area supports suitable habitat for this species. Many CNDDB occurrences for this species have been documented in ponds and streams in the region (CDFW 2020). | **High potential to occur.** The reach of the San Lorenzo River near the proposed Felton Diversion and Tait Diversion sites support suitable habitat for this species. The reach of Soquel Creek near the City/SqCWD intertie site also supports suitable habitat. |

**Notes:** CNDDB = California Natural Diversity Database; CWD = Central Water District; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit; SqCWD = Soquel Creek Water District; SVWD = Scotts Valley Water District.

**Status Legend**

**Federal**

BCC: Bird of Conservation Concern
BGEPA: Bald and Golden Eagle Protection Act
FC: Candidate for federal listing as threatened or endangered
FDL: Federally delisted; monitored for 5 years
FE: Federally listed endangered
FT: Federally listed as threatened

**State**

PSE: Proposed state listing as endangered
SDL: State delisted
SSC: Species of Special Concern
FP: California Department of Fish and Wildlife Protected and Fully Protected Species
SE: State listed as endangered
ST: State listed as threatened

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