

Appendix BIO

Biological Resources Assessment



Rincon Consultants, Inc.

449 15th Street, Suite 303
Oakland, California 94612

510 834 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

September 19, 2020
Project No: 19-08451

Christina Ratcliffe, Community and Economic Development Director
City of Martinez
525 Henrietta Street
Martinez, California 94553
Via email: cratcliffe@cityofmartinez.org

Subject: Supplemental Biological Resources Assessment for the Am re Apartment Homes Project in Martinez, Contra Costa County, California

Dear Ms. Ratcliffe:

This report documents the findings of a supplemental biological resources assessment conducted by Rincon Consultants, Inc. (Rincon) for the Am re Apartment Homes Project (project) in the City of Martinez, Contra Costa County, California. The purpose of this report is to update the existing *Biotic Survey Report* prepared by Charles A. Patterson for the property in 2016, to document the existing conditions of the project site, and to evaluate the potential for impacts to special status biological resources for compliance with the City of Martinez California Environmental Quality Act (CEQA) review process.

Project Location and Description

The project site is located in the City of Martinez in Contra Costa County (see Figure 1; Attachment A). The 6.06-acre site is located on the south side of Arnold Drive, near Starflower Drive (see Figure 2; Attachment A). The site includes two assessor parcel numbers: 161-400-009 and 161-400-010. The project site is surrounded by a mix of land uses. It is bordered by undeveloped land and State Route (SR) 4 to the south, Arnold Drive to the north, the Contra Costa County Assessor's Office to the east, and a single-family residence to the west. Single-family neighborhoods are located north of Arnold Drive and to the west of the site. Mountain View Sanitary District operates and maintains a sanitary sewer lift station on a small parcel that fronts Arnold Drive and is surrounded by the project site on the other three sides. The parcel containing the pump station is not included in the project site, and the project would not involve changes to the existing pump station facility.

The project would involve the construction of six buildings, including 104 one-bedroom/one-bathroom residential units and 79 two-bedroom/two-bathroom units, for a total of 183 rental units. The apartment complex would include on-site amenities such as a workout facility, business center, children's play area, recreation area, outdoor kitchen area, and parking areas. Three buildings would be three stories and up to 35 feet in height, and three buildings would be four stories and up to 44 feet in height. All buildings would be two inches above adjacent grade. project would include a parking lot with 275 spaces with two driveways for access from Arnold Drive.

Landscaping would include approximately 206 trees, as well as shrubs and ground cover throughout the project site. High planting densities would be used along the southern and eastern boundaries of the



project site to create a visual screen between the site and SR 4 and adjacent uses. Three bioretention areas would be located on site, with one in the southeastern corner and two along Arnold Drive on either side of the existing lift station. Flow-through planters would also be located along the parking area in the center of the site and north of the three western structures.

Regulatory Background

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, Contra Costa County). The California Department of Fish and Wildlife (CDFW) is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the California Fish and Game Code (CFGC). Under the California and federal Endangered Species Acts (CESA/ESA), CDFW and U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered as well as native bird species listed under the Federal Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act. The U.S. Army Corps of Engineers (USACE) has regulatory authority over specific biological resources—namely, wetlands and waters of the United States, under Section 404 of the federal Clean Water Act. The CDFW, under CFGC Sections 1600-1617, and Regional Water Quality Control Boards (RWQCB), under the Porter-Cologne Water Quality Control Act, protect waters and streambeds at the state level. The analysis in this biological resources assessment is guided by the requirements of these laws, and by the operating standards of the implementing agencies. The project site is within the Martinez General Plan area and subject to Martinez Municipal Code. The project site does not occur in Natural Community Conservation Planning or Habitat Conservation Plan areas.

Methods

The biological resources study for the project consisted of a review of the *Biotic Survey Report* (Patterson 2016a), *Arborist Report* (Traverso Tree Service 2016), *Request for a Jurisdictional Delineation* (Patterson 2016b), relevant literature and databases, a field reconnaissance survey to confirm existing conditions and determine which sensitive biological resources are present or may occur at the site, and an evaluation of the development to determine potentially significant impacts to biological resources under CEQA. The potential presence of special status species is based on the literature review and a field survey designed to assess habitat suitability and presence of target species. The potential for impacts to these species was evaluated based on these findings and the project description. The study area evaluated for this analysis includes the 6.06-acre project site (see Figure 2; Attachment A).

Literature Review

The literature review included the background reports database research on special status biological resource occurrences within the *Walnut Creek, California* U.S. Geological Survey (USGS) 7.5-minute quadrangle and surrounding eight quadrangles. Sources included the CDFW California Natural Diversity Data Base (CNDDB) (CDFW 2020a); Biogeographic Information and Observation System (CDFW 2019c**Error! Hyperlink reference not valid.**); USFWS National Wetlands Inventory (USFWS 2020a); USFWS Information for Planning and Consultation (USFWS 2020b); and USFWS Critical Habitat Portal (USFWS 2020c). Other resources included the California Native Plant Society's (CNPS) online Inventory of



Rare and Endangered Plants of California (CNPS 2020); CDFW's Special Animals List (August 2019a); and CDFW's Special Vascular Plants, Bryophytes, and Lichens List (January 2020b). Aerial photographs, topographic maps, soil survey maps, geologic maps, and climatic data in the area were also examined. References are included as Attachment B. A review of the information contained within these databases, supported by the expert opinion of Rincon's biological staff, resulted in a list of special status species and other resources to be evaluated for their presence or potential to occur at the project site.

Field Survey

Rincon Consultants, Inc. biologist Anastasia Ennis conducted a reconnaissance-level biological resource site visit to confirm the evaluation in the *Biotic Survey Report* and to assess the habitat suitability for potential special status species, map vegetation communities and land-cover types. The site visit also allowed Rincon to document and map the presence of any sensitive biological resources, identify potential jurisdictional waters or wetlands, document any wildlife connectivity/movement features, and record all observations of plant and wildlife species within the study area. Ms. Ennis conducted the site visit on May 21, 2020, between the hours of 0950 and 1215. The temperature onsite was approximately 75°F. The biologist walked meandering transects over the entire 6.06-acre study area, inspecting the site for the potential to support special status species or biological resources. Site photos from the survey are included as Attachment C.

All plant vegetation communities observed within the study area were documented. The survey included a directed search for special status plants that would have been apparent and identifiable during the time of the survey; however, the survey did not constitute a protocol-level floristic survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period and emergence of some of the annual species. Floral nomenclature for native and non-native plants in this report follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (University of California, Berkeley 2020).

Wildlife species observed directly or detected from calls, tracks, scat, nests, or other signs were documented. The detection of wildlife species was limited by seasonal and temporal factors. As the survey was performed during the day, identification of nocturnal animals was limited to signs if present on-site.

Existing Setting

Topography and Soils

At an elevation range of approximately 100 feet above mean sea level, the topography of the site grades down slope from west to east, with a hill rising approximately 20 feet in the southwest corner. The study area is depicted over the *Walnut Creek, California* USGS 7.5-minute quadrangle. Adjacent land uses include residential and commercial development, and undeveloped land. The study area occurs primarily along the northwestern edge of the Ygnacio Valley floor.

The study area contains the following three soil map units (USDA 2020): Gaviota sandy loam, 15 to 30 percent slopes; Positas loam, 2 to 9 percent slopes; and Lodo clay loam, 9 to 30 percent slopes. Each is defined below:



- **Gaviota sandy loam, 15 to 30 percent slopes:** a somewhat excessively drained sandy soil that occurs on mountain slopes. It is formed in residuum weathered from sandstone. A typical profile consists of sandy loam to 12 inches.
- **Positas loam, 2 to 9 percent slopes:** a moderately well drained loamy soil that occurs on terraces. It is formed from alluvium derived from igneous and sedimentary rock. A typical profile consists of loam to 21 inches and clay at 21 to 60 inches.
- **Lodo clay loam, 9 to 30 percent slopes:** a somewhat excessively drained soil that is found on hills. It is formed in Residuum weathered from sandstone and shale. A typical profile consists of clay loam to 18 inches and unweathered bedrock from 18 to 22 inches.

None of the soils mapped within the project site are listed as hydric soils.

Vegetation and Other Land Cover Types

Four (4) terrestrial vegetation communities or other land cover types were identified within the study area during the field survey. A map approximating the types and acreages of the various vegetation communities and land-cover types that occur within the study area is shown in Figure 3.

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) but have been modified slightly to most accurately reflect the existing site conditions. Although this manual has been superseded by the publication *Preliminary Description of Terrestrial Natural Communities of California* (Holland 1986), it is included for comparison.

Willow Riparian Woodland

The study area contains approximately 0.07 acres of red willow (*Salix laevigata*) riparian woodland. This vegetation community most closely corresponds with the *Salix gooddingii – Salix laevigata* Forest and Woodland Alliance in the Manual of California Vegetation system (Sawyer et al. 2009). It occurs toward the western end of the seasonal drainage ditch and was not present when the previous biotic survey was conducted (Patterson 2016a). This community consists of a canopy dominated by red willow, with coast live oak (*Quercus agrifolia*). The understory includes toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and thistle (*Carduus* sp.).

Landscaped

The study area contains approximately 1.99 acres of landscaped areas. This land cover type is not naturally occurring and is not described in the classification systems described in Holland (1986) or Sawyer et al. (2009). It consists of non-native ornamental trees, although some native vegetation is re-establishing amidst the ornamental plantings. Landscaped cover occurs primarily in the southwestern portion of the study area, where the dominant tree species is the non-native Italian stone pine (*Pinus pinea*). Coast live oak, valley oak (*Quercus lobata*), and toyon are also present as parts of both the canopy and the understory. Poison oak is also common in the understory. A small patch of five coast live oaks with no understory shrubs occurs along Arnold Drive to the east of the pump station. Ornamental trees are also planted around the pump station, including redwood (*Sequoia sempervirens*) and African sumac (*Searsia lancea*). The pump station is not part of the study area but is surrounded by the project site on three sides.



Coast live oak and valley oak are native species; however, individuals present within the study area are small and recently established, growing in and among ornamental plantings in a heavily disturbed area, and are not part of the natural community.

Ruderal

The study area contains approximately 3.52 acres of ruderal lands. Habitats that have been heavily disturbed or altered such that natural vegetation has largely been removed are mapped as ruderal areas. These sites do not correspond well with either the Holland (1986) or Sawyer et al. (2009) classification systems. Ruderal areas have had visible disturbance of soil or vegetation and are mostly bare and colonized by weeds and disturbance-tolerant natives. These include field bindweed (*Convolvulus arvensis*), hairy vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), wild radish (*Raphanus sativa*), field mustards (*Hirschfeldia* spp., *Brassica* spp.), narrowleaf milkweed (*Asclepius fascicularis*), rose clover (*Trifolium hirtum*), Italian thistle (*Carduus pycnocephalus*), and non-native annual grasses (*Avena fatua*, *Hordeum* sp., *Bromus* sp.). Trees also occur throughout this land cover type, individually or in low density, including coast live oak, valley oak, and red willow. Ruderal habitat within the study area shows evidence of mowing or disking.

Seasonal Drainage Ditch

A man-made ditch with in-channel riparian vegetation occurs on roughly 0.45 acres of the site, likely constructed to drain storm water from adjacent properties and roadways. This ditch contains concrete culverts that are partially buried at each end. The west end contains dense, annual weedy vegetation as well as a patch of willow riparian vegetation (see *Willow Riparian Woodland* described above). To the east of the willow grove, wetland vegetation is present in the bottom of the ditch, including rabbit's foot grass (*Polypogon monspeliensis*), saltgrass (*Distichlis spicata*), and curly dock. A single, small stem of bulrush (*Schoenoplectus* sp.) was growing in the ditch. Senescent cattail (*Typha latifolia*) and cocklebur (*Xanthium strumarium*) were observed, but no new growth of these obligate wetland species was observed in the ditch. The ditch was dry, but cracking did occur where sediment was present, and wet soils were found two inches below the surface, likely due to rains earlier in the week. The far west end of the ditch has a storm drain maintenance access point.

General Wildlife

The study area and its surroundings provide habitat for wildlife species that commonly occur in suburban habitat of the San Francisco Bay Area. Avian species observed/detected on or adjacent to the site include California scrub jay (*Aphelocoma californica*) red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), wild turkey (*Meleagris gallopavo*), and ruby-crowned kinglet (*Regulus calendula*). Terrestrial species observed/detected include Eastern fox squirrel (*Sciurus niger*), mule deer (*Odocoileus hemionus*) and western fence lizard (*Sceloporus occidentalis*).

Special Status Biological Resources

This section discusses sensitive biological resources observed on the study area and evaluates the potential for the study area to support other sensitive biological resources.



Special Status Species

Local, state, and federal agencies regulate special status species and may require an assessment of their presence or potential presence to be conducted prior to the approval of development on a property. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB species occurrence records from other sites in the vicinity of the study area (2020a), and previous reports for the study area. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **Not expected.** Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site recently (within the last 5 years).

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, or Endangered under the CESA or Native Plant Protection Act; those identified as Fully Protected by the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515); those identified as Species of Special Concern or Watch List species by the CDFW; and plants occurring on lists 1 and 2 of the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) system per the following definitions:

- **Rank 1A:** Plants presumed extinct in California;
- **Rank 1B.1:** Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- **Rank 1B.2:** Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- **Rank 1B.3:** Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- **Rank 2:** Rare, threatened or endangered in California, but more common elsewhere.

Based on a query of the CNDDDB (2020a), there are 61 special status plant species, 52 special status wildlife species, and four sensitive natural communities documented within the *Walnut Creek, California*



USGS 7.5-minute quad and the eight surrounding quads. The 113 special status species have been evaluated for potential to occur within the study area (Attachment D).

Special Status Plant Species

Sixty-one (61) special status plant species known to occur in the region were evaluated for their potential to occur in the study area (see Attachment D). None of these 61 species would be expected to occur within the project site. Species could be excluded based on known range and elevation, the lack of the species' specific habitat requirements within the study area (e.g., chaparral and serpentine substrate) or due to the disturbed nature of the site and its lack of connectivity to natural vegetation communities.

Special Status Wildlife Species

Rincon identified 52 special status wildlife species that have been documented within the nine-quadrangle search radius. These species were reviewed for potential to occur within the study area (see Attachment D); one species was found to have low potential to occur in the study area. Special status species are discussed in further detail below.

Cooper's Hawk

Cooper's hawk (*Accipiter cooperi*) is a state watch list species that breeds in oak woodlands and deciduous riparian areas. Its nests are often constructed near water, and the species forages in a variety of woodland and edge habitats. An agile flier, the species is known to pursue small birds and mammals through thickets and woodlands, and generally occurs in wooded areas. During the winter months, the Cooper's hawk utilizes a wider variety of habitats for foraging including open fields and grasslands. There are no occurrences reported by the CNDDB; however, suitable habitat is present and there are numerous sightings on eBird (2020) in the vicinity of the study area. Due to the level of human presence and developed areas surrounding the site, this species has a low potential to nest in trees within the study area or project vicinity.

Nesting Birds

Non-game migratory birds protected under the CFGC Section 3503, such as native avian species common to developed and ruderal areas, have the potential to breed and forage in the study area and vicinity. Species of birds common to the area that typically occur in the region, such as red-tailed hawk, California scrub jay, and Anna's hummingbird, may nest in the study area. Nesting by a variety of common birds protected by CFGC Section 3503 could occur in virtually any location throughout the study area containing native or non-native vegetation.

Special Status Vegetation Communities and Critical Habitat

Sensitive Natural Communities

Plant communities are also considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's



methodology (Jennings 2009), with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Some alliances with the rank of 4 and 5 have also been included in the 2019 sensitive natural communities list under CDFW’s revised ranking methodology (2019). Four sensitive natural communities were identified within the nine-quadrangle search radius:

- Coastal Brackish Marsh
- Northern Coastal Salt Marsh
- Northern Maritime Chaparral
- Serpentine Bunchgrass

None of these sensitive communities were observed in the study area.

The willow riparian natural community (Figure 3, Attachment A) falls under the Goodding’s willow (*Salix gooddingii*) – red willow (*S. laevigata*) riparian woodlands alliance, which is considered a sensitive natural community (G4, S3) by CDFW (2019b). A small patch of this habitat, established in the last four years, is present at the western end of the seasonal drainage ditch, as discussed in the Existing Setting section above. The seasonal drainage ditch is also considered sensitive as a riparian habitat.

American bulrush marsh (*Schoenoplectus americanus*), is considered a sensitive natural community by CDFW (2019b). This species was observed in the study area in 2016 (Patterson 2016a); however, only one small stem of bulrush was observed by Rincon in the seasonal drainage ditch in May 2020.

Critical Habitat

Three federally designated critical habitat units occur within five miles of the study area. These include delta smelt (*Hypomesus transpacificus*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), and California red-legged frog (*Rana draytonii*). Critical habitat for delta smelt occurs approximately 3.5 miles to the north of the study area in the Carquinez Strait. Critical habitat for Alameda whipsnake and California Red-legged frog occur approximately 1.8 miles and 2.6 miles to the south west, respectively, at Briones Regional Park.

Jurisdictional Waters and Wetlands

One potential jurisdictional feature was mapped within the study area—namely, a man-made ditch identified in the *Request for a Jurisdictional Delineation* (Patterson 2016b). This feature was also mapped by Rincon as a seasonal drainage ditch including willow riparian woodland (Figure 3, Attachment A). This ditch is roughly 735 feet long and 17 to 35 feet wide when measured between top of bank on each side (reported by Patterson as 600 feet long and 3 to 12 feet wide); it is located along the east side of the study area. The ditch only channels surface water from the site itself and drains into the storm drain system at the southeastern corner of the study area. Slopes within the ditch allow for ponding of runoff within the channel bottom and support hydrophytic vegetation. Patterson observed wetland vegetation and soils along the ditch, including rabbit’s-foot grass, American bulrush, cattail and rush (*Juncus* sp.) (Patterson 2016b). Rincon found fewer wetland obligate plant species in May 2020 (see *Seasonal Drainage Ditch* description above).

Patterson (2016b) also identified a concrete ditch that channels runoff from developed areas to the east and drains into the storm drain system. This concrete ditch was determined to be outside of the study area during Rincon’s site reconnaissance survey. Rincon also observed the “four-foot diameter buried



drainpipe” to the north of the seasonal drainage ditch that Patterson noted in his report. The soil on top of the drainpipe has eroded, exposing approximately 200 feet of its length. A small stand of red willow and coast live oak occurs at its east end, but no wetland vegetation or soils were observed within the eroded area.

Because the seasonal drainage ditch (including willow riparian woodland) drains upland areas and is not adjacent to any traditionally navigable water, the feature is unlikely to be under USACE jurisdiction. However, it is likely to be RWQCB jurisdictional as a seasonal wetland under the Porter-Cologne Water Quality Control Act. In addition, this ditch meets the definition of a CDFW streambed jurisdictional feature and likely falls under CDFW jurisdiction pursuant to CFGC Section 1600 et seq.

A request for a preliminary jurisdictional delineation (PJD) was submitted to the USACE on March 31, 2016 for the seasonal drainage ditch. The USACE issued a PJD indicating the seasonal drainage ditch may be subject to USACE jurisdiction under Section 404 of the CWA on February 6, 2017; however, this does not change our conclusion that the seasonal drainage ditch is not likely to be considered jurisdictional under current USACE regulations.

Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Other corridors may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a habitat linkage do not necessarily need to be identical to those habitats being linked. Rather, the linkage needs only to contain sufficient cover and forage to allow temporary utilization by species moving between core habitat areas. Habitat linkages are typically contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Some species may require specific physical resources (such as rock outcroppings, vernal pools, or oak trees) within the habitat link for the linkage to serve as an effective movement corridor, while other more mobile or aerial species may only require discontinuous patches of suitable habitat to permit effective dispersal and/or migration. Wildlife movement corridors may occur at either large or small scales.

The study area is completely surrounded by development, and therefore does not function as a large- or small-scale corridor for wildlife movement.

Local Policies and Ordinances

Martinez General Plan. The current Martinez General Plan (2010) includes open space policies to protect natural resources, such as limiting tree removal (Policy 22.45) and protection of oak tree root systems during construction (22.46).

Martinez Ordinances. Some resources are afforded protection through local ordinances, such as those that protect trees, riparian corridors, and environmentally sensitive habitats. The City of Martinez



Municipal Code (2020) Chapter 8.12 – requires a permit for the removal of trees on private property proposed for development. According to Section 8.12.020, protected trees are defined as all oak trees and indigenous trees measuring 20 inches or larger in circumference (approximately 6.5 inches in diameter), measured 4.5 feet from ground level. Protected oak and indigenous tree species requiring a permit for removal include but are not limited to:

- *Quercus agrifolia* (California or Coast Live Oak)
- *Quercus douglasi* (Blue Oak)
- *Quercus kelloggii* (California Black Oak)
- *Quercus lobata* (Valley Oak)
- *Sequoia Sempervirens* (Coast Redwood)
- *Alnus Rhombifolia* (White Alder)
- *Alnus Oregona* (Red Alder)
- *Acer Macrophyllum* (Bigleaf Maple)
- *Aesculus Californica* (California Buckeye)
- *Arbutus Menziesii* (Madrone)
- *Umbellularia Californica* (California Bay or Laurel)
- *Juglans Hindsii* (California Black Walnut)
- *Platanus Racemosa* (California Sycamore)
- *Sambucus Calliarpa* (Coast Red Elderberry)

Additionally, protected trees include any tree to be preserved on an approved tentative map and any replacement tree. On undeveloped properties, a tree removal permit is also required for:

- Any tree measuring 20 inches or larger in circumference (approximately 6.5 inches diameter), measured 4.5 feet from ground level including the oak trees listed above);
- Any multi-stemmed tree with the sum of the circumferences measuring 40 inches or larger, measured 4.5 feet from ground level; and
- Any significant grouping of trees, including groves of four or more trees.

Habitat Conservation Plans

The study area is not within any Habitat Conservation Plan or Natural Community Conservation Plan areas.

Impact Analysis and Mitigation Measures

This section discusses the potential impacts and effects to biological resources that may occur from project implementation.

Special Status Species

The project would have a significant effect on biological resources if it would:



- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

Special Status Plants

Literature review and database searches identified 61 special status plants have the potential to occur within the study area. None are expected to occur within the study area; therefore, impacts to special status plant species are not expected.

Special Status Wildlife

One special status wildlife species, the Cooper's hawk, has potential to occur within the study area based upon known ranges, habitat preferences, species occurrence records in the vicinity of the study area, and presence of suitable habitat. Potential impacts for this species and native birds with potential to occur on-site are discussed below.

Nesting Birds and Raptors

Special status raptors such as the Cooper's hawk, and other native birds protected by CFGC Section 3503, are likely to nest within the study area. Impacts may occur through removal of vegetation if active nests are present. Impacts may also occur if active nests are present in undeveloped and landscaped areas adjacent to active construction or staging through disturbance and nest abandonment. With the implementation of a worker training program and a preconstruction survey, impacts to nesting birds would be reduced to less than significant with mitigation.

Mitigation Measures

BIO 1(a) Worker Environmental Awareness Program (WEAP)

Prior to initiation of construction activities (including staging and mobilization) all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A qualified biologist shall prepare a fact sheet conveying this information for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form shall be submitted to the City to document compliance following each training.

BIO 1(b) Nesting Bird Survey

If construction requires any vegetation trimming or tree removals that are scheduled to occur during the nesting bird season (February 1 through September 1), a qualified biologist shall conduct preconstruction surveys no more than 7 days prior to the start of construction to determine the presence/absence of nesting birds and special status raptors within the project site. If active nests are



found, the qualified biologist shall establish an appropriate buffer, taking into account the species sensitivity and physical location of the nest (line of site to the work area), to be in compliance with CFGC 3503 and 3503.5. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species and 250 feet for raptor species. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material installed by the contractor. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist.

Sensitive Plant Communities and Critical Habitat

The project would have a significant effect on biological resources if it would:

- b) *Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

The riparian habitat onsite includes 0.45 acre of seasonal drainage ditch, including 0.07 acre of willow riparian woodland. In addition, the willow riparian woodland is considered a sensitive natural community (Goodding's willow– red willow riparian woodlands) by CDFW (2019b). The seasonal drainage ditch would be removed during the development of the project, thus there would be potentially significant impacts to riparian habitat. The following mitigation measure is recommended to reduce impacts to less than significant.

BIO 2 Sensitive Community Mitigation

Impacts to riparian habitat (i.e., seasonal drainage ditch, including willow riparian woodlands) shall be offset through purchase of credits at a RWQCB and CDFW-approved mitigation bank for creation or enhancement of sensitive natural communities at a 2:1 ratio. If the project falls outside of RWQCB- and CDFW-approved mitigation bank service areas, impacts to sensitive natural communities shall be offset through habitat restoration and/or enhancement at an off-site location at a ratio of 2:1 (habitat restored and/or enhanced to habitat impacted). The location of restoration and/or enhancement shall be determined by a qualified biologist. The restoration and/or enhancement shall include locally native species approved by the City. The restoration and/or enhancement shall be incorporated into an Off-Site Habitat Restoration/Enhancement Plan to be developed by a qualified biologist pursuant to the requirements listed below.

Upon final project design, a qualified biologist shall determine the final impacts to sensitive communities and the subsequent amount of acreage needed for restoration and/or enhancement for the project. The project applicant shall implement restoration and/or enhancement for a period of not less than five years, or until restoration and/or enhancement has been completed successfully as determined by a qualified biologist in coordination with City Planning. The Off-Site Habitat Restoration/Enhancement Plan shall include, at a minimum, the following components:

- a. Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);
- b. Goal(s) of the compensatory mitigation project (i.e., the type/types and area/areas of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type/types to be established, restored, enhanced, and/or preserved);



- c. Description of the proposed compensatory mitigation-site (i.e., location and size, ownership status, existing functions and values of the compensatory mitigation-site);
- d. Implementation plan for the compensatory mitigation-site (the plan will include rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan, including plant species to be used, container sizes, and seeding rates);
- e. Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (the plan will include activities, responsible parties, and schedule);
- f. Monitoring plan for the compensatory mitigation-site, including no less than quarterly monitoring for the first year; the plan will include performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports;
- g. Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type;
- h. An adaptive management program and remedial measures to address negative impacts to restoration efforts;
- i. Notification of completion of compensatory mitigation and agency confirmation; and
- j. Contingency measures (e.g., initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

Jurisdictional Waters and Wetlands

The project would have a significant effect on biological resources if it would:

- c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

The project would result in fill within the potentially jurisdictional seasonal drainage ditch, including willow riparian woodland. Because the seasonal drainage ditch drains upland areas and is not adjacent to, or tributary of, any traditionally navigable water, the feature is unlikely to be under USACE jurisdiction. A request for a PJD was submitted to the USACE on March 31, 2016 for the seasonal drainage ditch. The USACE issued a PJD indicating the seasonal drainage ditch may be subject to USACE jurisdiction under Section 404 of the CWA on February 6, 2017; however, this does not change our conclusion that the seasonal drainage ditch is not likely to be considered jurisdictional under current USACE regulations.

The seasonal drainage ditch may be considered waters of the state and fall under the jurisdiction of the RWQCB under the Porter-Cologne Act. Additionally, areas up to the top of bank, as well as riparian vegetation to the outer dripline of the riparian community, are subject to jurisdiction of the CDFW pursuant to Section 1600 et seq. of the CFGC. As such, impacts to the seasonal drainage ditch, including the willow riparian woodland, are likely to require a CDFW Lake or Streambed Alteration Agreement and RWQCB Waste Discharge Requirements permit. Mitigation Measures BIO-2 and BIO-3 are recommended to reduce impacts to less than significant.



BIO 3 Jurisdictional Delineation

If the project results in fill to wetlands, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW and/or RWQCB, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The result shall be a jurisdictional delineation report that shall be submitted to the implementing agency. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements permit. If CDFW asserts its jurisdictional authority, then a Lake or Streambed Alteration Agreement pursuant to Section 1600 et seq. of the California Fish and Game Code would also be required prior to construction within the areas of CDFW jurisdiction.

Wildlife Movement

The project would have a significant effect on biological resources if it would:

- d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.*

No significant wildlife movement corridors or habitat linkages are present in the study area. Due to the relatively small size of the project footprint, and its location within existing development, the project would not interfere substantially with the movement of wildlife species. Impacts to wildlife movement would be less than significant.

Local Policies and Ordinance

The proposed project would have a significant effect on biological resources if it would:

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*

The study area is located in the City of Martinez and is subject to the Martinez Municipal Code and General Plan policies. According to the arborist report, the study area contains 60 trees, 43 of which would require removal and 17 could be retained (Traverso Tree Service 2016). Tree removal is subject to review, approval, and permit issuance by the Community Development Department. Since the 2016 preparation of the arborist report, the quantity and health of the trees has changed; therefore, Rincon recommends that the Community Development Department request an updated arborist report. As long as appropriate permits are obtained for necessary removal of protected trees, no conflicts with local policies or ordinances protecting biological resources are expected.

Habitat Conservation Plan

The proposed project would have a significant effect on biological resources if it would:

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.*

The project is not within any applicable habitat conservation plan areas; therefore, no conflicts with state, regional, or local habitat conservation plans would occur.



Sincerely,
Rincon Consultants, Inc.

A handwritten signature in blue ink that reads "Anastasia G. Ennis".

Anastasia G. Ennis, M.S.
Associate Biologist

A handwritten signature in blue ink that reads "Sherri Miller".

Sherri Miller, M.S.
Principal Biologist



Attachments

- Attachment A Figures
- Attachment B References
- Attachment C Representative Site Photographs
- Attachment D Special Status Species Evaluation Tables

Attachment A

Figures

Figure 2 Study Area



Fig 2 Project Location

Figure 3 Vegetation Communities and Land Cover



Imagery provided by Microsoft Bing and its licensors   2020.

Fig. 3 Land Cover and Vegetation



This page intentionally left blank.

Attachment B

References



References

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley.
- California Department of Fish and Wildlife (CDFW). 2019a. Natural Diversity Database. August 2019. Special Animals List. Periodic publication. 67 pp.
- _____. 2019b. Natural Communities List Arranged Alphabetically by Life Form (PDF). Available from <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities>. (Accessed May 2020).
- _____. 2019c. Biogeographic Information and Observation System (BIOS). <http://bios.dfg.ca.gov>. (Accessed February 2020).
- _____. 2020a. California Natural Diversity Database, Rarefind 5. <https://wildlife.ca.gov/data/cnddb/maps-and-data> (Accessed February 2020).
- _____. 2020b. Natural Diversity Database. January 2020. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 140 pp.
- California Native Plant Society. 2020. Inventory of Rare and Endangered Plants. V8-02. <http://www.rareplants.cnps.org/>. (Accessed February 2020).
- City of Martinez. 2010. City of Martinez General Plan. Available at <https://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?BlobID=17257>.
- City of Martinez. 2020. Municipal Code. Available at https://library.municode.com/ca/martinez/codes/code_of_ordinances.
- eBird. 2020. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. <http://www.ebird.org> (Accessed May 2020).
- Jennings, M.J., D. Faber-Langendoen, O.L., Loucks, R.K. Peet. 2009. Standards for associations and alliances of the U.S. National Vegetation Classification. *Ecological Monographs* 79(2): 173–199.
- Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.
- Koch, J., J. Strange, and P. Williams. 2012. Bumble Bees of the Western United States. U. S. Forest Service and the Pollinator Partnership with funding from the National Fish and Wildlife Foundation.
- Patterson, Charles A. 2016a. Biotic Survey Report for Vacant Parcel on Arnold Drive, Martinez, Contra Costa County. January 11.
- Patterson, Charles A. 2016b. Request of a “JD” for a vacant lot (approximately 5 acres) on Arnold Drive, Martinez, Contra Costa County. March 31.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA.



- Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.
- Traverso Tree Service. 2016. Arborist Report for the Am re Apartment Homes. May 16.
- United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2019. Web Soil Survey. Soil Survey Area: Contra Costa County, California. Soil Survey Data: Version 8. Available at: <http://websoilsurvey.nrcs.usda.gov/app/>. (Accessed February 2020).
- United States Fish and Wildlife Service (USFWS). 2020a. National Wetlands Inventory (NWI) Wetlands mapper. Available at: <https://www.fws.gov/wetlands/data/mapper.html> (Accessed February 2020).
- _____. 2020b. Information for Planning and Consultation (IPaC). Available at: <https://ecos.fws.gov/ipac/>. (Accessed February 2020).
- _____. 2020c. Critical Habitat Portal. Available at: <http://criticalhabitat.fws.gov>. (Accessed February 2020).
- _____. 2009a. Bay checkerspot butterfly (*Euphydryas editha bayensis*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office Sacramento, California August 2009.
- _____. 2009b. Callippe silverspot butterfly (*Speyeria callippe callippe*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office Sacramento, California August 2009.
- University of California, Berkeley. 2020. University and Jepson Herbaria. <https://ucjeps.berkeley.edu/interchange/> [Accessed 27 May 2020].
- Xerces Society, Wildlife Preservation Canada, York University, The Montreal Insectarium, The London Natural History Museum, and BeeSpotter. 2020. Data accessed from Bumble Bee Watch, a collaborative website to track and conserve North America’s bumble bees. Available from: <http://www.bumblebeewatch.org/app/#/bees/lists> [Accessed 27 May 2020].

Attachment C

Representative Site Photographs



Photograph 1. View of ruderal and landscaped land cover from the intersection of Arnold Drive and Starflower Drive, facing southwest.



Photograph 2. The western end of the seasonal drainage ditch cover from the intersection of Arnold Drive and Starflower Drive, facing east.



Photograph 3. Willow riparian woodland from the north bank of the seasonal drainage ditch, facing southwest.



Photograph 4. In-channel wetlands in the middle of the seasonal drainage ditch, facing east.



Photograph 5. View of ephemeral drainage, ruderal land cover, and landscaped hillside from southeast corner of study area, facing west.



Photograph 6. Eroded area around exposed drainpipe shaded by landscaped live oaks along Arnold Drive, facing east.



Photograph 7. Concrete ditch outside the eastern edge of study area, facing northeast.



Photograph 8. Concrete ditch outside the eastern edge of study area, facing southeast.

Attachment D

Special Status Species Evaluation Tables



Special Status Plant Species in the Regional Vicinity (Nine Quad) of the Study Area

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	None/None G3/S3 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC- UC Santa Cruz	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland. 3 - 500 m. annual herb. Blooms Mar- Jun	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. One occurrence has been reported 4 miles away in 2013 (CDFW 2020a).
<i>Arctostaphylos</i> <i>auriculata</i> Mt. Diablo manzanita	None/None G2/S2 1B.3	Chaparral (sandstone), Cismontane woodland. 135 - 650 m. perennial evergreen shrub. Blooms Jan-Mar	Not Expected	Suitable elevation is not present.
<i>Arctostaphylos</i> <i>manzanita</i> ssp. <i>laevigata</i> Contra Costa manzanita	None/None G5T2/S2 1B.2	Chaparral (rocky). 430 - 1100 m. perennial evergreen shrub. Blooms Jan-Mar (Apr)	Not Expected	Suitable elevation is not present.
<i>Arctostaphylos</i> <i>pallida</i> pallid manzanita	FT/CE G1/S1 1B.1	Broadleaved upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub. siliceous shale, sandy or gravelly. 185 - 465 m. perennial evergreen shrub. Blooms Dec-Mar	Not Expected	Suitable elevation is not present.
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	None/None G2T1/S1 1B.2	Playas, Valley and foothill grassland (adobe clay), Vernal pools. alkaline. 1 - 60 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal pools with alkaline soils are not present.
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	None/None G3T2/S2 1B.2 BLM_S-Sensitive	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy). saline or alkaline. 0 - 560 m. annual herb. Blooms Apr-Oct	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles.
<i>Balsamorhiza</i> <i>macrolepis</i> big-scale balsamroot	None/None G2/S2 1B.2 BLM_S-Sensitive USFS_S-Sensitive	Chaparral, Cismontane woodland, Valley and foothill grassland. sometimes serpentinite. 45 - 1555 m. perennial herb. Blooms Mar-Jun	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Blepharizonia plumosa</i> big tarplant	None/None G1G2/S1S2 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	Valley and foothill grassland. Usually clay. 30 - 505 m. annual herb. Blooms Jul-Oct	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. One historic occurrence (1937) has been reported 4.5 miles away (CDFW 2020a).
<i>Calochortus pulchellus</i> Mt. Diablo fairy- lantern	None/None G2/S2 1B.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland. 30 - 840 m. perennial bulbiferous herb. Blooms Apr-Jun	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. Six occurrences have been reported in open space preserves within 5 miles with the most recent in 2012 (CDFW 2020a).
<i>Campanula exigua</i> chaparral harebell	None/None G2/S2 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral (rocky, usually serpentine). 275 - 1250 m. annual herb. Blooms May-Jun	Not Expected	Suitable elevation and habitat are not present.
<i>Centromadia parryi</i> <i>ssp. congdonii</i> Congdon's tarplant	None/None G3T1T2/S1S2 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	Valley and foothill grassland (alkaline). 0 - 230 m. annual herb. Blooms May-Oct (Nov)	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. Five occurrences, two of which are historic, have been reported within 5 miles, populations surrounded by developed areas such as the project site have been extirpated (CDFW 2020a).
<i>Chloropyron</i> <i>maritimum</i> ssp. <i>palustre</i> Point Reyes bird's- beak	None/None G4?T2/S2 1B.2 BLM_S-Sensitive	Marshes and swamps (coastal salt). 0 - 10 m. annual herb (hemiparasitic). Blooms Jun-Oct	Not Expected	Suitable habitat is not present.
<i>Chloropyron molle</i> <i>ssp. molle</i> soft bird's-beak	FE/CR G2T1/S1 1B.2	Marshes and swamps (coastal salt). 0 - 3 m. annual herb (hemiparasitic). Blooms Jun-Nov	Not Expected	Suitable habitat is not present.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	FE/None G2T1/S1 1B.1 BLM_S-Sensitive	Chaparral (maritime), Cismontane woodland (openings), Coastal dunes, Coastal scrub. sandy or gravelly. 3 - 300 m. annual herb. Blooms Apr-Sep	Not Expected	Suitable habitat is not present.
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water- hemlock	None/None G5T4T5/S2? 2B.1	Marshes and swamps Coastal, fresh or brackish water. 0 - 200 m. perennial herb. Blooms Jul-Sep	Not Expected	Suitable habitat is not present.
<i>Cirsium andrewsii</i> Franciscan thistle	None/None G3/S3 1B.2	Broadleaved upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub. mesic, sometimes serpentinite. 0 - 150 m. perennial herb. Blooms Mar-Jul	Not Expected	Suitable habitat is not present.
<i>Clarkia franciscana</i> Presidio clarkia	FE/CE G1/S1 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	Coastal scrub, Valley and foothill grassland (serpentinite). 25 - 335 m. annual herb. Blooms May- Jul	Not Expected	Suitable habitat is not present.
<i>Cordylanthus</i> <i>nidularius</i> Mt. Diablo bird's- beak	None/CR G1/S1 1B.1 BLM_S-Sensitive	Chaparral (serpentinite). 600 - 800 m. annual herb (hemiparasitic). Blooms Jun-Aug	Not Expected	Suitable elevation and habitat are not present.
<i>Delphinium</i> <i>californicum</i> ssp. <i>interius</i> Hospital Canyon larkspur	None/None G3T3/S3 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral (openings), Cismontane woodland (mesic), Coastal scrub. 195 - 1095 m. perennial herb. Blooms Apr-Jun	Not Expected	Suitable elevation and habitat are not present.
<i>Dirca occidentalis</i> <i>western</i> leatherwood	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland. mesic. 25 - 425 m. perennial deciduous shrub. Blooms Jan-Mar (Apr)	Not Expected	Small patches of newly established riparian trees and vegetation present, but no western leatherwood is expected due to the disturbed nature of the site. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Eriastrum erterrae</i> Lime Ridge eriastrum	None/None G1/S1 1B.1	Chaparral (openings or edges). Alkaline or semi- alkaline, sandy. 200 - 290 m. annual herb. Blooms Jun-Jul	Not Expected	Suitable elevation and habitat are not present.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	None/None G5T2/S2 1B.2	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland. serpentinite, sandy to gravelly. 0 - 700 m. annual herb. Blooms May-Sep	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Eriogonum truncatum</i> Mt. Diablo buckwheat	None/None G1/S1 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	Chaparral, Coastal scrub, Valley and foothill grassland. sandy. 3 - 350 m. annual herb. Blooms Apr-Sep (Nov-Dec)	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Eryngium jepsonii</i> Jepson's coyote thistle	None/None G2?/S2? 1B.2	Valley and foothill grassland, Vernal pools. clay. 3 - 300 m. perennial herb. Blooms Apr-Aug	Not Expected	Vernal pools are not present. Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. One occurrence has been reported within 5 miles (CDFW 2020a).
<i>Erysimum capitatum</i> var. <i>angustatum</i> Contra Costa wallflower	FE/CE G5T1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	Inland dunes. 3 - 20 m. perennial herb. Blooms Mar-Jul	Not Expected	Suitable habitat is not present.
<i>Extriplex joaquinana</i> San Joaquin spearscale	None/None G2/S2 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland. alkaline. 1 - 835 m. annual herb. Blooms Apr-Oct	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. Two occurrences, one historic, have been reported within 5 miles (CDFW 2020a).
<i>Fissidens pauperculus</i> minute pocket moss	None/None G3?/S2 1B.2 USFS_S-Sensitive	North Coast coniferous forest (damp coastal soil). 10 - 1024 m. moss. Blooms	Not Expected	Suitable habitat is not present.
<i>Fritillaria liliacea</i> fragrant fritillary	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland. Often serpentinite. 3 - 410 m. perennial bulbiferous herb. Blooms Feb-Apr	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Gilia millefoliata</i> dark-eyed gilia	None/None G2/S2 1B.2 BLM_S-Sensitive	Coastal dunes. 2 - 30 m. annual herb. Blooms Apr- Jul	Not Expected	Suitable habitat is not present.
<i>Grimmia torenii</i> Toren's grimmia	None/None G2/S2 1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Openings, rocky, boulder and rock walls, carbonate, volcanic. 325 - 1160 m. moss. Blooms	Not Expected	Suitable elevation and habitat are not present.
<i>Helianthella castanea</i> Diablo helianthella	None/None G2/S2 1B.2 BLM_S-Sensitive	Broadleaved upland forest, Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland. Usually rocky, axonal soils. Often in partial shade. 60 - 1300 m. perennial herb. Blooms Mar-Jun	Not Expected	Suitable elevation is not present.
<i>Hesperolinon breweri</i> Brewer's western flax	None/None G2/S2 1B.2 BLM_S-Sensitive	Chaparral, Cismontane woodland, Valley and foothill grassland. usually serpentinite. 30 - 945 m. annual herb. Blooms May- Jul	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Hoita strobilina</i> Loma Prieta hoita	None/None G2?/S2? 1B.1	Chaparral, Cismontane woodland, Riparian woodland. usually serpentinite, mesic. 30 - 860 m. perennial herb. Blooms May-Jul (Aug-Oct)	Not Expected	Small patches of newly established riparian trees and vegetation present, but this species is unlikely to occur due to the disturbed nature of the site. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT/CE G1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG- UC Botanical Garden at Berkeley	Coastal prairie, Coastal scrub, Valley and foothill grassland. often clay, sandy. 10 - 220 m. annual herb. Blooms Jun-Oct	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	None/None G4T1?/S1? 1B.1 SB_UCSC-UC Santa Cruz USFS_S- Sensitive	Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub. sandy or gravelly, openings. 10 - 200 m. perennial herb. Blooms Apr-Sep	Not Expected	Suitable habitat is not present.
<i>Isocoma arguta</i> Carquinez goldenbush	None/None G1/S1 1B.1	Valley and foothill grassland (alkaline). 1 - 20 m. perennial shrub. Blooms Aug-Dec	Not Expected	Native grasslands with alkaline soils are not present and the project site is heavily disturbed and dominated by non-native species. One occurrence based on a historic reference has been reported within 5 miles (CDFW 2020a).
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/None G1/S1 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools. mesic. 0 - 470 m. annual herb. Blooms Mar- Jun	Not Expected	Vernal pools, native grasslands, and other suitable habitat with alkaline soils are not present. Two historic occurrences have been reported within 5 miles (CDFW 2020a).
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tulle pea	None/None G5T2/S2 1B.2 SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden	Marshes and swamps (freshwater and brackish). 0 - 5 m. perennial herb. Blooms May-Jul (Aug-Sep)	Not Expected	Suitable habitat is not present.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	None/CR G2/S2 1B.1	Marshes and swamps (brackish or freshwater), Riparian scrub. 0 - 10 m. perennial rhizomatous herb. Blooms Apr-Nov	Not Expected	Suitable habitat is not present.
<i>Limosella australis</i> Delta mudwort	None/None G4G5/S2 2B.1	Marshes and swamps (freshwater or brackish), Riparian scrub. Usually mud banks. 0 - 3 m. perennial stoloniferous herb. Blooms May-Aug	Not Expected	Suitable habitat is not present.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Madia radiata</i> showy golden madia	None/None G3/S3 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG- Santa Barbara Botanic Garden	Cismontane woodland, Valley and foothill grassland. 25 - 1215 m. annual herb. Blooms Mar- May	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Malacothamnus hallii</i> Hall's bush-mallow	None/None G2/S2 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral, Coastal scrub. 10 - 760 m. perennial evergreen shrub. Blooms (Apr) May-Sep (Oct)	Not Expected	Suitable habitat and elevation are not present.
<i>Meconella oregana</i> Oregon meconella	None/None G2G3/S2 1B.1	Coastal prairie, Coastal scrub. 250 - 620 m. annual herb. Blooms Mar-Apr	Not Expected	Suitable habitat and elevation are not present.
<i>Monolopia gracilens</i> woodland woolythreads	None/None G3/S3 1B.2	Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland. Serpentine. 100 - 1200 m. annual herb. Blooms (Feb) Mar-Jul	Not Expected	Suitable elevation is not present.
<i>Navarretia gowenii</i> Lime Ridge navarretia	None/None G1/S1 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	Chaparral. 180 - 305 m. annual herb. Blooms May- Jun	Not Expected	Suitable habitat and elevation are not present.
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> shining navarretia	None/None G4T2/S2 1B.2 BLM_S-Sensitive	Cismontane woodland, Valley and foothill grassland, Vernal pools. Sometimes clay. 65 - 1000 m. annual herb. Blooms (Mar)Apr-Jul	Not Expected	Vernal pools are not present.
<i>Oenothera deltoides</i> ssp. <i>howellii</i> Antioch Dunes evening-primrose	FE/CE G5T1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG- UC Botanical Garden at Berkeley	Inland dunes. 0 - 30 m. perennial herb. Blooms Mar-Sep	Not Expected	Suitable habitat is not present.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Phacelia phacelioides</i> Mt. Diablo phacelia	None/None G2/S2 1B.2 BLM_S-Sensitive	Chaparral, Cismontane woodland. rocky. 500 - 1370 m. annual herb. Blooms Apr-May	Not Expected	Suitable habitat and elevation are not present.
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	None/CE G1Q/S1 1B.1 SB_UCSC-UC Santa Cruz	Coastal prairie, Valley and foothill grassland. 60 - 360 m. annual herb. Blooms Mar-Jun	Not Expected	Suitable elevation is not present.
<i>Sanicula maritima</i> adobe sanicle	None/CR G2/S2 1B.1 SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	Chaparral, Coastal prairie, Meadows and seeps, Valley and foothill grassland. clay, serpentinite. 30 - 240 m. perennial herb. Blooms Feb-May	Not Expected	Native grasslands are not present and the project site is heavily disturbed and dominated by non-native species. No occurrences have been reported within 5 miles (CDFW 2020a).
<i>Sanicula saxatilis</i> rock sanicle	None/CR G2/S2 1B.2 BLM_S-Sensitive	Broadleaved upland forest, Chaparral, Valley and foothill grassland. rocky, scree, talus. 620 - 1175 m. perennial herb. Blooms Apr-May	Not Expected	Suitable elevation is not present.
<i>Senecio aphanactis</i> chaparral ragwort	None/None G3/S2 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub. sometimes alkaline. 15 - 800 m. annual herb. Blooms Jan-Apr (May)	Not Expected	Suitable habitat is not present.
<i>Spergularia macrotheca</i> var. <i>longistyla</i> long-styled sand-spurrey	None/None G5T2/S2 1B.2	Meadows and seeps, Marshes and swamps. Alkaline. 0 - 255 m. perennial herb. Blooms Feb-May (Jun)	Not Expected	Suitable habitat is not present.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewelflower	None/None G2T2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley USFS_S-Sensitive	Chaparral, Cismontane woodland, Valley and foothill grassland. serpentinite. 95 - 1000 m. annual herb. Blooms (Mar) Apr-Sep (Oct)	Not Expected	Suitable elevation is not present.
<i>Streptanthus hispidus</i> Mt. Diablo jewelflower	None/None G2/S2 1B.3	Chaparral, Valley and foothill grassland. rocky. 365 - 1200 m. annual herb. Blooms Mar-Jun	Not Expected	Suitable elevation is not present.



Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Stuckenia filiformis</i> <i>ssp. alpina</i> slender-leaved pondweed	None/None G5T5/S2S3 2B.2	Marshes and swamps (assorted shallow freshwater). 300 - 2150 m. perennial rhizomatous herb (aquatic). Blooms May-Jul	Not Expected	Suitable habitat is not present.
<i>Symphyotrichum</i> <i>lentum</i> Suisun Marsh aster	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	Marshes and swamps (brackish and freshwater). 0 - 3 m. perennial rhizomatous herb. Blooms (Apr)May-Nov	Not Expected	Suitable habitat is not present.
<i>Trifolium</i> <i>hydrophilum</i> saline clover	None/None G2/S2 1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools. 0 - 300 m. annual herb. Blooms Apr- Jun	Not Expected	Vernal pools with alkaline soils are not present.
<i>Triquetrella</i> <i>californica</i> coastal triquetrella	None/None G2/S2 1B.2 USFS_S-Sensitive	Coastal bluff scrub, Coastal scrub. soil. 10 - 100 m. moss. Blooms	Not Expected	Suitable habitat is not present.
<i>Tropidocarpum</i> <i>capparideum</i> caper-fruited trepidocarpum	None/None G1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S- Sensitive	Valley and foothill grassland (alkaline hills). 1 - 455 m. annual herb. Blooms Mar-Apr	Not Expected	No native grasslands or alkaline soils are present and no occurrences have been reported within 5 miles (CDFW 2020a).
<i>Viburnum ellipticum</i> oval-leaved viburnum	None/None G4G5/S3? 2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. 215 - 1400 m. perennial deciduous shrub. Blooms May-Jun	Not Expected	Suitable habitat and elevation are not present.

Regional Vicinity refers to within a 9-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species
SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

CRPR (CNPS California Rare Plant Rank):

- 1A=Presumed Extinct in California
- 1B=Rare, Threatened, or Endangered in California and elsewhere
- 2A=Plants presumed extirpated in California, but more common elsewhere
- 2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:

- .1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2=Fairly endangered in California (20-80% occurrences threatened)
- .3=Not very endangered in California (<20% of occurrences threatened)



Special Status Animal Species in the Regional Vicinity (Nine Quad) of the Study Area

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
<i>Bombus crotchii</i> Crotch bumble bee	None/SC G3G4/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Not Expected	Suitable host plants are available, however presence in the site is unlikely due to disturbance. No recorded occurrences within 5 miles.
<i>Bombus occidentalis</i> western bumble bee	None/SC G2G3/S1 XERCES_IM- Imperiled	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Not Expected	Suitable host plants are available, however presence in the site is unlikely due to disturbance. Three historic occurrences are recorded within 5 miles (CDFW 2020a).
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/None G2/S2 IUCN_EN- Endangered	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	Not Expected	Vernal pools are not present.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/None G3/S3 IUCN_VU- Vulnerable	Endemic to the grasslands of the 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	Vernal pools are not present.
<i>Danaus plexippus</i> pop. 1 monarch - California overwintering population	None/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	Suitable wintering habitat is not present.
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	FT/None G5T1/S1 XERCES_CI-Critically Imperiled	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> & <i>O. purpurscens</i> are the secondary host plants.	Not Expected	This species is extirpated in Contra Costa County (USFWS 2009a)



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE/None G4/S3S4 IUCN_EN- Endangered	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not Expected	Vernal pools are not present.
<i>Speyeria callippe callippe</i> callippe silverspot butterfly	FE/None G5T1/S1 XERCES_CI-Critically Imperiled	Restricted to the northern coastal scrub of the San Francisco Peninsula. Hostplant is <i>Viola pedunculata</i> . Most adults found on E-facing slopes; males congregate on hilltops in search of females.	Not Expected	There are no known populations of this species in Contra Costa County (USFWS 2009b).
Fish				
<i>Archoplites interruptus</i> Sacramento perch	None/None G2G3/S1 AFS_TH-Threatened SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	Not Expected	Suitable aquatic habitats are not present.
<i>Eucyclogobius newberryi</i> tidewater goby	FE/None G3/S3 AFS_EN- Endangered SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Suitable aquatic habitats are not present.
<i>Oncorhynchus mykiss irideus</i> pop. 11 steelhead - Central Valley DPS	FT/None G5T2Q/S2 AFS_TH-Threatened	Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not Expected	Suitable aquatic habitats are not present.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	None/None GNR/S3 AFS_VU-Vulnerable SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	Not Expected	Suitable aquatic habitats are not present.
<i>Spirinchus thaleichthys</i> longfin smelt	FC/ST G5/S1	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not Expected	Suitable aquatic habitats are not present.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Amphibians				
<i>Ambystoma californiense</i> California tiger salamander	FT/ST G2G3/S2S3 SS	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not Expected	Suitable aquatic habitats may be present and the site is located within an extirpated occurrence, however the site is isolated by development with no connectivity to extant populations.
<i>Rana boylei</i> foothill yellow-legged frog	None/SC G3/S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not Expected	Suitable aquatic habitats are not present.
<i>Rana draytonii</i> California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	Suitable aquatic habitats may be present, however the site is isolated by development with no connectivity to known populations.
Reptiles				
<i>Anniella pulchra</i> northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Not Expected	Suitable sandy soils are not present, and the site is isolated by development.
<i>Emys marmorata</i> western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	Suitable aquatic habitats are not present, and the site is isolated by development.
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT/ST G4T2/S2	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	Not Expected	Suitable habitats are not present, and the site is isolated by development.
<i>Phrynosoma blainvillii</i> coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not Expected	Suitable habitats are not present, and the site is isolated by development.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Thamnophis gigas</i> giant gartersnake	FT/ST G2/S2	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the gartersnakes in California.	Not Expected	Suitable aquatic habitats are not present.
Birds				
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5/S4 SS IUCN_LC-Least Concern	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Low	Small patches of young riparian woodland are present.
<i>Agelaius tricolor</i> tricolored blackbird	None/ST G2G3/S1S2 SSC USFWS_BCC-Birds of Conservation Concern	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Not Expected	Suitable nesting habitat is not present.
<i>Aquila chrysaetos</i> golden eagle	None/None G5/S3 SS SFP USFWS_BCC-Birds of Conservation Concern	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Not Expected	Suitable nesting habitat is not present, and the site is too small to provide foraging habitat.
<i>Asio flammeus</i> short-eared owl	None/None G5/S3 SSC IUCN_LC-Least Concern	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Not Expected	Suitable nesting habitat is not present.
<i>Athene cunicularia</i> burrowing owl	None/None G4/S3 SSC USFWS_BCC-Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected	Suitable nesting habitat and prey base are not present due to disturbed nature of ruderal areas in the project site.
<i>Branta hutchinsii leucopareia</i> cackling (=Aleutian Canada) goose	Delisted/None G5T3/S3 SS	Winters on lakes and inland prairies. Forages on natural pasture or that cultivated to grain; loafs on lakes, reservoirs, ponds.	Not Expected	Suitable nesting habitat is not present.
<i>Buteo regalis</i> ferruginous hawk	None/None G4/S3S4 SS USFWS_BCC-Birds of Conservation Concern	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	Suitable wintering habitat is not present.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Buteo swainsoni</i> Swainson's hawk	None/ST G5/S3 USFWS_BCC-Birds of Conservation Concern	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Not Expected	Suitable nesting habitat is not present, and the site is too small to provide foraging habitat.
<i>Circus hudsonius</i> northern harrier	None/None G5/S3 SSC IUCN_LC- Least Concern	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Not Expected	Suitable nesting habitat is not present, and the site is too small to provide foraging habitat.
<i>Coturnicops noveboracensis</i> yellow rail	None/None G4/S1S2 SSC USFWS_BCC- Birds of Conservation Concern	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Not Expected	Suitable aquatic habitats are not present.
<i>Eremophila alpestris actia</i> California horned lark	None/None G5T4Q/S4 CDFW_WL-Watch List IUCN_LC- Least Concern	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	Suitable nesting habitat is not present.
<i>Falco mexicanus</i> prairie falcon	None/None G5/S4 SS USFWS_BCC- Birds of Conservation Concern	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Not Expected	Suitable nesting habitat is not present.
<i>Falco peregrinus anatum</i> American peregrine falcon	Delisted/Delisted G4T4/S3S4 SS SFP USFWS_BCC-Birds of Conservation Concern	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Not Expected	Suitable nesting habitat is not present.
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	None/None G5T3/S3 SSC USFWS_BCC- Birds of Conservation Concern	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Not Expected	Suitable nesting habitat is not present.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Haliaeetus leucocephalus</i> bald eagle	Delisted/SE G5/S3 SS USFWS_BCC- Birds of Conservation Concern	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Not Expected	Suitable nesting habitat is not present, and the site is too small to provide foraging habitat.
<i>Laterallus jamaicensis coturniculus</i> California black rail	None/ST G3G4T1/S1 SFP USFWS_BCC- Birds of Conservation Concern	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	Suitable aquatic habitats are not present.
<i>Melospiza melodia maxillaris</i> Suisun song sparrow	None/None G5T3/S3 SSC USFWS_BCC- Birds of Conservation Concern	Resident of brackish-water marshes surrounding Suisun Bay. Inhabits cattails, tules and other sedges, and Salicornia; also known to frequent tangles bordering sloughs.	Not Expected	Suitable aquatic habitats are not present.
<i>Melospiza melodia pusillula</i> Alameda song sparrow	None/None G5T2?/S2S3 SSC USFWS_BCC- Birds of Conservation Concern	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	Not Expected	Suitable aquatic habitats are not present.
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	None/None G5T2/S2 SSC USFWS_BCC- Birds of Conservation Concern	Resident of salt marshes along the north side of San Francisco and San Pablo bays. Inhabits tidal sloughs in the Salicornia marshes; nests in Grindelia bordering slough channels.	Not Expected	Suitable aquatic habitats are not present.
<i>Pandion haliaetus</i> osprey	None/None G5/S4 SS	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Not Expected	Suitable habitats are not present.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	FE/SE G5T1/S1 SFP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Not Expected	Suitable aquatic habitats are not present.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Sternula antillarum browni</i> California least tern	FE/SE G4T2T3Q/S2 SFP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	Not Expected	Suitable habitats are not present.
Mammals				
<i>Antrozous pallidus</i> pallid bat	None/None G5/S3 SSC WBWG_H- High Priority	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not Expected	Suitable roost habitats are not present.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G3G4/S2 SSC WBWG_H- High Priority	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not Expected	Suitable roost habitats are not present.
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	None/None G5T2T3/S2S3 SSC	Forest habitats of moderate canopy & moderate to dense understory. May prefer chaparral & redwood habitats. Constructs nests of shredded grass, leaves & other material. May be limited by availability of nest-building materials.	Not Expected	Suitable habitats are not present, and the site is isolated by development.
<i>Nyctinomops macrotis</i> big free-tailed bat	None/None G5/S3 SSC WBWG_MH- Medium-High Priority	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Not Expected	Suitable roost habitats are not present.
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	FE/SE G1G2/S1S2 SFP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	Not Expected	Suitable aquatic habitats are not present.
<i>Scapanus latimanus parvus</i> Alameda Island mole	None/None G5THQ/SH SSC	Only known from Alameda Island. Found in a variety of habitats, especially annual and perennial grasslands. Prefers moist, friable soils. Avoids flooded soils.	Not Expected	Suitable habitats are not present and this species is not known to occur in Contra Costa County.



Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Sorex ornatus sinuosus</i> Suisun shrew	None/None G5T1T2Q/S1S2 SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying cover and driftweed and other litter above the mean high tide line for nesting and foraging.	Not Expected	Suitable aquatic habitats are not present.
<i>Taxidea taxus</i> American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Suitable habitats are not present, and the site is isolated by development.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST G4T2/S2	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Not Expected	Suitable habitats are not present, and the site is isolated by development.

Regional Vicinity refers to within a 9-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS = Federally Sensitive

SE = State Endangered ST = State Threatened SC = State Candidate SS = State Sensitive

SSC = CDFW Species of Special Concern SFP = State Fully Protected



This page intentionally left blank.