



BIOLOGICAL TECHNICAL MEMORANDUM

To: Trent Sanson
DeNova Homes, Inc.
1500 Willow Pass Court
Concord CA, 94520

From: Joshua Goodwin, Senior Biologist
Analytical Environmental Services

Project: DeNova Homes Doctor's Hospital Housing Project

Date: 7/9/2021

1.0 INTRODUCTION

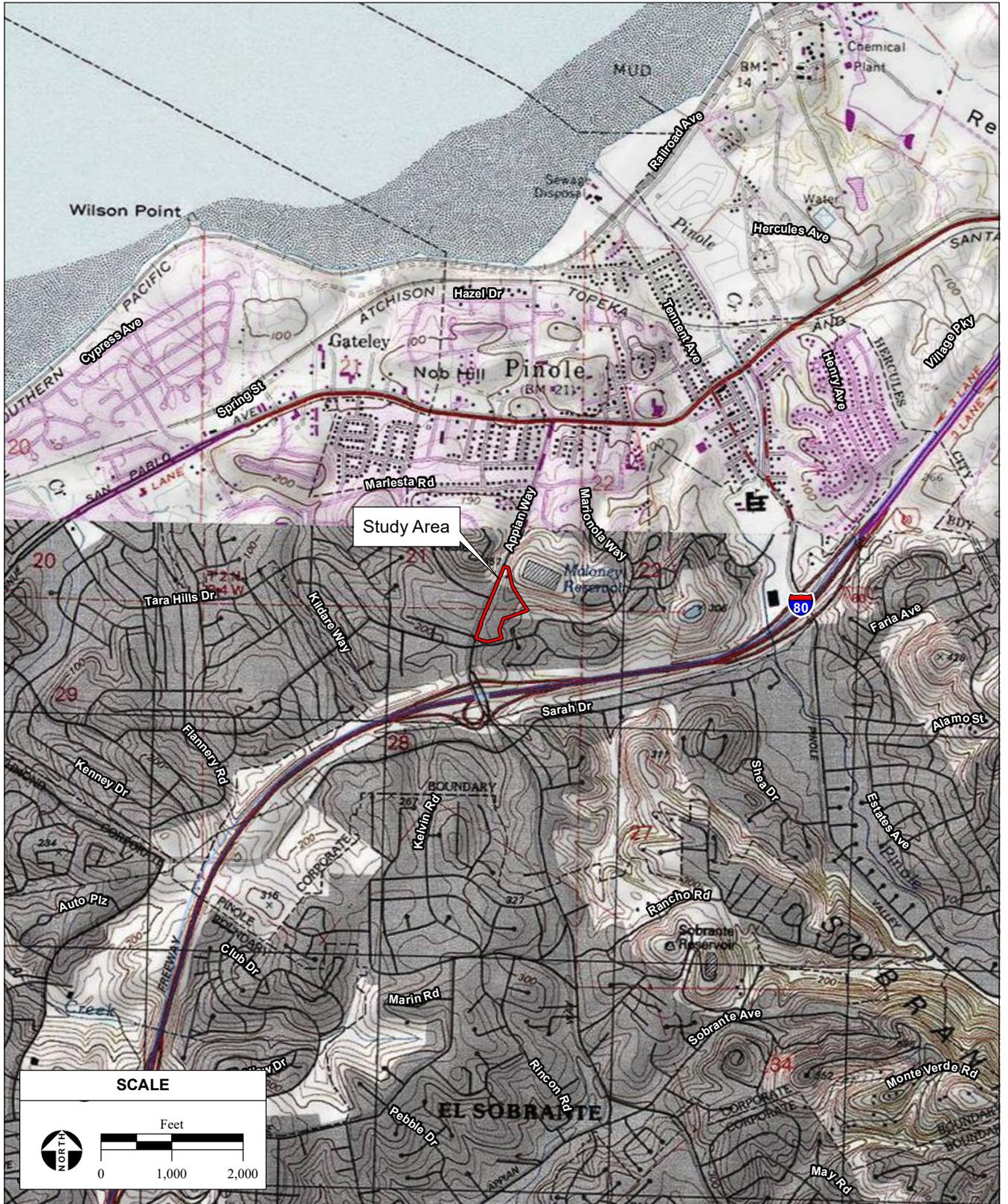
This memorandum has been prepared for the DeNova Homes Appian Way Housing Project (Proposed Project) and analyzes the 7.77 acre property (Study Area) located at 2151 Appian Way, Pinole, CA (APN's 401-240-017 and -018). The Study Area occurs within the USGS 7.5-minute Richmond quadrangle (**Figures 1, 2, and 3**). On-site elevations range from 225 to 295 feet above mean sea level. The purpose of this report is to assess and identify sensitive biological resources within the Study Area that could be affected by development within the Study Area. This report documents the results of the biological resources survey conducted on the Study Area on July 7, 2021.

2.0 METHODOLOGY

The following information was obtained and reviewed:

- Aerial photographs of the Study Area and surrounding area;
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) query, dated June 30, 2021 (USFWS, 2021a) (**Attachment A**);
- California Natural Diversity Database (CNDDDB) query, dated June 30, 2021, of state and federally listed special-status species known to occur in the vicinity (CDFW, 2021) (**Attachment A**);
- California Native Plant Society (CNPS) list, dated June 30, 2021 (CNPS, 2021) (**Attachment A**);
- USFWS National Wetlands Inventory (NWI) map of wetland features, dated June 30, 2021 (USFWS, 2021b) (**Figure 4**); and
- Natural Resources Conservation Service (NRCS) custom soils report, dated July 1, 2021 (NRCS, 2021) (**Figure 5 and Attachment A**).

AES Biologists Joshua Goodwin conducted biological resources survey of the Study Area on July 7, 2021. The survey was conducted by walking throughout the entirety of the Survey Area. The objective of the surveys was to identify habitat types on the Study Area, including potential wetlands and waters of the U.S., and to determine the potential for presence of special-status species. The field surveys consisted of walking transects throughout the Study Area. Representative areas of each habitat type were reviewed with the aid of an aerial photograph and through identification of dominant species cover within each vegetation community. Potentially jurisdictional waters of the U.S. were mapped. Data was collected via a Trimble Geo XH hand-held GPS receiver. Survey goals consisted of identifying habitat



SOURCE: "Richmond, CA" USGS 7.5 Minute Topographic Quadrangle, T2N R4W, Unsectioned Area of Richmond, Mt. Diablo Baseline & Meridian; Contra Costa County Parcels, 2019; ESRI, 2021; AES, 7/9/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 2
Site and Vicinity



SOURCE: Contra Costa County Parcels, 2019; Maxar aerial photograph, 11/1/2019; ESRI, 2021; AES, 7/9/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 3
Aerial Photograph



SOURCE: U.S. Fish & Wildlife Service National Wetlands Inventory;
 Contra Costa County Parcels, 2019; Maxar aerial photograph, 11/1/2019;
 ESRI, 2021; AES, 7/9/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 4
 National Wetland Inventory



SOURCE: NRCS soil data; Contra Costa County Parcels, 2019; Maxar aerial photograph, 11/1/2019; ESRI, 2021; AES, 7/9/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 5
Soil Types

types, sensitive habitats, wetlands, and waters of the U.S, and special-status species. Sensitive habitats include those that are designated by CDFW, considered by local experts or municipalities to be communities of limited distribution, or likely to be waters of the U.S. or State by the appropriate state and federal regulatory agencies. Habitat requirements of special-status species were compared to habitats observed, which were determined based on aerial photographs, ground-truthing, and background data review.

3.0 ENVIRONMENTAL SETTING

3.1 SOIL TYPES

The Study Area is comprised of two soil types consisting of Cut and fill land-Diablo complex with 9 to 30 percent slopes and cut and fill land-Millsholm complex with 30 to 50 percent slopes. A custom soils report for the Study Area can be found in **Attachment A**. A soils map can be found on **Figure 5**. Both soil types are explained below.

- **Diablo complex, 9 to 30 percent slopes:** This is a well-drained soil and has no frequency of flooding or ponding. It has a parent material of residuum weathered from sandstone and shale. This soil type is in hydrologic soil group C and is not considered a hydric soil.
- **Millsholm complex, 30 to 50 percent slopes:** This is a well-drained soil and has no frequency of ponding or flooding. It has a parent material of residuum weathered from sandstone and shale. This soil type is in hydrologic group D and is not considered a hydric soil.

3.2 HABITAT TYPES

Five habitat types were identified within the Study Area which include annual grassland, developed, chaparral, eucalyptus grove, and acacia grove (**Figure 6**). The entire Study Area is almost entirely developed consisting of a hospital, medical offices, and associated asphalt parking lots. Grassland habitat occurs within the northern most portion of the Study Area, along the middle portion of the eastern boundary, and also along the southern portion of the eastern boundary. A small patch of chaparral occurs adjacent to the annual grassland habitat located near the middle of the eastern boundary. Lastly a small eucalyptus grove and acacia grove occur within the northern portion of the Study Area along the eastern boundary. A query of the NWI database (**Figure 4**) did not show any previously identified aquatic features within the Study Area. Pinole Creek occurs approximately 0.64 mile to the east of the Study Area. NWI classifies Pinole Creek as riverine, upper perennial, unconsolidated bottom, and permanently flooded. Additionally, a small unnamed creek occurs approximately 0.20 mile south of the Study Area. NWI has classified this feature as riverine, intermittent, streambed, temporary flooded, and excavated. This feature occurs south of the I-80 Freeway. Habitat types on the Study Area are further discussed below. A list of plants observed within in the Study Area during the July 2021 survey can be found in **Attachment C**.

Annual Grassland

This habitat type makes up approximately 0.87 acre of the overall Study Area. This habitat type occurs along the eastern boarder of the Study Area and was identified in three separate areas (**Figure 6**). This habitat type is routinely managed showing signs of recent mowing, with the exception of the northern most annual grassland area which appeared to be unmanaged as vegetation heights ranged from 3 to 12 inches at the time of the survey (Photos 1 and 5 of **Attachment B**). Ornamental vegetation, eucalyptus grove, and acacia grove bordered this habitat. Dominant plant species observed include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), filed bindweed (*Convolvulus arvensis*), wild radish (*Raphanus*



SOURCE: Contra Costa County Parcels, 2019;
Maxar aerial photograph, 11/1/2019; ESRI, 2021; AES, 7/9/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 6
Habitat Types

sativus), and common vetch (*Vicia sativa*). Some areas of this habitat had minor inclusions of shrub vegetation such as toyon (*Heteromeles arbutifolia*) and firethorn (*Pyracantha* sp.). A single isolated coast live oak (*Quercus agrifolia*) occurred within the southernmost grassland habitat area.

Developed

This habitat made up the majority of the Study Area consisting of approximately 6.07 acres, composed of an abandoned hospital, medical offices, and associated asphalt parking lots (refer to photos 2 and 8 of **Attachment B**). Ornamental landscaped vegetation occurred along the perimeter and within this habitat type. Ornamental vegetation lined the adjacent roadways and within designated planter areas. This vegetation has been left largely unmaintained. Blackwood acacia (*Acacia melanoxydon*) used as ornamental planting appeared to have naturalized, escaping the confines of the original planting areas, and has formed a small grove over the years located the east of this developed habitat.

Chaparral

There is a small patch of chaparral habitat that occurs near the middle of eastern boundary of the Study Area and consists of approximately 0.1 acre (Photo 6 of **Attachment B**). This habitat type extends east from the developed habitat and also abuts the annual grassland and the acacia grove habitats. This habitat type is dominated by toyon, poison oak (*Toxicodendron diversilobum*), and coyote brush (*Baccharis pilularis*). Understory vegetation was dominated by wild oat.

Eucalyptus Grove

A small eucalyptus grove occurs within the northern portion of the Study Area along the eastern boundary, composed of approximately 0.13 acre (Photo 8 of **Attachment B**). This habitat type was dominated by Eucalyptus with no other tree species occurring within this habitat. This Eucalyptus grove transitioned to an acacia grove at its southern extent. Eucalyptus was the only tree growing within this habitat type. The understory was dominated by bare ground, fallen branches, leaf debris, and sparse growth of non-native annual grassland species such as wild oat and ripgut brome.

Acacia Grove

Similar to the eucalyptus grove habitat, this acacia grove habitat occurs within the northern portion of the Study Area along the eastern boundary and consists of approximately 0.25 acre (Photo 7 of **Attachment B**). This habitat type merges with the eucalyptus grove habitat to the north, transitioning into a monocrop of eucalyptus trees. Similar to the eucalyptus grove, the understory vegetation is dominated by bare ground, fallen branches, leaf debris, and sparse growth of non-native annual grassland species such as wild oat and ripgut brome.

3.3 SPECIAL-STATUS SPECIES

Data review and special-status species searches list 17 special-status plant species and 20 special-status wildlife species with the potential to occur in the region of the Study Area (**Attachment A**). The name, regulatory status, distribution, habitat requirements, period of identification, and potential to occur for each species are listed in **Table 1**.

Based on the site-specific habitats and special-status species habitat requirements for each species that may occur within the vicinity of the Study Area, as shown in **Table 1**, the Study Area contains suitable habitat to potentially support three special-status plant species and two special-status animal species. Species with no potential to occur within the Study Area were ruled out based on lack of suitable

habitat, soils, elevation, necessary substrate, and negative results during the survey if it coincided with the identifiable bloom period for plant species. Special-status species were not observed during the survey.

3.4 WILDLIFE MOVEMENT

Wildlife movement is currently restricted on all sides of the Study Area by existing development. The site is located in urban Pinole, bordered by heavily trafficked Appian Way to the west and Canyon View Drive to the south, with Interstate 80 occurring just south of that. A residential development abuts the Study Area to the east. Pinole Valley road and Interstate 80 also occur to the east further reducing wildlife movement from the east. Maloney Reservoir occurs to the northeast that has some open space surrounding the reservoir, however the greater area is heavily developed greatly reducing wildlife movement especially for larger species such as black-tailed deer (*Odocoileus hemionus columbianus*), mountain lion (*Puma concolor*), and bobcat (*Lynx rufus*). Vast open space occurs more than three miles to the east, which includes Pinole Ridge, but re-development of the Study Area would have no impact on wildlife movement in the area.

3.5 CRITICAL HABITAT

No designated critical habitat (CH) occurs within the Study Area (**Figure 7**). The closest CH to the Study Area is for soft bird's beak (2.2 miles to the west), Contra Costa goldfields (2.9 miles to the northeast), Alameda whipsnake (3.8 miles to the east), Delta smelt (5.8 miles to the north), Santa Cruz tarplant (3.6 miles to the south), and California red-legged frog (3.0 miles to the east).

4.0 RESULTS AND RECOMENDATIONS

4.1 SENSITIVE HABITATS

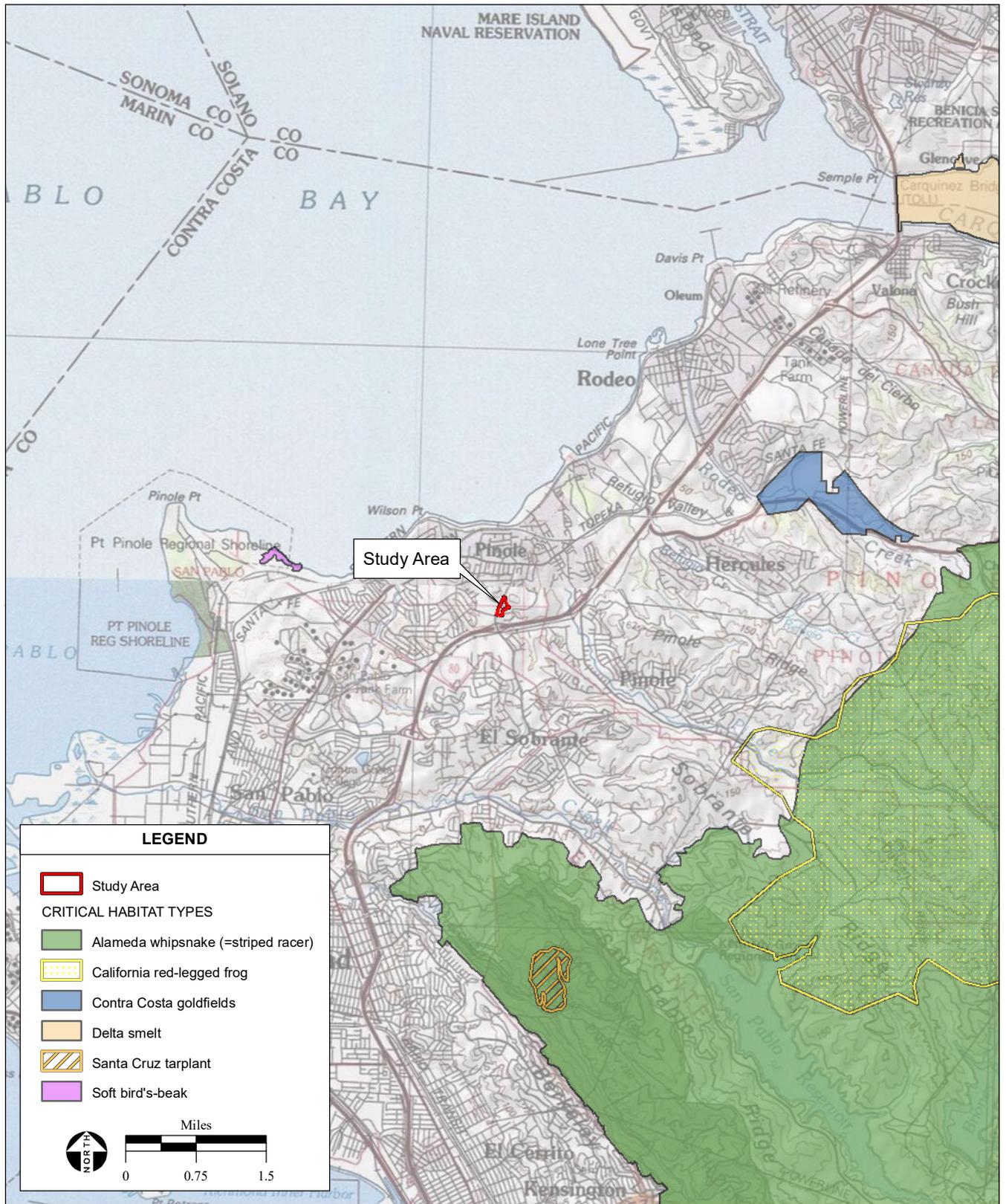
Habitat types within the Study Area include developed, annual grassland, chaparral, acacia grove, and eucalyptus grove, none of which are sensitive habitats. No wetlands or other waters of the U.S. or state were located within the Study Area. Coast live oaks are sporadically found along the eastern perimeter of the Study Area and would require mitigation if removed in the course of project activities consistent with county-level regulations and State-level requirements for Oak Preservation and mitigation.

4.2 NESTING MIGRATORY BIRDS

Migratory birds and their nests are protected from "take" by the Migratory Bird Treaty Act (16 U.S.C. 703-711), which makes it unlawful to "...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess or any part, nest, or egg of any such bird..." (50 CFR 10). Both grasslands and the scattered trees with the Study Area are potential nesting locations for protected migratory birds. Although no active bird nests were observed during the 2021 biological survey, nests could exist at the time of future development. Protective measures would need to be implemented to reduce the impacts to nesting birds, and pre-construction surveys would likely be required if construction starts during nesting bird season (February 15 through September 15).

4.2 NESTING MIGRATORY BIRDS

Migratory birds and their nests are protected from "take" by the Migratory Bird Treaty Act (16 U.S.C. 703-711), which makes it unlawful to "...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess or any part, nest, or egg of any such bird..." (50 CFR 10). Both grasslands and the scattered trees with the Study Area are potential nesting locations for protected migratory birds. Although no active



SOURCE: USFWS Critical Habitats Portal, 2020; "Richmond, CA"
 USGS 7.5 Minute Topographic Quadrangle, T2N R4W, Unsectioned Area of
 Richmond, Mt. Diablo Baseline & Meridian; Contra Costa County Parcels, 2019;
 ESRI, 2021; AES, 7/12/2021

DeNova Homes - Doctor's Hospital Biological Technical Memorandum / 221527 ■

Figure 7
 Critical Habitats

TABLE 1 - REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

<i>SCIENTIFIC NAME</i> COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
Plants					
<i>Blepharizonia plumosa</i> Big tarplant	--/--/1B.1	Known to occur in Alameda, Contra Costa, San Joaquin, San Luis Obispo, Solano and Stanislaus counties	Valley and foothill grassland. Elevations: 30-505 meters	July-October	Yes , habitat suitable to support this species occurs within the annual grassland habitat present within the Study Area.
<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	--/--/1B.2	Known to occur in Alameda, Contra Costa, and Solano counties	A perennial bulbiferous herb found in cismontane woodland, riparian woodland and valley and foothill grassland, rarely in chaparral. Generally in northern aspect. Elevations range from 30-840 meters	April - June	Yes , habitat suitable to support this species occurs within the annual grassland habitat present within the Study Area.
<i>Centromadia parryi</i> <i>ssp. congdonii</i> Congdon's tarplant	--/--/1B.2	Known to occur in Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, and Solano counties	Annual herb found growing on disturbed sites, terraces, swales, floodplains within valley and foothill grasslands (alkaline). Elevations range from 1-300 meters.	May –October (November)	No , the Study Area lacks habitat suitable to support this species.
<i>Chloropyron molle</i> ssp. <i>molle</i> Soft salty bird's-beak	FE/CR/1B.2	Known to occur in Contra Costa, Marin (though may be extirpated), Napa, Sacramento (though may be extirpated), Solano, and Sonoma (though may be extirpated) counties.	Marshes and swamps (coastal salt). Elevations: 0-3 meters.	July-November	No , the Study Area falls outside of the known elevational range and also lacks habitat suitable to support this species.
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock	--/--/2B.1	Known to occur in Contra Costa, Los Angeles, Marin, Sacramento, Santa Barbara, San Luis Obispo, and Solano Counties (CNPS 2011).	Occurs in marshes and swamps, coastal, fresh or brackish water. Elevations; 0-200 meters (CNPS 2011).	July-September	No , the Study Area lacks habitat suitable to support this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Dirca occidentalis</i> Western leatherwood	--/--/1B.2	Known to occur in Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma counties (CNPS, 2010).	Broadleaf upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, and Riparian woodland/mesic. Elevations; 25-425 meters (CNPS, 2015).	January-March (April)	No , the Study Area lacks habitat suitable to support this species.
<i>Eryngium jepsonii</i> Jepson's coyote thistle	--/--/1B.2	Known to occur in Alameda, Contra Costa, Napa, San Mateo, Solano, and Yolo counties.	A perennial herb found in clay vernal pools, and valley and foothill grasslands. Elevation range 3-300 meters.	April-August	No , the Study Area lacks habitat suitable to support this species.
<i>Fritillaria liliacea</i> Fragrant fritillary	--/--/1B.2	Known to occur in Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties.	Perennial bulbiferous herb occurs growing on heavy or serpentinite soils within open hills, fields near coast, coastal prairie, coastal scrub, valley and foothill grassland, and cismontane woodland. Elevations from: 3-410 meters.	February-April	No , the Study Area lacks soils suitable to support this species.
<i>Isocoma argute</i> Carquinez goldenbush	--/--/1B.1	Known to occur in Solano county.	A perennial shrub found in valley and foothill grassland (alkaline). Elevation range 1-20 meters.	August- December	No , the Study Area falls outside of the known elevational range for this species
<i>Helianthella castanea</i> Diablo helianthella	--/--/1B.2	Known to occur in Alameda, Contra Costa, Marin, San Francisco, and San Mateo counties.	Broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Elevations from: 60-1300 meters.	March-June	Yes , habitat suitable to support this species occurs within the annual grassland habitat present within the Study Area.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/--/1B.1	Known to occur in Alameda, Contra Costa, Mendocino (though may be extirpated), Monterey, Marin, Napa, Santa Barbara (though may be extirpated), Santa Clara (though may be extirpated), and Sonoma counties.	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, and Vernal pools/mesic. Elevations: 0-470 meters.	March-June	No , the Study Area lacks soils suitable to support this species

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	--/--/1B.2	Known to occur in Contra Costa, Napa, Sacramento, San Joaquin, Solano, Sonoma, and Yolo counties.	Marshes and swamps (freshwater and brackish). Elevations range from 0-5 meters.	May-September	No , the Study Area falls outside of the known elevational range and also lacks habitat suitable to support this species.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	--/CR/1B.1	Known to occur in Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, Solano, and Yolo counties.	Found in marshes and swamps (brackish or freshwater), and riparian scrub. Elevations range from 0-10 meters.	April-November	No , the Study Area falls outside of the known elevational range and also lacks habitat suitable to support this species.
<i>Senecio aphanactis</i> Chaparral ragwort	--/--/2B.2	Known to occur in Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, San Benito, Santa Clara, Santa Cruz, Santa Catalina Island, Santa Cruz Island, San Diego, San Luis Obispo, Solano, Santa Rosa Island, and Ventura counties.	Sometimes alkaline soils. Chaparral, cismontane woodland, and coastal scrub. Elevations from: 15-800 meters.	January-April	No , the Study Area lacks habitat suitable to support this species.
<i>Spergularia macrotheca</i> var. <i>longistyla</i> Long-styled sand-spurrey	--/--/1B.2	Known to occur in Alameda, Contra Costa, Napa, and Solano counties.	Found in alkaline habitats, of which include meadows and seeps, and marshes and swamps, and at elevations of 0-255 meters.	February-May	No , the Study Area falls outside of the known elevational range and also lacks habitat suitable to support this species.
<i>Symphotrichum lentum</i> Suisun marsh aster	--/--/1B.2	Known to occur in Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo counties.	Found in marshes and swamps (brackish and freshwater). Elevations range from 0-3 meters.	(April) May-November	No , the Study Area falls outside of the known elevational range and also lacks habitat suitable to support this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Trifolium hydrophilum</i> saline clover	--/--/1B.2	Known to occur in Alameda, Contra Costa, Colusa, Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Luis Obispo, San Mateo, Solano, Sonoma, and Yolo counties. However, this species is unconfirmed in Colusa county.	Annual herb found in marshes and swamps, valley and foothill grassland that are occasionally on mesic, alkaline soils, and vernal pools. Elevations range from 0-300 meters.	April-June	No , the Study Area lacks habitat suitable to support this species.
Animals					
Amphibians					
<i>Rana draytonii</i> California red-legged frog	FT/CSC/--	Known to occur along the Coast from Mendocino County to Baja California, and inland through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to eastern Tulare County, and possibly eastern Kern County. Currently accepted range excludes the Central Valley.	Occurs in permanent and temporary pools of streams, marshes, and ponds with dense grassy and/or shrubby vegetation. Elevations range from 0-1160 meters.	November – March (breeding)	No , the Study Area lacks habitat suitable to support this species.
Birds					
<i>Agelaius tricolor</i> Tricolored blackbird	--/CT, CSC/-	California and Baja California, Mexico.	Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water.	All Year	No , the Study Area lacks habitat suitable to support this species.
<i>Circus cyaneus</i> northern harrier	--/CSC/--	Permanent residents of the northeastern plateau and coastal areas; less common resident of the Central Valley.	Coastal scrub, Great Basin grassland, marsh and swamp (coastal and fresh water), riparian scrubs, valley and foothill grassland, and wetlands. Nests on the ground, usually in tall, dense clumps of vegetation, either alone or in loose colonies. Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3000 m.	All Year	No , the Study Area lacks soils suitable to support this species

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Coturnicops noveboracensis</i> yellow rail	--/CSC/--	Found in northeastern interior California during breeding season, the northern California coast during winter, and the Suisun Marsh region.	Breeds in sedge marshes and meadows with moist soil or shallow standing water. Found in wet meadows and coastal tidal marshes in winter.	May-early September (breeding) Late September-April (wintering)	No , the Study Area lacks habitat suitable to support this species.
<i>Geothlypis trichas sinuosa</i> Salt-marsh common yellowthroat	--/CSC/--	Breeding range bounded by Tomales Bay on the north, Carquinez Strait on the east, and Santa Cruz county to south, with occurrences in the Bay Area during migration and winter.	Salt, brackish, and freshwater marshes. Nests just above ground or over water, in thick herbaceous vegetation, often at base of shrub or sapling, sometimes higher in weeds or shrubs up to about 1 m.	March-July	No , the Study Area lacks habitat suitable to support this species.
<i>Laterallus jamaicensis coturniculus</i> California black rail	--/CT, FP/--	In coastal California during breeding season, presently found at Bodega Bay, Tomales Bay, Bolinas Lagoon, San Francisco Bay estuary, and Morro Bay. Overwhelming majority of birds in n. San Francisco Bay (San Pablo Bay) at relatively few sites. Occurs irregularly south to Baja California. Inland in small numbers in Salton Trough and on lower Colorado River from Bill Williams River (historically) to Laguna Dam.	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation. Uses sites with shallower water than other North American rails. Most breeding areas vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges. Sites used in coastal California characterized by taller vegetation, greater coverage and height of alkali heath (<i>Frankenia grandifolia</i>).	All Year	No , the Study Area lacks habitat suitable to support this species.
<i>Melospiza melodia maxillaris</i> Suisun song sparrow	--/CSC/--	Known to occur from the Carquinez Strait and Suisun Bay east to Antioch, at the confluence of the San Joaquin and Sacramento rivers.	Year-round endemic confined to tidal salt and brackish marshes.	All Year	No , the Study Area lacks habitat suitable to support this species.
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	--/CSC/--	Distributed in marshes around San Pablo Bay continuously from Gallinas Creek in the west, along the northern San Pablo bayshore, and throughout the extensive marshes along the Petaluma, Sonoma, and Napa rivers.	Commonly found in saltmarsh, brackish marsh, salt marsh (altered), brackish marsh (altered), and fringe areas, where marsh vegetation is limited to edges of dikes, landfills, or other margins of high ground bordering salt or brackish water areas.	All Year	No , the Study Area lacks habitat suitable to support this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Rallus obsoletus</i> <i>obsoletus</i> California Ridgway's rail	FE/CE/FP	Locally common yearlong in coastal wetlands and brackish areas around San Francisco Bay.	In saline emergent wetlands, nests mostly in lower zones, where cordgrass is abundant and tidal sloughs are nearby. Builds a platform concealed by a canopy of woven cordgrass stems or pickleweed and gumweed. Also uses dead drift vegetation as platform. In fresh or brackish water, builds nest in dense cattail or bulrush. Forages in higher marsh vegetation, along vegetation and mudflat interface, and along tidal creeks.	All Year	No , the Study Area lacks habitat suitable to support this species.
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	--/CSC/--	Breeds from central British Columbia eastward to very western Ontario, southward into central California, central New Mexico, and northern Illinois. Scattered small populations further east along the Great Lakes to Ohio. Winters from southern Arizona and western Texas southward to southern Mexico. Some birds winter in California.	Breeds in prairie wetlands and along other western lakes and marshes where tall reeds and rushes are present. Forages in the wetlands and in surrounding grasslands and croplands. In winter large flocks forage in agricultural areas	All Year	No , the Study Area lacks habitat suitable to support this species.
Reptiles					
<i>Emys marmorata</i> western pond turtle	--/CSC/--	Distribution ranges from Washington to northern Baja California.	Inhabit rivers, streams, lakes, ponds, reservoirs, stock ponds, and permanent wetland habitats with basking sites.	Year-round	No , the Study Area lacks habitat suitable to support this species.
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT/CT/--	Inhabits the inner coast range. Counties include Alameda, Contra Costa, San Joaquin, and Santa Clara.	Typically found in chaparral, northern coastal sage scrub, and coastal sage scrub communities. May also occur in adjacent habitats including annual grassland, oak savannah, and oak-bay woodland. Requires rock outcrops for retreat and access to prey species. Elevations; 0-153 meters.	May - August	No , the Study Area lacks habitat suitable to support this species.
Mammals					

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Antrozous pallidus</i> pallid bat	--/CSC/--	Locally common species at low elevations. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino county.	Habitats occupied include grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests, generally below 2,000 meters. The species is most common in open, dry habitats with rocky areas for roosting. Roosts also include cliffs, abandoned buildings, bird boxes, under exfoliating bark, and under bridges.	Year-round	Yes , habitat suitable to support this species occurs within the developed habitat within the abandoned buildings.
<i>Nyctinomops macrotis</i> big free-tailed bat	--/CSC/--	Rare in California. Records of the species are from urban areas of San Diego Co., and vagrants found in fall and winter. A probable vagrant was collected in Alameda Co., but this record is suspect.	Big free-tailed bats in other areas prefer rugged, rocky terrain. Found to 2500 m (8000 ft) in New Mexico, southern Arizona, and Texas. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrop. Probably does not breed in California.	May - September	Yes , habitat suitable to support this species occurs within the developed habitat within the abandoned buildings.
<i>Reithrodontomys raviventris</i> salt marsh harvest mouse	FE/CE/FP	Only found in the saline emergent wetlands of San Francisco Bay and its tributaries.	Critically dependent on dense cover and their preferred habitat is pickleweed (<i>Salicornia virginica</i>). Seldom found in cordgrass or alkali bulrush. In marshes with an upper zone of peripheral halophytes (salt-tolerant plants), mice use this vegetation to escape the higher tides, and may even spend a considerable portion of their lives there. Mice also move into the adjoining grasslands during the highest winter tides.	All Year	No , the Study Area lacks habitat suitable to support this species.
<i>Sorex ornatus sinuosus</i> Suisun shrew	--/CSC/--	Tidal marshes of the northern shores of San Pablo and Suisun bays.	Occurs in herbaceous wetlands and tidal marshes in dense, low-lying cover of salicornia.	All Year	No , the Study Area lacks habitat suitable to support this species.
Invertebrates					
<i>Bombus occidentalis</i> western bumble bee	-/CCE/--	Known to occur along the West Coast and Mountain West of North America, including Arizona, New Mexico, Mediterranean California, the Pacific Northwest, and Alaska.	Found in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Found at elevations from 0-2000+ meters. Nesting occurs underground in abandoned rodent burrows or other cavities.	February- November	No , the Study Area lacks habitat suitable to support this species, as the site is nearly entirely developed.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	IDENTIFICATION PERIOD	POTENTIAL TO OCCUR ON PROPERTY
<i>Speyeria callippe</i> <i>callippe</i> Callippe silverspot butterfly	FE/--/--	Restricted to the San Francisco peninsula.	Northern coastal scrub. Hostplant is <i>Viola pedunculata</i> . Most adults found on E-facing slopes; males congregate on hilltops in search of females.	Consult Agency	No , the Study Area lacks habitat suitable to support this species. The site also lacks its host plant.
Fish					
<i>Hypomesus transpacificus</i> Delta smelt	FT/CE/--	Occurs almost exclusively in the Sacramento-San Joaquin estuary, from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. May also occur in the San Francisco Bay.	Estuarine waters. Majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta.	Consult Agency	No , the Study Area lacks habitat suitable to support this species.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	--/CSC/--	Endemic to the Central Valley. Occurs below the Red Bluff Diversion Dam in Tehama County to the downstream reaches of the Sacramento and American Rivers. Also occurs in the lower reaches of the Feather, Merced, and the San Joaquin Rivers. This species is largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and Sacramento-San Joaquin estuary.	Predominantly freshwater estuarine systems. Prefers low-salinity, shallow-water habitats. Occurs in slow-moving sections of rivers, sloughs, and marshes. Abundance is strongly tied to outflows, because spawning occurs over flooded vegetation.	Consult Agency	No , the Study Area lacks habitat suitable to support this species.

SOURCE: CDFW, 2021

STATUS CODES

Federal: U.S. Fish and Wildlife Service

FE Federally Endangered

FT Federally Threatened

FC Candidate for Federal Listing

CNPS: California Native Plant Society

1A Plants Presumed Extinct in California

1B Plants Rare, Threatened, or Endangered in California and Elsewhere

2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

State: California Department of Fish and Game

CE California Listed Endangered

CT California Listed Threatened

CSC California Species of Special Concern

CC California Candidate for State Listing

CR California Rare

CNPS Threat Ranks:

0.1 – Seriously Threatened in California

0.2 – Fairly Threatened in California

bird nests were observed during the 2021 biological survey, nests could exist at the time of future development. Protective measures would need to be implemented to reduce the impacts to nesting birds, and pre-construction surveys would likely be required if construction starts during nesting bird season (February 15 through September 15).

4.3 SPECIAL-STATUS SPECIES

Three special-status plants and two special-status animal species have the potential to occur on the site. The three plant species include big tarplant (*Blepharizonia plumosa*), Mt. Diablo fairy-lantern (*Calochortus pulchellus*), and Diablo helianthella (*Helianthella castanea*). The big tarplant is a CNPS 1B.1 ranked species and both the Mt. Diablo fairy-lantern and diablo helianthella are CNPS 1B.2 ranked species, all having a potential to occur within the annual grassland habitat present within the Survey Area. The pallid bat (*Antrozous pallidus*) and big free-tailed bat (*Nyctinomops macrotis*), both a state species of special concern, may utilize the abandoned hospital buildings located within the Study Area as potential roosting habitat.

While none of these species were observed during the site visit, it is recommended that focused surveys for the above mentioned special-status species, identified as having a potential to occur within the Study Area, take place before any development of this site occurs in order to determine presence/absence and to develop appropriate mitigation and avoidance measures if any are found to exist. The field visit in July 2021 overlapped with the big tarplant's listed bloom season. No tarplant of any species was observed. Though the survey was conducted just outside the bloom season for diablo helianthella, this plant would have remnant plant characteristics that would allow identification down to genus. Diablo helianthella or plants within the genus *Helianthella* were not observed during the July 2021 survey. The one remaining plant with the potential to occur within the Study Area includes Mt. Diablo fairy lantern. Though the survey was conducted just outside of its identified bloom season, this plant would still be identifiable based on remnant plant characteristics. Mt. Diablo fairy lantern or plants within the genus *Calochortus* were not observed during the July 2021 survey. Regarding special-status bat species with the potential to occur within the Study Area, no bats or sign of bats were observed, however, there was no access to inside the main hospital to verify whether bats or bat sign (e.g. guano) were present.

5.0 CONCLUSION

The Study Area contains no sensitive habitats other than trees covered under the Pinole tree ordinance, which require a tree removal permit if designated for removal (City of Pinole, 2021). Trees covered under this ordinance include coast live oak, Madrone, buckeye, black walnut, redwood, big leaf maple, redbud, California bay, and toyon. No wetlands or other waters of the U.S. were identified. Five special status species have the potential to occur on site, and additional surveys are recommended to determine presence. No special-status species were observed during the site survey conducted in July of 2021. If development occurs on the site during the recognized bird nesting season (February 15 to September 15), pre-construction surveys for nesting birds are recommended to ensure development does not negatively impact protected migratory birds. A focused rare plant survey for Mt. Diablo fairy lantern and diablo helianthella conducted between the months of April to June would give more evidence to suggest that this species does not occur within the Study Area. If impacts to the annual grasslands are not anticipated, additional plant surveys would not be necessary. Regarding the two bat species identified as having a potential to roost within the abandoned building, it is recommended that a pre-construction bat survey be conducted prior to the demolition of the buildings. This bat survey should be conducted no more than one month prior to ground disturbance or demolition of the on-site

buildings. Pre-construction surveys should include a daytime inspection of the inside of all building looking for active roosting bats or bat sign, followed up by an evening fly-out survey. If no evidence of bats and/or evidence of bats sign are detected during the pre-construction surveys, no additional surveys are required. If bats or evidence of bats are detected during the pre-construction surveys, CDFW should be contacted regarding next steps.

6.0 REFERENCES

- California Department of Fish and Wildlife (CDFW), 2021. RareFind 5, California Natural Diversity Database (CNDDDB). Available online: <https://map.dfg.ca.gov/rarefind/Login.aspx?ReturnUrl=%2frarefind%2fview%2fRareFind.aspx>. Last updated June 30, 2021.
- California Native Plant Society (CNPS), 2021. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Available online at: <http://www.cnps.org/inventory>. Last updated June 30, 2021.
- City of Pinole, 2021. Tree Removal Permit. Available at https://www.ci.pinole.ca.us/city_government/-planning/applications/tree_removal_permit. Accessed July 16, 2021.
- Natural Resources Conservation Service (NRCS), 2020. Web Soil Survey. National Cooperative Soil Survey. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/Home-Page.htm>. Last updated July 1, 2021.
- U.S. Fish and Wildlife Service (USFWS), 2021a. U.S. fish and Wildlife Service, IPaC Information for Planning and Consultation. Available online at: <http://ecos.fws.gov/ipac>. Last updated June 30, 2021.
- USFWS, 2021b. National Wetlands Inventory, Wetlands Mapper. Available online at: <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed on June 30, 2021

ATTACHMENTS

ATTACHMENT A

SPECIAL-STATUS SPECIES DATABASE RESULTS



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Benicia (3812212) OR Mare Island (3812213))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAABH01022	<i>Rana draytonii</i> California red-legged frog	Threatened	None	G2G3	S2S3	SSC
ABNGA04010	<i>Ardea herodias</i> great blue heron	None	None	G5	S4	
ABNKC01010	<i>Pandion haliaetus</i> osprey	None	None	G5	S4	WL
ABNKC06010	<i>Elanus leucurus</i> white-tailed kite	None	None	G5	S3S4	FP
ABNKC11011	<i>Circus hudsonius</i> northern harrier	None	None	G5	S3	SSC
ABNKC12040	<i>Accipiter cooperii</i> Cooper's hawk	None	None	G5	S4	WL
ABNKC22010	<i>Aquila chrysaetos</i> golden eagle	None	None	G5	S3	FP
ABNKD06071	<i>Falco peregrinus anatum</i> American peregrine falcon	Delisted	Delisted	G4T4	S3S4	FP
ABNME01010	<i>Coturnicops noveboracensis</i> yellow rail	None	None	G4	S1S2	SSC
ABNME03041	<i>Laterallus jamaicensis coturniculus</i> California black rail	None	Threatened	G3G4T1	S1	FP
ABNME05011	<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	Endangered	Endangered	G3T1	S1	FP
ABPBX1201A	<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	None	None	G5T3	S3	SSC
ABPBXA301K	<i>Melospiza melodia maxillaris</i> Suisun song sparrow	None	None	G5T3	S3	SSC
ABPBXA301W	<i>Melospiza melodia samuelis</i> San Pablo song sparrow	None	None	G5T2	S2	SSC
ABPBXB0020	<i>Agelaius tricolor</i> tricolored blackbird	None	Threatened	G1G2	S1S2	SSC
ABPBXB3010	<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	None	None	G5	S3	SSC
AFCHB01040	<i>Hypomesus transpacificus</i> Delta smelt	Threatened	Endangered	G1	S1	
AFCHB03010	<i>Spirinchus thaleichthys</i> longfin smelt	Candidate	Threatened	G5	S1	
AFCJB34020	<i>Pogonichthys macrolepidotus</i> Sacramento splittail	None	None	GNR	S3	SSC
AMABA01103	<i>Sorex ornatus sinuosus</i> Suisun shrew	None	None	G5T1T2Q	S1S2	SSC



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMACC10010	<i>Antrozous pallidus</i> pallid bat	None	None	G4	S3	SSC
AMACD04020	<i>Nyctinomops macrotis</i> big free-tailed bat	None	None	G5	S3	SSC
AMAFF02040	<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	Endangered	Endangered	G1G2	S1S2	FP
ARAAD02030	<i>Emys marmorata</i> western pond turtle	None	None	G3G4	S3	SSC
ARADB21031	<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	Threatened	Threatened	G4T2	S2	
CTT52110CA	<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	None	None	G3	S3.2	
CTT52200CA	<i>Coastal Brackish Marsh</i> Coastal Brackish Marsh	None	None	G2	S2.1	
IIHYM24250	<i>Bombus occidentalis</i> western bumble bee	None	Candidate Endangered	G2G3	S1	
IIHYM24380	<i>Bombus caliginosus</i> obscure bumble bee	None	None	G4?	S1S2	
IILEPJ6091	<i>Speyeria callippe callippe</i> callippe silverspot butterfly	Endangered	None	G5T1	S1	
IILEPP2012	<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	Candidate	None	G4T2T3	S2S3	
PDAPI0M051	<i>Cicuta maculata var. bolanderi</i> Bolander's water-hemlock	None	None	G5T4T5	S2?	2B.1
PDAPI0Z130	<i>Eryngium jepsonii</i> Jepson's coyote-thistle	None	None	G2	S2	1B.2
PDAPI19030	<i>Lilaeopsis masonii</i> Mason's lilaeopsis	None	Rare	G2	S2	1B.1
PDAST1C011	<i>Blepharizonia plumosa</i> big tarplant	None	None	G1G2	S1S2	1B.1
PDAST4M020	<i>Helianthella castanea</i> Diablo helianthella	None	None	G2	S2	1B.2
PDAST4R0P1	<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	None	None	G3T1T2	S1S2	1B.1
PDAST57050	<i>Isocoma arguta</i> Carquinez goldenbush	None	None	G1	S1	1B.1
PDAST5L040	<i>Lasthenia conjugens</i> Contra Costa goldfields	Endangered	None	G1	S1	1B.1
PDAST8H060	<i>Senecio aphanactis</i> chaparral ragwort	None	None	G3	S2	2B.2
PDASTE8470	<i>Symphotrichum lentum</i> Suisun Marsh aster	None	None	G2	S2	1B.2



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDCAR0W062	<i>Spergularia macrotheca</i> var. <i>longistyla</i> long-styled sand-spurrey	None	None	G5T2	S2	1B.2
PDFAB250D2	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	None	None	G5T2	S2	1B.2
PDFAB400R5	<i>Trifolium hydrophilum</i> saline clover	None	None	G2	S2	1B.2
PDPGN0L1C0	<i>Polygonum marinense</i> Marin knotweed	None	None	G2Q	S2	3.1
PDSCR0J0D2	<i>Chloropyron molle</i> ssp. <i>molle</i> soft salty bird's-beak	Endangered	Rare	G2T1	S1	1B.2
PDTHY03010	<i>Dirca occidentalis</i> western leatherwood	None	None	G2	S2	1B.2
PMLIL0D160	<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	None	None	G2	S2	1B.2
PMLIL0V0C0	<i>Fritillaria liliacea</i> fragrant fritillary	None	None	G2	S2	1B.2

Record Count: 49

[HOME](#) [ABOUT](#) [CHANGES](#) [REVIEW](#) [HELP](#)

Search:

Simple

Advanced

Search for species and

Go

Search Results

Back

Export Results

18 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1A,1B,2A,2B], Quad is one of [3812213,3712283]

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Fed List	State List	Global Rank	State Rank	CA Rare Plant Rank	General Habitats	Micro Habitats	Lowest Elevation	Highest Elevation	CA Endemic	Date Added	Photo
-----------------	-------------	--------	----------	-----------------	----------	------------	-------------	------------	--------------------	------------------	----------------	------------------	-------------------	------------	------------	-------

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2
<i>Arctostaphylos pallida</i>	pallid manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	FT	CE	G1	S1	1B.1
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2
<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	None	None	G4T2T3	S2S3	1B.2
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2
<i>Chloropyron molle</i> ssp. <i>molle</i>	soft salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	FE	CR	G2T1	S1	1B.2
<i>Dirca occidentalis</i>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2
<i>Fritillaria liliacea</i>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2
<i>Helianthella castanea</i>	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2
<i>Hoita strobilina</i>	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	None	None	G2?	S2?	1B.1
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	FT	CE	G1	S1	1B.1
<i>Isocoma arguta</i>	Carquinez goldenbush	Asteraceae	perennial shrub	Aug-Dec	None	None	G1	S1	1B.1
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	None	None	G5T2	S2	1B.2
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
<i>Senecio aphanactis</i>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr (May)	None	None	G3	S2	2B.2
<i>Spergularia macrotheca</i> var. <i>longistyla</i>	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May	None	None	G5T2	S2	1B.2

<i>Suaeda californica</i>	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	FE	None	G1	S1	1B.1
<i>Trifolium hydrophilum</i>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2

Showing 1 to 18 of 18 entries

CONTACT US

Send questions and comments to rareplants@cnps.org.



Developed by
Rincon Consultants, Inc.

ABOUT THIS WEBSITE

[About the Inventory](#)
[Release Notes](#)
[Advanced Search](#)
[Glossary](#)

ABOUT CNPS

[About the Rare Plant Program](#)
[CNPS Home Page](#)
[About CNPS](#)
[Join CNPS](#)

CONTRIBUTORS

[The Calflora Database](#)
[The California Lichen Society](#)
[California Natural Diversity Database](#)
[The Jepson Flora Project](#)
[The Consortium of California Herbaria](#)
[CalPhotos](#)

[Log in](#)



United States Department of the Interior



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

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2224
Event Code: 08ESMF00-2021-E-06422
Project Name: Denova Homes - 2151 Appian Way

June 30, 2021

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

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

<http://>

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

Attachment(s):

- Official Species List
-

Official Species List

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

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2224

Event Code: 08ESMF00-2021-E-06422

Project Name: Denova Homes - 2151 Appian Way

Project Type: DEVELOPMENT

Project Description: housing development

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.99696165,-122.30070407920327,14z>



Counties: Contra Costa County, California

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

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

Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby <i>Eucyclogobius newberryi</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Flowering Plants

NAME	STATUS
Pallid Manzanita <i>Arctostaphylos pallida</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8292	Threatened
Santa Cruz Tarplant <i>Holocarpha macradenia</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6832	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States
Department of
Agriculture

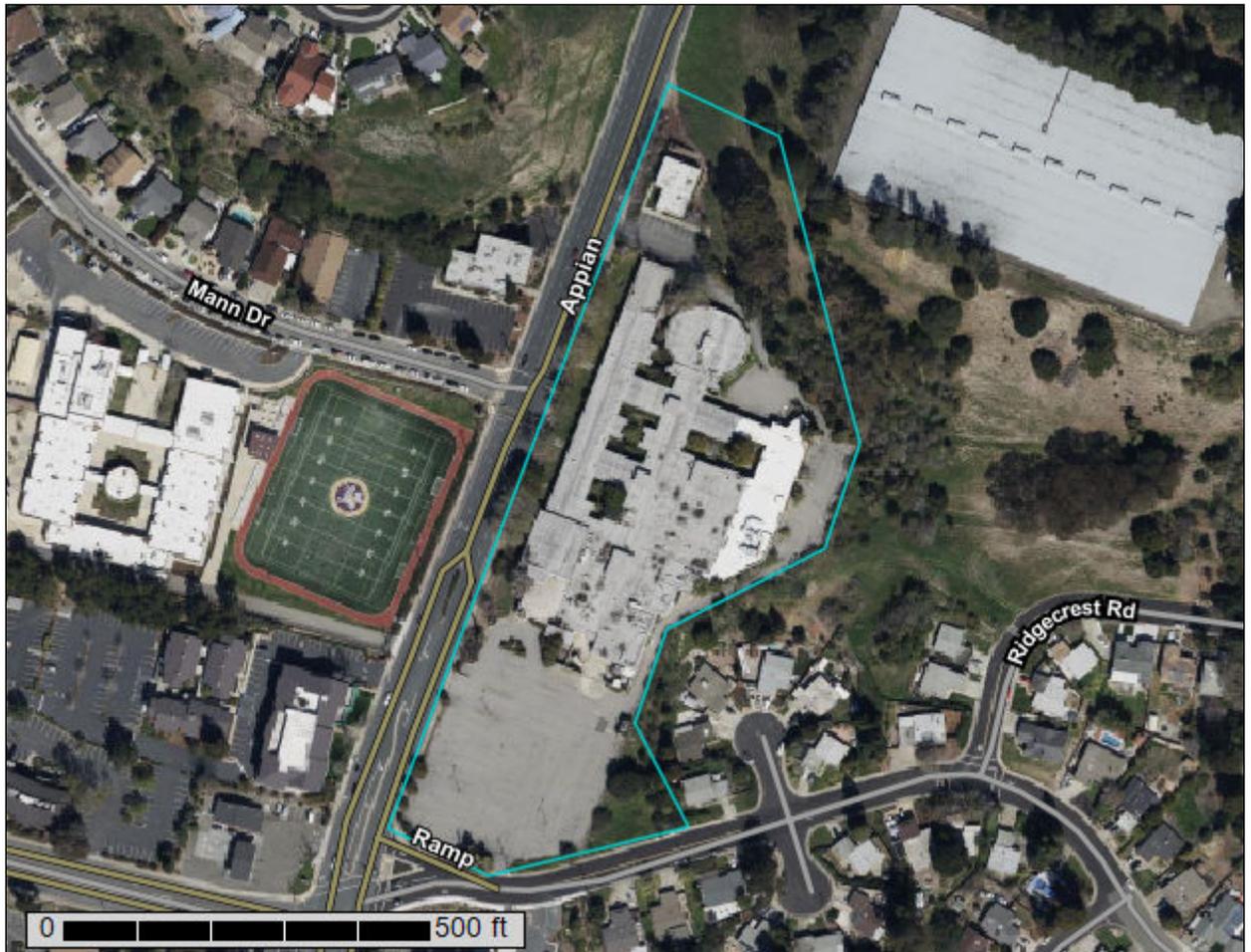
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Contra Costa County, California

Denova Homes - Appian Way



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Contra Costa County, California.....	13
CmE—Cut and fill land-Diablo complex, 9 to 30 percent slopes.....	13
CoF—Cut and fill land-Millsholm complex, 30 to 50 percent slopes.....	14
References	16

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

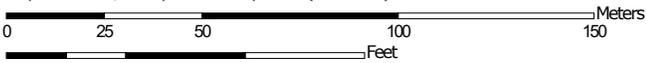
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:1,920 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Contra Costa County, California
 Survey Area Data: Version 17, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 7, 2021—Mar 27, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CmE	Cut and fill land-Diablo complex, 9 to 30 percent slopes	5.2	66.5%
CoF	Cut and fill land-Millsholm complex, 30 to 50 percent slopes	2.6	33.5%
Totals for Area of Interest		7.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Contra Costa County, California

CmE—Cut and fill land-Diablo complex, 9 to 30 percent slopes

Map Unit Setting

National map unit symbol: h98n
Elevation: 400 to 1,200 feet
Mean annual precipitation: 14 to 20 inches
Mean annual air temperature: 59 degrees F
Frost-free period: 260 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Cut and fill land (fill part): 75 percent
Diablo and similar soils: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land (fill Part)

Typical profile

- 0 to 60 inches: silty clay

Description of Diablo

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 29 inches: clay
H2 - 29 to 42 inches: silty clay
H3 - 42 to 46 inches: bedrock

Properties and qualities

Slope: 9 to 30 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Altamont

Percent of map unit: 10 percent

Hydric soil rating: No

CoF—Cut and fill land-Millsholm complex, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: h98r

Elevation: 300 to 2,000 feet

Mean annual precipitation: 14 to 24 inches

Mean annual air temperature: 59 degrees F

Frost-free period: 250 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Cut and fill land (fill part): 60 percent

Millsholm and similar soils: 20 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land (fill Part)

Typical profile

- 0 to 60 inches: silty clay loam

Description of Millsholm

Setting

Landform: Upland slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 12 inches: loam

H2 - 12 to 16 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent

Depth to restrictive feature: 12 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Lodo

Percent of map unit: 10 percent
Hydric soil rating: No

Los gatos

Percent of map unit: 5 percent
Hydric soil rating: No

Los osos

Percent of map unit: 5 percent
Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

ATTACHMENT B

SITE PHOTOGRAPHS



PHOTO 1: This photo was taken at the southeast corner of the Study Area facing west. This photo shows a small patch of annual grassland habitat.



PHOTO 3: This photo was taken along the eastern boundary of the Study Area, facing southwest. This photo shows unmaintained vegetation along the fence perimeter.



PHOTO 2: Taken from the southwest corner of the Study Area facing north. Showing the abandoned hospital and associated parking lot.



PHOTO 4: This photo was taken at the northern end of the Study Area showing the landscaped ornamental vegetation along the western boundary of the Study Area.



PHOTO 5: This photo was taken at the the northern boundary facing south, showing the grassland habitat occurring on a steep slope.



PHOTO 7: This photo was taken along the eastern boundary of the Study Area. A portion of the acacia grove can be seen on the right side of the photo just outside of the chainlink fence.



PHOTO 6: Showing a small patch of chaparral habitat occurring along the eastern boundary of the Study Area.



PHOTO 8: Showing a portion of the eycalyptus grove located within the far north portion of the Study Area, visible at the top right of the photo.

ATTACHMENT C

LIST OF VASCULAR PLANTS OBSERVED

Attachment C: List of Vascular Plant Species Observed at DeNova Homes Housing Project on July 7, 2021.

Wetland Indicator Status were classified according to the *Arid West 2018 Regional Wetland Plant List* (Lichvar et al, 2018).

SCIENTIFIC NAME	COMMON NAME	FAMILY	ORIGIN	FORM	INDICATOR STATUS
<i>Acacia melanoxylon</i>	Blackwood acacia	Fabaceae	Non-native	Tree	NI
<i>Avena fatua</i>	Wild oat	Poaceae	Non-native	Herb	NI
<i>Baccharis pilularis</i>	Coyote brush	Asteraceae	Native	Shrub	NI
<i>Brassica nigra</i>	Black mustard	Brassicaceae	Non-native	Herb	NI
<i>Bromus diandrus</i>	Ripgut brome	Poaceae	Non-native	Herb	NI
<i>Carpobrotus edulis</i>	Iceplant	Aizoaceae	Non-native	Herb	NI
<i>Convolvulus arvensis</i>	Field bindweed	Convolvulaceae	Non-native	Herb/vine	NI
<i>Eucalyptus</i> sp.	Eucalyptus	Myrtaceae	Non-native	Tree	NI
<i>Foeniculum vulgare</i>	Sweet fennel	Apicaceae	Non-native	Herb	NI
<i>Helminthotheca echioides</i>	Bristly ox-tongue	Asteraceae	Non-native	Herb	FAC
<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae	Native	Shrub	NI
<i>Koeleria micrantha</i>	Prairie junegrass	Poaceae	Native	Grass	NI
<i>Lysimachia arvensis</i>	Scarlet pimpernel	Myrsinaceae	Non-native	Herb	FAC
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae	Non-native	Herb	FAC
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Asteraceae	Non-native	Herb	FAC
<i>Pyracantha</i> sp.	Firethorn	Rosaceae	Non-native	Shrub	NI
<i>Quercus agrifolia</i>	Coast live oak	Fagaceae	Native	Tree	NI
<i>Raphanus sativus</i>	Wild radish	Brassicaceae	Non-native	Herb	NI
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae	Non-native	Vine/shrub	FACU
<i>Vicia sativa</i>	Common vetch	Fabaceae	Non-native	Herb	FACU

Wetland Indicator Status (WIS)

- OBL = Occurs in aquatic resources $\geq 99\%$ of time
- FACW = Occurs in aquatic resources 67-99% of time
- FAC = Occurs in aquatic resources 34-66
- FACU = Occurs in aquatic resources 1-33% of time
- UPL = Occurs in aquatic resources $\leq 1\%$ of time
- NI = Indicator status not known in this region