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REVISED NEPA-LEVEL BIOLOGICAL RESOURCES ASSESSMENT AND WETLAND DETERMINATION FOR THE PARK AVENUE HOUSING PROJECT, APNS 037-231-22 & -23, PROPERTY LOCATED AT 2838-2840 PARK AVENUE, SANTA CRUZ COUNTY, CALIFORNIA. MHBA FILE: 1220-2021-3777.

1.0. INTRODUCTION

On behalf of the Park Avenue Housing Project, Bole & Associates (B&A) conducted a biological resource assessment (BRA) for two parcels: APN 037-231-23 @ 1.041-acres and 037-231-22 @ 0.347-acres. 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 (NEPA, 42 U.S.C. 4332 (2) (C)). For projects other than major construction activities, the Service suggests that a biological resources assessment 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. The original report is hereby revised to include a review of the Santa Cruz black salamander, *Aneides flavipunctatus niger* (CDFW Species of Concern), and to provide a mitigation measure (BIO-5) to minimize impacts to this species.

1.1. Study Area and Project Area Location

The Study Area is located within Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle, in an unincorporated area (Soquel) of Santa Cruz County, California (See Enclosure A, Figure 1). Center of the Study Area is approximately 36.986205° North, -121.936079° West (NAD27).

1.2. Purpose of this Biological Resources Assessment

This report presents the results of a reconnaissance-level biological resources assessment conducted by Bole & Associates on the above reference property. The purpose of the survey was to identify and describe existing biological resources, evaluate the site's potential to support special-status plant and/or animal species, and determine if any other sensitive resources are present. This letter report includes the following: (1) a description of the methods used to conduct the evaluation; (2) a brief description of existing habitat conditions on the property; and (3) an analysis of special-status plant and animal species and other sensitive biological resources potentially present.

1.3. Project Description

The Park Avenue Housing Project is a multi-unit affordable income housing project. A site plan can be found in Enclosure D.

2.0. REGULATORY SETTING

2.1. Federal Regulations

2.1.1. Endangered Species Act

The Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law (16 U.S. Code [USC] 1538). Under Section 7 of ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for the issuance of Incidental Take Permits (ITPs) where no other federal actions are necessary provided a habitat conservation plan is developed.

Critical Habitat

Critical Habitat is defined in Section 3 of ESA as:

1. The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and
2. The specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are

the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior;
2. Food, water, air, light, minerals, or other nutritional or physiological requirements
3. Sites for breeding, reproduction, or rearing (or development) of offspring; and
4. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

2.1.2. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of non-game birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

2.1.3. Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredged or fill material into “Waters of the U.S.” without a permit from the U.S. Army Corps of Engineers (USACE). The Environmental Protection Agency (USEPA) and the USACE will assert jurisdiction over Waters of the U.S. according to the Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Rapanos). In summary, Waters of the U.S. under Rapanos include traditional navigable waters (TNW), wetlands adjacent to TNW, non-navigable tributaries of TNW that are relatively permanent where the tributaries typically flow at least seasonally (e.g. typically three months), and wetlands that directly abut such tributaries. Pursuant to Rapanos, the USEPA and USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water over the following: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary (USEPA and USACE 2008). Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence

of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3 7b). USEPA also has authority over wetlands, including the authority to veto permits issued by USACE under CWA Section 404.

Projects involving activities that have no more than minimal individual and cumulative adverse environmental effects may meet the conditions of one of the Nationwide Permits already issued by USACE (Federal Register 82:1860, January 6, 2017). If impacts on wetlands could be substantial, an individual permit is required. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. This certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2. State and Local Regulations

2.2.1. California Endangered Species Act (ESA)

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California ESA allows for take incidental to otherwise lawful projects under permits issued by California Department of Fish and Wildlife (CDFW).

2.2.2. Fully Protected Species

The State of California first began to designate species as “fully protected” prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing ITPs for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved NCCP within which such species are covered.

2.2.3. Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to “preserve, protect and enhance rare and endangered plants in this state.” The NPPA is administered by CDFW. The Fish and Game Commission has

the authority to designate native plants as “endangered” or “rare”. The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA, but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

2.2.4. California Fish and Game Code Special Protection of Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic nonnative species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

2.2.5. Lake or Streambed Alteration Agreements

Section 1600-1616 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration (LSA) to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the LSA Agreement. The project borders a riparian corridor associated with an unnamed intermittent tributary to Porter Gulch. Setbacks have been established to prevent impacts to the tributary.

2.2.6. Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant

Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, with any region that could affect the water of the state” (Water Code 13260(a)). Waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

2.2.7. California Environmental Quality Act Species Criteria

In accordance with California Environmental Quality Act (CEQA) Guidelines § 15380 (Guidelines), a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in ESA, the California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under ESA, the California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as species of special concern (SSC) by CDFW, and plants identified by the California Native Plant Society (CNPS) as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

Species of Special Concern

SSC are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under ESA, the California ESA, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role;
- The species is listed as federally (but not State) threatened or endangered, or meets the State definition of threatened or endangered but has not formally been listed;
- The species has or is experiencing serious (nonscyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for State threatened or endangered status; and

- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

USFWS Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA.” To meet this requirement, USFWS published a list of birds of conservation concern (BCC) (USFWS 2008) for the U.S. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS’s highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

Sensitive Natural Communities

The CDFW maintains the California Natural Community List (CDFW 2021), which provides a list of vegetation alliances, associations, and special stands as defined in the *Manual of California Vegetation* (Sawyer et al. 2009), along with their respective State and global rarity ranks. Natural communities with a State rarity rank of 1, 2, or 3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2021), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six California Rare Plant Ranks (CRPRs). The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere.
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere.
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere.
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere.
- Rare Plant Rank 3 – a review list of plants about which more information is needed.
- Rare Plant Rank 4 – a watch list of plants of limited distribution.

Additionally, CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants

ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

Threat Rank 0.2 – Moderately threatened in California (20-80 percent of occurrences threatened/moderate degree and immediacy of threat).

Threat Rank 0.3 – Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; differences in Threat Ranks do not constitute additional or different protection (CNPS 2021).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, §15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant under CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

2.2.8. County of Santa Cruz General Plan and Local Coastal Program

The Santa Cruz County General Plan and Local Coastal Program (LCP) is a comprehensive, long-term planning document for the unincorporated areas of the County, and includes the County's LCP, which is was certified by the California Coastal Commission in 1994 (County of Santa Cruz 1994). The County General Plan and LCP provides policies and programs to establish guidelines for future growth and all types of physical developments.

The County's General Plan, Chapter 5, Conservation and Open Space, Objective 5.2, Riparian Corridors and Wetlands, establishes definitions for riparian corridors and wetlands to ensure their protection. Policies 5.2.1 through 5.2.5 identify and define riparian corridors and wetlands, determine the uses that are allowed in and adjacent to these habitats, and specify required buffer setbacks and performance standards for land in and adjacent to these areas. Riparian corridors are defined as 50 feet from the top of a distinct channel or physical evidence of high water mark of perennial stream; 30 feet from the top of a distinct channel or physical evidence of high water mark of an intermittent stream as designated on the General Plan maps and through field inspection of undesignated intermittent and ephemeral streams; 100 feet of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water; the landward limit of a riparian woodland plant community; and wooded arroyos within urban areas (County of Santa Cruz 1994). The County definitions are consistent with those use for CEQA purposes.

The County certified LCP is administered by the County Planning Department pursuant to the California Coastal Act, and includes specific plans and ordinances for activities within the Coastal Zone. The LCP implementing ordinances in the County Code that are particularly relevant in the evaluation of biological resources of the proposed project include the following:

- Grading Ordinance (Chapter 16.20)
- Erosion Control Ordinance (Chapter 16.22)
- Riparian Corridor and Wetlands Protection (Chapter 16.30)
- Sensitive Habitat Protection (Chapter 16.32)
- Significant Trees Protection (Chapter 16.34)

Because the proposed project does not occur within the Coastal Zone and is exempt from the LCP, it would not require compliance with the LCP or standards contained in the above LCP implementing ordinances. The proposed project would not require a Coastal Development Permit. The relevant implementing ordinances are described below.

2.2.8.1. Grading and Erosion Control Ordinance

Santa Cruz County Code 16.20, Grading Regulations, sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, dredging, diking, fills, and embankments. Santa Cruz County Code Chapter 16.22 requires control of all existing and potential conditions of accelerated (human-induced) erosion, and sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing, and winter operations.

2.2.8.2. Riparian Corridor and Wetland Protection Ordinance

Santa Cruz County Code Chapter 16.30, Riparian Corridor and Wetlands Protection, includes regulations to limit development activities in riparian corridors. The regulations provide that “no project shall undergo developmental activities in riparian corridors or areas with urban or rural service lines which are within a buffer zone as measured from the top of the arroyo.” Buffer areas are specified in the regulations and are determined from characteristics found in the riparian area, including average slope within 30 feet of water’s edge, vegetation, and stream characteristics. The buffer always extends 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation, as determined by the dripline. After the buffer is determined, a 10-foot setback from the edge of the buffer is required for all structures, which allows construction equipment and use of a yard area. The current Assessor’s Parcel Map shows a Riparian Corridor (dotted line). The project as designed will not encroach upon this line (see Enclosure A, Figure 2).

2.2.8.3. Sensitive Habitats Protection Ordinance

Santa Cruz County Ordinance 16.32 regulates development in or adjacent to specified environmentally sensitive habitat areas. An area defined as “sensitive habitat” under this ordinance includes various criteria, and includes all lakes, wetlands, estuaries, lagoons, streams, rivers, and riparian corridors. No development activity may occur within an area of biotic concern unless approval is issued or unless the activity is review concurrently with the review of an associated development or land division application. All development within environmentally sensitive habitat must be mitigated or restored. By avoiding the Riparian Corridor located along the eastern boundary of APN 037-231-23 there will be no impact to these sensitive habitats.

2.2.8.4. Significant Trees Protection Ordinance

Santa Cruz County Code Chapter 16.34 regulates the removal of trees in the Coastal Zone that could reduce scenic beauty and the attractiveness of the area to residents and visitors. The ordinance establishes the type of trees to be protected, the circumstances under which they may be removed, and the procedures for obtaining a permit for their removal. A tree removal permit will not be required since the project site occurs outside the Coastal Zone. However, a Development Restriction requires a map of all trees on the parcel by size, species and location as part of any development proposal, along with an arborist report addressing the health of each tree. Designation of which trees are proposed for removal, along with reasons for removal shall be reviewed in the report. Tree protection measures during construction shall be considered. Santa Cruz County requires mature trees greater than 6 inches diameter at breast height shall be incorporated into the project design. Non-native plants are to be removed from the sites with the exception of mature eucalyptus which provide scenic value.

3.0. METHODS

For the purposes of this BRA, special-status species are defined as plants or animals that:

- are listed or are proposed for listing as threatened or endangered under the ESA;

- are candidates for future listing as threatened or endangered under the California ESA;
- are identified as an SSC by the CDFW;
- are considered by the CNPS with a CRPR of 1A, 1B, 2A, 2B, 3, or 4;
- are fully protected in California in accordance with the California Fish and Game Code, 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes)

3.1. Literature Review

Prior to field studies, special-status biological resources present or potentially present in the Study Area were identified through queries of the various state and federal databases (see Enclosure B) based on the U.S. Geological Survey 7.5-minute quadrangle where the Study Area is located (Soquel) and six surrounding quadrangles (Santa Cruz, Felton, Laurel, Loma Prieta, Watsonville West, and Moss Landing).

3.2. Field Assessment for Other Special-Status Species

A survey was conducted by Bole & Associates Senior Biologist David H. Bole and Senior Biologist Marcus H. Bole on January 1, 2022. During this field assessment, the Study Area was walked on foot, and topographic maps and aerial imagery were referenced. Biological communities occurring within the Study Area were characterized, and the following biological resource information was collected:

- protected trees occurring onsite;
- animal and plant species directly observed;
- habitat and vegetation communities; and
- representative photographs of the Study Area

3.3. Evaluation of Special-Status Species

Based on the species accounts, species occurrence information from the literature review, and the field assessment, a list of special-status plant and animal species considered to have the potential to occur within the Study Area was generated. Each of the species that were considered as potentially occurring within the Study Area or vicinity were evaluated based on the following criteria:

- **Present** – Species was observed during field surveys or is known to occur within the Study Area based on documented occurrences within the CNDDDB, other literature, and site assessments.

- **Potential to Occur** – Habitat (including soil and elevation requirements) for the species occurs within the Study Area based on site assessment and literature research.
- **Low Potential to Occur** – Marginal or limited amounts of habitat occur, and/or the species is not known to occur within the vicinity of the Study Area based on CNDDDB records other available documentation, and site assessments.
- **Absent** – No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Study Area based on CNDDDB records, other documentation, and site assessments.

3.4. Preliminary Aquatic Resources Assessment

The boundaries of aquatic resources were estimated through aerial photograph interpretation and limited field reconnaissance. Color aerial photographs available on Google Earth were used to assist with field mapping. In addition, the California Aquatic Resources Inventory (CARI) was queried for previously mapped features on-site (San Francisco Estuary Institute [SFEI] 2017). This assessment is intended for general planning purposes and not for detailed project planning and permitting. As such, this assessment was not performed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008).

4.0. RESULTS

4.1. Site Characteristics and Land Use

The Study Area is situated at an elevation of approximately 125 feet above mean sea level (MSL) in an unincorporated area of Santa Cruz County, California. The Study Area is bordered on the south by Cabrillo College Drive, on the east by a riparian corridor associated with an unnamed intermittent tributary to Porter Gulch, on the north by residential properties along Lindsay Lane and on the west by Park Avenue and residential apartment buildings. The Study Area consists of a highly disturbed and developed parcel (APN 037-231-22) fronting Park Avenue (dentist office and parking lot), an open, relatively undisturbed lower benched area (APN 037-231-23) supporting ruderal, non-native grasses and forbs, and an undisturbed riparian corridor supporting a thin band of coast live oak and willow trees. Wildlife species detected on or in the immediate vicinity of the Study Area included the following: mourning dove (*Zenaida macroura*), western gull (*Larus occidentalis*), California towhee (*Melospiza crissalis*), black phoebe (*Sayornis nigricans*) and house finch (*Carpodacus mexicanus*). All of these species are generalists that are adapted to human-modified landscapes. The Study Area provides habitat for other urban-adapted wildlife species such as northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). The riparian corridor supports a limited amount of seasonal drainage flows with a sparse amount of hydrophytic plant species.

4.1.1. Disturbed Annual Grasses and Forbs

The location of the proposed apartment building is within a lower benched portion of APN 037-231-23. The benched area is significantly lower in elevation from the dentist office and parking lot associated with APN 037-231-22. This lower bench then drops off sharply in the area of the riparian corridor. Between the relatively undisturbed riparian corridor and the developed portion of the Study Area adjacent to Park Avenue, the landscape is flat and other than a couple of medium diameter coast live oak trees is characterized as disturbed annual grasses and weedy forbs. The proposed three story, 8,700 square foot apartment building will occupy this lower benched area with a retaining wall separating the building footprint from the riparian corridor.

4.1.2. Coast Live Oak and Willow Riparian

The thin band of Coast Live Oak and Willow trees form a riparian corridor along the steeply sloped banks of the unnamed intermittent tributary that flows in a southerly direction along the eastern boundary of the Study Area. A designated Riparian Corridor set-back line is within the eastern portion of APN 037-231-23. No development will take place east of the Riparian Corridor set-back line.

4.1.3. Urban/Developed

The urban/developed area associated with the dentist office and parking lot is characterized by paved, impermeable surfaces that support only a limited amount of non-native ornamental landscape plant species.

4.1.4. Soils

According to the *Web Soil Survey* (Natural Resources Conservation Service [NRCS] 2021), one soil type dominates the Study Area (*Natural Resources Conservation Service Soil Types*): Tierra-Watsonville complex, 15 to 30 percent slopes (*National map unit symbol: h9g2*). The Tierra-Watsonville series consists of moderately well drained sandy loams along fan terraces and marine terraces. These soils are not classified as “hydric” and except for the immediate bed and banks of the unnamed intermittent tributary to Porter Gulch, no hydric soils were found within the Project area.

4.1.5. Aquatic Features

Except for the unnamed intermittent tributary to Porter Gulch there are no aquatic features within the Project area. An aquatic resources delineation has not been conducted for the unnamed intermittent tributary, therefore the USACE and/or the Regional Water Quality Control Board has not made a jurisdictional determination of the tributary.

4.1.6. Wildlife

Wildlife use of the Study area (Project area) is expected to be low due to the developed surroundings. However, the riparian corridor and overhanging trees provide habitat, including nesting, for some local nesting bird species. A few bird species observed during the January 2022 site visit included California scrub jay (*Aphelocoma californica*), western bluebird (*Sialia mexicana*), house finch (*Haemorhous mexicanus*), white-crowned sparrow (*Zonotrichia leucophrys*) and yellow-rumped warbler (*Setophana coronata*), mourning dove (*Zenaida macroura*), western gull (*Larus occidentalis*), California towhee (*Melospiza crissalis*), and black phoebe (*Sayornis nigricans*) among others. Urban-adapted wildlife typically found in this setting could include raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*).

4.2. Evaluation of Special-Status Species

Based on an analysis of literature review, 9-Quad CNDDDB occurrences, USFWS listed species, profession expertise and observations in the field, a list of special-status plant and animal species that have the potential to occur within the Study area was generated. Each of these species' potential to occur onsite was assessed using the criteria listed in Section 3.3.

Table 1. Evaluation of Listed and Proposed Species Potentially Occurring or Known to Occur in the Park Avenue Housing Project Study Area

Species	Federal (USFWS) Status ¹	State (CDFG)/CNPS Status ¹	Habitat	Potential for Occurrence
<i>Plants</i>				
Marsh Sandwort, (<i>Arenaria paludicola</i>)	E	E/1B.1	Marshes and swamps. Growing up through dense mats of typha, juncus, scirpus, etc. In freshwater marsh, Sandy soil. 3-170 M.	Absent: There is no suitable habitat onsite. Intermittent tributary to Porter Gulch does not support this species.
Santa Cruz Tarplant, (<i>Holocarpha macradenia</i>)	T	E/1B.1	Coastal prairie, Coastal scrub, Valley and foothill grassland. Light, sandy soil or sandy clay. 10-275 M.	Absent: There is no suitable habitat onsite.
Scotts Valley Spineflower, (<i>Polygonum hickmanii</i>)	E	E/1B.1	Valley and foothill grassland. Purisma sandstone or mudstone with a thin layer; vernal moist due to runoff. 210-230 M	Absent: There is no suitable habitat onsite.
Scotts Valley Spineflower, (<i>Chorizanthe robusta</i> var. <i>hartwegii</i>)	E	None/1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 105-475 M.	Absent: There is no suitable habitat onsite.

<i>Birds</i>				
California Least Tern, (<i>Sterna antillarum browni</i>)	E	E	Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Absent: There is no suitable habitat onsite.
Least Bell's Vireo (<i>Vireo bellii pusillus</i>)	E	E	Low riparian in vicinity of water or in dry river bottoms in the Southern California regions.	Absent: There is no suitable habitat onsite.
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	T	E	Nests in old-growth redwood dominated forests, up to six miles inland, often in Douglas fir.	Absent: There is no suitable habitat onsite.
Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	E	E	Riparian woodlands in Southern California	Absent: There is no suitable habitat onsite. Project site outside of range of this species.
Western Snowy Plover (<i>Charadrius nivosus nivosus</i>)	T	None	Sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy, gravelly or friable soils for nesting.	Absent: There is no suitable habitat onsite.
<i>Amphibians and Reptiles</i>				
California tiger salamander (<i>Ambystoma californiense</i>)	T	T	Cismontane woodland, meadow & seep, riparian woodland, valley and foothill grassland, vernal pool; need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Absent: There is no suitable habitat onsite.
Santa Cruz Long-toed Salamander (<i>Ambystoma macrodactylum croceum</i>)	E	E	Wet meadows near sea level in few restricted locales in Santa Cruz and Monterey Counties. Aquatic larvae prefer shallow water, using clumps of vegetation for cover. Adults use mammal burrows.	Absent: There is no suitable habitat onsite.
California red-legged frog (<i>Rana draytonii</i>)	T	None/SCS	Lowlands & foothills in or near permanent sources of deep water with dense shrubby or emergent riparian vegetation.	Absent: There is no suitable habitat onsite.
San Francisco Garter Snake (<i>Thamnophis sirtalis tetrataenia</i>)	E	E	Vicinity of freshwater marshes, ponds and slow moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover & water depths of at least one foot.	Absent: There is no suitable habitat onsite.
Santa Cruz black salamander (<i>Aneides flavipunctatus niger</i>)	None	None/CDFW Species of Concern	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara Counties.	Low: Adjacent riparian habitat is marginally suitable habitat for this specie due to long periods of low to no flows. Damp

				woody debris does provide suitable micro-habitat.
Tidewater Goby	E	None	Brackish water habitats, found in shallow lagoons and lower stream reaches.	Absent: There is no suitable habitat onsite.
<i>Invertebrates & Insects</i>				
Monarch Butterfly (<i>Danaus plexippus</i>) California overwintering population	Candidate	None	Roosts located in wind-protected tree groves with nectar and water sources nearby	Low: Large, sheltered eucalyptus trees within the riparian corridor provide suitable habitat; however, none observed during winter surveys.
Ohlone Tiger Beetle (<i>Cicindela ohlone</i>)	E	None	Remnant native grasslands with California oatgrass and purple needlegrass.	Absent: There is no suitable habitat onsite.
Zayante Band-winged Grasshopper (<i>Trimerotropis infantilis</i>)	E	None	Isolated sandstone deposits in the Santa Cruz Mountains. Mostly on sand parkland habitat.	Absent: There is no suitable habitat onsite.
Obscure bumble bee (<i>Bombus caliginosus</i>)	None	None	Food plant genera include baccharis, cirsium, lupines, lotus, grindella and phacelisa.	Low: sparse amounts of food genera onsite; however, within range of local populations.
Western bumble bee (<i>Bombus occidentalis</i>)	None	None	Exact location unknown. Mapped by CNDDDB centered on the town of Ben Lomond (last mapped in 1944)	Low: sparse amounts of food genera onsite; however, within range of local populations.
<i>Mammals-none</i>				
<p>(1) Legal Status Codes: E = Federally or State listed as endangered T = Federally or State listed as threatened SC = Federal or State special concern species S C = Candidate species for future listing as endangered or threatened -- = No designation 1A = Plants presumed extinct in California 1B = CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere 2 = CNPS List 2: Plants rare, threatened or endangered in California, but more common elsewhere 3 = CNPS List 3: Plants about which we need more information – a review list</p> <p>SOURCES: CNPS Inventory of Rare and Endangered Plants of California (sixth edition). David Tibor editor. California Native Plant Society. Sacramento, CA. California Natural Diversity Database (CNDDDB) Rare Find program. .</p>				

4.2.1. Special-Status Plants

A small number of federal and state listed special-status plant species were evaluated as having the potential to occur in the Study Area. However, upon further analysis and after the 2022 site visit, all were considered to be absent from the Study Area due to the lack of suitable habitat. No further discussion of these species is provided in this analysis.

4.2.2. Invertebrates

Three special status invertebrate species were evaluated as having a low potential to occur in the

Study Area. The Monarch butterfly, *Danaus plexippus*, is a federal candidate for listing. Winter surveys were conducted within the large diameter eucalyptus trees in the riparian corridor along the eastern boundary of the Study Area. Although no Monarch butterflies were observed, the area remains potential habitat for the species. Two unlisted species of bumble bees have been observed within a close proximity to the Study Area; however, there is very little food plant genera (foraging habitat) in the Study Area to support these species.

4.2.3. Reptiles & Amphibians

Two special-status reptile and three special status amphibian species were evaluated as being absent from the Study Area due to unsuitable habitat. One CDFG Species of Concern amphibian the Santa Cruz black salamander, *Aneides flavipunctatus niger*, may be present in the adjacent riparian habitat; however the seasonal flows do not provided needed year-round water for this species. None were found during intensive onsite evaluations of the riparian habitats. Mitigation measures will be applied to the project to protect this species. The Study Area does not support vernal pools.

4.2.4. Wildlife Movement/Corridors

The Study Area is surrounded on three sides by commercial/residential properties and major roadways. As such, wildlife use is expected to be relatively low. The Study Area does not fall within an Essential Habitat Connectivity area mapped by the CDFW. The medium to large diameter trees within the riparian corridor and those along the perimeter of the Study Area may support cover for local avian species, but it is not expected to be significant due to the relative small size of the project area.

4.2.5. Sensitive Natural Communities

With the exception of the riparian corridor, there are no sensitive natural communities within or near the Study Area. Due to the built up nature of the surrounding properties surrounding the Study Area, there is little evidence that the Study Area would support sensitive natural communities.

4.2.6. Trees

The Study Area (including the riparian corridor) supports a significant number of native (oak) and non-native (eucalyptus) trees. In accordance with the County of Santa Cruz Development Restrictions all trees will be mapped by size, species and location, along with an arborist report. The County will evaluate the report and any request for tree removal. Tree protection measures during construction shall be considered by the County.

5.0. Potential Biological Constraints & Mitigation Recommendations

Biological resource constraints to future development of the property is the potential presence of nesting birds and the requirement that existing mature trees and the riparian corridor be retained and enhanced, and incorporated into the site design and landscaping, where appropriate. The

riparian habitat may support the non-listed Santa Cruz black salamander; however, the seasonal nature of the riparian does not provide an abundant amount of micro-habitat for this thoroughly aquatic species.

5.1. BIO-1 Nesting Bird Protection.

The County shall require project applicants to retain the services of a qualified biologist(s) to conduct a pre-construction nesting bird survey during the nesting season (February 1 through August 31) prior to all new development that may remove any trees or vegetation that may provide suitable nesting habitat for migratory birds or other special-status bird species. If nests are found the qualified biologist(s) shall identify appropriate avoidance measures.

5.2. BIO-2 Listed Plant Species Preconstruction Surveys.

Initial biological resource evaluations were conducted during the winter months and outside the normal blooming cycle of all plants of concern. Habitat evaluations found the Study Area to be absent of the micro-habitat required to support these special status species. However, it is recommended that preconstruction surveys will be conducted during the normal blooming cycle for all plants of concern to confirm the presence/absence of federal and/or state special status plant species. Surveys should be conducted no earlier than 30 days before construction activities are scheduled. If special status plant species are identified onsite, appropriate notification will be made to the County of Santa Cruz, the USFWS and CDFW. A protection plan will be submitted for agency review and action before special status plants are impacted.

5.3. BIO-3 Riparian/Wetland Impact Analysis and Permits

A riparian setback line has been designed within APN 037-231-23 on the revised APN map (see Enclosure A, Figure 2). No construction activities will be allowed to encroach upon the setback line.

5.4. BIO-4 Tree Protection and Preservation Plan

A County of Santa Cruz approved arborist shall prepare a preliminary Tree Protection and Preservation Plan for submission with the Site Plan. A map of all trees on the parcel by size, species and location will be submitted as part of the development proposal, along with the arborist report addressing the health of each tree. Designation of which trees are proposed for removal, along with the reasons for removal shall be reviewed in the report. Santa Cruz County requires the existing mature trees greater than 6 inches diameter at breast height shall be incorporated in the project design. Non-native plants are to be removed from the site with the exception of mature eucalyptus which provide scenic value.

5.5. BIO-5 Santa Cruz black salamander.

Additional surveys for this amphibian should be conducted within two-weeks of construction activities. It is recommended that a curb/barrier be installed to prevent salamanders from accessing the parking areas during precipitation and high flows through the riparian corridor.

Additionally, a reptile/amphibian barrier (such as 1/4 inch hardware cloth 23 gauge black vinyl coated welded fence mesh) along the bottom of the fence delineating the riparian area should be installed. Lights should be shielded and directed away from the riparian corridor to protect sensitive wildlife that might utilize the corridor. Windows and glass door should have a reflective film to prevent household light from residential units from shining into the corridor.

This concludes our biological resource assessment and wetland determination of the Park Avenue Housing Project, a ±1.4-acre Study Area located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, County, California. If you have any questions concerning our findings or recommendations please feel free to contact me directly at: Bole & Associates, Attn: Marcus H. Bole, 104 Brock Drive, Wheatland, CA 95692, phone 530-633-0117, fax 530-633-0119, email: marcus@mhbole.com.

Enclosures

Enclosure A: Maps & Photos
Enclosure B: Species Databases
Enclosure C: Soil Data
Enclosure D: Site Plans

6.0 References

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ENCLOSURE A: MAPS & PHOTOS

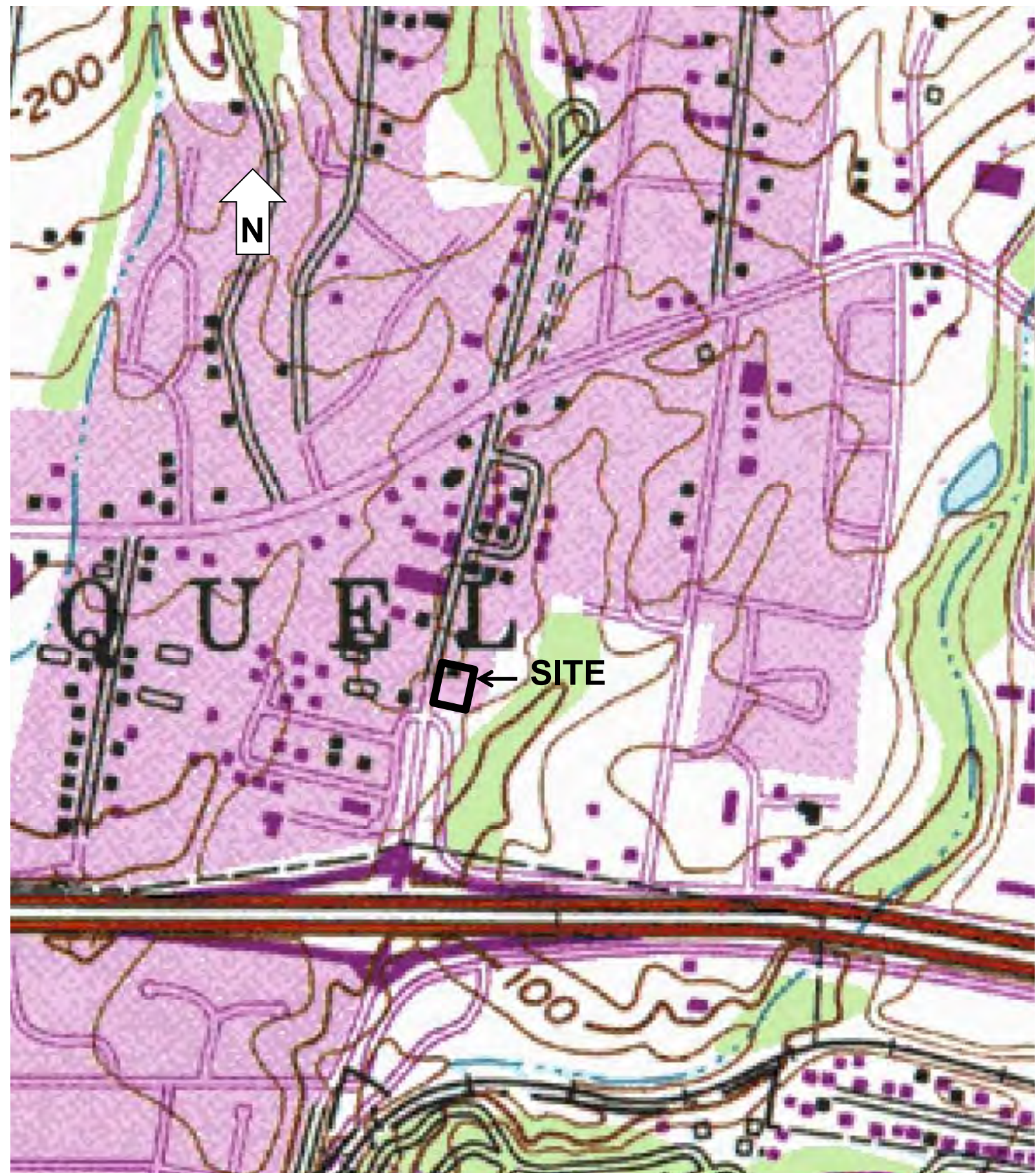


FIGURE 1: Vicinity Map, 2838 Park Avenue Project. Site located at 2838 Park Avenue, Soquel, CA. Township 11 South, Range 1 West, Soquel 7.5' USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.

FOR TAX PURPOSES ONLY
 THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.
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POR, SOQUEL RANCHO
 SEC. 11, T.11S., R.1W., M.D.B. & M.

Tax Area Code
 96-101

37-23

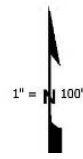
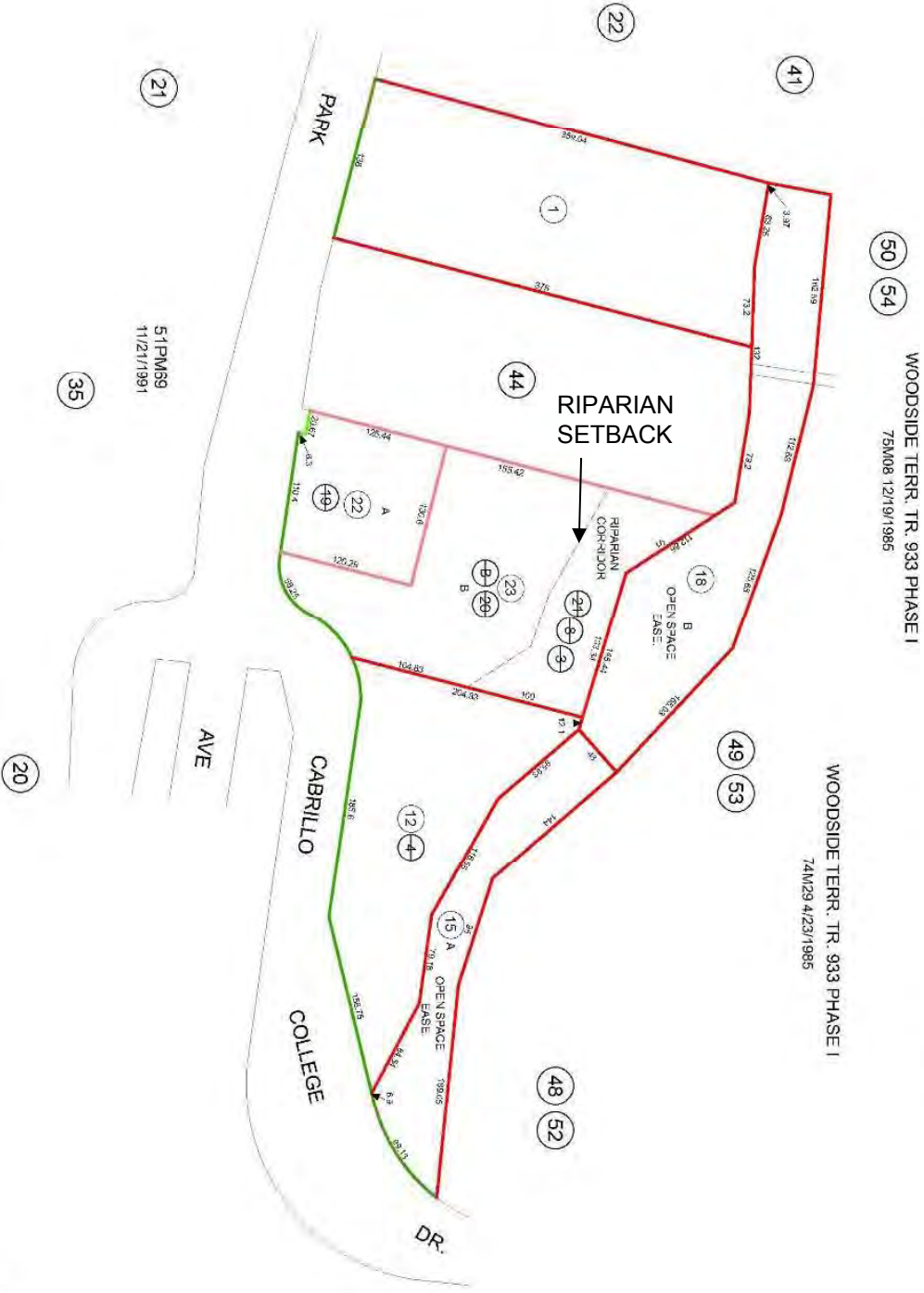


Figure 2: Revised APN Map

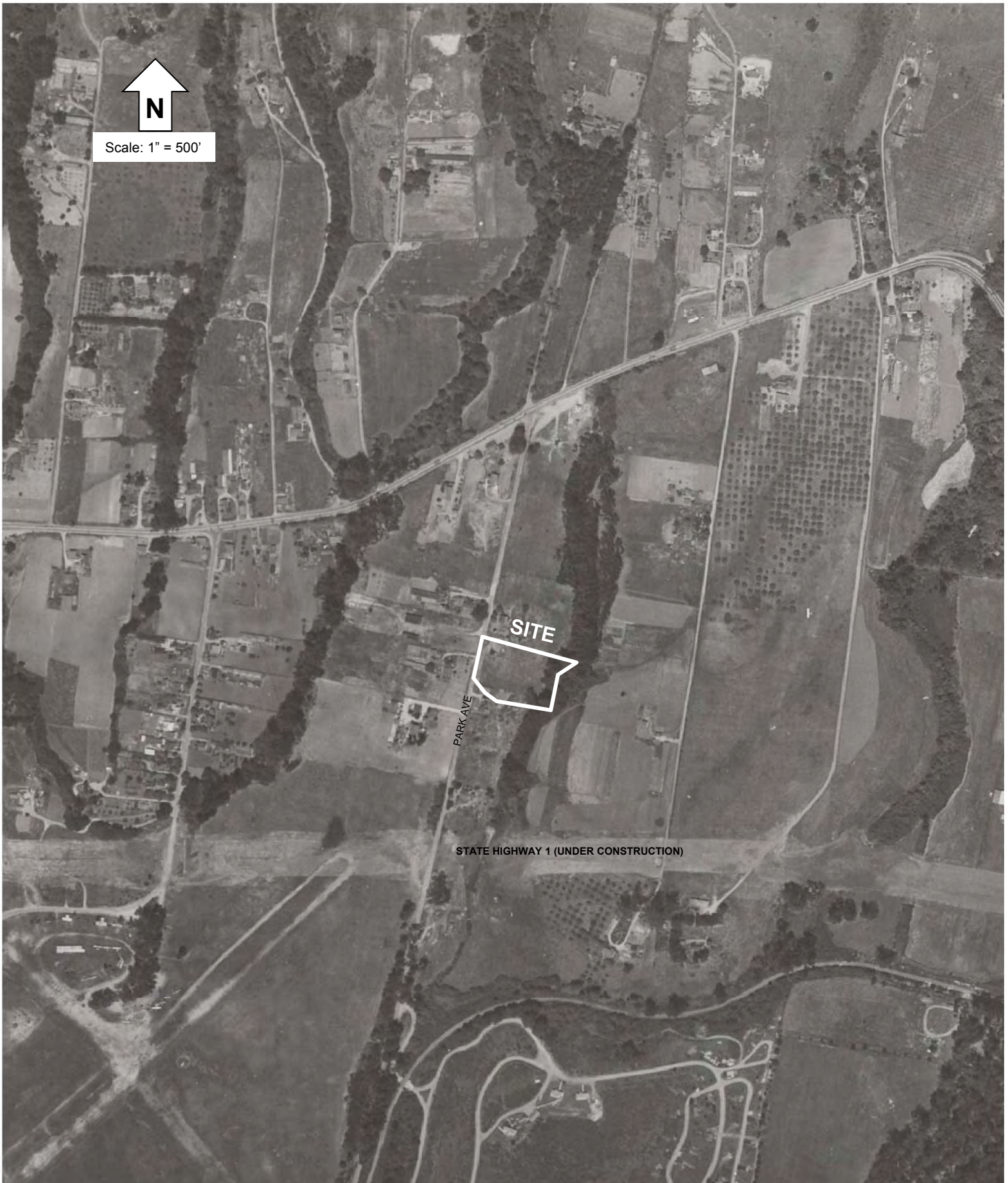
Electronically Redrawn 5/1/98 rw
 Rev. 4/25/01 mvm (changed page refs.)
 Rev. 1/10/22 CC (Cor/combine 1-23)

Note - Assessor's Parcel & Block Numbers Shown in Circles.

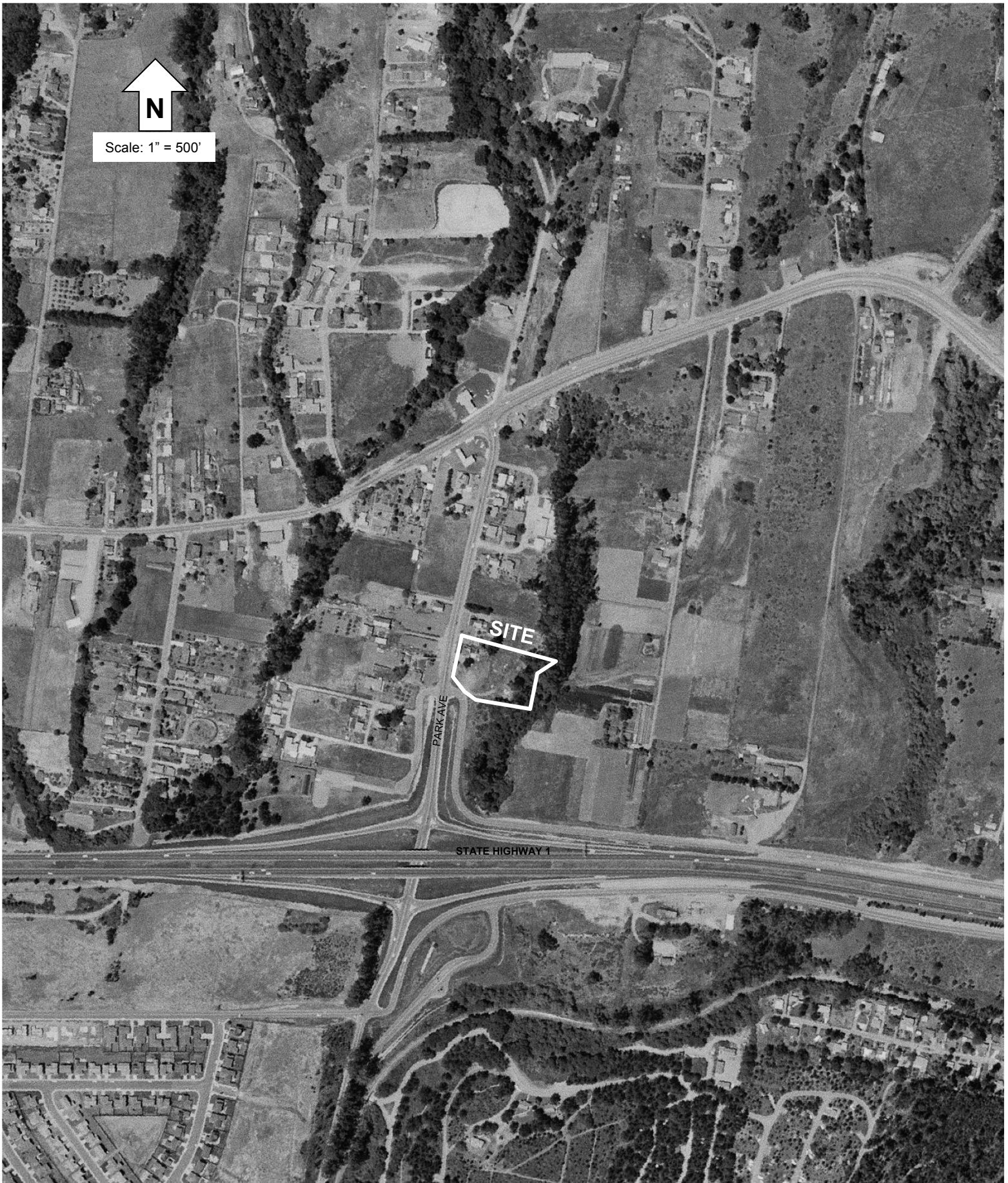
Assessor's Map No. 37-23
 County of Santa Cruz, Calif.
 May, 1998



1942 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



1948 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



1968 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



1974 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



1982 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



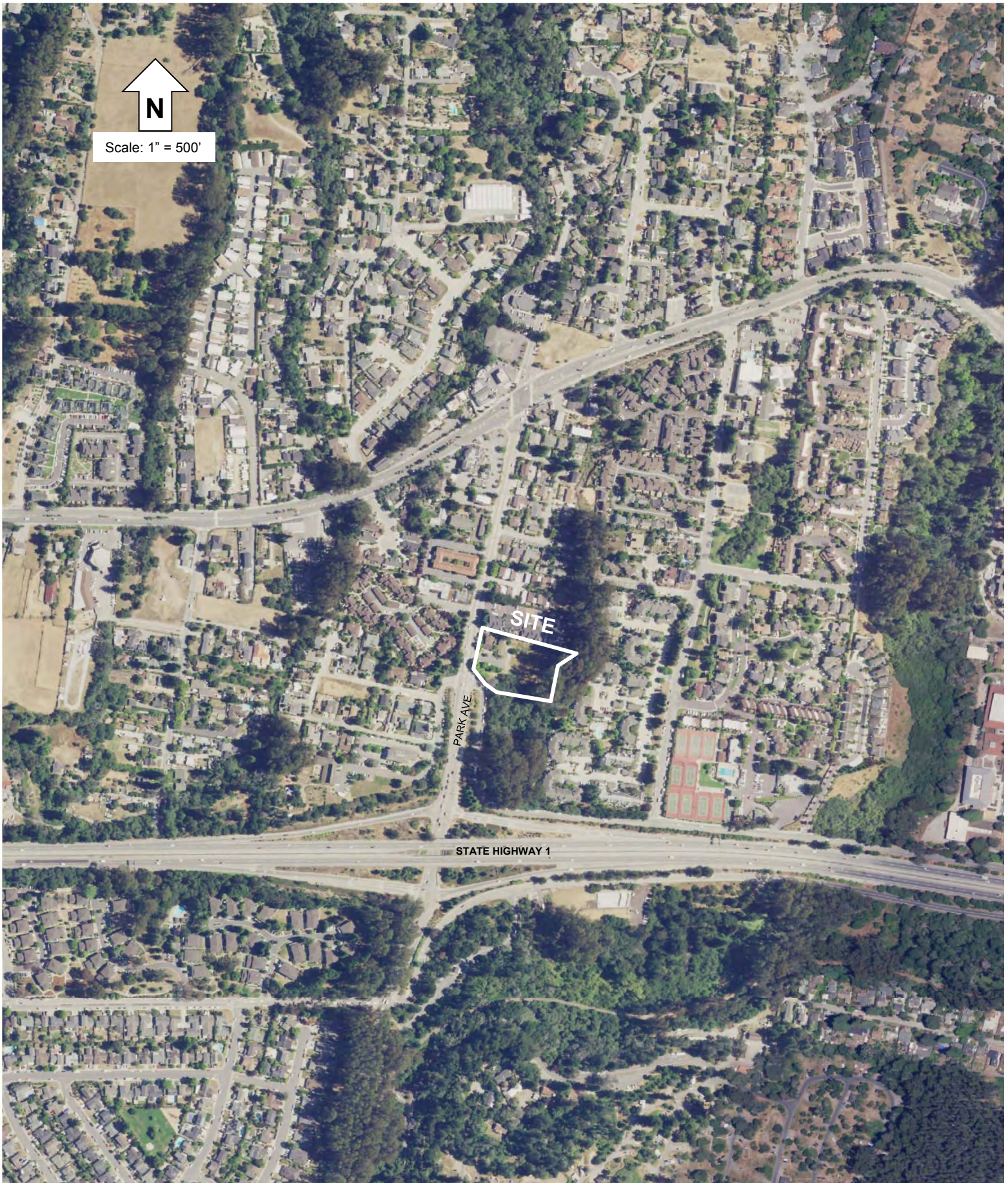
1993 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



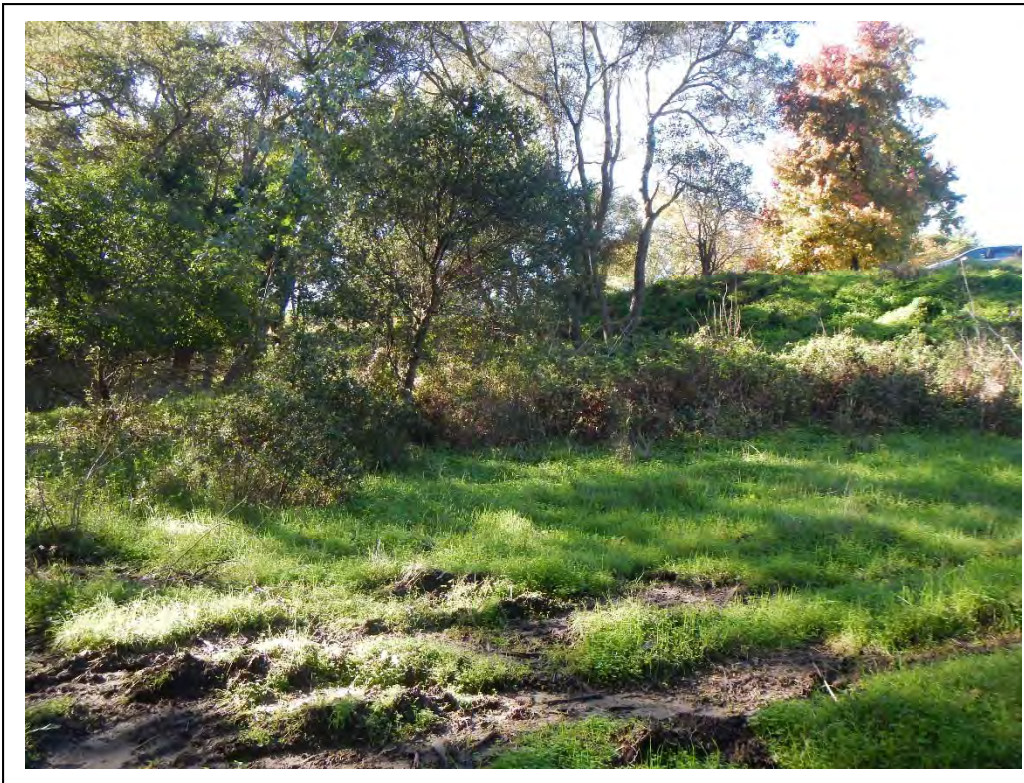
2005 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



2012 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.

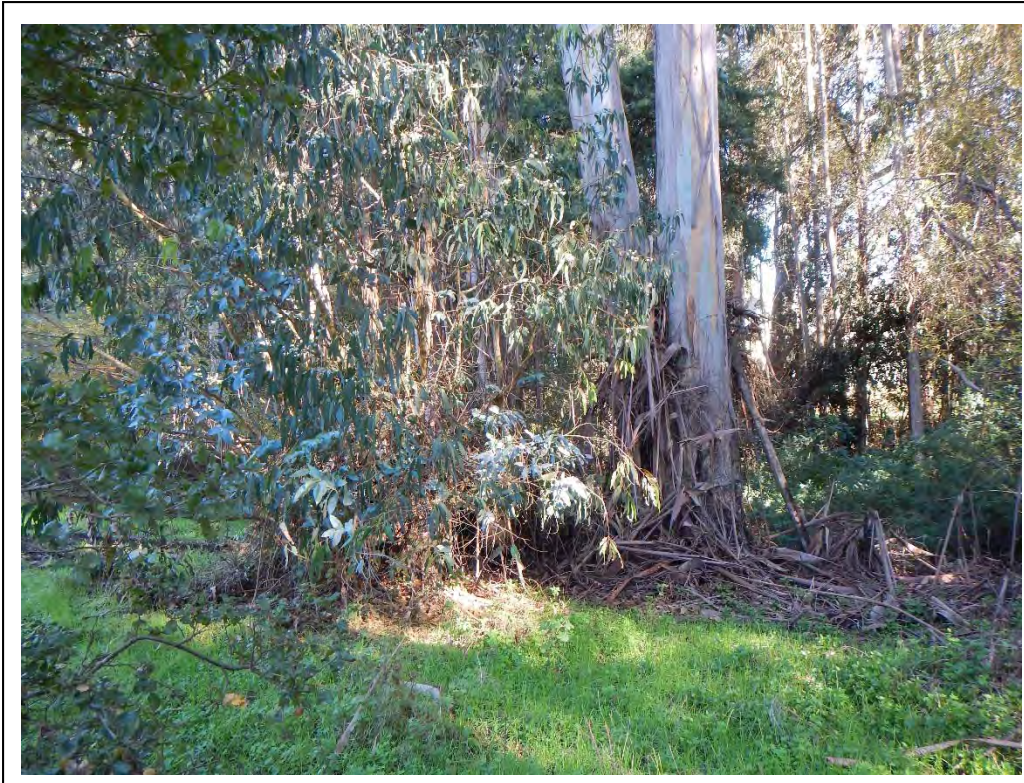


2016 Historical Aerial Photo, Park Avenue Housing Project. Site located at 2838-2840 Park Avenue, in an unincorporated area (Soquel) of Santa Cruz County, CA. Township 11 South, Range 1 West, Soquel 7.5" USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23.



MARCUS H. BOLE & ASSOCIATES
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SITE: APN 037-231-23
ITEM: Project Site Photo - Typical
DATE: 1/1/2022 **PLATE: 1**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: APN 037-231-23
ITEM: Riparian Corridor Photo - Typical
DATE: 1/1/2022 **PLATE: 2**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: APN 037-231-22
ITEM: Developed Parcel – Dental Office
DATE: 1/1/2022 **PLATE: 3**

ENCLOSURE B: SPECIES DATABASES



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To:
Consultation Code: 08EVEN00-2022-SLI-0129
Event Code: 08EVEN00-2022-E-00371
Project Name: 2838 Park Avenue Project

January 03, 2022

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 list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*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.]

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:

Ventura Fish And Wildlife Office

2493 Portola Road, Suite B

Ventura, CA 93003-7726

(805) 644-1766

Project Summary

Consultation Code: 08EVEN00-2022-SLI-0129

Event Code: Some(08EVEN00-2022-E-00371)

Project Name: 2838 Park Avenue Project

Project Type: DEVELOPMENT

Project Description: Construct a 8,700 SF affordable housing apartment

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.9857228,-121.93626839816618,14z>



Counties: Santa Cruz County, California

Endangered Species Act Species

There is a total of 18 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
Southern Sea Otter <i>Enhydra lutris nereis</i> No critical habitat has been designated for this species. <i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i> Species profile: https://ecos.fws.gov/ecp/species/8560	Threatened

Birds

NAME	STATUS
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
Least Bell's Vireo <i>Vireo bellii pusillus</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/5945	Endangered
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) 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/4467	Threatened
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</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/6749	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

Reptiles

NAME	STATUS
San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5956	Endangered

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
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA 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/2076	Threatened
Santa Cruz Long-toed Salamander <i>Ambystoma macrodactylum croceum</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7405	Endangered

Fishes

NAME	STATUS
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

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Ohlone Tiger Beetle <i>Cicindela ohlone</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8271	Endangered
Zayante Band-winged Grasshopper <i>Trimerotropis infantilis</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/1036	Endangered

Flowering Plants

NAME	STATUS
Marsh Sandwort <i>Arenaria paludicola</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
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
Scotts Valley Polygonum <i>Polygonum hickmanii</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/3222	Endangered
Scotts Valley Spineflower <i>Chorizanthe robusta var. hartwegii</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/7108	Endangered

Critical habitats

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



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Query Criteria: Quad IS (Soquel (3612188) OR Santa Cruz (3612281) OR Felton (3712211) OR Laurel (3712118) OR Loma Prieta (3712117) OR Watsonville West (3612187) OR Moss Landing (3612177))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate OR All CNDDDB element occurrences OR Delisted) OR State Listing Status IS (Endangered OR Threatened OR Rare OR All CNDDDB element occurrences OR Delisted OR Candidate Endangered OR Candidate Threatened))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Accipiter cooperii</i> Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	83 700	118 S:2	1	1	0	0	0	0	1	1	2	0	0
<i>Adela oplerella</i> Opler's longhorn moth	G2 S2	None None		725 725	14 S:1	0	0	1	0	0	0	0	1	1	0	0
<i>Agelaius tricolor</i> tricolored blackbird	G1G2 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	13 217	955 S:6	0	0	0	0	1	5	5	1	5	1	0
<i>Agrostis blasdalei</i> Blasdale's bent grass	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	50 50	62 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Ambystoma californiense pop. 1</i> California tiger salamander - central California DPS	G2G3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	13 289	1263 S:5	1	0	1	1	0	2	2	3	5	0	0
<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	G5T1T2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected	10 529	26 S:20	6	8	4	1	0	1	5	15	20	0	0
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	750 750	93 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Aneides niger</i> Santa Cruz black salamander	G3 S3	None None	CDFW_SSC-Species of Special Concern	100 1,900	78 S:30	3	0	0	0	0	27	20	10	30	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Anniella pulchra</i> Northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	10 100	378 S:12	3	5	2	0	0	2	7	5	12	0	0
<i>Anomobryum julaceum</i> slender silver moss	G5? S2	None None	Rare Plant Rank - 4.2	560 560	13 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Antrozous pallidus</i> pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	40 650	420 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Aquila chrysaetos</i> golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	976 976	324 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Arctostaphylos andersonii</i> Anderson's manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	314 2,200	64 S:22	1	2	5	2	1	11	9	13	21	1	0
<i>Arctostaphylos hookeri ssp. hookeri</i> Hooker's manzanita	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	350 500	24 S:2	0	1	0	0	0	1	1	1	2	0	0
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	110 500	28 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Arctostaphylos silvicola</i> Bonny Doon manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	500 1,300	16 S:12	0	0	1	1	0	10	8	4	12	0	0
<i>Ardea herodias</i> great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	40 40	156 S:1	0	0	1	0	0	0	1	0	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Arenaria paludicola</i> marsh sandwort	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_SBBG-Santa Barbara Botanic Garden	15 550	19 S:2	0	0	0	0	1	1	1	1	1	0	1
<i>Asio flammeus</i> short-eared owl	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	10 10	11 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	35 500	2011 S:5	0	4	0	0	0	1	3	2	5	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	100 3,000	181 S:7	0	0	0	0	0	7	7	0	7	0	0
<i>Bombus crotchii</i> Crotch bumble bee	G3G4 S1S2	None None		100 2,829	437 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Bombus occidentalis</i> western bumble bee	G2G3 S1	None None	USFS_S-Sensitive	7 1,100	306 S:17	0	0	0	0	0	17	17	0	17	0	0
<i>Brachyramphus marmoratus</i> marbled murrelet	G3 S2	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered NABCI_RWL-Red Watch List	1,650 1,650	110 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Calyptridium parryi</i> var. <i>hesseae</i> Santa Cruz Mountains pussypaws	G3G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	1,000 2,800	11 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Campanula californica</i> swamp harebell	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	520 520	155 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Carex comosa</i> bristly sedge	G5 S2	None None	Rare Plant Rank - 2B.1 IUCN_LC-Least Concern	1,420 1,420	31 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Carex saliniformis</i> deceiving sedge	G2 S2	None None	Rare Plant Rank - 1B.2	400 850	18 S:2	0	0	0	0	1	1	2	0	1	0	1



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Ceanothus ferrisiae</i> Coyote ceanothus	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	1,500 1,500	4 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Central Dune Scrub</i> Central Dune Scrub	G2 S2.2	None None		10 50	24 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	G3T1T2 S1S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	10 20	98 S:3	0	2	0	0	1	0	1	2	2	0	1
<i>Charadrius nivosus nivosus</i> western snowy plover	G3T3 S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	10 10	138 S:11	0	0	0	0	2	9	11	0	9	0	2
<i>Chorizanthe pungens var. hartwegiana</i> Ben Lomond spineflower	G2T1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	350 1,200	18 S:14	1	5	4	0	1	3	13	1	13	1	0
<i>Chorizanthe pungens var. pungens</i> Monterey spineflower	G2T2 S2	Threatened None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	10 875	51 S:17	3	4	2	0	1	7	8	9	16	1	0
<i>Chorizanthe robusta var. hartwegii</i> Scotts Valley spineflower	G2T1 S1	Endangered None	Rare Plant Rank - 1B.1	350 800	4 S:4	0	3	0	0	0	1	1	3	4	0	0
<i>Chorizanthe robusta var. robusta</i> robust spineflower	G2T1 S1	Endangered None	Rare Plant Rank - 1B.1	50 800	20 S:15	2	5	2	0	0	6	4	11	15	0	0
<i>Cicindela hirticollis gravaida</i> sandy beach tiger beetle	G5T2 S2	None None		50 50	34 S:1	0	0	0	0	1	0	1	0	0	1	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Cicindela ohlone</i> Ohlone tiger beetle	G1 S1	Endangered None		240 1,150	6 S:6	0	0	3	0	0	3	4	2	6	0	0
<i>Clarkia concinna ssp. automixa</i> Santa Clara red ribbons	G5?T3 S3	None None	Rare Plant Rank - 4.3	3,000 3,000	20 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh	G3 S2.1	None None		10 20	60 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Coastal Brackish Marsh</i> Coastal Brackish Marsh	G2 S2.1	None None		15 15	30 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Coelus globosus</i> globose dune beetle	G1G2 S1S2	None None	IUCN_VU-Vulnerable	5 20	50 S:4	0	0	2	0	0	2	4	0	4	0	0
<i>Collinsia multicolor</i> San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	40 40	36 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Cordylanthus rigidus ssp. littoralis</i> seaside bird's-beak	G5T2 S2	None Endangered	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden		40 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	40 80	635 S:2	0	0	0	0	0	2	2	0	2	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Coturnicops noveboracensis</i> yellow rail	G4 S1S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	100 100	45 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Cypseloides niger</i> black swift	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFWS_BCC-Birds of Conservation Concern	20 60	46 S:7	0	5	0	0	1	1	7	0	6	1	0
<i>Dacryophyllum falcifolium</i> tear drop moss	G2 S2	None None	Rare Plant Rank - 1B.3 USFS_S-Sensitive	620 800	12 S:2	0	0	0	0	0	2	0	2	2	0	0
<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	G4T2T3 S2S3	Candidate None	USFS_S-Sensitive	10 400	383 S:27	2	8	6	0	3	8	18	9	24	2	1
<i>Dicamptodon ensatus</i> California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	100 2,200	234 S:34	1	3	0	0	0	30	15	19	34	0	0
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	G4T1 S1	None None		22 2,170	29 S:17	0	0	0	0	10	7	15	2	7	10	0
<i>Elanus leucurus</i> white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	830 830	180 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	0 1,820	1398 S:17	6	6	2	1	0	2	12	5	17	0	0
<i>Eriogonum nudum var. decurrens</i> Ben Lomond buckwheat	G5T1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	600 760	9 S:7	0	1	0	0	0	6	5	2	7	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Erysimum ammophilum</i> sand-loving wallflower	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CRES-San Diego Zoo CRES Native Gene Seed Bank SB_SBBG-Santa Barbara Botanic Garden	20 50	58 S:3	0	1	0	0	0	2	1	2	3	0	0
<i>Erysimum teretifolium</i> Santa Cruz wallflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	600 1,200	15 S:13	0	6	2	0	3	2	9	4	10	2	1
<i>Eucyclogobius newberryi</i> tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered IUCN_VU-Vulnerable	0 80	127 S:16	2	6	5	0	2	1	11	5	14	2	0
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	G5T1T2 S1	Endangered None		640 2,976	68 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Falco peregrinus anatum</i> American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	29 29	58 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	360 1,150	22 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Fissilicreagris imperialis</i> Empire Cave pseudoscorpion	G1 S1	None None	IUCN_VU-Vulnerable	560 560	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Gilia tenuiflora ssp. arenaria</i> Monterey gilia	G3G4T2 S2	Endangered Threatened	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	30 120	29 S:4	1	1	1	0	0	1	3	1	4	0	0
<i>Hesperocyparis abramsiana var. abramsiana</i> Santa Cruz cypress	G1T1 S1	Threatened Endangered	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	1,500 1,500	7 S:2	0	1	0	0	0	1	1	1	2	0	0
<i>Hoita strobilina</i> Loma Prieta hoita	G2? S2?	None None	Rare Plant Rank - 1B.1	680 3,300	37 S:3	1	0	1	0	0	1	0	3	3	0	0



Summary Table Report

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	40 400	37 S:17	1	3	8	2	2	1	14	3	15	0	2
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	G4T1? S1?	None None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz USFS_S-Sensitive	280 700	58 S:6	0	1	0	0	0	5	5	1	6	0	0
<i>Horkelia marinensis</i> Point Reyes horkelia	G2 S2	None None	Rare Plant Rank - 1B.2	1,130 1,130	36 S:3	1	0	0	0	0	2	1	2	3	0	0
<i>Lasiurus cinereus</i> hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		59 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Laterallus jamaicensis coturniculus</i> California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	100 100	303 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lavinia exilicauda harengus</i> Monterey hitch	G4T2T4 S3	None None	CDFW_SSC-Species of Special Concern	250 250	2 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Lessingia micradenia var. glabrata</i> smooth lessingia	G2T2 S2	None None	Rare Plant Rank - 1B.2 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,600 1,600	44 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Linderiella occidentalis</i> California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	120 120	508 S:1	0	0	0	0	0	1	1	0	1	0	0



Summary Table Report

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California Natural Diversity Database



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Lytta moesta</i> moestan blister beetle	G2 S2	None None		100 100	12 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	G2Q S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,170 2,170	30 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Margaritifera falcata</i> western pearlshell	G4G5 S1S2	None None		240 240	78 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Maritime Coast Range Ponderosa Pine Forest</i> Maritime Coast Range Ponderosa Pine Forest	G1 S1.1	None None		480 1,200	12 S:10	0	0	0	0	0	10	10	0	10	0	0
<i>Meta dolloff</i> Dolloff Cave spider	G1 S1	None None	IUCN_VU-Vulnerable	600 600	2 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Microseris paludosa</i> marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz	400 1,100	38 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Monardella sinuata ssp. nigrescens</i> northern curly-leaved monardella	G3T2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	550 800	25 S:4	0	0	0	0	0	4	3	1	4	0	0
<i>Monolopia gracilens</i> woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2	800 3,200	68 S:10	0	0	1	0	0	9	9	1	10	0	0
<i>Neochthonius imperialis</i> Empire Cave pseudoscorpion	G1 S1	None None		560 560	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	G5T2T3 S2S3	None None	CDFW_SSC-Species of Special Concern	269 269	42 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>North Central Coast Drainage Sacramento Sucker/Roach River</i> North Central Coast Drainage Sacramento Sucker/Roach River	GNR SNR	None None		400 400	4 S:1	0	1	0	0	0	0	1	0	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	G3 S3.2	None None		15 15	53 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Northern Maritime Chaparral</i> Northern Maritime Chaparral	G1 S1.2	None None		500 1,200	17 S:10	0	0	0	0	0	10	10	0	10	0	0
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	G5T2T3Q S2	Endangered Endangered	AFS_EN-Endangered	400 400	23 S:1	0	0	0	1	0	0	1	0	1	0	0
<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	20 400	44 S:10	0	1	2	1	0	6	8	2	10	0	0
<i>Oncorhynchus mykiss irideus pop. 9</i> steelhead - south-central California coast DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened	350 350	41 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Pandion haliaetus</i> osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	800 1,180	504 S:3	2	1	0	0	0	0	0	3	3	0	0
<i>Pedicularis dudleyi</i> Dudley's lousewort	G2 S2	None Rare	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz USFS_S-Sensitive	200 200	7 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Penstemon rattanii var. kleei</i> Santa Cruz Mountains beardtongue	G4T2 S2	None None	Rare Plant Rank - 1B.2	1,900 3,000	5 S:3	0	1	0	0	0	2	2	1	3	0	0
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	680 680	14 S:2	0	0	0	0	2	0	2	0	0	2	0
<i>Philanthus nasalis</i> Antioch specid wasp	G1 S1	None None		480 1,200	4 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Piperia candida</i> white-flowered rein orchid	G3 S3	None None	Rare Plant Rank - 1B.2	700 700	222 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Piperia yadonii</i> Yadon's rein orchid	G1 S1	Endangered None	Rare Plant Rank - 1B.1	350 350	26 S:1	1	0	0	0	0	0	1	0	1	0	0
<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	26 700	42 S:4	0	0	0	0	0	4	2	2	4	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	G1Q S1	None Endangered	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	160 1,182	17 S:11	1	5	3	0	0	2	6	5	11	0	0
<i>Polygonum hickmanii</i> Scotts Valley polygonum	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	700 750	2 S:2	0	1	0	1	0	0	0	2	2	0	0
<i>Polyphylla barbata</i> Mount Hermon (=barbate) June beetle	G1 S1	Endangered None		350 800	11 S:11	1	5	1	0	0	4	5	6	11	0	0
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	G3T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List		99 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Rana boylei</i> foothill yellow-legged frog	G3 S3	None Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	110 1,628	2476 S:20	3	1	1	1	1	13	12	8	19	0	1
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	0 1,536	1667 S:46	6	14	16	2	0	8	19	27	46	0	0
<i>Reithrodontomys megalotis distichlis</i> Salinas harvest mouse	G5T1 S1	None None		10 15	7 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Riparia riparia</i> bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	10 30	298 S:4	0	0	0	0	0	4	4	0	4	0	0
<i>Scaphinotus behrensi</i> Behrens' snail-eating beetle	G2G4 S2S4	None None		100 100	4 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Senecio aphanactis</i> chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank		98 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	G3 S3	None None	Rare Plant Rank - 4.2	100 100	136 S:1	0	0	0	0	1	0	1	0	0	1	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Sorex ornatus salarius</i> Monterey shrew	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern	38 38	6 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Candidate Threatened		0 0	46 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz		19 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Stygobromus imperialis</i> Empire Cave amphipod	G1 S1	None None		560 560	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Stygobromus mackenziei</i> Mackenzie's Cave amphipod	G1 S1	None None	IUCN_VU-Vulnerable	560 560	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	200 1,000	594 S:3	0	0	1	0	0	2	2	1	3	0	0
<i>Thaleichthys pacificus</i> eulachon	G5 S2	Threatened None		0 0	10 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Trifolium buckwestiorum</i> Santa Cruz clover	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture	300 2,325	64 S:8	0	2	2	1	0	3	5	3	8	0	0
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	9 10	56 S:3	0	1	0	0	0	2	1	2	3	0	0
<i>Trifolium polyodon</i> Pacific Grove clover	G1 S1	None Rare	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_USDA-US Dept of Agriculture	695 1,130	21 S:2	0	0	1	0	0	1	0	2	2	0	0
<i>Trimerotropis infantilis</i> Zayante band-winged grasshopper	G1 S1	Endangered None	IUCN_EN-Endangered	100 800	6 S:5	0	3	0	0	1	1	3	2	4	1	0



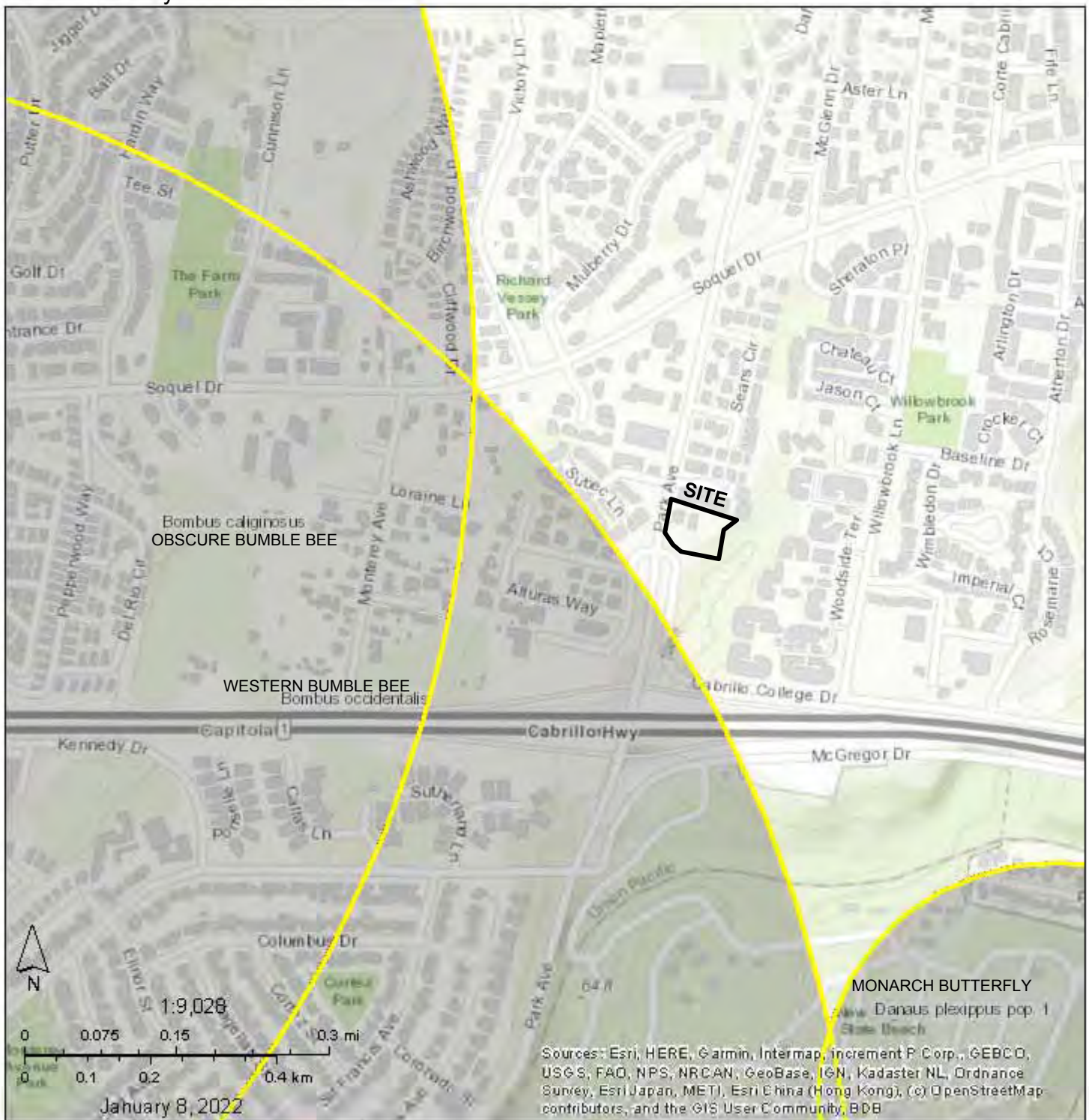
Summary Table Report

California Department of Fish and Wildlife California Natural Diversity Database



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	0 10	39 S:9	0	0	0	0	4	5	5	4	5	0	4

CNDDDB BIOS MAP, 2838 Park Avenue Project. Site located at 2838 Park Avenue, Soquel, CA. Township 11 South, Range 1 West, Soquel 7.5' USGS Quadrangle. 36.986205N, 121.936079W. 1.4-acre Study Area within APNs 037-231-22 & -23



California Natural Diversity Database (CNDDDB) Commercial [ds85]

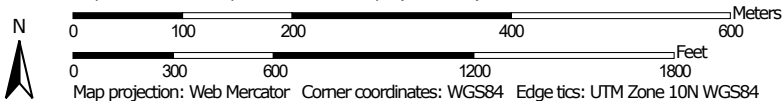
- | | | | | | | | |
|--|----------------------|--|----------------------------------|--|------------------------------|--|----------------------------------|
| | Plant (80m) | | Animal (non-specific) | | Aquatic Comm. (80m) | | Multiple (circular) |
| | Plant (specific) | | Animal (circular) | | Aquatic Comm. (specific) | | Sensitive EO's (Commercial only) |
| | Plant (non-specific) | | Terrestrial Comm. (80m) | | Aquatic Comm. (non-specific) | | |
| | Plant (circular) | | Terrestrial Comm. (specific) | | Aquatic Comm. (circular) | | |
| | Animal (80m) | | Terrestrial Comm. (non-specific) | | Multiple (80m) | | |
| | Animal (specific) | | Terrestrial Comm. (circular) | | Multiple (specific) | | |

ENCLOSURE C: SOIL DATA

Soil Map—Santa Cruz County, California
(2838 Park Avenue Project)



Map Scale: 1:6,900 if printed on A landscape (11" x 8.5") sheet.



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: Santa Cruz County, California

Survey Area Data: Version 15, Sep 9, 2021

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

Date(s) aerial images were photographed: Apr 13, 2020—Apr 24, 2020

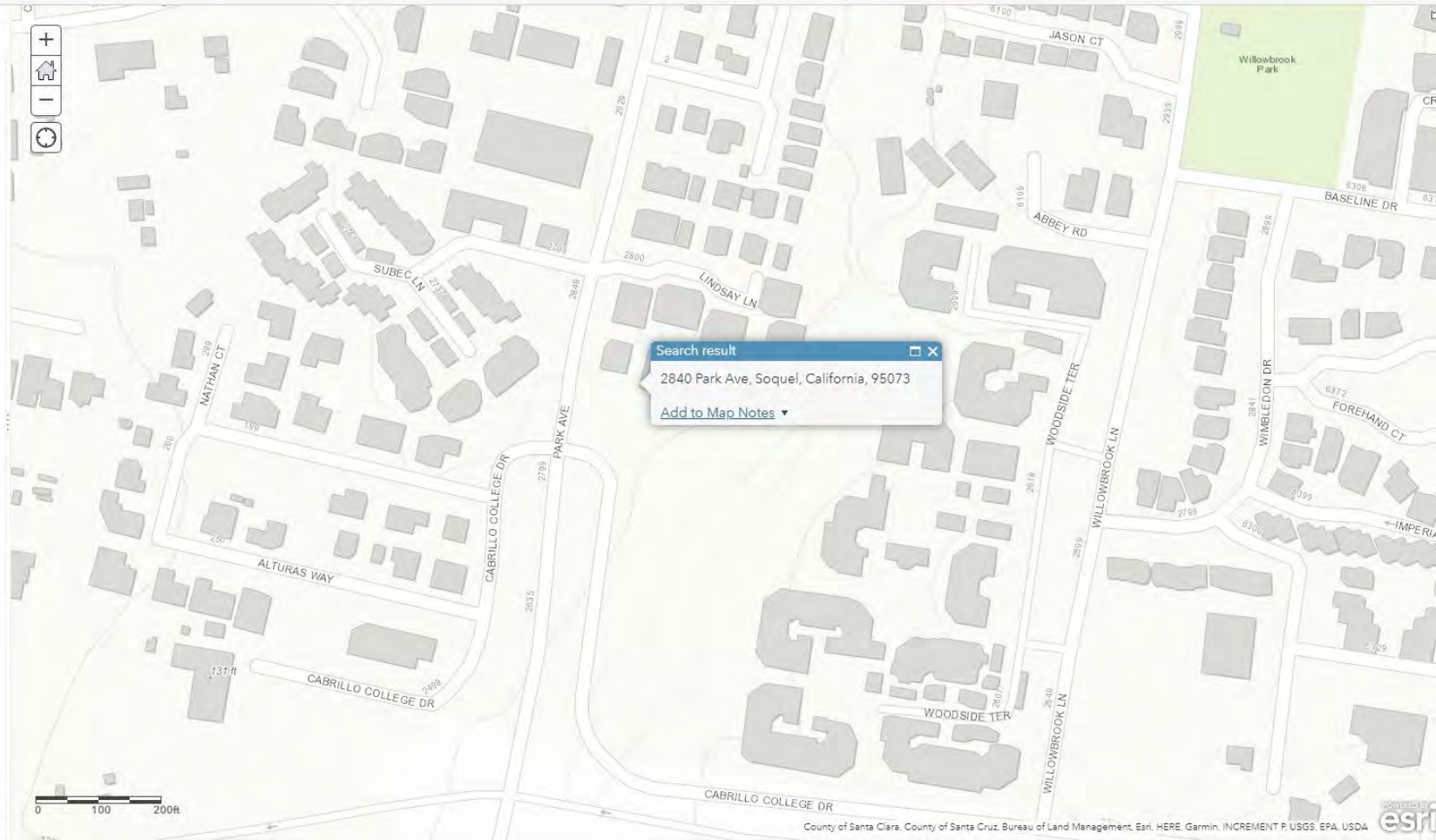
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
124	Danville loam, 0 to 2 percent slopes	7.2	3.7%
133	Elkhorn sandy loam, 2 to 9 percent slopes	23.4	11.9%
170	Soquel loam, 0 to 2 percent slopes	17.8	9.1%
174	Tierra-Watsonville complex, 15 to 30 percent slopes	38.1	19.5%
176	Watsonville loam, 0 to 2 percent slopes	7.8	4.0%
177	Watsonville loam, 2 to 15 percent slopes	28.2	14.4%
178	Watsonville loam, thick surface, 0 to 2 percent slopes	36.7	18.7%
179	Watsonville loam, thick surface, 2 to 15 percent slopes	36.7	18.7%
Totals for Area of Interest		196.0	100.0%

ENCLOSURE D: PROJECT SITE PLANS

- Legend
- Final Linear Features
 - Final Polygon Features
 - Proposed Linear Features
 - Proposed Polygon Features



APN
 Address
 Street
 Intersection

2838 PARK AVE A



Parcel Information	Timber Resources	No	Stream Type	n/a
	Grasslands	No	Lake Name	n/a
Recorded Maps & Docs	Riparian Woodlands	Yes-Portion	Basins	Soquel
	Biotic Resources	Yes-Portion	Watersheds	Porter
Select and Query Results	Special Forest	No	Reservoir Protection	No
	Sandhill Habitat	n/a	Water Supply Watersheds	No
	Sandhills IPHCP	n/a	Least Disturbed Watersheds	No
	Fishery Resource	n/a	Ground Water Recharge	No
	USGS 7.5 Quad Map	SOQUEL-USGS	Ground Water Basin	SANTA CRUZ MID-COUNTY

RIPARIAN HABITAT

(Please read notes for plant availability & property and habitat protection)

Scientific Name	Common Name	Form	Notes	Sun
<i>Acer negundo</i>	Box Elder	tree	Max. Height 35 - 66 ft Max. Width 40 ft	Part Shade, Sun
<i>Aer macrophyllum</i>	Big Leaf Maple	tree	Max. Height 30 - 114.8 ft Max. Width 65 ft	Part Shade, Sun
<i>Aesculus californica</i>	Buckeye	tree	Max. Height 13.1 - 39.4 ft Max. Width 40 ft	Part Shade, Sun
<i>Alnus rhombifolia</i>	White Alder	tree	Max. Height 49-82 ft Max. Width 40 - 70 ft	Part Shade, Sun
<i>Alnus rubra</i>	Red Alder	tree	Max. Height 40 - 50 ft	Part Shade, Sun
<i>Platanus racemosa</i>	Sycamore	tree	Max. Height 20 - 115 ft Max. Width 50 ft	Sun
<i>Populus trichocarpa</i>	Black Cottonwood	tree	Max. Height 98 to 164 ft Max. Width 25 - 30 ft	Sun
<i>Achillea millefolim</i>	Yarrow	rhizomatous perennial	Max. Height 1 - 3 ft Max. Width .5 - 1.5 ft	Sun, Part Shade, Full Shade
<i>Acmispon glaber</i>	Deer Weed	bunching perennial	Max. Height 1.6 - 3 ft Max. Width 3 ft	Sun
<i>Agrostis pallens</i>	Dune Bent Grass	rhizomatous perennial	Max. Height 0.33 - 2.3 ft Max. Width 3 ft	Sun, Part Shade, Full Shade
<i>Anisocarpus madioides</i>	Woodland Tarweed	bunching perennial	Max. Height 2.5 ft	Shade
<i>Aquilegia formosa</i>	Columbind	bunching perennial	Max. Height 1.5 - 3 ft Max. Width 1 ft	Sun, Part Shade, Full Shade
<i>Artemisia douglasiana</i>	Mugwort	rhizomatous perennial	Max. Height 3-5 - 3 ft Max. Width 3-5 ft	Sun
<i>Asarum caudatum</i>	Wild Ginger	rhizomatous perennial	Max. Height 1 ft	Full Shade, Part Shade
<i>Baccharis pilularis</i>	Coyote Bush	shrub	Max. Height 1.5 - 10 ft Max. Width 12 ft	Sun, Part Shade
<i>Bromus carinatus</i>	California Brome	bunching perennial	Max. Height 1 - 4 ft Max. Width 4 ft	Sun, Part Shade
<i>Carex barbarae</i>	Santa Barbara Sedge	rhizomatous perennial	Max. Height 1.6 - 3.3 ft Max. Width 3 ft	Part Shade
<i>Carex bolanderi</i>	Bolander's Sedge	bunching perennial	Max. Height 2 ft Max. Width 2 ft	Sun, Part Shade
<i>Carex densa</i>	Dense Sedge	bunching perennial	Max. Height 2 ft Max. Width 2 ft	Sun, Part Shade
<i>Carex globosa</i>	Round-fruited Sedge	bunching perennial	Max. Height 2 ft Max. Width 2 ft	Sun, Part Shade
<i>Carex subbracteata</i>	Small-bracted Sedge	bunching perennial	Max. Height 2 ft Max. Width 2 ft	Sun, Part Shade
<i>Carex tumulicola</i>	Foothill Sedge	bunching perennial	Max. Height 0.5 - 1 ft Max. Width 2 ft	Sun, Part Shade

<i>Ceanothus thyrsiflorus</i>	Wild Lilac	large shrub/small tree	Max. Height 2 - 30 ft Max. Width 2 - 40 ft	Part Shade
<i>Clinopodium douglasii</i>	Yerba Buena	layering perennial	Max. Height 3.6 - 7.2 in Max. Width 3 ft	Full Shade, Part Shade
<i>Cornus sericea</i>	Dogwood	colonial shrub	Max. Height 3-20 ft Max. Width 8-12 ft	Sun, Part Shade
<i>Corylus cornuta</i>	Hazelnut	large shrub	Max. Height 5 - 26.3 ft Max. Width 10 ft	Shade, Part Shade
<i>Cyperus eragrostis</i>	Umbrella Sedge	clumping perennial	Max. Height 3 ft Max. Width 30 ft	Sun
<i>Dicentra formosa</i>	Bleeding Heart	rhizomatous perennial	Max. Height 0.7 - 1.6 ft Max. Width 3 ft	Sun, Part Shade, Shade
<i>Elymus glaucus</i>	Blue Wild Rye	bunching perennial	Max. Height 4 - 5 ft Max. Width 5 ft	Part Shade, Sun
<i>Epilobium canum</i>	California Fuschia	rhizomatous perennial	Max. Height 0.25 - 1.5 ft Max. Width 2-3 ft	Sun
<i>Euonymus occidentalis</i>	Burning Bush	shrub	Max. Height 6.6 - 20 ft Max. Width 10 - 20 ft	Shade, Part Shade
<i>Euthamia occidentalis</i>	Western Goldenrod	rhizomatous perennial	Max. Height 3.5 - 7 ft	Sun
<i>Fragaria vesca</i>	Wood Strawberry	stoloniferous perennial	Max. Height 0.1 - 1 ft Max. Width 3 ft	Sun, Part Shade
<i>Frangula californica</i>	Coffeeberry	large shrub/small tree	Max. Height 6 - 15 ft Max. Width 5- 15 ft	Sun, Part Shade
<i>Heracleum maximum</i>	Cow Parsnip	bunching perennial	Max. Height 4-8 ft	Part Shade
<i>Heteromeles arbutifolia</i>	Toyon	large shrub/small tree	Max. Height 6 - 30 ft Max. Width 10- 15 ft	Sun
<i>Heuchera micrantha</i>	Small-flowered Alum-rod	bunching perennial	Max. Height 1 - 3 ft Max. Width 1 ft	Full Shade, Part Shade
<i>Holodiscus discolor</i>	Oceanspray	shrub	Max. Height 3 - 16.4 ft Max. Width 10 - 15 ft	Shade, Part Shade
<i>Iris douglasiana</i>	Douglas' Iris	bunching perennial	Max. Height 0.6 - 2.6 ft Max. Width 2 - 4 ft	Sun, Part Shade, Full Shade
<i>Iris fernaldii</i>	Fernalds Iris	bunching perennial	Max. Height 1.3 ft	Shade, Part Shade
<i>Juncus patens</i>	Grey Rush	bunching perennial	Max. Height 1 - 3 ft Max. Width 3 ft	Sun
<i>Lonicera hispidula</i>	Hairy Honeysuckle	vine, groundcover	Max. Height 4 ft Max. Width 8 ft	Part Shade
<i>Maianthemum racemosum</i>	False Solomon's Seal	rhizomatous perennial	Max. Height 1.6 - 3 ft	Part Shade
<i>Maianthemum stellatum</i>	Slim Solomon's Seal	rhizomatous perennial	Max. Height 2.5 ft	Full Shade, Part Shade

<i>Mimulus aurantiacus</i>	Sticky Monkeyflower	small shrub	Max. Height 4 - 5 ft Max. Width 5 ft	Part Shade, Sun
<i>Monardella villosa subsp. v.</i>	Coyote Mint	bunching perennial	Max. Height 2 ft Max. Width 3 ft	Sun, Part Shade
<i>Morella californica</i>	Wax Myrtle	large shrub/small tree	Max. Height 6 - 30 ft Max. Width 20 ft	Part Shade, Sun
<i>Oenothera elata</i>	Evening Primrose	self-seeding biennial	Max. Height 5 ft Max. Width 3 ft	Part Shade, Sun
<i>Oxalis organa</i>	Redwood Sorel	rhizomatous perennial	Max. Height 0.16 - 1.3 ft	Part Shade
<i>Petasites frigidus var. palmatus</i>	Western Sweet Coltsfoot	rhizomatous perennial	Max. Height 2 ft	Shade, Part Shade
<i>Polypodium californicum</i>	California Polypody	rhizomatous fern	Max. Height 1.5 ft Max. Width 3 ft	Full Shade, Part Shade
<i>Polypodium calirhiza</i>	Nested Polypody	rhizomatous fern	Max. Height 1-1.5 ft	Full Shade, Part Shade
<i>Polypodium glycyrrhiza</i>	Licorice Fern	rhizomatous fern	Max. Height 1 ft Max. Width 1-2 ft	Full Shade, Part Shade
<i>Polystichum munitum</i>	Sword Fern	bunching fern	Max. Height 1.6 - 5.9 ft Max. Width 2 - 3 ft	Full Shade
<i>Prosartes hookeri</i>	Hooker's Fairy Bells	bunching perennial	Max. Height 2.6 - 3.3 ft	Part Shade
<i>Ribes menziesii var. m.</i>	Canyon Gooseberry	shrub	Max. Height 9.8 ft	Part Shade
<i>Ribes sanguineum var. glutinosum</i>	Pink-flowering Currant	large shrub	Max. Height 13 ft Max. Width 7 ft	Sun, Part Shade
<i>Rosa californica</i>	California Rose	rhizomatous perennial	Max. Height 6-10 ft Max. Width 6-10 ft	Sun
<i>Rosa gymnocarpa</i>	Wood Rose	bunching perennial	Max. Height 3 - 6.6 ft Max. Width 6-9 ft	Sun, Part Shade, Full Shade
<i>Rubus parviflorus</i>	Thimbleberry	rhizomatous perennial	Max. Height 4 - 8.2 ft	Part Shade
<i>Rubus ursinus</i>	California Blackberry	layering perennial	Max. Height 2-5 ft Max. Width 6-8 ft	Sun, Part Shade, Full Shade
<i>Salix exigua var. hindsiana</i>	Hind's Willow	colonial shrub	Max. Height 15-20 ft Max. Width 15-20 ft	Sun, Part Shade
<i>Salix laevigata</i>	Red Willow	large shrub/tree	Max. Height 25-50 ft Max. Width 15-35 ft	Sun, Part Shade
<i>Salix lasiandra var. lasiandra</i>	Shining Willow	large shrub/tree	Max. Height 3-30 ft Max. Width 3-9 ft	Sun, Part Shade
<i>Salix lasiolepis</i>	Arroyo Willow	large shrub/tree	Max. Height 3-5 ft Max. Width 3-7 ft	Sun, Part Shade
<i>Salix scouleriana</i>	Scouler's Willow	large shrub/tree	Max. Height 12 ft Max. Width 30 ft	Sun, Part Shade
<i>Salix sitchensis</i>	Sitka Willow	large shrub/tree	Max. Height 3-25 ft Max. Width 3-25 ft	Sun, Part Shade
<i>Salvia spathacea</i>	Hummingbird Sage	rhizomatous perennial	Max. Height 1 - 3 ft Max. Width 3 ft	Full Shade, Part Shade
<i>Sambucus nigra</i>	Blue Elderberry	large shrub/small tree	Max. Height 13.1 - 30 ft Max. Width 10-20 ft	Part Shade, Sun

<i>Scrophularia californica</i>	Bee Plant	rhizomatous perennial	Max. Height 2 - 4 ft Max. Width 6 - 12 ft	Part Shade
<i>Stachys bullata</i>	Hedge Nettle	rhizomatous perennial	Max. Height 1.3 - 2.6 ft	Shade, Part Shade
<i>Struthiopteris spicant</i>	Deer Fern	bunching fern	Max. Height 1-3 ft Max. Width 1 - 3 ft	Full Shade, Part Shade
<i>Symphoricarpos albus var. laevigatus</i>	Snowberry	shrub	Max. Height 4-6 ft Max. Width 8-12 ft	Shade, Part Shade
<i>Symphotrichum chilense</i>	California Aster	rhizomatous perennial	Max. Height 1.3 - 3.3 ft	Part Shade, Sun
<i>Tellima grandiflora</i>	Fringe Cups	bunching perennial	Max. Height 1.3 - 3 ft Max. Width 2 ft	Shade, Part Shade
<i>Tiarella trifoliata var. unifoliata</i>	Sugar Scoop	rhizomatous perennial	Max. Height 5.9 - 8.4 in	Shade, Part Shade
<i>Vaccinium ovatum</i>	Huckleberry	shrub	Max. Height 1.6 - 8 ft Max. Width 15 ft	Part Shade, Sun
<i>Verbena lasiostachys var. l.</i>	California Vervain	bunching perennial	Max. Height 2.6 ft	Sun
<i>Woodwardia fimbriata</i>	Giant Chain Fern	bunching fern	Max. Height 4 - 6 ft Max. Width 4 - 6 ft	Full Shade, Part Shade

PLANT AVAILABILITY, PROPERTY & HABITAT PROTECTION:

- After a fire, revegetating riparian areas with native plants can prevent erosion and restore habitat
- Consider consulting with a native plant expert from the area such as Central Coast Wilds, UC Santa Cruz Arboretum, Rana Creek or Grassroots Ecology
- Riparian habitats should be restored with local native plant nursery stock and should ideally be watershed specific to maintain genetic integrity
- Consider using species that are consistent with the guidelines of defensible space