Appendix C:
Biological Resources Supporting Information

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BIOLOGICAL RESOURCES REPORT
506 BROOKSIDE DRIVE

RICHMOND, CALIFORNIA

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LIST OF ATTACHMENTS

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1.0 INTRODUCTION

On behalf of CenterPoint Properties, Los Angeles, California, Huffman-Broadway Group, Inc. (HBG) has prepared a Biological Assessment Report for the Project at 506 Brookside Drive in Richmond, Contra Costa County, California. It is expected that this Biological Resources Report will be used in decision-making with respect to the documentation necessary for the project pursuant to the California Environmental Quality Act (CEQA). It is likely that the Lead Agency under CEQA (the City of Richmond) will prepare a Mitigated Negative Declaration for the project under the CEQA guidelines.

The purpose of this biological study is to provide a general level biological survey to determine if there is the potential for the presence of special status species and/or sensitive habitats and, if present, the potential for project impacts and any recommended mitigation measures. The assessment is based on information (e.g., technical reports, data, mapping, aerial imagery) readily available at the time of the study and on site conditions observed during a field inspection conducted on July 13, 2017. If it is determined that there is a potential for special status species or sensitive habitats to be present, more detailed technical study following local, state, and federal environmental agency requirement would be recommended.

The objectives of the biological study are to:

1. Determine if there is the potential for any special status plant species or special status animal species to be present within the project site;
2. Determine if there is the potential for any sensitive habitat to be present within the project site;
3. Analyze the potential for impacts to any special status species and sensitive habitat from the implementation of the proposed project; and
4. Determine if more detailed studies are necessary to determine the presence or absence of any special status plant species, special status animal species, or special status habitat.

Our analysis included a review of pertinent literature on habitat characteristics of the site, species of plants and animals expected to utilize the Project Site, a review of planning documents referencing ecological aspects of the site, and field site surveys. HBG has reviewed whether sensitive habitats as defined by CEQA guidelines are present at the site and conducted a preliminary delineation of wetlands and waters of the United States at the property according to criteria of the U.S. Army Corps of Engineers. The results of the wetland delineation are summarized herein. The California Natural Diversity Data Base (CNDDB) was consulted to determine if any populations of endangered, threatened, or rare species have occurred historically or currently are known to exist in the project vicinity.

2.0 PROJECT DESCRIPTION

2.1 Location of Project Site

The Project is located at 506 Brookside Drive in the City of Richmond, Contra Costa County, California. The 31.48-acre Project Site can be accessed from Brookside Drive, which can be reached using Fred Jackson Way from Richmond Parkway off of Interstate 580. Refer to Attachment 1, Figure 1 for the Project site location map, Figure 2 for the location of the Project site on a USGS quadrangle map, and Figure 3 for a recent aerial image of the Project site.

2.2 Project Description

CenterPoint Properties is proposing an office/warehouse project for the 31.48-acre site in Richmond, California. The property is zoned Planned Unit (P-1). The Conceptual Site Plan for the Project is shown in Figure 4. The Project proposes a total of 520,793 square feet (sq. ft.) of warehouse space and 32,801 square feet of office space in three separate buildings. Building 1 is proposed to contain 225,956 sq.ft. of warehouse space and 12,989 sq.ft. of office space. Building 2 is proposed to contain 196,505 sq.ft. of warehouse and 12,830 sq. ft. of office. Building 3 is proposed to contain 98,332 sq.ft. of warehouse and 6,982 sq.ft. of office. The Project includes a total of 452 standard parking stalls and 320 trailer stalls spread among the three buildings. A detention basin will also be constructed in the southwest portion of the site. Several residential structures and barns would need to be demolished to construct the office/warehouse project.

3.0 REGULATORY BACKGROUND

The following provides regulatory background information regarding special status species and sensitive habitats:

3.1 Special Status Species

Special status species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Title 14, California Code of Regulations Section 15380. Special status species also include those species listed by the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) as Species of Special Concern which face extirpation in California if current population and habitat trends continue. Although CDFW and USFWS Species of Concern generally have no special legal status, they are given special consideration under CEQA. The CEQA also considers impacts to plant species on California Native Plant Society (CNPS) Lists 1 and 2 as special status species and impacts to these species as well as those described above to be significant.

The CDFW maintains records for the distribution and known occurrences of special status species and sensitive habitats in the California Natural Diversity Database (CNDDB). The CNDDB is organized into map areas based on 7.5-minute topographic quadrangle maps produced by the U.S. Geological Survey (USGS). All known occurrences of special status species are mapped onto quadrangle maps maintained by the CNDDB. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat.

In addition to the above described federal and state regulations for special status species, most birds in the United States, including non-special status species, are protected by the Migratory Bird Treaty Act of 1918. Under this act destroying active nests, eggs, and young is illegal. Section 3503 of the California Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird. Section 3503.5 makes it unlawful to take or possess birds of prey (hawks, eagles, vultures, owls) or destroy their nests or eggs.

3.2 Sensitive Habitats

Sensitive habitats are those habitats which have been identified by local, state, or federal agencies as areas which provided special functions or values. These habitats are subject to regulation under various local, state, and federal regulations such as the following:

City or County Tree Ordinances	The California Endangered Species Act
City or County General Plan Land Use Areas	The Federal Clean Water Act
City, County, State, or Federal Special Habitat Management Areas	The Federal Endangered Species Act (listed species or critical habitat)
The California Porter-Cologne Act	The Federal Migratory Bird Treaty Act
The California Coastal Act	The Bald and Golden Eagle Protection Act
The California Environmental Quality Act (CEQA)	The National Environmental Protection Act
Habitats such as serpentine soils or vernal pools supporting plant species on California Native Plant Society (CNPS) Lists 1 and 2 which are considered special status habitats under CEQA.	The Federal Magnuson-Stevens Fishery Conservation and Management Act
The California Department of Fish and Wildlife Lake and Streambed Alteration Agreement Program	The Federal Coastal Zone Management Act

Sensitive habitats potentially found within the Project Area include:

Waters of the United States

The Department of the Army, acting through the U.S. Army Corps of Engineers (USACE or Corps), has the authority to permit the discharge of dredge or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA). Waters of the U.S. include both wetlands and "other waters of the U.S." Wetlands and other waters of the U.S. are described by U.S. Environmental Protection Agency (US EPA) and USACE regulations (40 CFR § 230.3(s) and 33 CFR § 328.3(a), respectively). US EPA and the USACE define wetlands 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" (US EPA regulations at 40 CFR § 230.3(t); USACE regulations at 33 CFR § 328.3(b)). Both natural and manmade wetlands and other waters (not vegetated by a dominance of rooted emergent vegetation) are subject to regulation. The geographic extent of wetlands is defined by the collective presence of a dominance of wetland vegetation, wetland hydrology conditions, and wetland soil conditions as determined

following the USACE' 1987 Wetlands Delineation Manual (1987 Manual); the USACE 2008 Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0 (Arid West Regional Supplement); and supporting guidance documents. The geographic extent of other waters of the U.S. is defined by an ordinary high water mark (OHWM) in non-tidal waters (33 CFR. §328.3(e)) and by the High Tide Line within tidal waters (33 CFR. §328.3(d)).

Given that the site being investigated is largely agricultural fields, the following was considered during this investigation.

> As stated in the preamble to the USACE's Final Rule of November 13, 1986: ". . .we generally do not consider the following waters to be 'Waters of the United States' . . . (b) Artificially irrigated areas which would revert to upland if the irrigation ceased." 51 Federal Register 41217, November 13, 1986. Thus, waters, including wetlands, created as a result of irrigation would not be considered waters of the U.S. even when augmented on occasion by precipitation.

USACE Regulatory Guidance Letter No. 07-02, states

> Wetlands established solely due to the presence of irrigation water, irrigated fields, or irrigation ditches do not qualify as wetlands for purposes of applying the 404(f) exemption for construction and maintenance of irrigation ditches and for maintenance of drainage ditches. Where sufficient information is not available to determine the hydrological contribution of irrigation waters to a particular wetlands (i.e., whether the wetland existed at the location prior to the presence of irrigation activities), such wetlands are not removed from consideration as wetlands or waters of the U.S.
>
> ….. an irrigation ditch is a man-made feature and/or an upland swale that either conveys water to an ultimate irrigation use or place of use, or that moves and/or conveys irrigation water (e.g., "run-off" from irrigation) away from irrigated lands. Irrigation ditches may include the distribution system or parts thereof, consisting of manmade canals, laterals, ditches, siphons, and/or pipes, or pump systems. If a ditch carries only irrigation water, irrigation return flows, and overland flow (precipitation and/or snowmelt) that moves from an irrigated field either to or away from an area subject to irrigated agriculture (e.g., an irrigated field), that ditch would be considered an irrigation ditch, not a drainage ditch.

Waters of the State

Waters of the State are defined more broadly than "waters of the US" to mean "any surface water or groundwater, including saline waters, within the boundaries of the

state" (Water Code section 13050(e)). Examples include, but are not limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked baylands, seasonal wetlands, and riparian woodlands. Waters of the State include all waters within the state's boundaries, whether private or public, including waters in both natural and artificial channels. They include all "waters of the United States"; all surface waters that are not "waters of the United States, e.g. non-jurisdictional wetlands; groundwater; and the territorial seas.
(http://www.waterboards.ca.gov/academy/courses/wqstandards/materials/water_us_ca/ca_water_042508.pdf)

The State Water Quality Control Board (SWQCB) and its Regional Boards, including the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), routinely rely on the USACE/USEPA jurisdictional determinations as they have no adopted methodology for the identification and delineation of wetlands or other waters of the State. However, as a matter of policy the SWQCB/SFBRWQCB consider wetlands and waters determined non-jurisdictional by the USACE/USEPA under *SWANCC or Rapanos guidance to remain jurisdictional as waters of the State subject to* SWQCB/SFBRWQCB jurisdiction. Similarly, the SWQCB/SFBRWQCB typically takes jurisdiction over wetlands and other waters where the USACE/USEPA has determined a wetland or other water of the US is exempted or excluded from jurisdiction or where the USACE/USEPA determines that the proposed project activity is exempt from regulation. The SWQCB and SFBRWQCB do not consider agricultural irrigation ditches constructed in uplands to be waters of the state for similar reasons as the USACE.

Lakes, Streams and Associated Riparian Habitat
CDFW regulates lakes and streams under Section of 1602 of the California Fish and Game Code (FGC). CDFW's regulations implementing the FGC define the relevant rivers, streams and lakes over which the agency has jurisdiction to constitute "all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams and streambeds which have intermittent flows of water." (Title 14 *California Code of Regulations* [CCR] § 720). The regulations further define the terms "stream" and "lake" as follows:

> 14 CCR § 1.72. Stream (Includes Creeks and Rivers). *A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.*
>
> 14 CCR § 1.56. Lake. *Includes natural lakes or man-made reservoirs.*

The CDFW takes jurisdiction under its Lake and Streambed Alteration Agreement Program for any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. The CDFW does not have a methodology for the identification and delineation of the jurisdictional limits of streams except for the general guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607 California Fish and Game Code* (CDFW 1994). In making jurisdictional determinations, CDFW staff typically rely on field observation of physical features that provide evidence of water flow through a bed and channel such as observed flowing water, sediment deposits and drift deposits and that the stream supports fish or other aquatic life. Riparian habitat is not specifically defined by the Fish and Game Code but CDFW takes jurisdiction over areas within the flood plain of a body of water where the vegetation (grass, sedges, rushes, forbs, shrubs, and trees) is supported by the surface or subsurface flow.

Sensitive Plant Communities

Sensitive plant communities are those natural plant communities identified in local or regional plans, policies, ordinances, regulations, or by the CDFW which provide special functions or values. The CDFW natural plant communities considered sensitive are those CDFW ranks as 'threatened' or 'very threatened' and keeps records of their occurrences in its CNDDB. All known occurrences of sensitive habitats are mapped onto 7.5 minute USGS topographic quadrangle maps maintained by the CNDDB. Sensitive plant communities are also identified by CDFW on their List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities must be considered and evaluated under CEQA.

3.3 Other Applicable Regulations

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSFA) conserves and manages the fishery resources found off the coasts of the United States, the anadromous species, and the Continental Shelf fishery resources of the United States, including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The National Marine Fisheries Service (NMFS) enforces the MSFA and regulates commercial and recreational fishing and the management of fisheries resources. The MSFA mandates the identification and protection of Essential Fish Habitat (EFH) for managed species during the review of projects conducted under federal permits that have the potential to affect such habitat. Federal agencies are required to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency, which may adversely affect EFH (MSFA 305.b.2). Under the MSFA, NMFS identifies, conserves, and

enhances EFH for those species regulated under a federal fisheries management plan (FMP). EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity and includes all associated physical, chemical and biological properties of aquatic habitat that are used by fish. Projects that have the potential to adversely affect EFH must initiate consultation with NMFS.

There are four FMPs in California, Oregon, and Washington that identify EFH for groundfish, coastal pelagic species, Pacific salmon, and Pacific highly migratory fisheries. The Project Site is within an area identified as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of fish species managed with the following FMPs under the Act: the Pacific Groundfish FMP (various rockfishes, sole and sharks), the Pacific Salmon FMP (Chinook salmon, Coho salmon), and the Coastal Pelagic FMP (northern anchovy, Pacific sardine). In addition, the project occurs within an area designated as Habitat Areas of Particular Concern (HAPC) for various federally-managed fish species within the Pacific Groundfish FMP. As defined in the Pacific Groundfish FMP, San Francisco Bay, including the project area, is within estuary HAPC.

4.0 EXISTING SETTING

4.1 Site Description

The 31.48-acre project site (site) is located in an urban area and based on review of historical imagery using Google Earth Pro (https://www.google.com/earth/download/ge/agree.html),the site has had a history of being used as upland farmland to grow row crops since the late 1930's. The evaluation for this study was conducted when the cultivated farmlands were fallow. Several residential structures and barns are found on the site. Based on review of the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey (NRCS 2017) the underlying soils in the western portion of the site along Fred Jackson Way is Sycamore silty clay loam. The soils in the remainder of the site are Botella clay loam, 0 to 2 percent slopes (Figure 5).

4.2 Biological Setting

4.2.1 Plant Communities

A plant community is an assemblage of plants that co-exist in a similar environment. Different communities are defined by their structure, form, and/or species composition. At broad scales vegetation types are based strongly on shared growth forms that dominate an area and reflect patterns of climate, substrate and disturbances. At fine scales, vegetation types are based on assemblages of plant species that co-occur in an area and are linked by their interactions with each other and their environment. At all scales, vegetation types can be described by repeating patterns in species composition and/or growth forms and structure and relationships to the environment in which they are found (USNVC 2016).

Vegetation communities and habitats within California are typically identified by biologists based on the currently accepted *List of Vegetation Alliances and Associations* (or Natural Communities List) (CDFW 2010). The list is based on *A Manual of California Vegetation, Second Edition* (Sawyer and Keeler-Wolf 2009), which is the *National Vegetation Classification* (USNVC 2016) applied to California. However, unlike the *National Vegetation Classification* which provides a hierarchical classification of both natural and cultural vegetation communities, the California vegetation classification system used to develop the *Natural Communities List* does not include cultural vegetation communities such as agricultural lands as they are considered usually short lived, persisting even with a high frequency of human-mediated disturbance such as mowing, plowing, irrigating, burning, or disking (Sawyer and Keeler-Wolf 2009).

Natural (including semi-natural) vegetation is defined as vegetation where ecological processes primarily determine species and site characteristics; that is, vegetation

comprised of a largely spontaneously growing set of plant species that are shaped by both site and biotic processes (Küchler 1969, Westhoff and van der Maarel 1973). Cultural vegetation is defined as vegetation with a distinctive structure, composition, and development determined by regular human activity (cultural vegetation sensu stricto of Küchler 1969). Cultural vegetation has typically been planted or treated, and has relatively distinctive physiognomic, floristic, or site features when compared to natural vegetation (USNVC 2016). Cultural vegetation communities are altered more readily by these nonnatural processes and have a suite of species, many of which are equally capable of dominating a stand under a shifting palette of natural seasonal and yearly changes, coupled with intensive and often high-frequency unnatural disturbance (Sawyer and Keeler-Wolf 2009). Cultural vegetation communities are altered more readily by these nonnatural processes and have a suite of species, many of which are equally capable of dominating a stand under a shifting palette of natural seasonal and yearly changes, coupled with intensive and often high-frequency unnatural disturbance (Sawyer and Keeler-Wolf 2009). The *Natural Communities List* does however, include some of the more conspicuous types dominated by non-natives.

HBG biologists conducted field surveys of the site on July 13, 2017. All habitats on the project site were surveyed on foot and assessed for similarity to sites known to support special status species within the area. Qualitative information on the composition and distribution of plant species on the site was obtained during the site visit. Following the *National Vegetation Classification* the site primarily contains cultural vegetation of an agricultural type consisting of herbaceous agricultural vegetation when planted and cropped, but found to be in a fallow state at the time of the site visit where non-native grasses and other ruderal vegetation were found.

Emerging from fallow agricultural lands were primarily non-native grasses and herbaceous plants and forbs dominating the landscape. The predominant non-native grasses include wild oats (*Avena fatua*), Mediterranean ryegrass (*Festuca perennis*), foxtail barley (*Hordeum murinum leporinum*), and rip-gut brome (*Bromus diandrus*). Herbaceous plants occurring throughout the site include black mustard (*Brassica nigra*), wild radish (*Raphanus sativa*), bull mallow (*Malva nicaeensis*), bristly ox-tongue (*Helminthotheca echioides*), field bindweed (*Convolvulus arvensis*), cut-leaf plantain (*Plantago coronopus*), and prickly lettuce (*Lactuca serriola*). Other scattered non-native species include pampas grass (*Cortedaria selloana*), sweet fennel (*Foeniculum vulgare*), chicory (*Chicorum intybus*), Italian thistle (*Carduus pycnocephalus*), and small patches of Himalayan blackberry (*Rubus armeniacus*). Species found along the edge of the site include several coyote brush (*Baccharis pilularis*), horseweed (*Erigeron canadensis*), and one small Coast live oak (*Quercus agrifolia*). Select native species were found in the open fields (uplands) at the site including California cudweed (*Pseudognaphalium californicum*) and California poppy (*Eschscholzia californica*).

Several irrigation ditches which connect to underground street stormwater drainages can be found in portions of the site. Vegetation within these areas consists primarily of tall flat-sedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), smartweed (*Polygonum* sp.), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and bird's foot trefoil (*Lotus corniculatus*), along with small areas of other wetland species such as rabbitsfoot grass (*Polypogon monspeliensis*). Scattered areas were also found to contain broadleaf cattail *(Typha latifolia)* and arroyo willow *(Salix lasiolepis).*

4.2.2 Animal Populations

The species discussed in this study are based on review of available literature, visits to the area by HBG wildlife biologist, and habitat observations made during qualitative surveys conducted by HBG wildlife biologists on July 13, 2017. A complete listing of the references from which information was compiled on the flora and fauna inhabiting the region is contained in the References section.

The combination of ruderal vegetation within the fallow agricultural lands and irrigation ditches provides habitat of limited value to wildlife. The irrigation ditches can accommodate wildlife adapted to aquatic areas, and vegetation throughout provides potential nesting and roosting sites for birds, in addition to foraging areas for species of mammals, reptiles, amphibians and birds.

Most of the wildlife observed by HBG during the site visit were bird species. Species observed within the open fields included Canada goose (*Branta canadensis)*, American kestrel (*Falco sparverius)*, western kingbird (*Tyrannus verticalis)*, northern mockingbird (*Mimus polyglottos)*, and house finch (*Haemorhous mexicanus)*. Species seen flying over the site included turkey vulture (*Cathartes aura)* and California gull (*Larus californicus)*. Other common bird species that would be expected at the site would include killdeer (*Charadrius vociferous)*, mourning dove (*Zenaida macroura)*, rock pigeon (*Columba livia)*, Eurasian collared-dove (*Streptopelia decaocto)*, black phoebe (*Sayornis nigricans)*, Anna's hummingbird (*Calypte anna)*, American crow (*Corvus brachyrhynchos)*, European starling (*Sturnus vulgaris)*, yellow-rumped warbler (*Setophaga coronate)* (winter), white-crowned sparrow (*Zonotrichia leucophrys)*, Brewer's blackbird (*Euphagus cyanocephalus),* red-winged blackbird (*Agelaius phoeniceus)*, and house sparrow (*Passer domesticus)*. Raptors such as red-tailed hawk (*Buteo jamaicensis)* and red-shouldered hawk (*Buteo lineatus)* are also present in the area.

The only mammal documented at the site was Botta's pocket gopher (*Thomomys bottae*)(presence of dens). Other mammals that likely occur in the area would include those adapted to urban environments such as California ground squirrel (*Spermophilus beecheyi)*, black-tailed jackrabbit (*Lepus californicus)*, Virginia opossum (*Didelphis*

virginiana), deer mouse (*Peromyscus maniculatus)*, house mouse (*Mus musculus)*, Norway rat (*Rattus norvegicus)*, striped skunk (*Mephitis mephitis)* and raccoon (*Procyon lotor)*. Reptiles and amphibians would include western fence lizard (*Sceloporus occidentalis)*, gopher snake (*Pituophis melanoleucus)*, common garter snake (*Thamnophis sirtalis)* and Pacific treefrog *(Hyla regilla).*

It is also possible that bats may be present in spaces and crevices within the residential structures and barns present at the site. Bats and other non-game mammals are protected in California under the State Fish and Game Code. Bats in this region use a wide variety of roosts, including man-made roosts such as buildings, bridges and culverts; they also use trees that contain suitable roost habitat. Bats are nocturnal, and select day roosts for rest, protection, pup-rearing and overwintering, and night roosts during seasonal periods of activity during foraging flights. Often, the same day roost provides night roost habitat. Colonial bats roost in groups ranging from several to thousands of individuals. Bats in this region of California are not active year-round. Bats are particularly vulnerable to loss or disturbance of their day roosts, especially during pup-rearing during the summer when bats are not volant (not flying), and during winter months when bats are in torpor or hibernation.

4.2.3 Wetland and Other Waters of the U.S. Delineation

Definitions of Wetlands and Other Waters of the U.S.

The Department of the Army, acting through the U.S. Army Corps of Engineers (USACE or Corps), has the authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA), and permit work and placement of structures in navigable waters of the U.S. under Section 10 of the Rivers and Harbors Act of 1899 (RHA). The term “waters of the United States” is described by U.S. Environmental Protection Agency’s (EPA) and the Corps’ regulations (40 CFR § 230.3(s) and 33 CFR § 328.3(a). Wetlands are a type of water of the United States.

EPA and the USACE define wetlands as: “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" (EPA regulations at 40 CFR § 230.3(t); Corps regulations at 33 CFR § 328.3(b)). The term “*under normal circumstances*” refers to situations in which the vegetation has not been substantially altered by man's activities as defined in Appendix A of the Corps’ 1987 *Wetlands Delineation Manual*. Clarification of the term, as it pertains to farmed wetlands, was furthered defined in Regulatory Guidance Letter 90-7 dated September 26, 1990, as “the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed.”

Under Section 10 of the Rivers and Harbors Act of 1899, the USACE also regulates the construction of structures in, over, or under; excavation of material from; or deposition of material into navigable waters. As described by Corps' regulation 33 CFR § 329.4, the general definition of "navigable waters" includes those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce. Several factors must be examined when deciding whether a waterbody is a navigable water. These factors include (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce, and (c) defined geographic limits of the waterbody. A determination of navigability, once made by the Corps, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which impeded or destroy navigable capacity. Based on this provision, the Corps also has the discretion to regulate activities in historically navigable waters. Historically navigable waters are areas that were navigable in the past, but are no longer navigable because of artificial modifications, such as levees, dikes, and dams.

Furthermore, waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 C.F.R. §328.3(e)).

Preliminary Wetland and Other Waters of the U.S. Delineation-Methodology

HBG conducted field studies for a preliminary wetland delineation in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps' 1987 *Wetlands Delineation Manual* (1987 Manual), the Corps' 2008 *Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0* (Arid West Regional Supplement) and supporting guidance documents. The 1987 Manual provides technical guidance and procedures, from a national perspective, for identifying and delineation of wetlands that may be subject to Section 404 of the CWA. Pursuant to the 1987 Manual, key criteria for determining the presence of wetlands are: (a) the presence of inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water; and (b) a prevalence of vegetation typically adapted for life in saturated soil conditions (i.e., hydrophytic vegetation). Explicit in the definition is the consideration of three environmental parameters: hydrology, soil, and vegetation. The Arid West Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. The combined use of the 1987 Manual and Arid West Regional Supplement enhances the technical accuracy, consistency, and credibility of wetland determinations.

Prior to the field survey, existing land forms onsite that may contain areas that are potential waters of the U.S. and State, including wetlands, were identified by reviewing: (1) USGS topographic mapping (Figure 2), (2) recent orthorectified digital aerial imagery (Figure 3), (3) NRCS soils mapping (Figure 5), and (4) CAD project boundary data. A recent orthorectified digital aerial image was brought into GIS software and CAD boundary data were overlaid on the aerial image creating a site base map (Figure 3). If any potential waters of the U.S./State were found during field inspection, a hand-held Trimble global positioning system (GPS) unit was used to collect location data which would be used to map the geographical extent of the potential waters of the U.S./State and, using GIS software, then map onto a recent orthorectified digital aerial image for analysis and reporting purposes.

Preliminary Wetland Delineation-Result

Review of the historical imagery using Google Earth Pro provided no evidence of streams being diverted away from the site, wetlands being converted to agricultural use, or that such habitats had been eliminated from the site. Review of the USGS National Hydrography Dataset shows no stream drainages occurring on the property (https://nhd.usgs.gov/data.html). Review of the U.S. Fish and Wildlife Service National Wetlands Inventory maps shows no wetlands or deepwater habitats mapped within the site (Figures 6a - c). Recent U.S. Geological Survey (USGS) DigitalGlobe aerial imagery showed fallow farmland with crop furrows and irrigation ditches (Figure 3) and several attendant building structures. The July 13, 2017 HBG on-site investigation confirmed these observations, and based on this field inspection no wetlands/waters of the U.S. or State were found on the property.

4.2.4 Special Status Species

Sensitive species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the “rare” or “endangered” criteria defined in Title 14, California Code of Regulations, Section 15380.

The CDFW maintains records for the distribution and known occurrences of sensitive species and habitats in the California Natural Diversity Database (CNDDB). The CNDDB is organized into map areas based on 7.5 minute topographic maps produced by the U.S. Geological Survey (USGS). All known occurrences of sensitive species and important natural communities are mapped onto the quadrangle map. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat. The project site is located on the Richmond 7.5-minute quadrangle; the relevant

adjacent quads include the Mare Island, Novato, Petaluma Point, Briones Valley, Benicia, Oakland East, Oakland West, San Quentin, San Rafael, and San Francisco North quadrangles.

A search of the CNDDB records of occurrence for special status animals and plants and natural communities within these quadrangles indicated that none of the special status species or natural communities is known to occur on the project site itself. However, even the absence of a special animal, plant, or natural community from the report does not necessarily mean they are absent from the area in question, but only that no occurrence data have been entered for that species or natural community in the CNDDB inventory. The occurrence of special status plant and animal species in the vicinity of the project area may be an indication that they also could occur in the project area. Therefore, occurrences of special status species throughout the quadrangles mentioned above were noted in considering the potential presence of these species on the project site.

An evaluation of all special status plant species reported in the vicinity of the project site is presented in Table 1 (Attachment 2). Table 2 (Attachment 2) presents an evaluation of special status animal species that have been reported in the project vicinity.

Special Status Plant Species

Special status plant species include: (i) species that are listed or proposed for listing as threatened or endangered under the federal Endangered Species Act; (ii) species that are listed, or proposed for listing by the state of California as threatened or endangered under the California Endangered Species Act; (iii) plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and elsewhere; and (iv) plant species that meet the definition of rare or endangered under CEQA.

A target list of special status plants found within 10 miles of the site is shown in Table 1 (Attachment 2), which includes all species mentioned in the CNDDB occurring within 10 miles of the project site. The property does not represent high quality habitat for special status plants. All of the plant species mentioned in Table 1 require habitat conditions that are not found at the site. No special status plant species were observed at the property during floristic surveys conducted at the site in July of 2017, and none of the species included in Table 1 are expected to occur in the project area.

Special Status Animal Species

Special status animal species known to occur in the project vicinity based on results of a search of the CNDDB data base and based on the knowledge of wildlife biologists with HBG are evaluated in Table 2 (Attachment 2). The primarily non-native grassland habitat

of the Project Site does not provide suitable habitat for any of the special status animal species evaluated in the table.

Residential structures and barns at the site could harbor populations of bats as described in Section 4.2.2. Among the possible bat species that could be found in crevices in the buildings are special status species of bat including pallid bat *(Antrozous pallidus)* which is a state-designated species of special concern. No other animals with a special status designation would be expected to occur at the Project Site.

5.0 BIOLOGICAL EVALUATION

5.1 Standards of Significance

According to the Environmental Checklist in Appendix G of the CEQA Guidelines (Title 14, California Code of Regulations, 15000 et seq.), the project would be considered to have a significant impact on biological resources if it would:

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

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

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

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

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

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

5.2 Evaluation

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

The property does not represent high quality habitat for special status plants. All of the plant species mentioned in Table 1 require habitat conditions that are not found at the site. No special status plant species were observed at the property during floristic surveys conducted at the site in July of 2017, and none of the species included in Table 1 are expected to occur in the project area. There would be no significant impacts on special status plant species with development of the Project Site as planned.

The Project Site does not provide suitable habitat for any of the special status animal species evaluated in Table 2. No special status animal species are expected to occur on the Project Site with the exception of special status bat species that could be present within buildings slated for demolition. A bat habitat assessment and plan for eviction of any bats according to agency protocol (see Mitigation Measure #4) would mitigate impacts to any sensitive bat species that may be present. There would be no significant impacts on special status animal species with development of the Project Site as planned.

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

Sensitive Habitats. Construction will take place within fallow farmland vegetation vegetated with primarily non-native herbaceous plants and grasses (ruderal vegetation), and non-native shrubs, some planted for landscaping purposes around building structures. The removal of upland habitats of mostly non-native vegetation would not be considered a significant impact, and no mitigation for this impact is warranted. No sensitive habitats as defined by the CNDDB or local policies of Contra Costa County of the City of Richmond were found on the property or in the project vicinity.

Landscaping/Invasive Species. Invasive, exotic weeds compete with native vegetation and can degrade the quality of wildlife habitats. Project landscaping and construction activity has the potential to introduce invasive, exotic, non-native vegetation, some of which may not now exist in the area. Also, highways and various construction projects provide a pathway for dispersal of invasive plants. Invasive plant species include those designated as noxious weeds by the U.S. Department of Agriculture, problem species listed by the California Department of Food and Agriculture, and other invasive plants designated by the California Invasive Plant Council. Where appropriate, vegetation removed because of project activities should be replaced with native species which are of value to local wildlife. Native plants generally are more valuable as wildlife food sources and require less irrigation, fertilizers, and pesticides than exotic species.

Impact #1: Project landscaping is expected to introduce exotic, non-native vegetation, some of which may not exist in the area.

> **Mitigation Measure #1:** Landscaping shall be designed to enhance the wildlife value and aesthetic quality of undeveloped portions of the project site. Where appropriate, vegetation removed because of project activities shall be replaced with native species which are of value to local wildlife, and native vegetation shall be retained. Weed management practices may be warranted, including identification and removal of infestations of noxious weeds prior to construction, use of construction equipment and materials such as fill and erosion control devices that are weed-free, power-washing of construction vehicles to remove mud, dirt and vegetative material before working in relatively weed-free areas, and removal of invasive species from undeveloped areas within the project boundary.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

No federally protected wetlands as defined by Section 404 of the Clean Water Act were identified within the agricultural lands evaluated. No impacts would occur to federally protected wetlands as a result of project development.

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

Project construction would occur in an area that is vegetated with mostly Urban habitats consisting of primarily non-native herbaceous plants and grasses and landscaping. Loss of vegetation associated with these habitats on site will result in minor disruption of existing wildlife. Some bird roosting, nesting, and foraging areas within the non-native grassland and small areas of irrigation ditches which connect to street underground stormwater drainages will be eliminated. Landscaping vegetation associated primarily with building structures removed during construction operations is easily replaced subsequent to construction. Some reptiles, amphibians and small mammals adapted the urban habitats within this disturbed site may be temporarily displaced to similar habitats nearby capable of accommodating these species. Animal species that have adapted to living in close association with human disturbance can be

expected to continue after the proposed project. These species include mammals such as raccoon, California ground squirrel, deer mouse, and house mouse, and birds such as rock pigeon, mourning dove, American robin, European starling, house sparrow, Brewer's blackbird and brown-headed cowbird.

Nesting Birds. Nesting bird species protected by the federal Migratory Bird Treaty Act could be impacted during project construction. The removal of shrubs, grasses and other vegetation during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present. Many species of raptors (birds of prey) are sensitive to human incursion and construction activities, and it is necessary to ensure that nesting raptor species are not present in the vicinity of construction sites.

Impact #2: The removal of vegetation during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present.

> **Mitigation Measure #2**- If feasible, construction work should take place outside of the February 1 to August 31 breeding window for nesting birds. If construction is to be conducted during the breeding season, a qualified biologist should conduct a pre-construction breeding bird survey in areas of suitable habitat within 15 days prior to the onset of construction activity. If bird nests are found, appropriate buffer zones should be established around all active nests to protect nesting adults and their young from construction disturbance. In general, CDFW recommends a 250-foot construction exclusion zone around the nests of active passerine songbirds during the breeding season, and a 500-foot buffer for nesting raptors. Buffer zones should be maintained until it can be documented that either the nest has failed or the young have fledged.

Water Quality. Grading, placement of fill material and other ground-disturbing activities associated with construction could promote erosion and allow elevated levels of sediment to wash into nearby aquatic areas downstream, resulting in potential indirect impacts to fish and wildlife resources. Construction activities on the project site would involve disturbance and exposure of soils through grading and removal of vegetative cover, installation of infrastructure, and other activities. These activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. If not managed properly, the runoff could cause elevated levels of contaminants and increased sedimentation and turbidity in surface waters beyond the borders of the Project Site, resulting in degradation of water quality of downstream water bodies such as San Pablo Creek and ultimately San Francisco Bay. However, the requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will minimize adverse effects associated with these activities. BMPs will

include installation of silt fence and straw wattles at appropriate locations along the work area to protect nearby aquatic areas from increased sedimentation. Furthermore, standard techniques to control contaminants in stormwater such as oil and grease traps will be employed to mitigate water quality concerns.

Impact #3: Placement of fill and other ground disturbing activities could promote erosion and allow elevated levels of sediment to wash into downstream aquatic areas, potentially affecting fish and wildlife resources.

> **Mitigation Measure #3:** Best Management Practices and all requirements as detailed in the Stormwater Pollution Prevention Plan shall be implemented to control erosion and migration of sediments off-site. Implementation of water quality controls shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction. In addition, vegetation shall only be cleared from the permitted construction footprint. Areas cleared of vegetation, pavement, or other substrates shall be stabilized as quickly as possible to prevent erosion and runoff.

Bat Populations. The proposed project has the potential to affect special status and common roosting bat species, including pallid bat (a California Species of Special Concern that has occurred in this part of Contra Costa County), during demolition of the houses, barns and other structures occurring on the site. Bats have the potential to roost in existing vacant or underutilized buildings, other man-made structures and could be present within the structure. Protections are necessary for maternity roosts (those that are occupied by pregnant females or females with non-flying young) and non-breeding roosts or day roosts (without pregnant females or non-flying young). Significant impacts to bats prohibited under the Fish and Game Code could result from (i) destruction of an occupied, non-breeding bat roost, resulting in the death of bats; (ii) disturbance that causes the loss of a maternity colony of bats (resulting in the death of young); or (iii) destruction of hibernacula. This may occur through direct disturbance from destruction of a roost site during removal of structures or an indirect disturbance causing behavioral alterations due to construction noise or vibration, or increased human activity in the area.

Conducting demolition of structures without first determining absence or lack of suitable potential bat habitat, makes humane eviction of bats or partial dismantling of a structure to cause bats to abandon habitat impossible, and could result in direct mortality of roosting bats. A bat habitat assessment conducted by a bat biologist could determine if suitable habitat for bats is found in structures slated for demolition. The habitat assessment in on-site structures would consist of a visual examination of the exterior and interior surfaces and spaces for suitable entry points, and signs of roosting

bats (fecal pellet accumulations, urine or fur staining at entrances, insect prey remains, live or dead bats, characteristic odor, etc.). Demolition could proceed at structures containing no suitable habitat. Structures containing suitable potential roost habitat and signs of past or present use by bats will be presumed to contain roosting bats unless a detailed visual survey or night emergence survey can be conducted that verifies the absence of bats. Night emergence surveys can only be conducted when bats are active. Buildings containing bats or signs of past or present use by bats will require either humane eviction (installation of blockage materials and one-way exits), or partial dismantling, only during seasonal periods of bat activity.

Impact #4: Demolition of buildings could adversely impact either maternity roosts or winter roost of bats.

> **Mitigation Measure #4-** A daytime bat habitat assessment should be conducted by a qualified bat biologist of all structures slated for demolition. If no evidence of bats is found, the structure can be demolished. If structures contain past or present evidence of roosting bats (fecal pellet accumulations, urine or fur staining at entrances, insect prey remains, live or dead bats, characteristic odor, etc.) and there are walls or other portions of the structure that cannot be completely surveyed, it will be assumed that roosting bats are present. Demolition of structures containing roosting bats or signs of past or present use by bats would be delayed until (i) the period between March 1 (weather permitting) and April 15 to avoid take of torpid overwintering bats, and between September 1 and October 15 to prevent take of young that are not yet self-sufficiently volant, or (ii) until structures containing or suspected of containing active bat roosts can be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage, and where partial dismantling can change roost conditions and cause bats to abandon and not return to the roost.

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

The project is consistent with all local policies and ordinances protecting biological resources of the City of Richmond.

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

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan applicable to the project site.

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ATTACHMENT 1.

Figures

Figure 1. Project Site Location Map

506 Brookside Drive, Richmond, California

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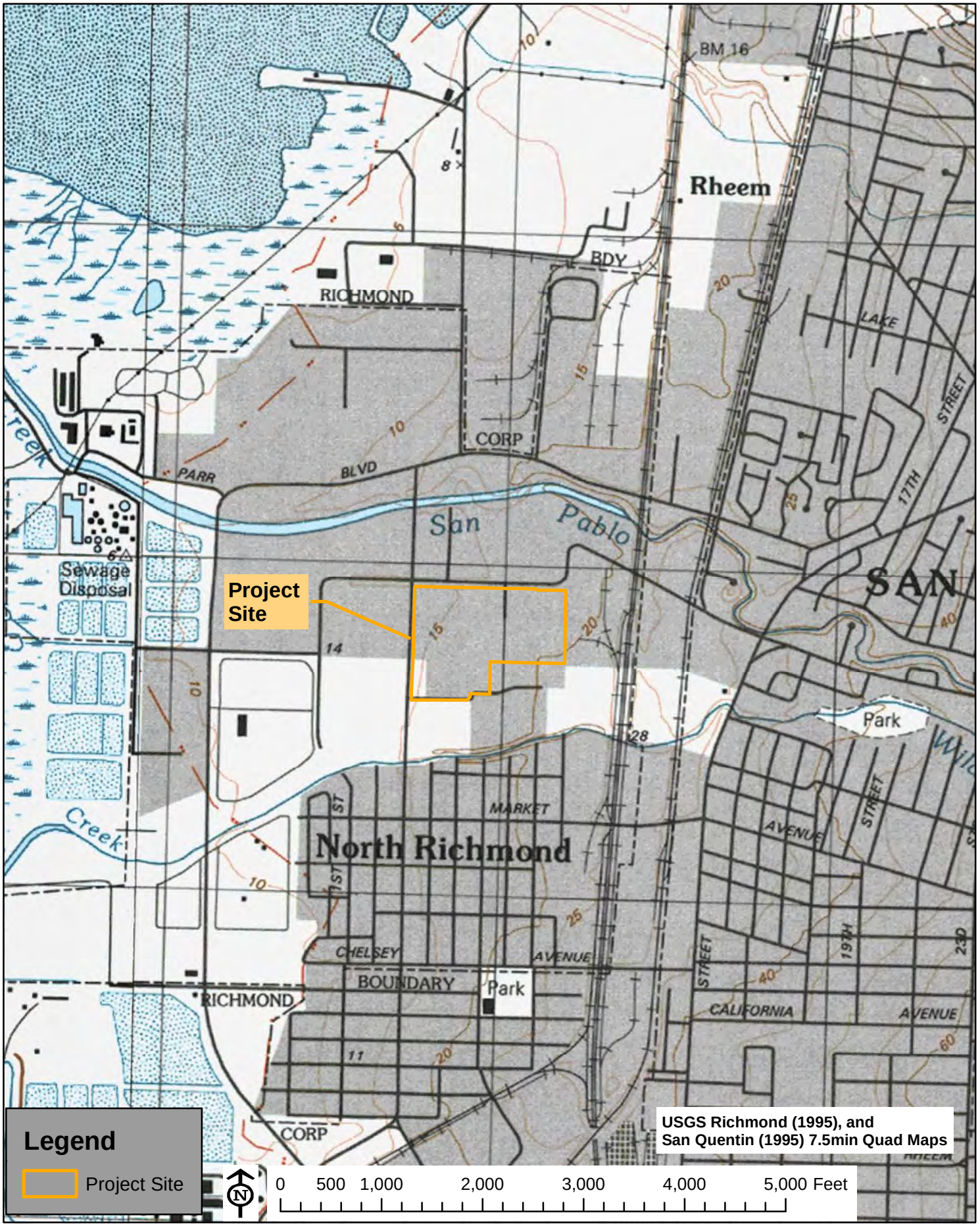

Figure 2. USGS Topographic Map of the Project Site
506 Brookside Drive, Richmond, California

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Figure 3. Aerial Imagery of the Project Site
506 Brookside Drive, Richmond, California

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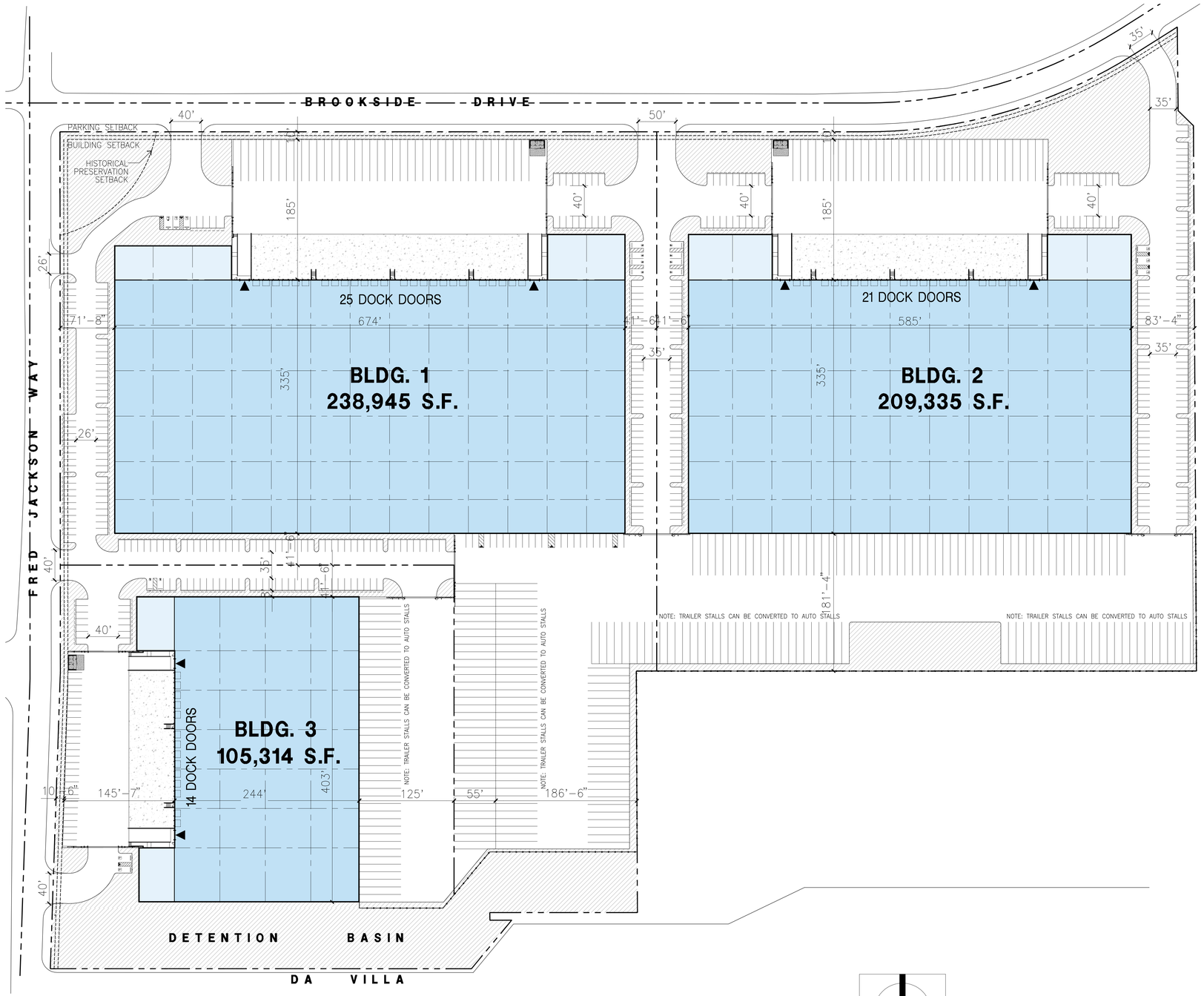
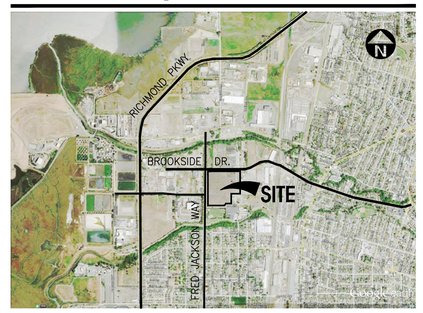


north

1" = 60'

0 60 120 180

Aerial Map



Legend

- POTENTIAL OFFICE
- WAREHOUSE
- DRIVE THRU DOOR

Tabulation

SITE AREA	BLDG. 1	BLDG. 2	BLDG. 3	DETENTION BASIN	TOTAL
In s.f.	546,101	524,149	236,516	64,300	1,371,066 s.f.
In acres	12.54	12.03	5.43	1.48	31.48 ac
BUILDING AREA					
Office (5%)	12,989	12,830	6,982		32,801 s.f.
Warehouse	225,956	196,505	98,332		520,793 s.f.
TOTAL	238,945	209,335	105,314		553,594 s.f.
COVERAGE	43.8%	39.9%	44.5%		40.4%
AUTO PARKING REQUIRED					
Office: 1/250 s.f.	52	51	28		131 stalls
Whse: 1/1,000 s.f.	226	197	99		522 stalls
TOTAL	278	248	127		653 stalls
AUTO PARKING PROVIDED					
Standard (8.5' x 18.5')	199	176	77		452 stalls
TRAILER PARKING PROVIDED					
Trailer (10' X 55')	141	140	39		320 stalls
ZONING ORDINANCE FOR CITY					
Zoning Designation - Heavy Industrial (H-I)					
MAXIMUM BUILDING HEIGHT ALLOWED					
Height - 50'					
MAXIMUM FLOOR AREA RATIO					
FAR - .67					
MAXIMUM LOT COVERAGE					
Coverage - 50%					
SETBACKS					
Building	Parking				
Front - 10'	Front - 5'				
Side - 0'	0'				
Rear - 0'	0'				
St. Side - 10'					
LANDSCAPE REQUIRED					
In Percentage - 10%					
LANDSCAPE PROVIDED					
In s.f.	56,203	68,353	12,682	63,499	200,737 s.f.
In Percentage -	10.3%	13.0%	5.4%	98.8%	14.6%

Note: This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative aid in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.

Figure 4. Proposed Project - Plan View

506 Brookside Drive, Richmond, California

Conceptual Site Plan

506 Brookside Drive

Richmond, CA

CenterPoint Properties®

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Scheme 7

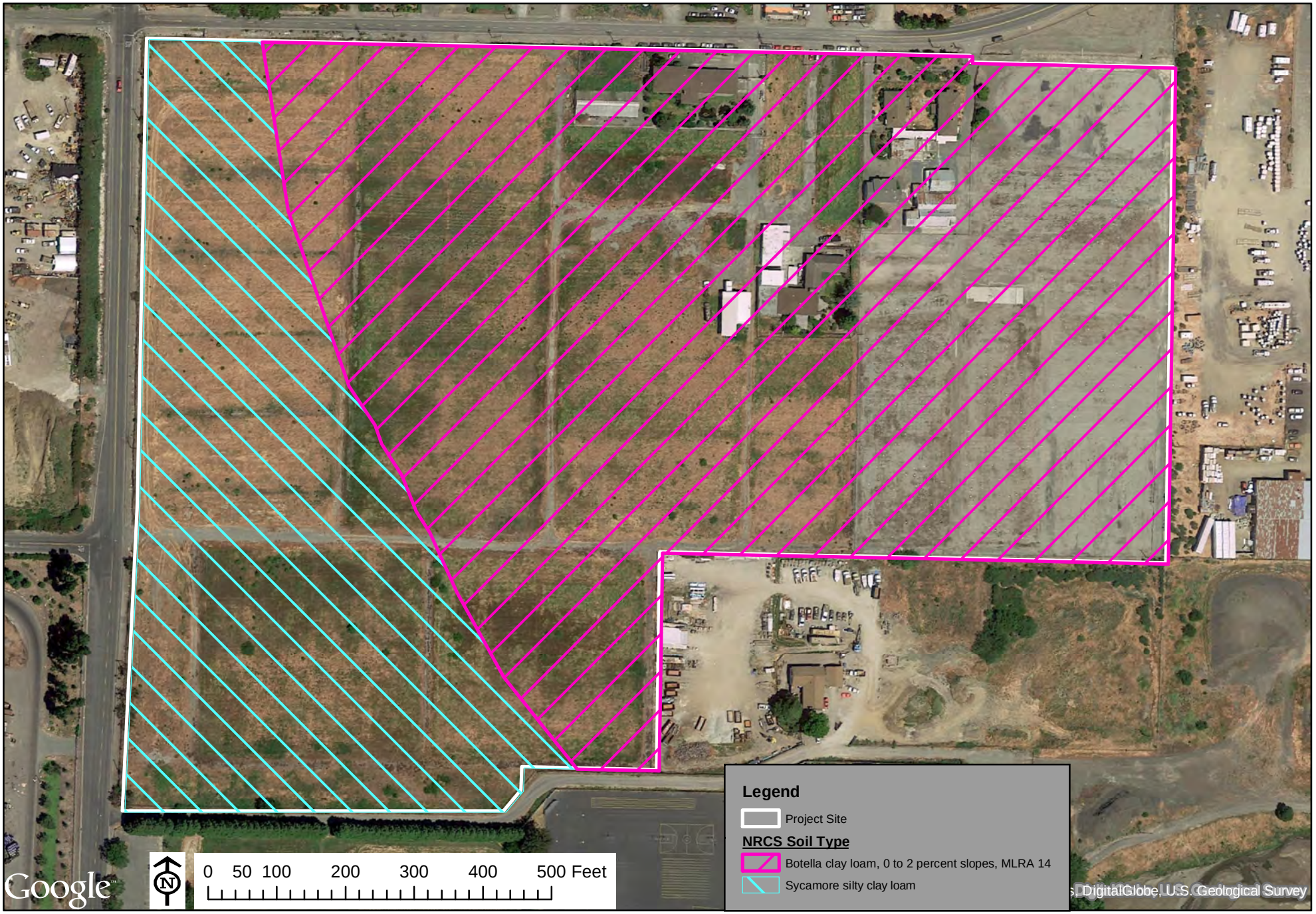

Figure 5. NRCS Soil Map of the Project Site

506 Brookside Drive, Richmond, California

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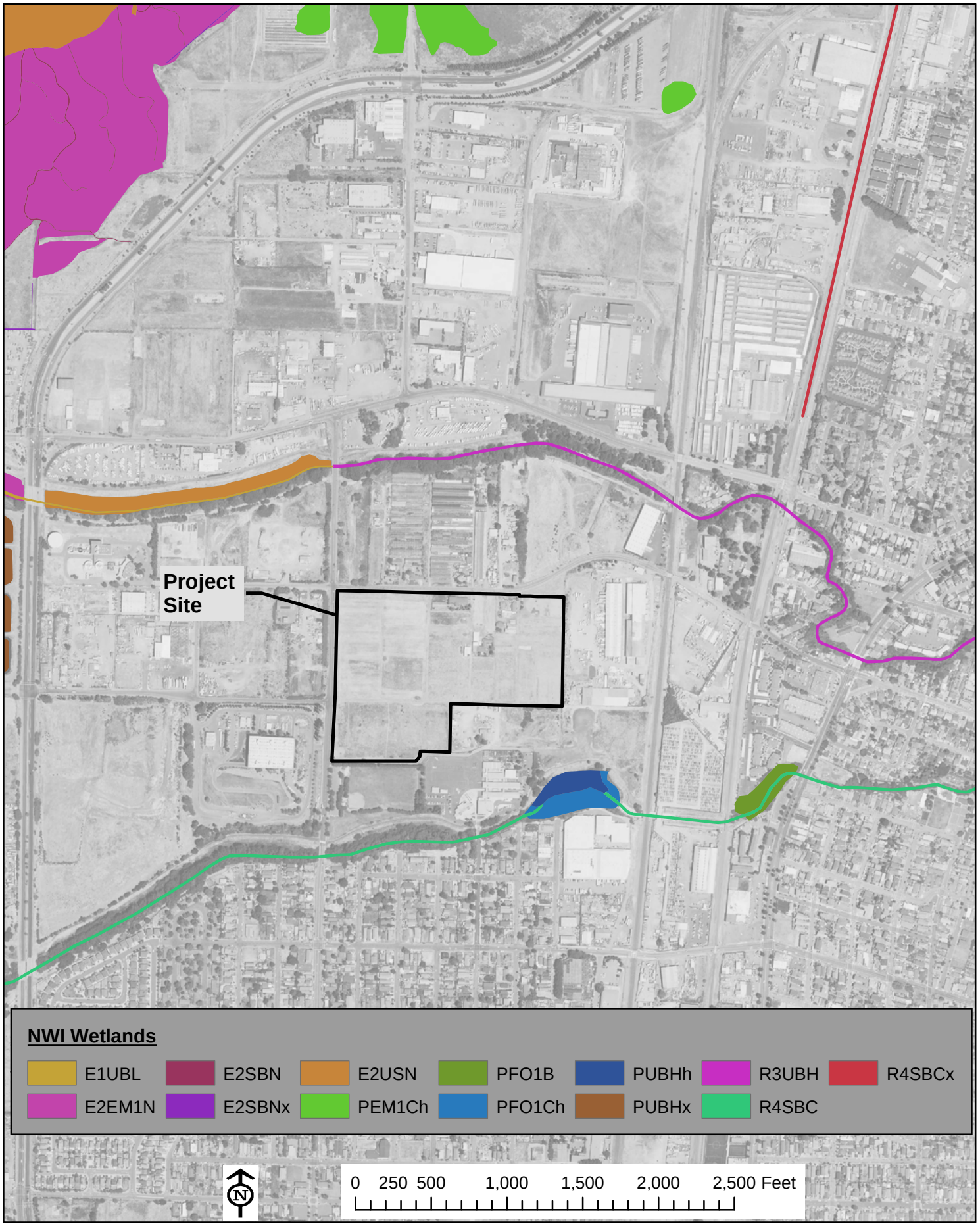

Figure 6a. NWI Wetlands in the vicinity of the Project Site 506 Brookside Drive, Richmond, California

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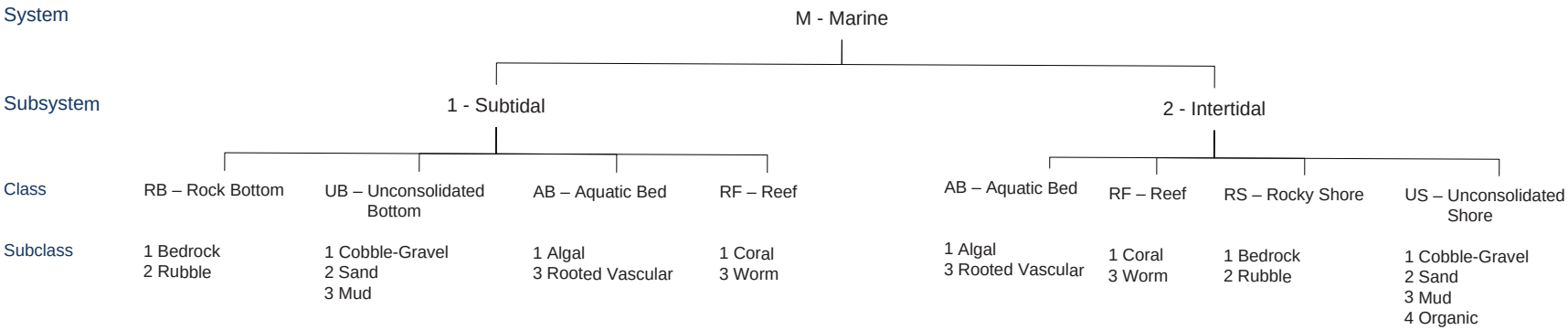
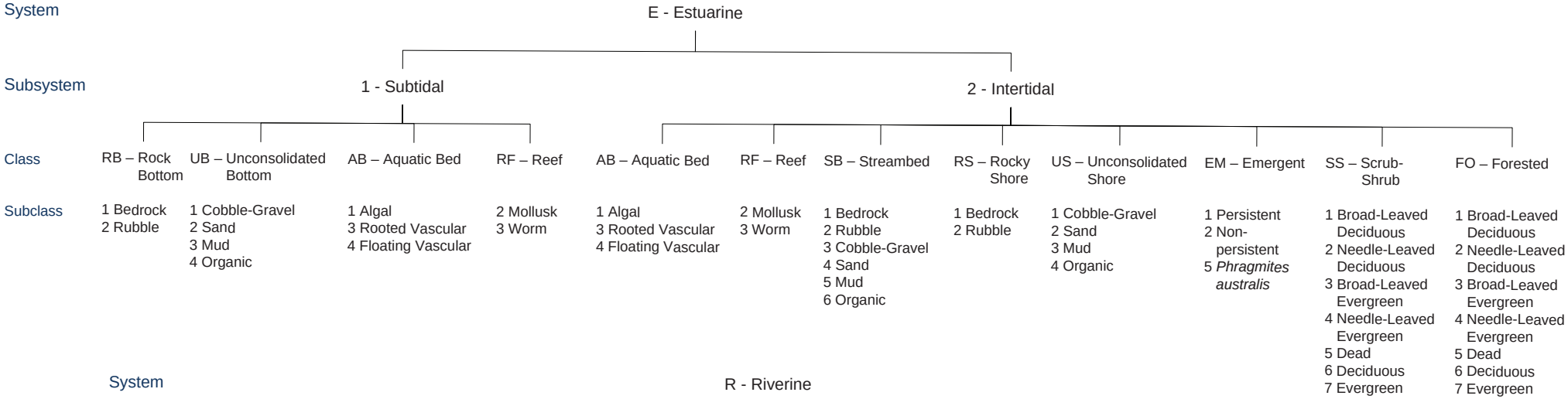
NWI Wetlands and Deepwater Map Code Diagram





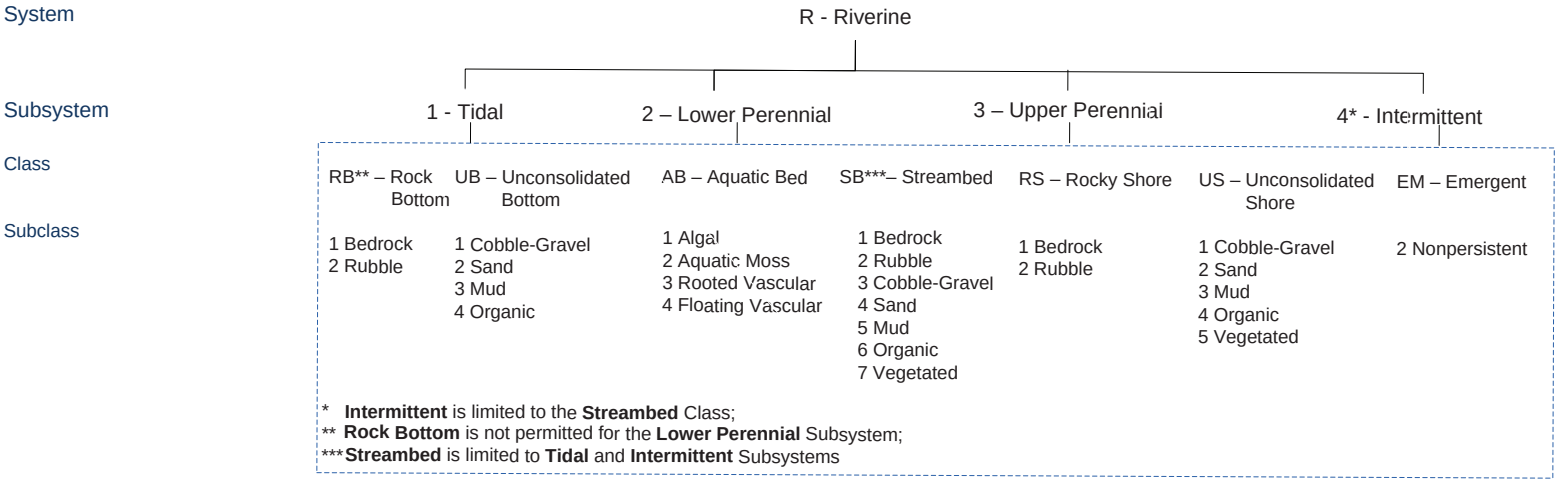
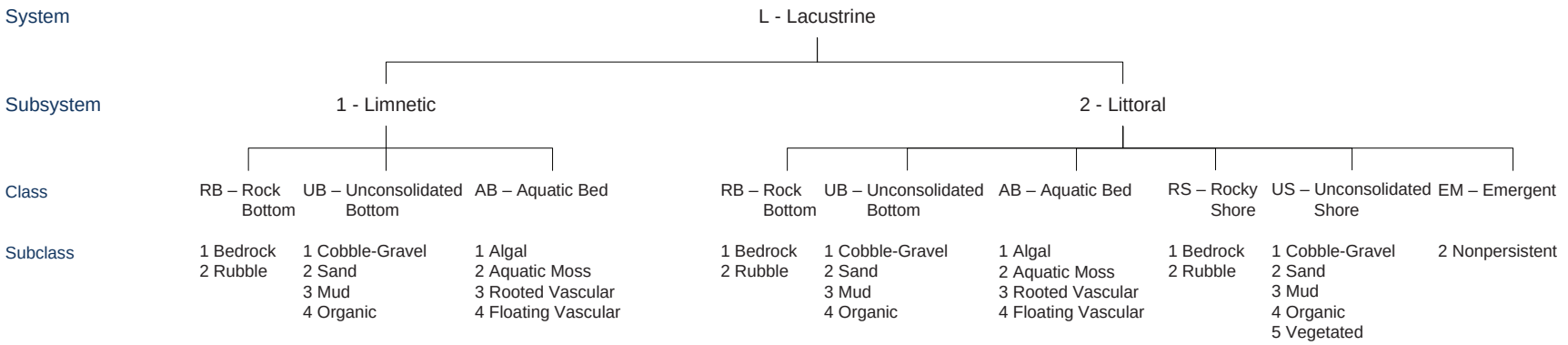


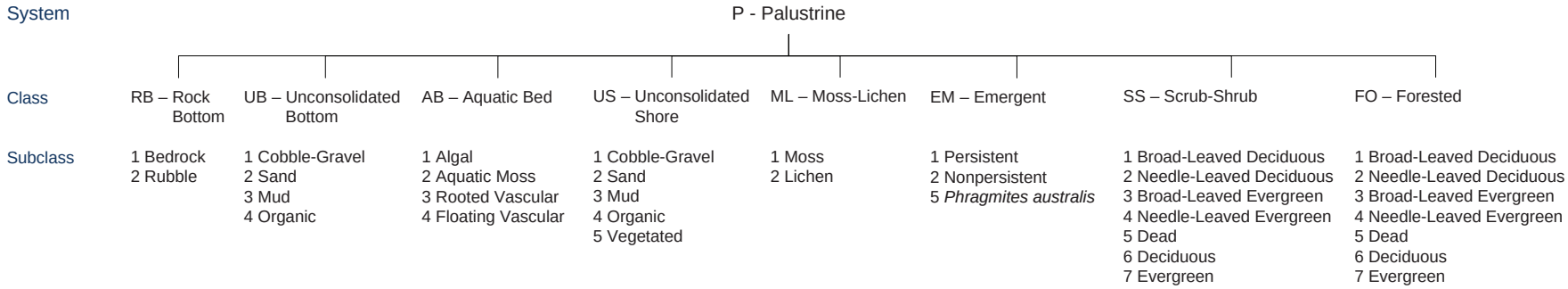
Figure 6b. NWI Wetlands and Deepwater Code Map Diagram, Part 1

August, 2015

Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al*. 1979

NWI Wetlands and Deepwater Map Code Diagram





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy.

Water Regime			Special Modifiers	Water Chemistry		Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Halinity/Salinity**	**pH Modifiers for Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded- Fresh Tidal	b Beaver	1 Hyperhaline / Hypersaline	a Acid	g Organic
B Seasonally Saturated	M Irregularly Exposed	Q Regularly Flooded-Fresh Tidal	d Partly Drained/Ditched	2 Euhaline / Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	R Seasonally Flooded-Fresh Tidal	f Farmed	3 Mixohaline / Mixosaline (Brackish)	i Alkaline	
D Continuously Saturated	P Irregularly Flooded	T Semipermanently Flooded-Fresh Tidal	m Managed	4 Polyhaline		
E Seasonally Flooded / Saturated		V Permanently Flooded-Fresh Tidal	h Diked/Impounded	5 Mesohaline		
F Semipermanently Flooded			r Artificial Substrate	6 Oligohaline		
G Intermittently Exposed			s Spoil	0 Fresh		
H Permanently Flooded			x Excavated			
J Intermittently Flooded						
K Artificially Flooded						

Figure 6c. NWI Wetlands and Deepwater Code Map Diagram, Part 2

ATTACHMENT 2.

Tables

Attachment 1. Table 1. Special-Status Plants with Potential to Occur in the Vicinity of the Project Site, Richmond, Contra Costa County, California

SPECIES	STATUS FED/STATE/CNPS[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Napa false indigo (*Amorpha californica* var. *napensis*)	--/--/1B.2	Broad-leafed upland forest, chaparral, cismontane woodland; openings in forest or woodland or in chaparral (150-2000m).	Not present. Suitable habitat is not present at the site.
Bent-flowered fiddleneck (*Amsinckia lunaris*)	--/--/1B.2	Cismontane woodland and valley and foothill grassland. 50-500m.	Not present. Suitable habitat is not present at the site.
Mt. Tamalpais manzanita (*Arctostaphylos hookeri ssp. montana*)	--/--/1B.3	Chaparral, valley and foothill grassland. Known from fewer than 20 occurrences in the Mt. Tamalpais area, Marin County. Serpentine slopes in chaparral and grassland: 160-760 m.	Not present. No suitable habitat in the project vicinity.
Pallid manzanita *(Arctostaphylos pallida)*	FT/CE/1B.1	Broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. Grows on uplifted marine terraces on siliceous shale or thin chert. May require fire. 180-460 m.	Not present. Suitable habitat is not present at the site.
Alkali Milk-vetch (*Astragalus tener* var. *tener*)	--/--/1B.2	Inhabits low ground, alkali flats and flooded land in valley and foothill grasslands or in playas or vernal pools. 1-170m.	Not present. Suitable habitat is not present at the site.
Round-leaved filaree (*California macrophylla*)	--/--/1B.1	Found on clay soils in cismontane woodland and valley and foothill grasslands. 15-1200m.	Not present. Suitable habitat is not present at the site.
Tiburon mariposa-lily *(Calochortus tiburonensis)*	FT/CT/1B.1	Serpentine slopes in Valley and Foothill Grassland. Found on open rocky slopes 50-150 m.	Not present. Suitable habitat is not present at the site.
Coastal bluff morning-glory *(Calystegia purpurata ssp. saxicola)*	--/--/1B.2	Found Coastal dunes, Coastal scrub, Coastal bluff scrub and North coniferous forest. 5-430 m.	Not present. Suitable habitat is not present at the site.
Northern meadow sedge *(Carex praticola)*	--/--/1B.2	Meadows and seeps. Moist to wet meadows. 15-3200 m.	Not present. Suitable habitat is not present at the site.
Tiburon paintbrush (*Castilleja affinis* ssp. *neglecta*)	FE/CT/1B.2	Rocky serpentine sites within valley and foothill grassland. 75-400m.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE/CNPS[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Points Reyes salty bird's beak (*Chloropyron maritimum palustre*)	--/--/1B.2	Usually in coastal salt marsh with *Salicornia, Distichlis, Jaumea, Spartina,* etc. 0-15m.	Not present. Suitable habitat is not present at the site.
Soft salty bird's beak *Chloropyron molle ssp. molle*	FT/Rare/1B.1	Found in Coastal salt marsh with *Distichlis*, *Salicornia, Frankenia*, etc. 0-5 m.	Not present. Suitable habitat is not present at the site.
Franciscan thistle (*Cirsium andrewsii*)	--/--/1B.2	Coastal bluff scrub, broadleaved upland forest and coastal scrub. Sometimes found in serpentine seeps. 0-150m.	Not present. Suitable habitat is not present at the site.
San Francisco collinsia (*Collinsia multicolor*)	FE/CE/1B.1	Found in closed-cone coniferous forest and coastal scrub. Usually on decomposed mudstone shale mixed with humus. 30-250m.	Not present. Suitable habitat is not present at the site.
Western leatherwood (*Dirca occidentalis*)	--/--/1B.2	On brushy slopes and mesic sites mostly in mixed evergreen and foothill woodland communities. 30-550m.	Not present. Suitable habitat is not present at the site.
Tiburon buckwheat *(Eriogonum luteolum* var. *caninum)*	--/--/1B.2	Chaparral, valley and foothill grassland, cismontane woodland and coastal prairie. On sandy to gravelly sites on serpentine soils. 0-700m.	Not present. Suitable habitat is not present at the site.
Minute pocket moss *(Fissidens pauperculus)*	--/--/1B.2	Found in North Coast coniferous forest. This moss grows on damp soil along the Coast and found in dry streambeds and on stream banks. 10-1024 m.	Not present. Suitable habitat is not present at the site.
Fragrant fritillary *(Fritillaria liliacea)*	--/--/1B.1	Coastal scrub, valley and foothill grassland, coastal prairie, often on ultramafic soils. 3-410m.	Not present. Suitable habitat is not present at the site.
Dark-eyed gilia *(Gilia millefoliata)*	--/--/1B.2	Coastal dunes. 2-20m.	Not present. Suitable habitat is not present at the site.
Diablo helianthela *(Helianthela castenea)*	--/--/1B.2	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils. Often in partial shade. 25-1150m.	Not present. Suitable habitat is not present at the site.
Marin western flax (*Hesperolinon congestum*)	FT/CT/1B.1	Chaparral, valley and foothill grassland. Found in serpentine barrens and serpentine grassland and chaparral. 30-365 m.	Not present. No suitable habitat in the project vicinity.

SPECIES	STATUS FED/STATE/CNPS[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Loma Prita hoita (Hoita strobilina)	--/--/1B.1	Found in mesic sites and in serpentine within chaparral, cismontane woodland, and riparian woodland.60-975 M.	Not present. Suitable habitat is not present at the site.
Santa Cruz tarplant *(Holocarpha macradenia)*	FT/CE/1B.1	Sandy soil or sandy clay in coastal prairie and valley and foothill grassland. 10-260m.	Not present. Suitable habitat is not present at the site.
Carquinez goldenbush *(Isocoma argute)*	--/--/1B.1	Found in Valley and Foothill grassland. On alkaline soils, flats and lower hill. Found on low benches near drainages and on tops and sides of mounds in swale habitat. 1-50 m.	Not present. Suitable habitat is not present at the site.
Contra Costa Goldfields (*Lasthenia conjugens*)	FE/--/1B.1	Vernal pools, swales, low depressions, in open grassy areas. 1-445m. Extirpated from most of its range. Most remaining occurrences restricted to the Fairfield region.	Not present. Suitable habitat is not present at the site.
Delta Tule Pea (*Lathyrus jepsonii* var. *jepsonii*)	--/--/1B.2	Inhabits the banks of sloughs and bays in the Suisun Bay and Delta. Found in freshwater and brackish marshes.	Not present. Suitable habitat is not present at the site.
Mason's lilaeopsis (*Lilaeopsis masonii*)	--/CR/1B.1	Inhabits the edges of mudflats in brackish marsh and riparian scrub in the Delta. 0-10m.	Not present. Suitable habitat is not present at the site.
Oregon meconella *(Meconella oregana)*	--/--/1B.1	Open moist places within Coastal Prairie and Coastal Scrub. 60-640 M.	Not present. Suitable habitat is not present at the site.
Marsh microseris (*Microseris paludosa*)	-/-/1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300m.	Not present. Suitable habitat is not present at the site.
White-rayed pentachaeta (*Pentachaeta bellidiflora)*	FE/CE/1B.1	Mostly on soils derived from serpentine bedrock or open, dry rocky slopes and grassy areas of valley and foothill grassland.	Not present. Appropriate habitat not present on site.
Hairless popcornflower *(Plagiobothrys glaber)*	--/--/1A	Found in meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows. 5-125m.	Not present. Suitable habitat is not present at the site.
Oregon Polemonium *(Polemonium carneum)*	--/--/2B.2	Found in Coastal prairie, coastal scrub and lower montane coniferous forest. 0-1830m.	Not present. Appropriate habitat not present on site.
Marin knotweed (*Polygonum marinense*)	--/--/3.1	Coastal salt marshes and brackish marshes. 0-10m.	Not present. Suitable habitat is not present at the site.
Chaparral ragwort *(Senecio aphanactis)*	--/--/1B.2	Known from foothill woodland and chaparral habitats.	Not present. Suitable habitat not present on site.

SPECIES	STATUS FED/STATE/CNPS[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Santa Cruz microseris (*Stebbinsoseris decipiens*)	--/--/1B.2	Found in broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie and coastal scrub. Occurs in open areas on seaward slopes in loose or disturbed soil, usually derived from sandstone, shale or serpentine. 10-500m.	Not present. Suitable habitat is not present at the site.
Most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*)	--/--/1B.2	Found on serpentine outcrops and ridges and slopes within chaparral, valley and foothill grassland, and cismontane woodland. 95-1000m.	Not present. Suitable habitat is not present at the site.
Tiburon jewelflower *(Streptanthus glandulosus ssp. niger)*	FE/CE/1B.1	Found on shallow, rocky, serpentine slopes in Valley and Foothill grassland. 30-150 m.	Not present. Suitable habitat is not present at the site.
California seablite *(Suaeda californica)*	FE/--/1B.1	Margins of coastal salt marshes. 0-5m.	Not present. Suitable habitat is not present at the site.
Suisun Marsh aster (*Symphyotrichum lentum*)	--/--/1B.2	Both brackish and freshwater marshes and swamps. 0-3m.	Not present. Suitable habitat is not present at the site.
Saline clover (*Trifolium depauperatum* var. *hydrophilum*)	--/--/1B.2	Found in mesic alkaline sites in marshes and swamps, valley and foothill grassland and vernal pools. 0-300m.	Not present. Suitable habitat is not present at the site.
Two-fork clover (*Trifolium amoenum*)	FE/--/1B.1	Inhabits moist clay grassland soils; known from one extant occurrence in Marin County. 5-560m.	Not present. Suitable habitat is not present at the site.
Coastal triqeutrella *(Triquetrella californica)*	--/--/1B.2	Grows within 30m of the coast in coastal scrub, grasslands and open gravels on roadsides, hillsides, rocky slopes and fields. Found on gravel or thin soil over outcrops. 10-100m.	Not present. Suitable habitat is not present at the site.

1. **Source**: *California Natural Diversity Data Base*, Natural Heritage Division, California Department of Fish and Wildlife for the Richmond 7.5 Minute Quadrangle Map and surrounding areas, information dated August 2017.
2. **Status Codes**:
   - FE Federally-listed Endangered
   - FT Federal-listed Threatened
   - FPE Federal Proposed Endangered
   - FPT Federal Proposed Threatened

CE	California State-listed Endangered
CT	California State-listed Threatened
CR	California Rare
FP	California Fully Protected
CSC	California Species of Special Concern

2. Status Codes (Continued):

California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.
California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.
California Rare Plant Rank 3: Plants about which more information is needed – a review list.
California Rare Plant Rank 4: Plants of limited distribution – a watch list.
CNPS Threat Ranks
0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Attachment 1. Table 2. Special Status Animal Species that Have Been Reported in the Project Area, Richmond, Contra Costa County, California

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Lee's micro-blind harvestman *(Microcina leei)*	--/--	Xeric habitats in the San Francisco Bay Region. Found beneath sandstone rocks in open oak grassland.	Not present. Suitable habitat not present at the site.
Tiburon micro-blind harvestman *(Microcina tiburona)*	--/--	Open hilly grassland habitat in areas of serpentine bedrock. Found on the undersides of serpentine rocks near permanent springs.	Not present. Suitable habitat not present at the site.
Bridge's Coast Range shoulderband *(Helminthoglypta nickliniana bridgesi)*	--/--	Inhabits open hillsides of Alameda and Contra Costa Counties. Tends to colonize under tall grasses and weeds.	Not present. Suitable habitat not present at the site.
Mimic Tryonia or California brackishwater snail (*Tryonia imitator*)	--/--	Found in coastal lagoons, estuaries and salt marshes from Sonoma County south to San Diego County. Permanently submerged area, tolerates a variety of salinities.	Not present. Suitable habitat is not present at the site.
Obscure bumble bee *(Bombus caliginosus)*	--/--	Found in Coastal areas from Santa Barbara County north to Washington State. Food plant genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia* and *Phacelia*.	Not present. Suitable habitat not present at the site.
Western bumble bee *(Bombus occidentalis)*	--/--	This species was once common and widespread, but the species has declined precipitously from Central California to Southern British Columbia, perhaps from disease.	Not present. Suitable habitat not present at the site.
Opler's longhorn moth *(Adela oplerella)*	--/--	Ranges from Marin County on the Inner Coast Ranges to Santa Clara County. Most records are on serpentine grassland. Larvae feed on *Platystemon californicus*.	Not present. Suitable habitat is not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Monarch butterfly (*Danaus plexippus*)	--/CR	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Not present. Suitable habitat for a roost site not present at the site.
Mission blue butterfly (*Plebejus icarioides missionensis*)	FE/--	Inhabits grasslands of the San Francisco Peninsula. Larval host plants include *Lupinus albifrons*, *L. variicolor*, and *L. formosus*, favors *L. albifrons*.	Not present. Suitable habitat is not present at the site.
Marin hesperian (*Vespericola marinensis*)	--/--	Found in moist spots in coastal brushfields and chaparral vegetation in Marin County. Found under leaves of cow-parsnip, around spring seeps, in leafmold along streams and in alder woods and mixed evergreen forest.	Not present. Suitable habitat is not present at the site.
Tidewater goby *(Eucyclogobius newberryi)*	FE/CSC	Found in brackish water habitats along the California Coast from San Diego County north to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. These fish need fairly still but not stagnant water and high oxygen levels.	Not present. Suitable habitat not present at the site.
Eulachon *(Thaleichthys pacificus)*	FT/--	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawns in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand and woody debris. Has occurred in San Pablo Bay.	Not present. Suitable habitat not present at the site.
Sacramento perch (*Archoplites interruptus)*	--/CSC	Historically found in sloughs, slow-moving rivers and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates a wide range of physio-chemical water conditions.	Not present. Suitable habitat not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Longfin Smelt (*Spirinchus thaleichthys*)	FC/CT, CSC	In California, Longfin Smelt have been commonly collected from San Francisco Bay, Eel River, Humboldt Bay and Klamath River. As they mature in the fall, adults found throughout San Francisco Bay migrate to brackish or freshwater in Suisun Bay, Montezuma Slough, and the lower reaches of the Sacramento and San Joaquin Rivers. Spawning probably takes place in freshwater.	Not present. Suitable habitat not present at the site.
Delta Smelt (*Hypomesus transpacificus*)	FT/CT	During spawning they migrate upstream into shallow fresh or slightly brackish tidally-influenced backwater sloughs and channel edges. In Solano County, Delta Smelt are found in Suisun Bay/Suisun Marsh sloughs upstream through the delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties.	Not present. Suitable habitat not present at the site.
Coho Salmon-Central California Coast ESU (*Oncorhynchus kisutch*)	FE/CE	Coho Salmon spawn in streams that are narrow, shallow, clear, and cold with a strong upwelling of water through the gravel. This ESU includes tributaries to San Francisco Bay, but not the Sacramento-San Joaquin river system.	Not present. Suitable habitat not present at the site.
Steelhead - Central CA Coast ESU *Oncorhynchus mykiss)*	FT/--	Well-oxygenated streams with riffles; loose, silt-free gravel substrate. ESU encompasses drainages in San Francisco and San Pablo Bays east to the Napa River.	Not present. Suitable habitat not present at the site.
Steelhead-Central Valley ESU (*Oncorhynchus mykiss*).	FT /--	Steelhead spawn in streams that are shallow, clear, and cold with a strong upwelling of water through the gravel. The ESU encompasses the Suisun Bay/Sacramento River Delta watersheds.	Not present. Suitable habitat not present at the site.
California Giant Salamander *(Dicamptodon ensatus)*	--/--	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams and occasionally in lake and ponds. Adults found in wet forests under rocks and logs near streams and lakes.	Not present. Suitable habitat is not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
California red-legged frog (*Rana draytonii)*	FT/CSC	Mostly in lowlands and foothills in/near permanent sources of deep water but will disperse far during and after rain. Prefers shorelines with extensive vegetation.	Not present. Suitable habitat not present at the site.
Western pond turtle (*Clemmys marmorata marmorata*)	--/CSC	Aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	Not present. Suitable habitat not present at the site.
Alameda whipsnake *(Masticophis lateralis euryxanthus)*	FT/CT	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savannah and woodland habitats. Mostly found on south-facing slopes and ravines with rock outcrops, deep crevices or abundant rodent burrows where shrubs form a vegetative mosaic with oak trees and grasses.	Not present. Suitable habitat not present at the site.
California Brown Pelican *(Pelecanus occidentalis californieus)* (nesting colony and communal roosts)	Delisted/Delisted, CFP	Found in estuarine, marine, subtidal, and marine pelagic waters along California coast. Nest is a small mound of sticks or debris on rocky or low brushy slopes of undisturbed islands, usually on ground, less often bushes.	Unlikely. Suitable habitat for a nesting colony or communal roost is not present on site.
Double-crested cormorant *(Phalacrocorax auritus)* [rookery site]	--/WL	Colonial nester on coastal cliffs and offshore islands and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Not present. Suitable habitat for a rookery is not present at the site.
Great blue heron (*Ardea herodius*) [Nesting]	--/--	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are in close proximity to foraging areas such as marshes, lake margins, tide-flats, rivers and streams, wet meadows.	Not present. Suitable habitat for a rookery is not present at the site.
Great egret (*Ardea alba*) (Rookery)	--/--	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	Not present. Suitable habitat for a rookery is not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Snowy egret *(Egretta thula)*	--/--	Colonial nester with nest sites situated in protected beds of dense tules. Rookery sites are situated close to foraging areas. Found in marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Not present. Suitable habitat for a rookery is not present at the site.
Black-crowned night-heron *(Nycticorax nycticorax)* [Nesting]	--/--	Colonial nester, usually in trees but occasionally in tule patches. Rookery sites are located adjacent to foraging areas including lake margins, mud-bordered bays and marshy spots.	Not present. Suitable habitat for a rookery is not present at the site.
Osprey (*Pandion haliaetus*) [Nesting]	--/WL	Breeds in northern California from the Cascade Ranges south to Lake Tahoe, and along the coast south to Marin County. Associated strictly with large, fish-bearing waters, primarily in Ponderosa pine through mixed conifer habitats.	Not present. Suitable nest sites not present.
Bald Eagle *(Haliaeetus leucocephalus)* (nesting and wintering)	Delisted,BCC/CE,FP	In winter, maybe be found throughout most of California at lakes, reservoirs, rivers and some rangelands and coastal wetlands. California's breeding habitats are mainly located in mountains and foothill forests near permanent water sources.	Not present. Suitable nesting habitat not present on site.
Northern harrier (*Circus cyaneus)* [Nesting]	--/CSC	Coastal salt marsh and freshwater marsh; nests and forages in grasslands; nests on ground in shrubby vegetation, usually at marsh edge.	Not present. Suitable nesting habitat not present on site.
White-tailed kite (*Elanus caeruleus*) [nesting]	--/CFP	Open grassland and agricultural areas throughout Central California.	Not present. Suitable nesting habitat not present on site.
Cooper's hawk (*Accipiter cooperii*) [nesting]	--/WL	Nests primarily in deciduous riparian forests; forages in open woodlands.	Not present. Suitable nesting habitat not present on site.
Sharp-shinned Hawk (*Accipiter striatus*) [nesting]	--/WL	Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. All habitats except alpine, open prairie, and bare desert used in winter.	Not present. Suitable nesting habitat not present on site.
American peregrine falcon (*Falco peregrinus*) [nesting]	Delisted, BCC/Delisted	Inhabits open wetlands near cliffs, also occurs in some cities where nests on buildings and bridges.	Not present. Suitable nest sites not present.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Merlin (*Falco columbarius*) [wintering]	--/WL	Breeds in Canada, winters in a variety of California habitats, including grasslands, savannahs, wetlands, etc.	Not present. Suitable wintering sites not present.
Ridgway's (California clapper) rail (*Rallus obsoletus obsoletus)*	FE/CE,CFP	Found in saltwater marshes traversed by tidal sloughs in the vicinity of San Francisco Bay; associated with abundant growths of pickleweed; feeds on mollusks obtained from mud bottomed sloughs	Not present. Suitable habitat not present at the site.
California black rail *(Laterallus jamaicensis coturniculus)*	BCC/CT,CFP	Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh with dense growths of pickleweed; also occurs in freshwater and brackish marshes.	Not present. Suitable habitat not present at the site.
Western snowy plover (*Charadrius alexandrinus nivosus*) [nesting]	FT,BCC/CSC	Found on sandy beaches or marine and estuarine shores; also salt pond levees and shores of large alkali lakes; requires sandy, gravelly or friable soil substrate for nesting.	Not present. Suitable habitat not present at the site.
Long-billed curlew (*Numenius americanus*) [nesting]	BCC/WL	Breeds in wet meadows in northeastern California. Winters on the coast and in the Central Valley in coastal estuaries, upland herbaceous areas and croplands.	Not present. Suitable habitat not present at the site.
Caspian tern *(Hydroprogne caspia)*	BCC/--	Nests on sandy or gravely beaches and shell banks in small colonies inland and along the Coast. Found in inland freshwater lakes and marshes, and also brackish or salt waters of estuaries and bays.	Not present. Suitable nesting habitat not present on site.
Short-eared owl (*Asio flammeus)* [Nesting]	--/CSC	Found in marshes, both freshwater and salt; lowland meadows; irrigated alfalfa fields. Tule patches/full grass needed for nesting and daytime seclusion. Nests on dry ground in a depression concealed in vegetation.	Not present. Suitable habitat not present at the site.
Burrowing owl (*Athene cunicularia*)	BCC/CSC	Found in open dry annual or perennial grasslands, deserts and scrublands characterized by low growing vegetation. This species is a subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Not present. Suitable habitat not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Loggerhead shrike (*Lanius ludovicianus*)	BCC/CSC	Habitat includes open areas such as desert, grasslands and savannah. Nests in thickly foliaged trees or tall shrubs. Forages in open habitats, which contain trees, fence posts, utility poles, and other perches.	Not present. Suitable habitat not present at the site.
Yellow Warbler (*Setophaga petechia*) [nesting]	BCC/CSC	Breeds in deciduous riparian woodlands, widespread during fall mitigation.	Nesting not present. No suitable breeding habitat found on the site. Migrants may pass through the site in the fall.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	BCC/CSC	Requires thick continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Not present. Suitable habitat not present at the site.
Suisun Song Sparrow *(Melospiza melodia maxillaris)*	FSC/CSC	Forages and nests in dense marsh and scrub habitat along the margins of Suisun Bay.	Not present. Suitable habitat is not present at the site.
San Pablo Song Sparrow *(Melospiza melodia samuelis)*	BCC/CSC	Tidal, brackish or salt marshes, San Pablo Bay.	Not present. Suitable habitat is not present at the site.
Alameda song sparrow (*Melospiza melodia pusillula*)	BCC/CSC	Resident of salt marshes bordering south arm of San Francisco Bay.	Not present. Suitable habitat not present at the site.
Tri-colored blackbird (*Agelaius tricolor*) [nesting colony]	BCC/CE	Breeds near freshwater, usually in tall emergent vegetation. Colonies prefer heavy growth of cattails and tules. Uses grasslands and agricultural lands for foraging.	Not present. Suitable habitat not present at the site.
Yellow-headed blackbird *(Xanthocephalus xanthocephalus)*	--/CSC	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as dragonflies are abundant. Nesting is timed with maximum emergence of aquatic insects.	Not present. Suitable habitat not present at the site.
Silver-haired bat (*Lasionycteris noctivagans*)	--/--	Coastal and montane forests. Feeds over streams, ponds and open bushy areas, roosts in hollow trees.	Not present. Suitable habitat is not present at the site.
Pallid bat *(Antrozous pallidus)*	--/CSC	Roosts primarily in oak woodland and ponderosa pine habitats; forages in open areas.	Not present. Suitable habitat not present at the site.

SPECIES[1]	STATUS FED/STATE[2]	HABITAT	OCCURRENCE ON THE PROJECT SITE
Hoary bat (*Lasuirus cinereus*)	--/--	Prefers open habitats with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees.	Not present. Suitable habitat not present at the site.
Townsend's Big-eared Bat *(Corynorhinus townsendii)*	--/CCT,CSC	Found in desert scrub and coniferous forests. Roost in caves or abandoned mines and occasionally are found to roost in buildings.	Not present. Suitable habitat not present at the site.
Salt marsh harvest mouse (*Reithrodontomys raviventris*)	FE/CE,CFP	Inhabits saline emergent wetlands in the San Francisco Bay and its tributaries. Pickleweed is the primary habitat.	Not present. Suitable habitat not present at the site.
Salt-marsh wandering shrew (*Sorex vagrans halicoetes)*	--/CSC	Found in salt marshes of the south arm of San Francisco Bay in medium high marsh 6-8 feet above sea level where abundant driftwood is scattered among *Salicornia*.	Not present. Suitable habitat not present at the site.
Suisun Shrew *(Sorex ornatus sinuosus)*	--/CSC	Inhabits tidal marshes along the northern shores of San Pablo and Suisun Bays.	Not present. Suitable habitat is not present at the site.
San Pablo vole *(Microtus californicus sanpabloensis)*	--/CSC	Found in salt marshes of San Pablo Creek on the south shore of San Pablo Bay. Constructs burrow in soft soil. Feeds on grasses, sedges and herbs. Forms a network of runways leading from the burrow.	Not present. Suitable habitat is not present at the site.
Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis)*	--/--	Found in open grassy hilltops and open spaces in chaparral and blue oak/digger pine woodlands. Needs fine, deep, well-drained soil for burrowing.	Not present. Suitable habitat not present at the site.
Angel Island mole *(Scapanus latimanus insularis)*	--/--	Known only from Angel Island in San Francisco Bay. Needs friable soils for burrowing.	Not present. Suitable habitat not present at the site.
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	--/CSC	Found in forested habitats of moderate canopy and moderate to dense understory.	Not present. Suitable habitat not present at the site.

1. **Source**: *California Natural Diversity Data Base*, Natural Heritage Division, California Department of Fish and Wildlife for the Richmond 7.5 Minute Quadrangle Map and surrounding areas, information dated August 2017.
2. **Status Codes:**

FE Federally-listed Endangered CE California State-listed Endangered

FT Federally-listed Threatened
FPE Federally Proposed Endangered
FPT Federally Proposed Threatened
BCC USFWS Bird Species of Conservation Concern

CT California State-listed Threatened
CCT California Candidate for State-listed Threatened
CR California Rare
CFP California Fully Protected
CSC CDFW Species of Special Concern
WL CDFW Watch List Species

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DMITRI TIOUPINE
Tree Care & Preservation

Pre-Development Tree Assessment Report

Date: 2/12/2018
Client: CenterPoint Properties
Location: CenterPoint Development Site, 506 and 550 Brookside Drive, Richmond, California.
Visit Date: 2/09/2018

Assignment

1) Site visit to evaluate condition of trees, measuring at 4.5 feet (DBH), identifying species and heritage status of the trees within the proposed development.

2) Preparation of the report for Development Permit.

Description of the subject trees and location

The first group of trees is located at 506 Brookside Drive:

Tree #1: Coast Redwood (Sequoia *sempervirens*) with double trunks, a DBH 37" at 3', approximately 60' in height with a canopy spread of approximately 37'. The tree health appeared good with average vigor. Some structural defects such as stem inclusions were present. This is a protected species; removal permit is required. (See Figure 1.)

Tree #2: Atlas cedar (Cedrus *atlantica*) with a DBH 20", approximately 35' in height with a canopy spread of approximately 45'. The tree health appeared good with average vigor and insignificant structural defects. This tree is protected due to its size; removal permit is required. (See Figure 2.)

Tree #3: Deodar cedar (Cedrus *deodara*) with a DBH 16", approximately 25' in height with a canopy spread of approximately 15'. The tree health appeared good with average vigor. Structural defects such as stem inclusions were present. (See Figure 3.)
This tree is protected due to its size; removal permit is required.

Tree #4: Juniper (Juniperus *?*) with a DBH 14", approximately 20' in height with a canopy spread of approximately 10'. The tree health appeared fair with some canker spots throughout the canopy and some structural defects such as stem inclusions were present. This tree is protected due to its size; removal permit is required.
(See Figure 4.)

Tree #5: Monkey puzzle (Araucaria *araucana*) with a DBH 16", approximately 30' in height with a canopy spread of approximately 20'. The tree health appeared good with average vigor and insignificant structural defects. This tree is protected due to its size; removal permit is required. (See Figure 5.)

There were various small ornamental and fruit trees throughout the property. No removal permit is required. (See Figure 6.)

The second group of trees is located at 550 Brookside Drive:

Tree #7: Coast Live oak (Quercus *agrifolia*) with a DBH 16", approximately 25' in height with a canopy spread of approximately 35'. The tree health appeared good with average vigor. Some structural defects such as stem inclusions were present. This is a protected species; removal permit is required. (See Figure 7.)

Tree #8: Southern magnolia (Magnolia *grandiflora*) with a DBH 18", approximately 25' in height with a canopy spread of approximately 18'. The tree health appeared good with average vigor. Some structural defects such as stem inclusions were present. This tree is protected due to its size; removal permit is required. (See Figure 8.)

There were various small ornamental trees throughout the property. No removal permit is required. (See Figure 9.)

Figure 1: Tree #1: Coast Redwood (Sequoia *sempervirens*)

Figure 2: Tree #2: Atlas cedar (Cedrus *atlantica*)

Figure 3: Tree #3: Deodar cedar (Cedrus *deodara*)

Figure 4: Tree #4: Juniper (Juniperus *?*)

Figure 5: Tree# 5: Monkey puzzle (Araucaria *araucana*)

Figure 6: Various small ornamental and fruit trees

Figure 7: Tree #7: Coast Live oak (Quercus *agrifolia*)

Figure 8: Tree #8: Southern magnolia (Magnolia *grandiflora*)

Figure 9: Various small ornamental trees

Please feel free to contact me with any questions about this report.

Sincerely,

Dmitri A. Tioupine
Certified Arborist, #WE-4490A
Qualified Tree Risk Assessor #1858
CA CLN 707545

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Richmond (3712283))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G2G3	S1	SSC
Arctostaphylos pallida pallid manzanita	PDERI04110	Threatened	Endangered	G1	S1	1B.1
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Calystegia purpurata ssp. saxicola coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Hydroprogne caspia Caspian tern	ABNNM08020	None	None	G5	S4	
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G5	S3S4	
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
Melospiza melodia samuelis San Pablo song sparrow	ABPBXA301W	None	None	G5T2	S2	SSC
Microcina leei Lee's micro-blind harvestman	ILARA47040	None	None	G1	S1	
Microtus californicus sanpabloensis San Pablo vole	AMAFF11034	None	None	G5T1T2	S1S2	SSC
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Maritime Chaparral Northern Maritime Chaparral	CTT37C10CA	None	None	G1	S1.2	
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G5T1	S1	FP
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Sorex vagrans halicoetes salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 44

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CNPS California Native Plant Society

Inventory of Rare and Endangered Plants

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

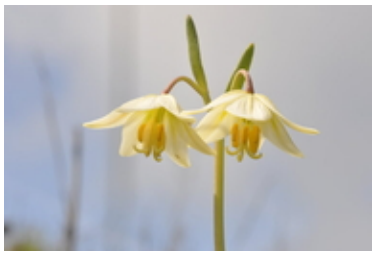
17 matches found. *Click on scientific name for details*

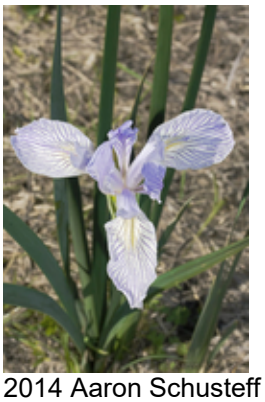
Search Criteria

Found in Quad 3712283

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Remove Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	Federal Listing Status	State Listing Status	State Rank	CA Rare Plant Rank	Photo
Arctostaphylos pallida	pallid manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	FT	CE	S1	1B.1	 2014 Neal Kramer
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun			S1	1B.2	 1991 Dean Wm. Taylor
Calochortus umbellatus	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May			S3?	4.2	 2013 Christopher Gurney
Calystegia purpurata ssp.	coastal bluff morning-	Convolvulaceae	perennial herb	(Mar)Apr-Sep			S2S3	1B.2	

saxicola	glory						 2013 John Doyen
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	S2	1B.2	 2013 Robert Sikora
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	S2	1B.2	 2004 David A. Tharp
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	S2	1B.2	 2009 Shawn DeCew
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	S2	1B.2	 2007 Erin McDermott
Hoita strobilina	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	S2?	1B.1	

									 2005 David A. Tharp
Holocarpha macradenia	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	FT	CE	S1	1B.1	 2009 Zoya Akulova
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May			S3	4.2	 2014 Aaron Schusteff
Meconella oregana	Oregon meconella	Papaveraceae	annual herb	Mar-Apr			S2	1B.1	 2010 Ryan Batten
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May			S3	4.2	 2008 Jorg Fleige
Spergularia macrotheca var. longistyla	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May(Jun)			S2	1B.2	no photo available
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)			S2	1B.2	


1994 Robert E. Preston, Ph.D.

Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	FE	S1	1B.1	


2010 Chris Winchell

Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun		S2	1B.2	


2005 Aaron Schusteff

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 08 November 2019].

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