Appendix C:
Biological Resources Supporting Information

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Biological Resources Assessment
Arroyo Lago Residential Project
County of Alameda

Project Applicant:
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Date: February 7, 2024

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SECTION 1: INTRODUCTION

This Biological Resources Assessment (BRA) has been prepared by FirstCarbon Solutions (FCS) for the proposed Arroyo Lago Residential Project (proposed project). The purpose of the BRA is to (1) document existing and potentially occurring biological resources on the Study Area and adjacent areas; (2) analyze potential project-related impacts on regulated biological resources; (3) summarize relevant local, State, and federal regulations; and (4) recommend appropriate measures to mitigate potential impacts on biological resources to less than significant levels.

1.1 - Project Location and Description

1.1.1 - Study Area

The 150.25-acre Study Area is located directly east of the City of Pleasanton city limits (Exhibit 1). The Study Area is generally located south of Lakes I and H, and west of Cope Lake (part of the Zone 7 Water Agency Chain of Lakes), although there is a portion of the Study Area that bisects Lake I and Cope Lake (Exhibit 2). The Study Area can be accessed on the northside of the eastern terminus of Busch Road. The Study Area is located within the unincorporated Alameda County but is also within the City of Pleasanton's Sphere of Influence (SOI). Presently, the Study Area is vacant with no structures or existing development other than the existing Busch and El Charo Roads. The Study Area consists of three Assessor's Parcel Numbers (APNs)—APN 946-4634-1, 946-4634-2, and 946-1350-3-10. Specifically, the Study Area is located within the *Livermore, Californi*a United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map (Latitude 37° 40' 38.28" North; Longitude 121° 51' 22.68" West).

1.1.2 - Project Site and Project Impact Area

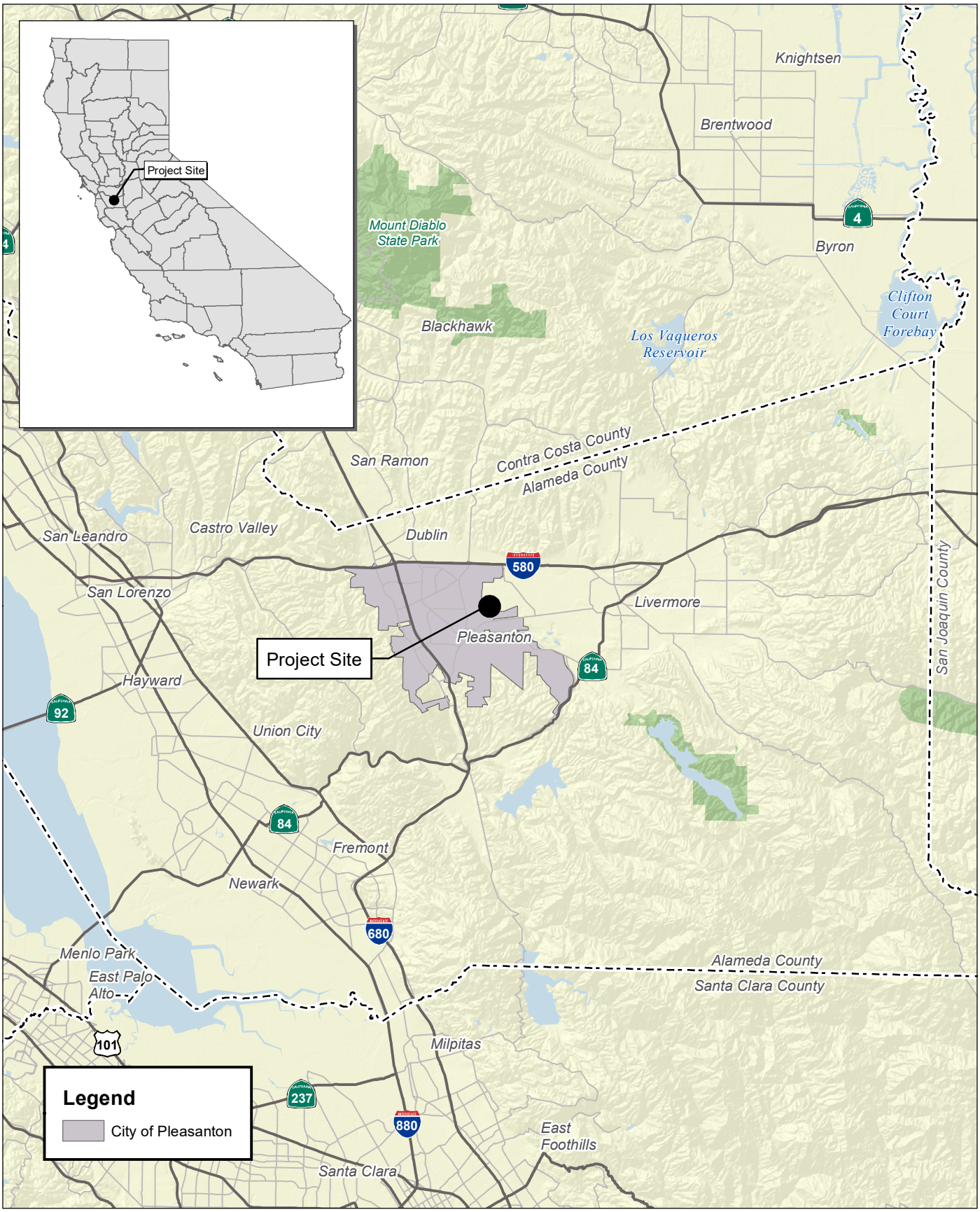
The 26.6-acre project site is a subset of the greater Study Area. All project-related activities (e.g., the Project Impact Area/limit of disturbance) would occur within the Study Area. The Project Impact Area includes the project site and any associated off-site improvements.

The 330 Land Company (project applicant) proposes to construct 194 market-rate single-family homes with approximately 25 percent (49 homes) designed as affordable junior Accessory Dwelling Units (ADUs), a 0.7-acre centrally located private park, and approximately 0.5 mile of designated public walking trails on the 26.6-acre project site. The proposed project would include internal roadways and two driveways on Busch Road to facilitate access and circulation within the project site (Exhibit 3a).

Additionally, the proposed project would include off-site infrastructure to support the proposed development, including an approximately 1-acre sewer treatment plant, an approximately 0.4-acre water storage and booster pump facility, an approximately 2.5-acre recycled water storage facility with an approximately 10 to 15-foot depth, approximately 8.5 acres of agricultural irrigation recycled water spray fields, and two bioretention areas with treatment areas sized at approximately 0.9-acre and 0.03-acre respectively.

The proposed water storage and booster pump facility as well as the approximately 0.03-acre sewer treatment plant would be located northeast of the project site between Lake I and Cope lake, accessed by El Charro Road. The proposed sewer treatment plant and recycled water storage facility would be located east of the project site, directly south of Lake I, and adjacent to the west side of El Charro Road. The proposed agricultural irrigation recycled water spray fields would be located east of the project site and east of El Charro Road. A stormwater outfall is also proposed east of El Charro Road south of the irrigation recycled water spray field. The location of the approximately 0.9-acre bioretention area is being considered under two design options. Design Option A would cluster the bioretention area directly east of the sewer treatment plant and south of the recycled water storage facility. Design Option B would locate the bioretention area southwest of the agricultural spray field, adjacent to the east side of El Charro Road. The Project Impact Area for Design Option A includes 65.37 acres, and the Project Impact Area for Design Option B covers 64.97 acres. The locations of these off-site components under both design options are provided in Exhibits 3b and 3c.

The proposed project would also include an approximately 4.24-acre temporary soil harvest site and haul routes to bring soil to the project site during construction. It would be located west of the proposed sewer treatment plant and recycled water storage facility, south of Lake I, and east of the project site. Exhibits 3b and 3c depict the location of the soil harvest site and the haul routes to the project site.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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330 LAND COMPANY, LLC
ARROYO LAGO RESIDENTIAL PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

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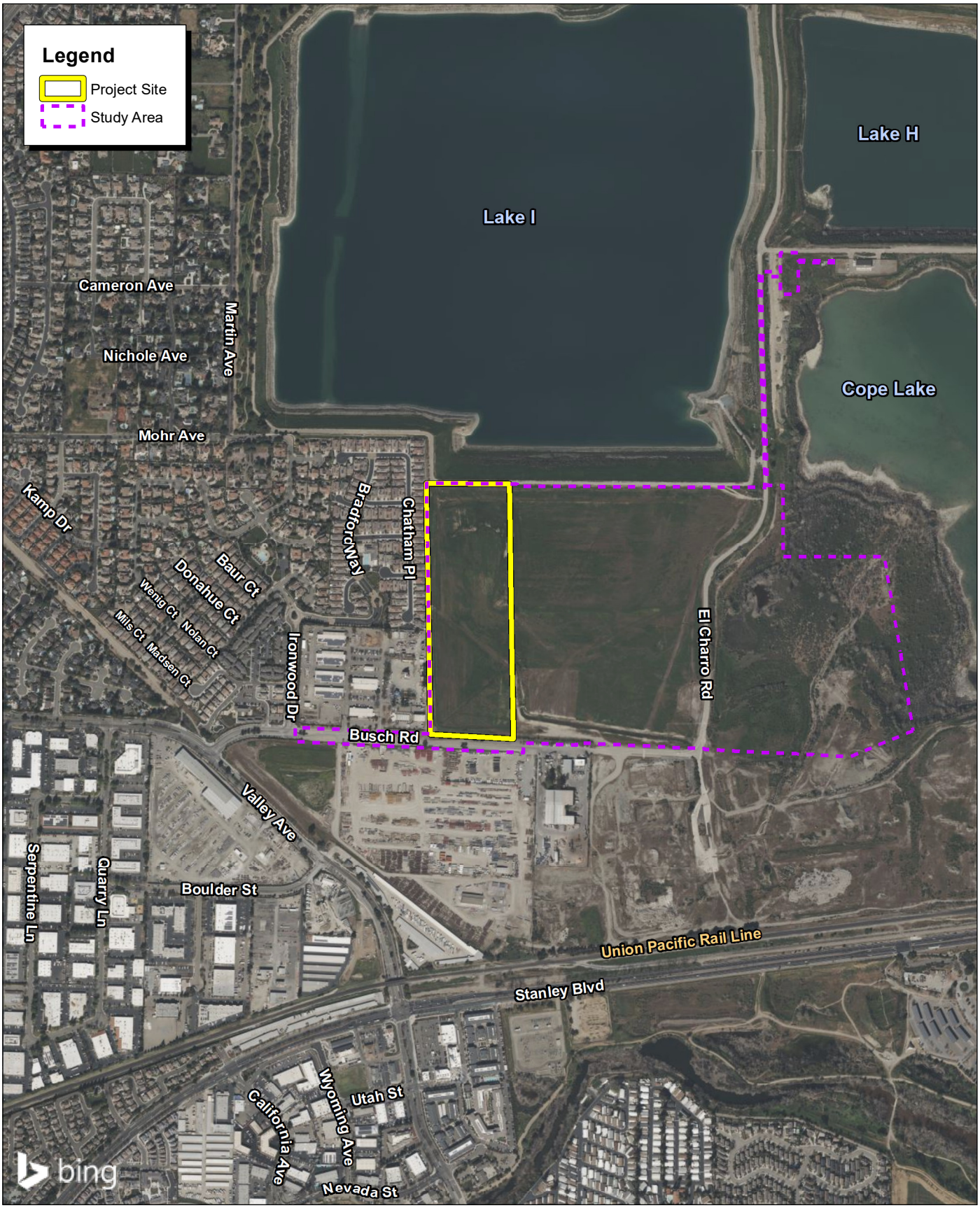

Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023.

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1,000 500 0 1,000 Feet

Exhibit 2
Local Vicinity Map

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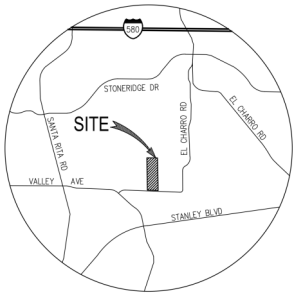

VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROJECT BOUNDARY
		CURB, GUTTER AND SIDEWALK
		CENTERLINE
		RIGHT OF WAY
		LOT LINE

0 100 200 300

Source: CBG Civil Engineers. 09/2023.

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Exhibit 3a
Project Site Plan

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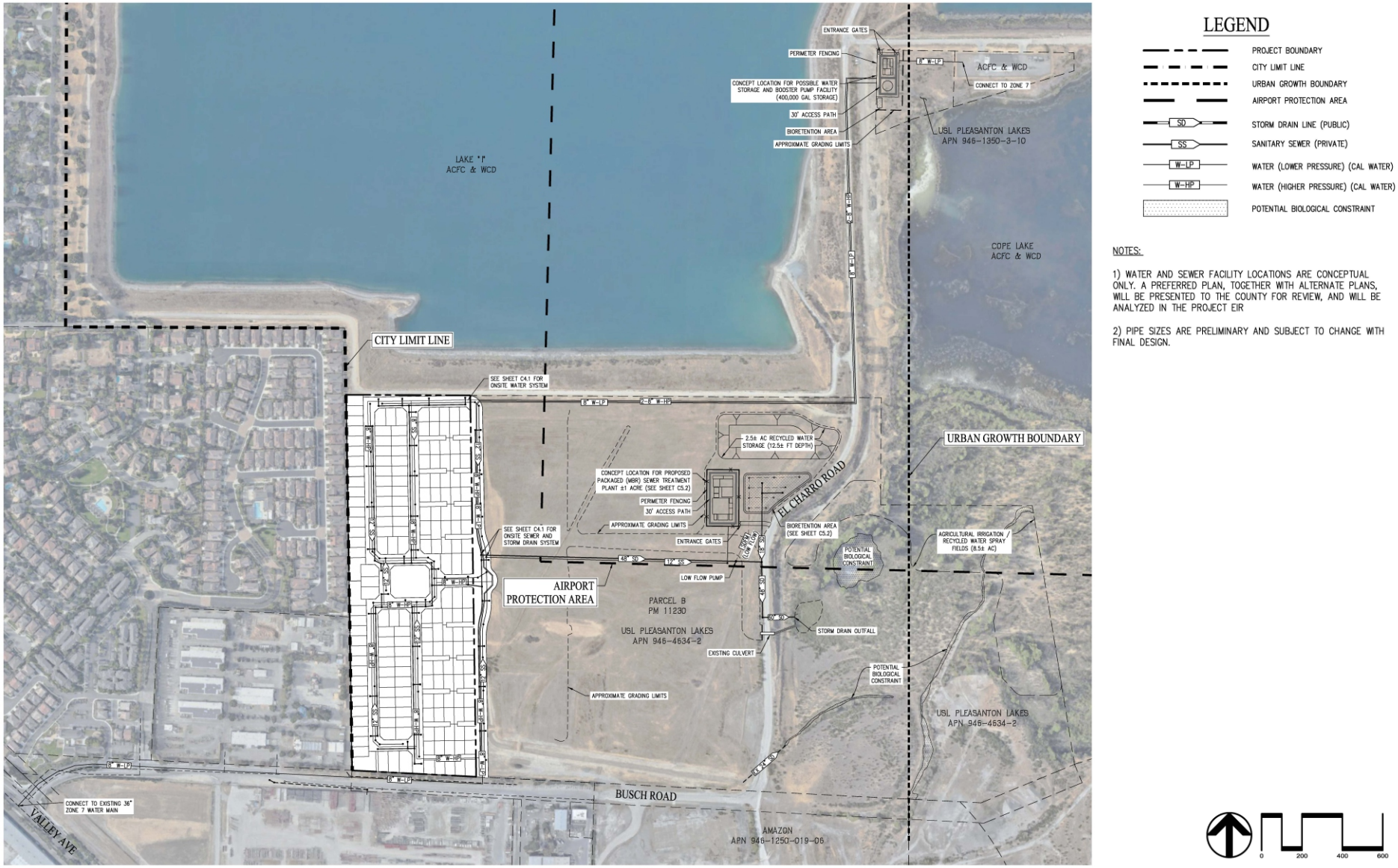

Source: CBG Civil Engineers. 12/2023.

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Exhibit 3b
Design Option A
Offsite Utility Plan - Sanitary Sewer & Water Plan

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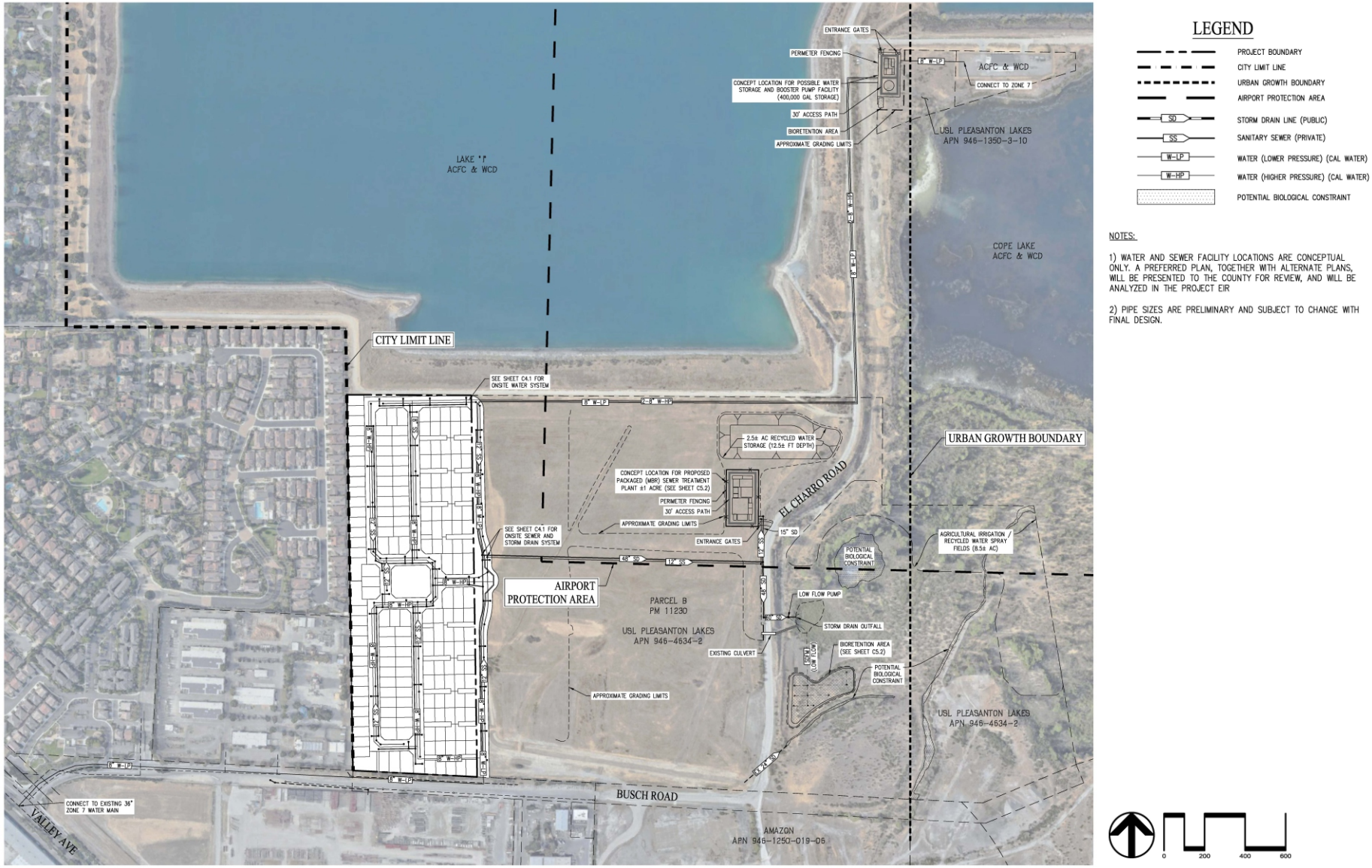

Source: CBG Civil Engineers. 12/2023.

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Exhibit 3c
Design Option B
Offsite Utility Plan - Sanitary Sewer & Water Plan

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SECTION 2: REGULATORY SETTING

2.1 - Federal

2.1.1 - Endangered Species Act of 1973

The United States Fish and Wildlife Service (USFWS) has jurisdiction over species listed as threatened or endangered under the federal Endangered Species Act of 1973. Section 9 of Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process.

2.1.2 - Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under the MBTA (16 United States Code [USC] § 703, *et seq*.).

2.1.3 - Bald and Golden Eagle Protection Act

The golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) are afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC § 669, *et seq*.) and the Bald and Golden Eagle Protection Act (16 USC §§ 668–668d).

2.1.4 - Clean Water Act

Section 404

The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States.

As of the preparation of this report, the final "Revised Definition of Waters of the United States" rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states and for certain parties due to litigation. Moreover, the United States Environmental Protection Agency (EPA) and USACE (hereafter known as the agencies) are in receipt of the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in *Sackett*.[1] As a result of ongoing litigation, the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice.

[1] United States Environmental Protection Agency (EPA). 2023. Website: https://www.epa.gov/wotus/current-implementation-watersunited-states. Accessed December 7, 2023.

Therefore, since the agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice, our analysis follows 40 Code of Federal Regulations 230.3(s) in effect under the pre-2015 regulatory regime, which defines "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
   a) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   b) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   c) Which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under this definition.
5. Tributaries of waters identified in paragraphs(s) (1) through (4) of this section.
6. The territorial sea.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs(s) (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 Code of Federal Regulations 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater 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. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401

As stated in Section 401 of the CWA, "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

2.2 - State

2.2.1 - CEQA Guidelines

The California Environmental Quality Act (CEQA) requires public agencies to evaluate potential impacts to special-status species and their habitat. The following CEQA Guidelines Appendix G checklist questions serve as thresholds of significance when evaluating the potential impacts of a proposed project on biological resources. Impacts are considered significant if a project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on federally and State-protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

Oak Woodlands Conservation Act

Senate Bill (SB) 1334, the Oak Woodlands Conservation Act (Assembly Bill [AB] 242 2001), became law on January 1, 2005, and was added to the CEQA statutes as 21083.4. This statute requires that a county must determine whether or not a project will result in a significant impact on oak woodlands

and, if it is determined that a project may result in a significant impact on oak woodlands then the County shall require one or more of the following mitigation measures:

- Conserve oak woodlands through the use of conservation easements;
- Plant an appropriate number of trees, including maintenance of plantings and replacement of failed plantings;
- Contribute funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements;
- Other mitigation measures developed by the County.

2.2.2 - California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows the CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

2.2.3 - California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (NPPA) (FGC § 1900, *et seq*.) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

In addition to formal listing under the Endangered Species Act and CESA, some species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a "Species of Special Concern." The CDFW maintains lists of "Species of Special Concern" that serve as species "watch lists." Species with this status may have limited distributions or limited populations, and/or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA, and specific protection measures may be warranted. In addition to Species of Special Concern, the CDFW Special Animals List identifies animals that are tracked by the California Natural Diversity Database (CNDDB) and may be potentially vulnerable but warrant no federal interest and no legal protection.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society (CNPS) List ranked 1A, 1B, and 2 would typically require evaluation under CEQA.

Fish and Game Code Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project Study Area and determine whether the proposed project would have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

Fish and Game Code Section 1602 requires any entity to notify the CDFW before beginning any activity that "may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake" or "deposit debris, waste, or other materials that could pass into any river, stream, or lake." "River, stream, or lake" includes

waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement would be required if the CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water. CDFW jurisdiction typically extends to the edge or "drip line" of the riparian habitat or top of bank.

2.2.4 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland/waters of the State determinations and the permitting process.[2]

2.2.5 - California Native Plant Society

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4: Watch List:** Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations. Nevertheless, some level of CEQA review is justified for California Rare Plant Rank (CRPR) 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon's distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some CRPR 4 taxa occurrences as regionally rare or unique. One limitation to fully analyzing

[2] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. November 17, 2023.

impacts on CRPR 4 taxa is the difficulty in obtaining current data on the number and condition of the occurrences.[3]

2.3 - Regional and Local

2.3.1 - East Alameda County Conservation Strategy

The East Alameda County Conservation Strategy (EACCS) intends to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects. The City of Pleasanton is a partner in the EACCS and uses the document to provide a baseline inventory of biological resources and conservation priorities during project-level planning and environmental permitting. The EACCS is a framework for guidance by regulatory agencies and does not include incidental take permits for threatened or endangered species similar to that provided by a Habitat Conservation Plan. Compliance with the EACCS is voluntary but doing so streamlines the regulatory permitting process.

The Study Area is located within Conservation Zone 2 of the EACCS, which recognizes this area as highly developed while still providing pockets of habitat for several special-status species. The EACCS describes the following conservation priorities for Conservation Zone 2:

- Protection of burrowing owl nesting and foraging habitat.
- Protection of and restoration opportunities in mixed willow riparian scrub along Arroyo del Valle and Arroyo Mocho.
- Protection of and restoration opportunities along Arroyo Seco and Arroyo Mocho to support California red-legged frog and future central California coast steelhead habitat.
- Surveys for San Joaquin spearscale and protection of extant populations.
- Surveys for Congdon's tarplant and protection of extant populations.
- Protection of vernal pool habitat.

2.3.2 - East County Area Plan (Alameda County)

The East County Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area.

Goal To preserve a variety of plant communities and wildlife habitat.

Policy 121 The County shall secure open space lands, through acquisition of easements or fee title, specifically for the preservation and protection of indigenous vegetation and wildlife.

[3] California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological. Resource Impact Analysis. Sacramento, CA. 21 January 2020.

Policy 122 The County shall encourage that wetland mitigation be consolidated in areas that are relatively large and adjacent to or otherwise connected to open space. To the extent possible, these areas should be included in, adjacent to, or linked through open space corridors with lands designated as "Resource Management" that are managed specifically for the preservation and enhancement of biological resources.

Policy 123 Where site-specific impacts on biological resources resulting from a proposed land use outside the Urban Growth Boundary are identified, the County shall encourage that mitigation is complementary to the goals and objectives of the ECAP. To that end, the County shall recommend that mitigation efforts occur in areas designated as "Resource Management" or on lands adjacent to or otherwise contiguous with these lands in order to establish a continuous open space system in East County and to provide for long-term protection of biological resources.

Policy 124 The County shall encourage the maintenance of biological diversity in East County by including a variety of plant communities and animal habitats in areas designated for open space.

Policy 125 The County shall encourage preservation of areas known to support special-status species.

Policy 126 The County shall encourage no net loss of riparian and seasonal wetlands.

Policy 127 The County shall encourage the preservation of East County's oak woodland plant communities.

Policy 128 The County shall ensure that, where quarries will be reclaimed as open space, reclamation plans are designed to restore biological value to sites through appropriate revegetation, contouring of lakes to simulate natural bodies of water, and protection or in-kind replacement of significant trees.

Policy 129 The County shall protect existing riparian woodland habitat present along the Arroyo Mocho, Arroyo Del Valle, Arroyo Las Positas, Arroyo de la Laguna; and Alamo, Tassajara, and Alameda Creeks. Exceptions to these requirements shall apply for those portions of the Arroyo del Valle to be excavated for water transfer Lakes A and B under the Specific Plan for the Livermore Amador Valley Quarry Area Reclamation, which shall instead be subject to riparian habitat restoration as specified by Policies 128 and 164; and for any approved quarry operations in Regionally Significant Construction Aggregate Resource Sector C (Arroyo Mocho) or any other streambeds, which shall also be subject to habitat restoration under Policies 128 and 164, and according to applicable State Public Resources Code requirements, to the extent that proposed reclamation specifies riparian habitat as the end use.

Policy 130 The County shall preserve an open space corridor connecting the Bird's Beak Preserve with lands designated "Resource Management." This open space corridor shall vary in width between 50 and 150 feet.

Policy 131 The County shall require that roadways be designed to minimize impacts to wildlife corridor and regional trails. Where appropriate, grade-separated crossings and/or other features shall be used to maintain the viability of the affected corridor.

Policy 132 The County shall designate a zone of approximately 200 yards around the perimeter of the defined Bird's Beak Preserve in North Livermore as a Special Management Area. Within this zone, all proposed land uses, and project designs shall be evaluated regarding their potential to affect the viability of the Springtown valley sink scrub habitat, and mitigation shall be incorporated into the approval of detailed development plans within this 200 yard zone to avoid the impact. Mitigation may take the form of clustering development to avoid sensitive areas, management practices, land swap with the FCC Monitoring Station, or other appropriate measures.

Policy 133 The County shall require that the impacts of wind turbine operations on bird populations are minimized.

2.3.3 - Alameda County Ordinance Code

The Alameda County Ordinance Code Chapter 12.11 defines trees as a woody perennial plant with a single or multiple trunks which typically develop a mature size of over 7 inches in diameter and 10 or more feet in height. Palms, Yuccas, and any plant required to be planted as a replacement tree shall be considered trees. Trees protected under this ordinance are those on a public right-of-way. The planting, maintenance, removal, or replacement of any tree located in a right-of-way between a private property line and the edge of the paved street shall be the responsibility of the adjacent property owner on whose frontage the tree is located irrespective of who planted said tree. The planting, maintaining, or removing of any tree in the right-of-way, and all associated facilities, such as irrigation systems, tree wells, root barriers and supports, are encroachments subject to the permitting and other requirements of this chapter.

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SECTION 3: METHODS

3.1 - Literature Review

Literature review was conducted to analyze existing documentation regarding biological resources and habitat conditions within the Study Area and is summarized below.

3.1.1 - Existing Documentation

As part of the literature review, an FCS Biologist compiled and analyzed existing environmental documentation for the Study Area and relevant areas in its vicinity. This documentation included literature pertaining to the habitat requirements of special-status species with the potential to occur in the project vicinity; and federal register listings, protocols, and species data provided by the USFWS, CDFW and CNPS.

3.1.2 - Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current USGS 7.5-minute topographic quadrangle map(s)and aerial photographs as a preliminary analysis of the existing conditions within the Study Area and immediate vicinity.[4] Information obtained from the topographic maps included elevation, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the EPA Watershed Assessment, Tracking, and Environmental Results System (WATERS).[5] Aerial photographs provided a perspective of the current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

3.1.3 - Soil Surveys

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[6] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the Study Area and to inform whether the soil conditions on-site are potentially suitable for any special-status plant species. However, Natural Resources Conservation Service (NRCS) soil maps utilize an approximately 1.4-acre minimum mapping unit, and line placement may not be accurate on a large (i.e., parcel-level) scale.

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4 United States Geological Survey (USGS). 2023. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed November 17, 2023.

5 United States Environmental Protection Agency (EPA). 2023. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed November 17, 2023.

6 Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed November 17, 2023.

3.1.4 - Special-status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the project vicinity based on a search of the USFWS Information for Planning and Consultation (IPaC) database,[7] the California Natural Diversity Database (CNDDB), and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the United States Geological Survey (USGS) *Livermore, California* 7.5-minute topographic quadrangle, and the eight surrounding quadrangles.[8,9] The CNDDB Biogeographic Information and Observation System (BIOS 6) was used to determine the distance between the known occurrences of special-status species and the Study Area.[10]

3.1.5 - Trees

Prior to conducting the reconnaissance-level field survey, an FCS Biologist reviewed applicable County ordinances pertaining to tree preservation and protection and ascertained whether tree replacement measures or permits for the removal of protected trees are required.

3.2 - Field Survey

FCS Biologists familiar with the biological resources of the region conducted general wildlife, habitat, vegetation community and aquatic resource surveys on March 31, July 27, and November 14, 2023. The objective of the field survey was to ascertain general site conditions, wildlife use, and identify whether existing vegetation communities provide suitable habitat for special-status plant or wildlife species. Potentially sensitive areas identified during the literature review were ground-truthed during the field survey for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area.[11]

3.2.1 - Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded. Uncommon plants were identified with the use of taxonomical guides, including Jepson eFlora and Calflora.[12,13] Taxonomic nomenclature used in

[7] United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed November 17, 2023.
[8] California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 17, 2023.
[9] California Native Plant Society (CNPS). 2023. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed November 17, 2023.
[10] California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed November 17, 2023.
[11] California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 17, 2023.
[12] Jepson Flora Project (eds.) 2020. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/. Accessed November 17, 2023.
[13] Calflora. 2020. Calflora: Information on California plants for education, research, and conservation. Website: http://www.calflora.org/. Accessed November 17, 2023.

this study follows The Jepson Manual: Vascular Plants of California.[14] Vegetation types and boundaries were noted on aerial photos, verified through field observation, and digitized using ESRI ArcGIS software® ArcMap 10.0. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the Study Area was prepared. Vegetation community and land cover types used to help classify habitat types are based on the Manual of California Vegetation (MCV) where applicable.

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW maintains a list of natural communities which attempts to classify vegetation types found within the State of California and rank them based on rarity. Communities ranked S1-S3 are considered sensitive natural communities.[15]

3.2.2 - Wildlife

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area.[16] Appropriate field guides were used to assist in species identification during surveys, such as Peterson, Reid, and Stebbins.[17,18,19] Online resources such as eBird and California Herps were also consulted, as necessary. [20,21]

3.2.3 - Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by natural and anthropogenic dispersal barriers, including rugged terrain, changes in vegetation, development, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated “islands” of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

The Study Area was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey and review of aerial photographs, and CDFW’s BIOS 6 information. The focus of this study was to determine whether a change in land use at the Study Area could have significant impacts on the regional movement of wildlife. Conclusions are based on the information compiled during the literature review, including aerial photographs, USGS topographic maps and resource maps for the vicinity; the field survey; and professional experience with the desired topography, habitat, and resource requirements of the special-status species potentially utilizing the Study Area and vicinity.

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[14] Baldwin, B. et al. 2012. The Jepson Manual: Vascular Plants of California. Berkeley: University of California Press. County of San Bernardino (Bernardino). 2007 (amended 2015).

[15] California Department of Fish and Wildlife (CDFW). 2023. Sensitive Natural Communities List, Sacramento: California Department of Fish and Wildlife. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed November 17, 2023.

[16] California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 17, 2023.

[17] Peterson, T.R. 2010. A Field Guide to Birds of Western North America, 4th Edition. Boston: Houghton Mifflin Harcourt.

[18] Reid, F. 2006. A Field Guide to Mammals of North America, 4th Edition. Boston: Houghton Mifflin Harcourt.

[19] Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin Harcourt.

[20] eBird. 2020. Online bird occurrence database. Website: http://ebird.org/content/ebird/. Accessed November 17, 2023.

[21] California Herps. 2020. A Guide to the Amphibians and Reptiles of California. Website: http://www.californiaherps.com/ Accessed November 17, 2023.

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SECTION 4: RESULTS

This section summarizes the general environmental setting based on the results of the literature research, database analyses, field surveys listed in Section 3. Sensitive biological resources including special-status species and the impact analysis are addressed separately in Section 5 and 6 of this document.

4.1 - Environmental Setting

Alameda County is in the San Francisco Bay Area and occupies much of the East Bay region. The Study Area is on the eastern side of the City of Pleasanton where commercial and residential development intersperses with man-made lakes and fallowed areas. The Study Area is surrounded by residential and industrial uses and associated roadways to the west and south. To the north and east are man-made lakes and industrial material suppliers.

4.2 - Topography and Hydrology

The Study Area lies at approximately 372 feet above sea level in elevation. The Study Area and vicinity are generally flat, which is typical for the developed areas within the adjacent City of Pleasanton. The site drains to the south.

A man-made stormwater swale bisects the project site. Grading of this feature along its current alignment was originally completed in 2019 and re-graded again in 2023 to provide stormwater drainage across the project site following removal of a large mining pit that was once associated with the mining activities on this site. There has been some form of stormwater control swale bisecting the site for years. This swale is maintained on an annual basis to keep the channel clear of obstructions and to maintain flows for stormwater drainage. Additionally, the eastern portion of the Study Area contains a depressional wetland and two drainage swales that convey water to the south.

4.3 - Soils

The USDA NRCS indicates that the soils on the site consist of gravel pits (Gp), Water (W) which has been subsequently reclaimed, Yolo loam, calcareous substratusm (YmA), 0-6 percent slope, Yolo loam over gravel (Yo), 0-3 percent slope, and Yolo gravelly loam (Yr), 0-3 percent slope (Exhibit 4). These soil type and their primary characteristics are summarized in Table 1 below.

Table 1: Soil Types Present within Study Area

Soil Name	Symbol	Slope	Description	Acreage
Gravel pits	Gp	NA	Gravelly sand	33.75
Water	W	NA	Formally associated with adjacent lake. Land was reclaimed between 1987-1993. This area is tied directly to Gp (gravel pits).	6.22

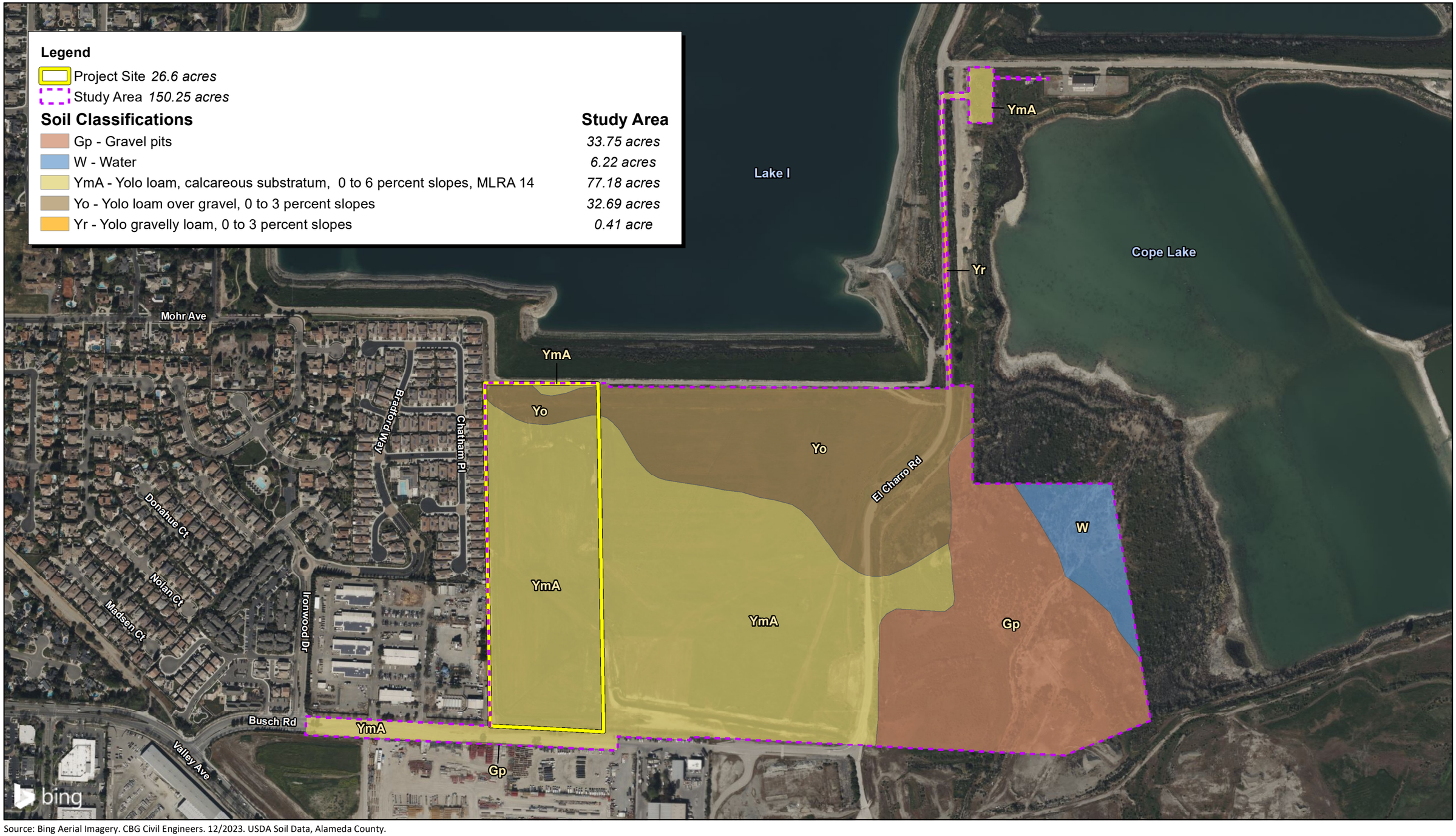
Soil Name	Symbol	Slope	Description	Acreage
Yolo loam, calcareous substratusm	YmA	0-6%	Alluvium derived from sedimentary rock, well drained and non-saline soil.	77.18
Yolo loam over gravel	Yo	0-3%	Alluvium derived from sandstone and shale, well drained and non-saline to very slightly saline soil.	32.69
Yolo gravelly loam	Yr	0-3%	Alluvium derived from sandstone and shale, well drained and non-saline to very slightly saline soil.	0.41
Source: Natural Resources Conservation Service (NRCS). 2021. Official Soil Series Descriptions. United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed November 20, 2023.				

Legend

Project Site *26.6 acres*

Study Area *150.25 acres*

Soil Classifications	Study Area
Gp - Gravel pits	*33.75 acres*
W - Water	*6.22 acres*
YmA - Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	*77.18 acres*
Yo - Yolo loam over gravel, 0 to 3 percent slopes	*32.69 acres*
Yr - Yolo gravelly loam, 0 to 3 percent slopes	*0.41 acre*



Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023. USDA Soil Data, Alameda County.

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Exhibit 4

Soils Map

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4.4 - Vegetation Communities and Land Cover Types

The following section describes the vegetation communities and land cover types present within the Study Area. The location and extent of each vegetation community is shown on Exhibit 5.

4.4.1 - Ruderal

Ruderal habitat is classified as areas that are no longer recognizable as a native or naturalized vegetation association, but which continue to retain a soil substrate. Vegetation, if present, is typically composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or show signs of past or present animal usage that precludes them from providing viable natural habitat for uses other than dispersal. The vast majority of the Study Area contains ruderal habitat, specifically within the central and eastern portion of the Study Area.

Vegetation observed consisted of cheeseweed mallow (*Malva neglecta*), stinkwort (*Dittrichia graveolens*), slender wild oat (*Avena barbata*), wild radish (*Raphanus raphanistrum*), burclover (*Medicago polymorpha*), Russian thistle (*Salsola tragus*), prickly sow thistle (*Sonchus asper*), shortpod mustard (*Hirschfeldia incana*), yellow star thistle (*Centaurea solstitialis*), field bindweed (*Convolvulus arvensis)*, artichoke thistle (*Cynara cardunculus L*), and others.

4.4.2 - Graded/Disturbed

Graded/disturbed habitat is classified as areas that have undergone significant anthropogenic disturbances and no longer contain native or naturalized vegetation associations, usually through the process of mass grading. The project site designated for primary development has been graded and all present vegetation removed. WRA conducted a field survey on November 8, 2023, to inspect the constructed stormwater drainage swale that bisects a portion of the project site (as referenced in Section 4.2) and authored a subsequent jurisdictional memorandum on November 20, 2023. The purpose of the memorandum was to discuss the jurisdictional status of the aquatic features identified within the project site. The memorandum concluded that that the man-made ditch/stormwater drainage swale is not considered a jurisdictional water of the United States or State (see Appendix D for further detail). As such, an emergency use authorization was granted by Alameda County to grade the project site to provide positive drainage and conduct maintenance of the man-made stormwater drainage swale to prevent flooding this winter.

In addition to the entirety of the project site, the larger Study Area contains graded and disturbed landcover within the northeastern and southeastern corners. These areas are devoid of vegetation except for a small section of coyote brush scrub (*Baccharis pilularis*) in the southeastern graded portion of the Study Area. The northeastern section of the Study Area follows El Charro Road and turns toward Cope Lake. This section contains graded and disturbed habitat throughout its entirety.

4.4.3 - Paved Access Road

Adjacent to the southeastern boundary of the project site is a developed off-site roadway and frontage improvement area. This area currently contains Busch Road and associated ornamental trees. Moving through the center of the Study Area is El Charro Road, which travels from the

southern to northern portion of the Study Area. Vegetation observed lining the road consist of coyote brush, artichoke thistle, stinkwort, slender wild oat, among others.

4.4.4 - Depressional Wetland

Wetlands are characterized as areas permanently or periodically inundated by water and may have been modified by human activity. Depressional wetlands usually occur in topographic lows with closed or nearly closed elevation contours. These areas can be unvegetated but may also contain scattered native or non-native vegetation. The eastern portion of the Study Area contains a potential 1.09-acre depressional wetland. This wetland is surrounded by Fremont poplar (*Populus fremontii*) and mixed willow stands.

4.4.5 - Fremont Poplar and Mixed Willow Stands

The eastern portion of the Study Area contains approximately 5.87 acres of scattered Fremont poplar and mixed willow stands best designated as *Populus fremontii–Salix gooddingii* Woodland Alliance under the CDFW California Sensitive Natural Community database (Ca Code: 61.211.04). The canopy is dominated by Fremont poplar and goddings willow (*Salix gooddingii)* with the understory dominated by species such as wild oat, yellow star thistle, stinkwort, coyote brush, and others.

4.4.6 - Drainage Swale

Drainage swales are characterized as linear ground depressions that usually convey direct precipitation. The eastern portion of the Study Area contains two drainage swales. The easternmost swale runs from the northeastern corner of the Study Area and conveys water to the south, outside of the boundary of the Study Area. The northern reach of this swale is bounded by Fremont poplar and mixed willow stands. The swale joins with ruderal and graded habitat types toward its southern reach.

The second drainage swale is located to the west and is likely fed through an existing culvert that coneys flows under El Charro Road in an easterly fashion where it terminates before joining the swale to the east. This reach of the swale contains riparian habitat as shown in detail on Exhibit 5.

4.4.7 - Coyote Brush Scrub

Coyote brush scrub is found in a wide variety of habitats, primarily along coastal bluffs, terraces, stabilized dunes of coastal bars, spits along the coastline, river mouths, stream sides, open exposed slopes, ridges, or gaps in forest stands. The eastern portion of the Study Area contains large areas of coyote brush scrub. This area is primarily located east of El Charro Road, separating the depressional wetland from the drainage swales. A smaller section of coyote brush is surrounded by graded/disturbed habitat in the far southeastern corner of the Study Area.

4.5 - Common Wildlife

The vegetation community and land cover types discussed above provide habitat for numerous wildlife species. Wildlife activity consisted primarily of avian species, including American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), pigeon (*Columbidae* sp.), snowy

egret (*Egretta thula*), yellow-breasted warbler (*Phylloscopus montis*), killdeer (*Charadrius vociferus*), California gull (*Larus californicus*), western meadowlark (*Sturnella neglecta*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), western kingbird (*Tyrannus verticalis*), and red tail hawk (*Buteo jamaicensis*).

Additional species observed on-site during the field survey include the western fence lizard (*Sceloporus occidentalis*), black-tailed jackrabbit (*Lepus californicus*), and California mule deer (*Odocoileus hemionus californicus*).

4.6 - Wildlife Movement Corridors and Nursery Sites

An FCS Biologist evaluated the ground and database research of CDFW's BIOS 6 information on wildlife linkages within the Study Area and concluded that the proposed project does not have the potential to interfere with the movement of native wildlife. The Study Area has a history of disturbance associated with previous mining activity and continued disturbance associated with semi-regular grading events for flood control purposes. Currently, the Study Area primarily consists of a majority vacant, disturbed land with limited habitat value.

Additionally, the Study Area is surrounded by urban and industrial developments, man-made lakes with limited habitat value, and active roadways which limit the potential for wildlife movement through the site. Although the eastern reaches of the Study Area contain a riparian vegetation and Fremont poplar and mixed willow stands, these habitats do not connect two significant and undeveloped habitat areas or allow connection between wildlife populations separated by human activity. Therefore, the Study Area does not act as a wildlife movement corridor and no further analysis is required.

Wildlife nursery sites include nesting birds and maternity bat roosts, aquatic breeding habitats, and special-status and non-special-status wildlife breeding or nesting colonies. No significant breeding/nesting colonies were observed during the wildlife surveys. However, individual nesting birds have the potential of being present on-site and within disturbance distance seasonally. For example, songbirds adapted to urban settings likely nest in on-site trees, both ornamental and native, that occur within the Study Area.

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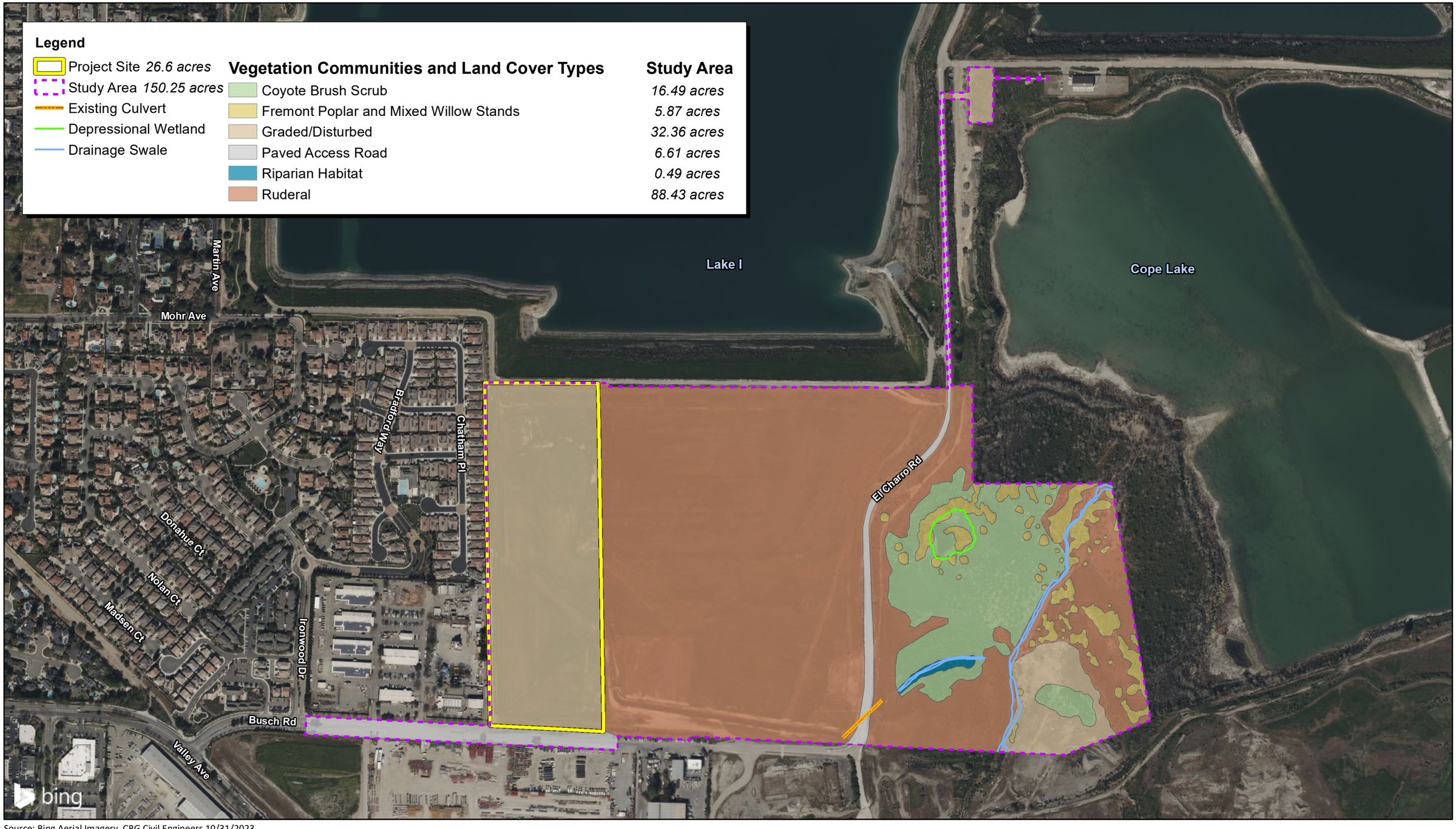

Source: Bing Aerial Imagery. CBG Civil Engineers 10/31/2023.

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Exhibit 5
Vegetation Communities and Land Cover Types

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SECTION 5: SENSITIVE BIOLOGICAL RESOURCES

The following section discusses the existing site conditions and presence or potential presence for sensitive biological resources to occur within the Study Area.

5.1 - Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW identifies sensitive natural communities based on the MCV, and ranks a subset based on rarity. Communities identified on CDFW's list as "sensitive" and/or communities ranked S1-S3 are considered sensitive natural communities under CEQA.[22]

Fremont Poplar and Mixed Willow Stands

As described in Section 4.4.5 above, the eastern portion of the Study Area contains approximately 5.87 acres of Fremont poplar and mixed willow stands, best designated as *Populus fremontii–Salix gooddingii* Woodland Alliance under the CDFW California Sensitive Natural Community database. However, the proposed project would actively avoid any impacts to this sensitive natural community. Additionally, neither Design Option A nor Design Option B are expected to impact this sensitive natural community. Therefore, it is not expected that any Fremont poplar and mixed willow stands would be removed or disturbed through project-related construction. As such, this resource category is not further addressed in the impact analysis and recommendations section of this document.

5.2 - Special-status Plant Species

The CNDDB and CNPS list 46 special-status or sensitive plant species that have been recorded within the *Livermore, California,* USGS Topographic Quadrangle Map and the eight surrounding quadrangles (Appendix A).[23,24,25] The CNDDB occurrences near the Study Area are shown on Exhibit 6. No rare or special-status plant species were observed during the general biological survey.

Based upon the field survey, literature review, and professional experience, no special-status plant species occur or are expected to occur within the Study Area due to the absence of suitable habitat, previous land uses, and the extent and frequency of ground disturbance. Much of the Study Area has been subjected to decades of disturbance events from grading and past mining operations. For these reasons, the Study Area does not promote the establishment of, or provide suitable conditions for rare plants, which are typically sensitive to these types of disturbances. Moreover, the Study Area lacks microhabitats such as vernal pools, chenopod scrub, and alkaline or acidic soils that are

[22] California Department of Fish and Wildlife (CDFW). 2022. Natural Communities List, Sacramento: California Department of Fish and Wildlife. https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed November 20, 2023.
[23] United States Geological Survey (USGS). 2022. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con.
[24] California Department of Fish and Wildlife (CDFW). 2022. CNDDB RareFind 5 California Natural Diversity Database Query for Special-status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 20, 2023.
[25] California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed November 20, 2023.

typically necessary to support many rare plants. For the reasons outlined above, it is reasonable to conclude that special-status plant species are determined to be absent from the Study Area. As such, this resource category is not further addressed in the impact analysis and recommendations section of this document.

5.3 - Special-status Wildlife Species

CNDDB identifies 36 federal and State-listed threatened and/or endangered wildlife species and State Species of Special Concern that have been recorded within the *Livermore, California,* USGS Topographic Quadrangle Map and eight surrounding quadrangles (Appendix A). Thirty-four of these species are unlikely to occur on-site, as discussed in the Special-status Species Occurrence Evaluation (Appendix A).

The remaining two species (and functional groups like nesting birds that include special-status species) could have the potential to occur on-site, perhaps as vagrant, dispersing, nesting, or foraging individuals, and are therefore discussed in more detail below.

5.3.1 - Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a California "species of special concern." Its nest, eggs, and young are also protected under California Fish and Game Code Sections 3503, 3503.5, and§3800. The burrowing owl is also protected from direct take under the MBTA (50 Code of Federal Regulations [CFR] § 10.13).

Burrowing owl habitat is usually found in annual and perennial grasslands, characterized by low growing vegetation. Often, the burrowing owl utilizes rodent burrows, typically California ground squirrel (*Otospermophilus beecheyi*) burrows, for nesting and cover. They may also on occasion dig their own burrows or use man-made objects such as concrete culverts or rip-rap piles for cover. They exhibit high site fidelity, reusing burrows year after year. Burrowing owls typically are not observed in grasslands with tall vegetation or wooded areas because the vegetation obscures their ability to detect avian and terrestrial predators.

The closest CNDDB record was documented 0.85-mile northeast of the Study Area (Occurrence No. 530). Additionally, there were 16 recent recorded occurrences of this species within 5 miles of the Study Area. No burrowing owl, signs of burrowing owl, or burrows suitable for burrowing owl were observed during the FCS field surveys. However, the species may utilize the site in a foraging capacity within the low growing ruderal vegetation currently present. Because of the marginal foraging habitat present and the number of recent occurrences within the vicinity of the Study Area, this species has a low potential to be present on-site. Therefore, out of an abundance of caution, it cannot be ruled out that this species may disperse through the Study Area before construction-related activities occur.

5.3.2 - Protected Nesting Birds (Including All Special-status Bird Species)

Special-status species such as the white-tailed kite (*Elanus leucurus*), and active nests of most resident and migratory (game and non-game) birds are protected by the MBTA and/or Fish and

Game Code; and are therefore categorized as "special-status" wildlife functional group during this time.

The Study Area provides nesting opportunities for different taxa of birds, including ground nesters (e.g., killdeer). The ruderal vegetation within the Study Area, along with the Fremont poplar and mixed willow stands and understory shrubbery could provide nesting and foraging opportunities to support successful nesting and rearing habitat. Therefore, it is likely that protected bird nests are present on-site during the nesting season (typically considered to last from February 1 to August 31 for most species). The presence or absence of nesting birds should be confirmed through a pre-construction survey (and protection buffers if found).

5.4 - State or Federally Protected Waters and Wetlands

WRA conducted a field survey on November 8, 2023, to inspect the constructed stormwater drainage swale that bisects a portion of the project site (as referenced in Section 4.2) and authored a subsequent jurisdictional memorandum on November 20, 2023. The memorandum surmised that the constructed stormwater drainage swale is not a regulated water due to the USACE long-standing practice that views stormwater control features were not built in waters of the United States as non-jurisdictional features. The following are not considered waters of the United States:

- Stormwater control features constructed or excavated in upland or non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff.

Historic aerial imagery of the project site illustrates that no stream or other aquatic features occurred in the vicinity of these constructed features. The alignment of the stormwater drainage swale does not fall within the footprint of a historical stream, marsh, or wetland boundary, and is not a relocated tributary.

The State Water Board adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials into Waters of the State* on April 2, 2019 (the Procedures). The stormwater drainage swale does not meet the definition of a wetland under the State Wetland Definition since these features are artificial and are subject to ongoing operation and maintenance. As indicated in the Procedures, stormwater ditches are not waters of the State since they are artificial wetlands that were constructed, and are currently used and maintained, primarily for one or more of the following purposes:

- Settling of sediment
- Detention, retention, infiltration, or treatment of stormwater runoff
- Treatment of surface waters.

The Procedures provide a jurisdictional exemption for artificial wetlands that are currently used and maintained for detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program. As such, the stormwater drainage swale is not a State of federally protected water (Appendix D).

The eastern portion of the Study Area contains a potential depressional wetland and two drainage swales that are potentially regulated as a State and federally protected wetland and waters, respectively. Neither Design Option A nor Design Option B are expected to have direct or indirect impacts on the potential depressional wetland feature, although Design Option B may result in indirect impacts to the adjacent drainage swale and associated riparian vegetation due to the location of the proposed bioretention area.

5.5 - Protected Trees

The Alameda County Ordinance Code Chapter 12.11 stipulates tree protection ordinances. These ordinances, as discussed in Section 2.3.3, define protected trees as trees along a public right-of-way. While there are ornamental trees located along the periphery of Busch Road, no trees would be removed as part of either Design Option A or B . Therefore, no protected trees under the Alameda County Ordinance Code would be impacted by the proposed project and no further analysis is required.

CNDDB version 01/2024. Please Note:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Legend

- Project Site

CNDDB

Symbology

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

Source: Bing Street Imagery. California Natural Diversity Database (CNDDB), January 2024.

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Exhibit 6
CNDDB Special-Status Species Occurrences

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SECTION 6: IMPACT ANALYSIS AND RECOMMENDATIONS

The following discussion addresses potential project impacts on sensitive biological resources, including special-status species, and recommends measures to avoid and/or mitigate impacts to a less than significant level under CEQA.

6.1 - Impact Analysis for Special-status Wildlife Species

6.1.1 - Burrowing Owl

Although no suitable burrows for owls have been observed on the site, a limited amount of marginal foraging habitat is present on the site in the form of ruderal grasslands. Though owls are not expected to breed or nest within the Study Area, they may use the area for short periods during migratory movements. To avoid potential project-related impacts on burrowing owl that may temporarily utilize the site, the following mitigation measure adapted from the EACCS is recommended to reduce impacts to a less than significant level.

MM BIO-1 Burrowing Owl

- To avoid potential impacts to active burrowing owl nests and adult owls, a qualified Biologist shall conduct protocol-level burrowing owl surveys in accordance with CDFW 2012 Staff Report.
- If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season (March 15 to September 1), a no-activity zone shall be established by a qualified Biologist. The no-activity zone shall be large enough to avoid nest abandonment and shall at a minimum, be 250-feet radius from the nest.
- If the burrowing owls are present at the site during the nonbreeding period, a qualified Biologist shall establish a no-activity zone of at least 150 feet.
- If an effective no-activity zone cannot be established in either case, an experienced burrowing owl Biologist shall develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitive and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.

6.1.2 - Protected Nesting Birds

The vegetated habitats within the Study Area provide suitable nesting habitat for a variety of species of nesting birds. Ruderal grasses, Fremont poplar and mixed willow stands, and riparian habitat provide potential nesting opportunities for ground and tree nesting birds, including special-status species such as the white-tailed kite. Construction activities that occur during the avian nesting season (generally February 1 to August 31) could disturb protected nesting sites within the construction footprint and within disturbance distance. Grading and the removal of vegetation during the nesting season could result in direct harm to nesting birds, while noise, light, and other

construction-related disturbances may cause nesting birds adjacent to the vegetation removal areas to abandon their nests.

With implementation of Mitigation Measure (MM) BIO-2, requiring pre-construction nesting bird surveys and avoidance of direct and indirect impacts on nests, potential project-related impacts on protected bird nests can be reduced to a less than significant level under CEQA.

MM BIO-2 Protection of Active Bird Nests (includes pre-construction survey and implementation of avoidance buffer, if found).

1. Removal of trees shall be limited to only those necessary to construct the proposed project as reflected in the relevant project approval documents.
2. If the proposed project requires vegetation to be removed during the nesting season (February 1 to August 31), pre-construction surveys shall be conducted no more than 7 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present.
3. If an active nest is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. (The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s).
4. The qualified Biologist shall monitor the active nest during construction activities and modify the protection zone accordingly to prevent project-related nest disturbance, until the young have fledged.

6.2 - Impact Analysis for State and Federally Protected Waters and Wetlands

Design Option A

The proposed project would avoid any direct and indirect impacts to State or federally protected waters and/or wetlands (Exhibit 7a). The proposed project under Design Option A would not impact the water quality of the potential depressional wetland or drainage swales within the eastern portion of the Study Area as project construction would be mostly sequestered to the western side of El Charro Road. The proposed storm drain outfall is located more than 120 feet from the potential depressional wetland feature. Therefore, FCS does not recommend implementing mitigation measures related to State or federally protected waters and/or wetlands for Design Option A.

Design Option B

The proposed project would avoid any direct impacts to State or federally protected waters and/or wetlands (Exhibit 7b). However, the proposed project under Design Option B has the potential to indirectly impact the water quality of the adjacent drainage swale and associated riparian vegetation within the eastern portion of the Study Area. The proposed bioretention area is located approximately 25 feet from the adjacent drainage swale and approximately 15 feet from the riparian vegetation associated with the drainage swale. As such, potential temporary indirect impacts (during construction) and permanent indirect impacts (during project operation) include pollutant loading, increased erosion and sedimentation, and trash or debris dispersal in the adjacent drainage swale.

FCS recommends implementing MM BIO-3a and MM BIO-3b mitigation measures for temporary indirect impacts and permanent indirect impacts to the adjacent drainage swale if Desing Option B is selected.

MM BIO-3a Avoidance and Minimization of Indirect Temporary Impacts to Water Quality and Riparian Vegetation

- The project applicant shall obtain a Construction General Permit from the Regional Water Quality Control Board (RWQCB) if Design Option B is selected. The applicant shall ensure that the project Civil Engineer prepares all required stormwater planning documents consistent with the requirements of the RWQCB (e.g., a Storm Water Pollution Prevention Plan [SWPPP] that complies with current National Pollutant Discharge Effluent Standards [NPDES]; Best Management Practices [BMPs] to control the pollutants in stormwater runoff, and/or a Storm Water Management Plan (SWMP) shall be developed and integrated into the project plan.

MM BIO-3b Avoidance and Minimization of Indirect Permanent Impacts to Water Quality and Riparian Vegetation

- Prior to construction the applicant shall install silt fencing including the placement of straw wattles between all construction areas and the adjacent depressional wetland and drainage swales (including the swale with riparian vegetation) to avoid impacts to water quality by grading and construction if Design Option B is selected. A qualified Biologist shall be on-site to monitor the installation of fencing. Fencing shall be in place and regularly maintained during project implementation.
- The project applicant shall install post-construction stormwater management measures and establish a long-term maintenance plan if Design Option B is selected. This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger shall demonstrate compliance with the post-construction standards set forth in the General Permit.

6.3 - Conflict with Local Policies or Ordinances

Local policies or ordinances applicable to the proposed project include the East Alameda County Area Plan, and the Alameda County Ordinance Code Chapter 12.11 as described in Section 2.3 above. The proposed project would meet the East Alameda County Area Plan through the implementation of MM BIO-1 through MM BIO-3b, which would protect and preserve sensitive habitat and special-status species with the potential to occur within the Study Area. Additionally, the Alameda County Ordinance Code Chapter 12.11 which sets forth the City's Tree Preservation Guidelines would be met as no trees stipulated as protected under the Ordinance would be affected by the proposed project. Therefore, with adherence to the Alameda County Ordinance Code and the East Alameda County Area Plan, the proposed project would not conflict with the County's local policies or ordinances.

6.4 - Conflict with the East Alameda County Conservation Strategy

The Study Area is located within the boundaries of the EACCS. The strategy has been developed to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects. EACCS is a framework for guidance by regulatory agencies and does not include incidental take permits for threatened or endangered species similar to that provided by a Habitat Conservation Plan. In addition to the mitigation measures outlined above, it is recommended that the project adhere to the following general avoidance and minimization measures identified in the EACCS. Some modifications to the EACCS measures are provided here to reflect project-specific circumstances. Implementation of the mitigation, avoidance, and minimization measures outlined in this report would mitigate all potentially significant biological impacts to a less than significant level and ensure that the project would be in compliance with the EACCS.

EACCS Measure GEN-01 Employees and contractors performing construction activities will receive environmental sensitivity training. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on covered species during construction activities.

EACCS Measure GEN-02 Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects to these species during construction activities. Directors, managers, superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

EACCS Measure GEN-03 Contracts with contractors, construction management firms, and subcontractors will obligate all contractors to comply with the Project avoidance, minimization, and mitigation measures.

EACCS Measure GEN-04 The following will not be allowed at or near work sites for covered activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

EACCS Measure GEN-05 Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

EACCS Measure GEN-06 Off-road vehicle travel will be minimized.

EACCS Measure GEN-07 Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during off-road travel.

EACCS Measure GEN-08 Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.

EACCS Measure GEN-09 Vehicles will be washed at off-site facilities. Vehicles will not be washed at the project site.

EACCS Measure GEN-10 To discourage the introduction and establishment of invasive plant species, seed mixtures/straw used within natural vegetation will be either rice straw or weed-free straw.

EACCS Measure GEN-11 Pipes, culverts and similar materials greater than 4 inches in diameter, will be stored so as to prevent covered wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.

EACCS Measure GEN-12 Erosion control measures will be implemented to reduce sedimentation in wetland habitat occupied by covered animal and plant species when activities are the source of potential erosion problems. Plastic mono-filament netting (erosion control matting) or similar material containing netting shall not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Wetlands that contain habitat for covered species are not present within the Study Area. However, this general measure is still applicable to protect sedimentation from intruding into adjacent aquatic features identified within this report.

EACCS Measure GEN-13 Stockpiling of material will occur such that direct effects to covered species are avoided. Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.

EACCS Measure GEN -14 Grading will be restricted to the minimum area necessary.

EACCS Measure GEN-15 Prior to ground-disturbing activities in sensitive habitats, Project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.

EACCS Measure GEN-16 Significant earthmoving-activities will not be conducted in riparian aquatic areas within 24 hours of predicted storms or after major storms (defined as 1 inch of rain or more).

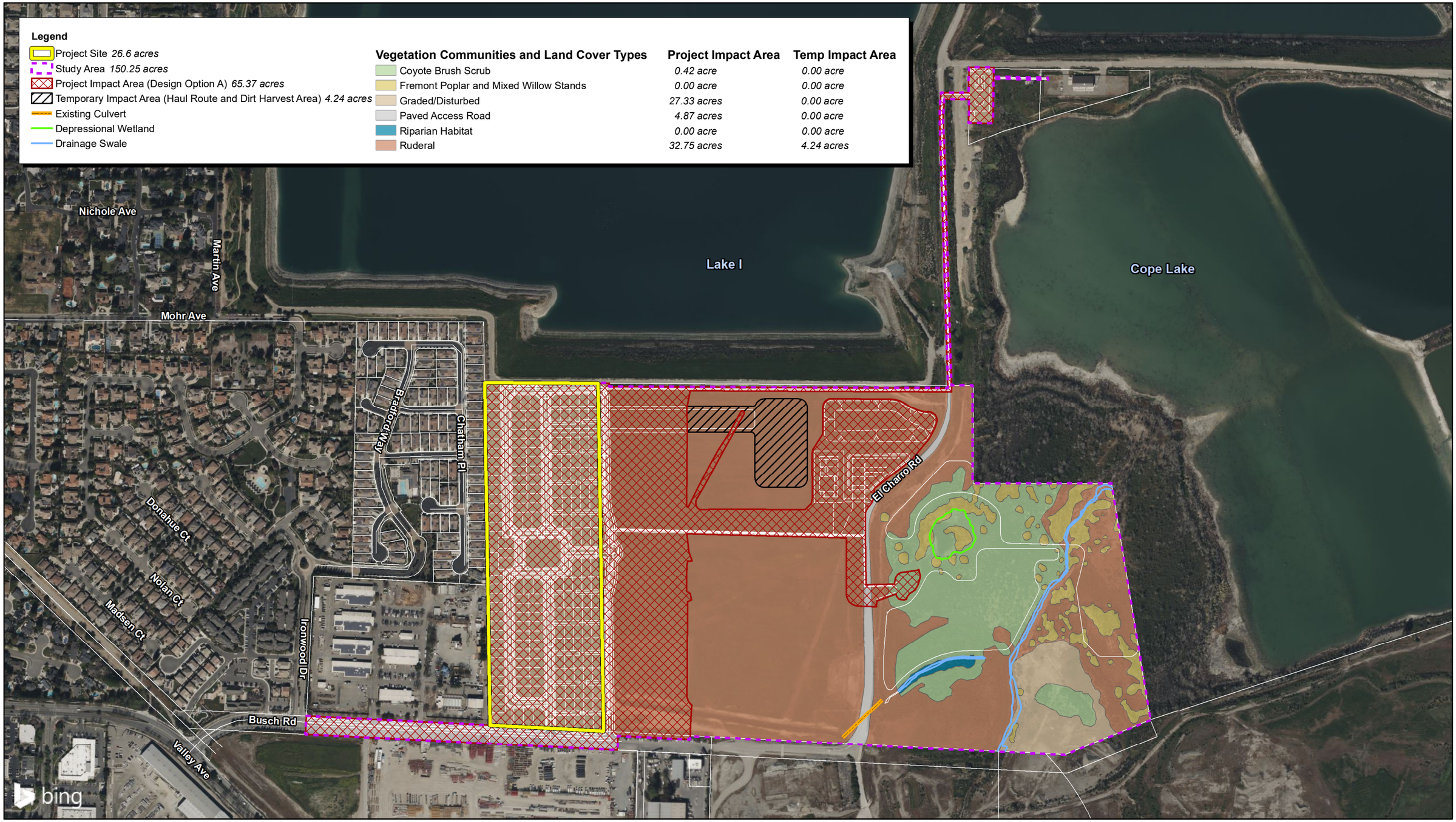
This measure also applies to the aquatic features found within the Study Area that do not contain riparian vegetation.

EACCS Measure GEN-17 Trenches will be backfilled as soon as possible. Open trenches will be searched each day prior to construction to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified Biologist.

Legend

- Project Site *26.6 acres*
- Study Area *150.25 acres*
- Project Impact Area (Design Option A) *65.37 acres*
- Temporary Impact Area (Haul Route and Dirt Harvest Area) *4.24 acres*
- Existing Culvert
- Depressional Wetland
- Drainage Swale

Vegetation Communities and Land Cover Types	Project Impact Area	Temp Impact Area
Coyote Brush Scrub	*0.42 acre*	*0.00 acre*
Fremont Poplar and Mixed Willow Stands	*0.00 acre*	*0.00 acre*
Graded/Disturbed	*27.33 acres*	*0.00 acre*
Paved Access Road	*4.87 acres*	*0.00 acre*
Riparian Habitat	*0.00 acre*	*0.00 acre*
Ruderal	*32.75 acres*	*4.24 acres*



Source: Bing Aerial Imagery. Source: CBG Civil Engineers. 12/2023.

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Exhibit 7a
Design Option A
Impacts Map

330 LAND COMPANY, LLC
ARROYO LAGO RESIDENTIAL PROJECT
BIOLOGICAL RESOURCE ASSESSMENT

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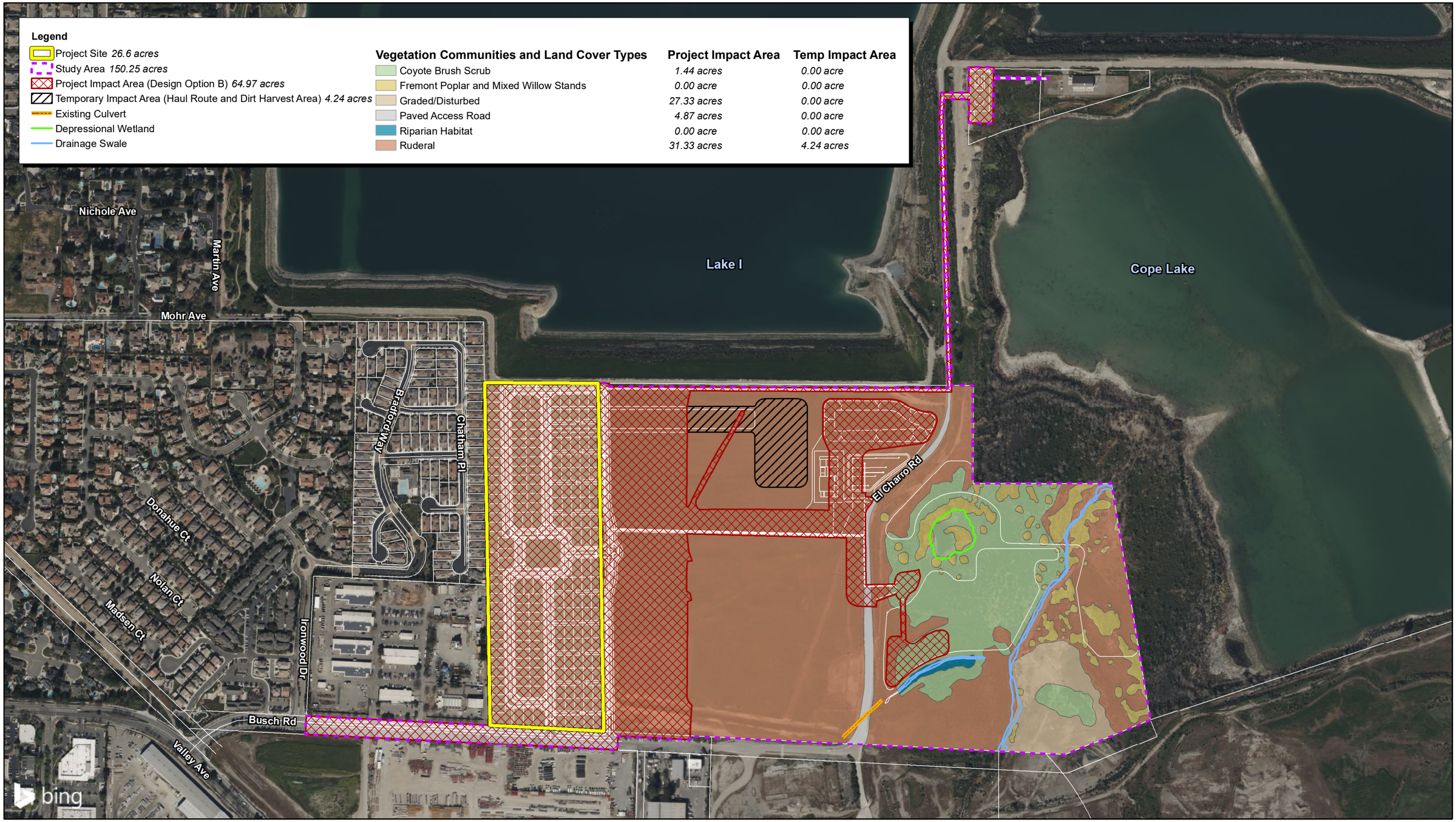
Legend

- Project Site *26.6 acres*
- Study Area *150.25 acres*
- Project Impact Area (Design Option B) *64.97 acres*
- Temporary Impact Area (Haul Route and Dirt Harvest Area) *4.24 acres*
- Existing Culvert
- Depressional Wetland
- Drainage Swale

Vegetation Communities and Land Cover Types	Project Impact Area	Temp Impact Area
Coyote Brush Scrub	*1.44 acres*	*0.00 acre*
Fremont Poplar and Mixed Willow Stands	*0.00 acre*	*0.00 acre*
Graded/Disturbed	*27.33 acres*	*0.00 acre*
Paved Access Road	*4.87 acres*	*0.00 acre*
Riparian Habitat	*0.00 acre*	*0.00 acre*
Ruderal	*31.33 acres*	*4.24 acres*



Source: Bing Aerial Imagery. Source: CBG Civil Engineers. 12/2023.

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Exhibit 7b
Design Option B
Impacts Map

330 LAND COMPANY, LLC
ARROYO LAGO RESIDENTIAL PROJECT
BIOLOGICAL RESOURCE ASSESSMENT

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Appendix A:
Special-status Species Occurrence Evaluation

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Table 1: Special-status Plant Species Habitat Value Evaluation

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Amsinckia grandiflora large-flowered fiddleneck	FE	SE	1B.1	Cismontane woodland, and valley and foothill grassland. Elevation: 275-550 m. Blooming period: March-May	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. The project site lacks woodland habitat.
Anomobryum julaceum slender silver moss	—	—	4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. Elevation: 100-1000 m. Blooming period: NA	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of upland forest and montane forest onsite.
Arctostaphylos auriculata Mt. Diablo manzanita	—	—	1B.3	Chaparral, cismontane woodland. In canyons and slopes on sandstone. Elevation: 180-565 m. Blooming period: January-March	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral or cismontane woodland onsite.
Arctostaphylos manzanita ssp. laevigata Contra Costa manzanita	—	—	1B.2	Chaparral on rocky slopes. Elevation: 150-610 m. Blooming period: December - March	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral or rocky slopes onsite.
Astragalus tener var. tener alkali milk-vetchuuiqq 1	—	—	1B.2	Playas, valley and foothill grassland, and vernal pools. Prefers alkaline soils. Elevation: 1-60 m. Bloom period: March-June	**None**: Lack of playas or vernal pools on site to offer habitat value. High levels of disturbance onsite preclude presence.
Atriplex cordulata var. cordulata heartscale	—	—	1B.2	Chenopod scrub, valley and foothill grassland, meadows and seeps. Alkaline flats and scalds in the Central Valley, sandy soils. Elevation: 3-275 m. Blooming period: April-October	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chenopod scrub or seeps to support this species.
Atriplex depressa brittlescale	—	—	1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grasslands, vernal pools. Elevation: 1-320 m. Bloom periods: April- October	**None:** No suitable habitat is present such as scrub, meadows or seeps. The site has been greatly manipulated and soil disturbed for decades**.**
Atriplex minuscula lesser saltscale	—	—	1B.1	Chenopod scrub, Playas, Valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. Elevation: 0-225 m. Blooming period: May-October	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Site lacking soil quality needed for suitable habitat.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Balsamorhiza macrolepis big-scale balsamroot	—	—	1B.2	Chaparral, cismontane woodland and valley and foothill grassland. Sometimes occurs in serpentinite soils. Elevation: 45-1555 m. Bloom period: March-June.	**None.** The project site does not contain suitable habitat to support this species. Serpentinite soils are not present. The site has been greatly manipulated and soil disturbed for decades
Blepharizonia plumosa big tarplant	—	—	1B.1	Valley and foothill grassland. Dry hills & plains in annual grassland. Clay to clay-loam soils; usually on slopes and often in burned areas. Elevation: 60-505 m. Blooming period: August-October	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of clay soil and dry hills on site
Calochortus pulchellus Mt. Diablo fairy-lantern	—	—	1B.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. On wooded and brushy slopes. Elevation: 45-915 m. Blooming period: April-June	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of chaparral and cismontane woodland habitat onsite
Campanula exigua chaparral harebell	—	—	1B.2	Chaparral. Rocky sites, usually on serpentine in chaparral. Elevation: 90-1375 m. Blooming period: May-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral habitat and rocky site.
Centromadia parryi ssp. congdonii Congdon's tarplant	—	—	1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. Elevation: 0-230 m. Blooming period: June-November	**None**: Extremely high level of disturbance at site precludes the potential presence. Lack of valley and foothill grassland due to recent grading but presence of ruderal grasses onsite.
Chloropyron molle ssp. hispidum hispid salty bird's-beak	—	—	1B.1	Meadows and seeps, playas, valley and foothill grassland. In damp alkaline soils, especially in alkaline meadows and alkali sinks with *Distichlis*. Elevation: 5-155 m. Blooming period: June-September	**None:** The project site does lack damp alkaline soils with *Distichlis*. The project site has been subject to decades of previous disturbance and soil disturbance.
Chloropyron palmatum palmate-bracted bird's-beak	FE	SE	1B.1	Chenopod scrub, Valley and foothill grassland. Usually on Pescadero silty clay which is alkaline, with *Distichlis*, Frankenia, etc. Elevation: 5-155 m. Blooming period: May-October	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of silty clay or *Distichlis* habitat on site.
Clarkia concinna ssp. automixa Santa Clara red ribbons	—	—	4.3	Foothill woodland Elevation: 90-1500 m Bloom period: April-July	**None:** The project site does not contain any foothill woodland to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Deinandra bacigalupii Livermore tarplant	—	SE	1B.1	Annual herb in the sunflower family (Asteraceae). Meadows and seeps (alkaline). Known from fewer than five occurrences near Livermore. Elevation: 150 -185 m Blooms: June - October	**None**: Suitable habitat and known habitat components not found within the project site. The project site has been subject to decades of previous soil disturbance.
Delphinium californicum ssp. interius Hospital Canyon larkspur	—	—	1B.2	Perennial herb in the buttercup family (Ranunculaceae). Chaparral (openings), and cismontane woodland (mesic). Elevation: 230 -1,095 m Blooms: April - June	**None**: Suitable habitat and known habitat components not found within the project site. The site does not contain cismontane woodland. The project site has been subject to decades of previous disturbance and soil disturbance
Delphinium recurvatum recurved larkspur	—	—	1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. Elevation: 3-790 m. Blooming period: March-June	**None:** The project site does not contain chenopod scrub, grassland, or woodland habitats to support this species. The project site has been subject to decades of previous disturbance.
Eriogonum truncatum Mt. Diablo buckwheat	—	—	1B.1	Chaparral, coastal scrub, valley and foothill grassland. In dry, exposed clay or sandy substrates. Elevation: 105-350 m. Blooming period: March-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral, or clay and sandy substrates on site.
Eryngium jepsonii Jepson's coyote-thistle	—	—	1B.2	Vernal pools, valley and foothill grassland. In clay substrate. Elevation: 3-305 m. Blooming period: May-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of vernal pools, or clay substrate on site.
Eschscholzia rhombipetala diamond-petaled California poppy	—	—	1B.1	Annual herb in the poppy family (Papaveraceae). Valley and foothill grassland (alkaline, clay). Found at Lawrence Livermore Laboratory Site 300, Alameda Co. in 1997, where extant as of 2003. Elevation: 0 -975 m Blooms: March - April	**None**: Suitable habitat and known habitat components not found within the project site. The project site has been subject to decades of previous disturbance.
Extriplex joaquinana San Joaquin spearscale	—	—	1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with Distichlis spicata, Frankenia, etc. Elevation: 0-800 m. Blooming period: April-September	**None**: Extremely high level of disturbance at site preclude presence. Lack of seeps and alkali wetlands onsite. There are 8 recent occurrences of this species within 5 miles of the project site with the nearest recorded occurrence 1 mile from the site to the north. However, recent occurrences were recorded in non-native grassland that has since been developed. The project site lacks suitable grassland to support this species.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Fritillaria agrestis stinkbells	—	—	4.2	This species is a perennial bulbiferous herb that occurs in clay, sometimes serpentine areas in chaparral, cismontane woodland, pinyon and juniper woodland, and Valley and foothill grassland. Elevation: 10-1555 m Blooming period: March-June	**None**: Suitable habitat and known habitat components not found within the project site. The project site has been subject to decades of previous disturbance.
Fritillaria liliacea fragrant fritillary	—	—	1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. Elevation: 3-385 m. Bloom period: February-April	**None.** The project site does not contain serpentine soils to support this species. The project site has been subject to decades of previous disturbance.
Helianthella castanea Diablo helianthella	—	—	1B.2	Broadleafed 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. Elevation: 45-1070 m. Blooming period: April-June	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of upland forest and chaparral habitat onsite.
Hesperolinon breweri Brewer's western flax	—	—	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. Elevation: 195-910 m. Blooming period: May-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral or foothill grassland habitat onsite.
Legenere limosa legenere	—	—	1B.1	Vernal pools. Elevation: 1-1005 m. Blooming period: April-June	**None:** The project site does not contain suitable habitat to support this species. The project site has been subject to decades of previous disturbance.
Malacothamnus hallii Hall's bush-mallow	—	—	1B.2	Chaparral, coastal scrub. Some populations on serpentine soils. Elevation: 10-735 m. Blooming period: May-September	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral and coastal scrub onsite.
Monolopia gracilens woodland woollythreads	—	—	1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. Elevation: 120-975 m. Blooming period: March-July	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral, grassland, or woodland habitat onsite

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Navarretia prostrata prostrate vernal pool navarretia	—	—	1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. Elevation: 3-1235 m. Blooming period: April-May	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of vernal pools on site.
Phacelia phacelioides Mt. Diablo phacelia	—	—	1B.2	Chaparral, cismontane woodland. Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. Elevation: 605-1345 m. Blooming period: April-May	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral habitat onsite.
Plagiobothrys glaber hairless popcornflower	—	—	1A	Meadows and seeps (alkaline), Marshes and swamps (coastal salt) Elevation: 7-371 m. Blooming period: March-May	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of marshes and swamps.
Polemonium carneum Oregon polemonium	—	—	2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation: 15-1525 m. Blooming period: April-September	**None:** The project site does likely not contain coastal prairie or coniferous forest vegetation.
Puccinellia simplex California alkali grass	—	—	1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins. Elevation: 1-915 m. Blooming period: May-June	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of scrub habitat within project boundaries.
Ravenella exigua chaparral harebell	—	—	1B.2	Chaparral on rocky areas, usually serpentinite. Elevation: 275-1250 m. Bloom period: May-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. The project site lacks chaparral or rocky area habitat.
Senecio aphanactis chaparral ragwort	—	—	2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevation: 20-1020 m. Blooming period: January-April	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack scrub, woodland, or chaparral habitat onsite.
Spergularia macrotheca var. longistyla long-styled sand-spurrey	—	—	1B.2	Alkaline meadows and seeps, alkaline marshes and swamps. Annual herb meadows with saturated soils Elevation: 0-220 m. Blooming period: March-October	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of marshes and swamps on site.
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	—	—	1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Serpentine outcrops, on ridges and slopes. Elevation: 90-1040 m. Blooming period: April-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral or woodland habitat onsite.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		
Streptanthus hispidus Mt. Diablo jewelflower	—	—	1B.3	Valley and foothill grassland, chaparral. Talus or rocky outcrops. Elevation: 245-975 m. Blooming period: March-June	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral or grassland habitat onsite.
Stuckenia filiformis ssp. alpina northern slender pondweed	—	—	2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevation: 5-2325 m. Blooming period: June-July	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of marshes and swamps onsite.
Suaeda californica California seablite	FE	—	1B.1	Margins of coastal salt marshes. Elevation: 0 - 5 m. Blooming period: July - October.	**None:** The project site does not contain marsh habitat to support this species.
Trifolium hydrophilum saline clover	—	—	1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), Vernal pools. Elevation: 1-335 m. Blooming period: April-June	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of marshes and swamps on site.
Triquetrella californica coastal triquetrella	—	—	1B.2	Coastal bluff scrub, coastal scrub. Grows within 30 miles. from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. Elevation: 20-1175 m. Bloom period: N/A (bryophyte)	**None.** The project site does not contain suitable coastal bluff or rocky slope habitat to support this species. The project site has been subject to decades of previous disturbance.
Tropidocarpum capparideum caper-fruited tropidocarpum	—	—	1B.1	Valley and foothill grassland. Alkaline clay. Also grows in hillsides, annual herb grasslands. Elevation: 0-360 m. Blooming period: March -April	**None**: Lack of suitable habitat and extremely high level of disturbance at site preclude presence. Lack of undisturbed grasslands on site.
Viburnum ellipticum oval-leaved viburnum	—	—	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation: 215-1400 m. Bloom period: May-June	**None.** The project site does not contain suitable woodland habitat to support this species. The project site has been subject to decades of previous disturbance.

Code Designations

[1] **Federal Status: 2023 Endangered Species Act (ESA) Listing**	[2] **State Status: 2023 California Endangered Species Act (CESA) Listing**	[3] **California Rare Plant Rank (CRPR): 2023 CRPR Listing**
ESU = Evolutionary Significant Unit is a distinctive population. **FE** = Listed as endangered under the Endangered Species Act.	**SE** = Listed as endangered under the California Endangered Species Act. **ST** = Listed as threatened under CESA. **SSC** = Species of Special Concern as identified by the CDFW.	**Rank 1A** = Plants species that presumed extinct in California. **Rank 1B** = Plant species that are rare, threatened, or endangered in California and elsewhere.

Scientific Name Common Name	Status			Habitat Description[4]	Habitat Value and Rationale
	ESA[1]	CESA[2]	CRPR[3]		

FT = Listed as threatened under the Endangered Species Act.
FC = Candidate for listing (threatened or endangered) under the Endangered Species Act.
FD = Delisted in accordance with the Endangered Species Act.
FPD = Federally Proposed to be Delisted.
MBTA = Protected by the Migratory Bird Treaty Act
— = Not federally listed

FP = Listed as fully protected under the Fish and Game Code.
CFG = FGC =protected by Fish and Game Code 3503.5
CR = Rare in California.
— = Not State-listed

Rank 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 = Plants about which we need more information–A Review List
Rank 4 = Plants of limited distribution–A Watch List

Notes:
[4] **Habitat Description**: Habitat description adapted from CNDDB and CNPS online inventory or other specified source.
[5] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 5 or other specified source.

Sources:
California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 16, 2023.
California Native Plant Society (CNPS). 2023. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed November 16, 2023.
California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed November 16, 2023.

Table 2: Special-status Wildlife Species Habitat Value Evaluation

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Amphibians				
Ambystoma californiense pop. 1 California tiger salamander	FT	ST	Need underground refuges, especially ground squirrel burrows, and vernal pools, ponds, or other standing water bodies for breeding.	**None**: There is no recorded occurrence of this species on site and the site lacks suitable breeding habitat (vernal pools, ponds, or other standing bodies of water). The nearest recorded occurrence of this species is 1.8 miles away to the north and is separated from the project site by a major freeway. This is far greater than the average dispersal distance (1.37 miles) of most tiger salamanders[1]. The project site does not contain vernal pools to support this species. No ground squirrel burrows were observed- lack of suitable upland refuge habitat.
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	FP	SE	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**None**: Lack of suitable habitat and high level of development on site. The site does not contain perennial stream habitat and furthermore lacks suitable a substrate for breeding. No recorded occurrence of this species was found within 5 miles of the project area.
Rana draytonii California red-legged frog	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development	**None**: There is no recorded occurrence of this species on site. The nearest recent occurrence is 0.94 miles away. The project site does not contain perennial water with deep pooling features or dense emergent riparian vegetation. CRLF can disperse up to 1.7 miles from breeding habitat and there are six occurrences of this species within 1.7 miles from the project site[2]. However, all of these occurrences are separated by the project site by highly trafficked roadways, further limiting the likelihood of dispersal. The combination of all the factors listed above results in the conclusion that CRLF is unlikely to occur on the project site.
Spea hammondii western spadefoot	—	SSC	Occurs in open areas with sandy or gravelly soils in mixed woodlands, grasslands, coastal sage and Riversidean alluvial fan sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeds in ephemeral rain pools that do not contain bullfrogs, fish, or crayfish.	**None**: Lack of suitable habitat and high level of disturbance on site. There are no occurrences of this species within 5 miles of the project site. The nearest occurrence is located around 8 miles from the project site.

[1] Orloff, S.G, 2009. Movement Patterns and Migration Distances In An Upland Population Of California Tiger Salamander (*Ambystoma Californiense*). Herpetological Conservation and Biology Vol. 6, No. 2, pp. 266–276

[2] Fellers and Kleeman, 2007. California Red-Legged Frog (*Rana Draytonii*) Movement and Habitat Use. Journal of Herpetology Vol. 41, No. 2, pp. 276-286

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Birds				
Accipiter cooperii Cooper's hawk	— MBTA	— FGC	Found in woodlands, chiefly of the open, interrupted, or marginal types. Nest sites are mainly in riparian growths of deciduous trees, such as in canyon bottoms on river plains; also, in live oaks.	**None**: No suitable habitat is present within the project site. No recent recorded occurrences have been documented within 5 miles of the project site.
Accipiter striatus sharp-shinned hawk	—	WL	Mixed or coniferous forests, open deciduous woodlands, thickets, edges. Usually nests in groves of coniferous trees in mixed woods, sometimes in dense deciduous trees or in pure coniferous forest with brush or clearings nearby. In winter found in any kind of forest or brushy area; tends to avoid open country.	**None:** The project site does not contain suitable forests for nesting or hunting habitat. There is no occurrence of this species within 5 miles of the project site. High levels of development surrounding the site preclude presence.
Agelaius tricolor Tricolored blackbird	—	ST SSC	Breeds near fresh water in dense emergent vegetation.	**None:** The site does not contain aquatic resources with emergent vegetation suitable for this species. There were past occurrences of this species found within the project site, but mining operation eliminated the potential habitat for this species and no occurrences have been recorded in the last 20 years.
Ammodramus savannarum grasshopper sparrow		SSC	Found in dense grasslands on rolling hills, lowland plains, in valleys, and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. A loosely colonial species when nesting.	**None**: No suitable habitat is present within the project site. No recorded occurrences of this species within 5 miles of the project area were identified.
Aquila chrysaetos Golden eagle	—	FP	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert	**None:** The site is does not contain suitable habitats in the form of mountain areas, or sage-juniper flats. There are no occurrences of this species within 5 miles of the project site.
Athene cunicularia Burrowing owl	—	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Low**: Portions of the ungraded site contains low growing vegetation and marginal foraging habitat. The project site is highly disturbed and no suitable burrows were observed during field surveys.. However, recently recorded occurrence of this species was found 0.85 miles from the project site with 16 other occurrences recorded within 5 miles away. These occurences provide the potential for owls to occur on the site in a transitiory (e.g., non-nesting/breeding) capacity.
Buteo regalis ferruginous hawk	—	WL	Grassland and arid shrublands with an abundance of prey species, such as pocket gophers, black-tailed jackrabbits, and desert cottontails. Will winter near cultivated fields that have an abundance of pocket gophers.	**None:** The site does not contain suitable nesting habitat to support this species. There is no recent recorded occurrences within 5 miles of the project site.
Buteo swainsoni Swainson's hawk	—	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**None:** The site does not contain suitable habitat for this species such as juniper-sage flats or oak savannahs. There is no recent recorded occurrences within 5 miles of the project site.

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Circus hudsonius northern harrier	—	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas	**None**: The project site lacks coastal salt and or freshwater marsh habitat to support this species. All recorded occurrences are within the greater project vicinity are tied to the San Francisco Bay.
Elanus leucurus white-tailed kite	—	FP	Grasslands and open coastal scrub in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous, open stages of most habitats mostly in cismontane California.	**Low:** The project site does contains marginal foraging habitat for this species, and the offsite improvement area does contain potential nesting habitat. The site is heavily disturbed and surrounded by dense human development and water bodies. There is one recent occurrence of this species located 4 miles from the project site.
Eremophila alpestris actia California horned lark	—	WL	Occurs and nests in open areas with sparse vegetation.	**None:** The site does contain an open area with sparse vegetation, but the site is heavily disturbed and there are no recent occurrences of this species within 5 miles of the project site.
Falco mexicanus prairie falcon	—	WL	Open, dry scrub and grassland terrain. Breeding sites are located on a sheltered ledge of a cliff overlooking a large open area.	**None:** While the site does not contain suitable nesting habitat to support this species. The site lacks cliffs or ledges.
Falco peregrinus anatum American peregrine falcon	FD	SD/ FP	Near wetlands, lakes, rivers, or other aquatic features. Nests on cliffs, coastal habitats or tall buildings.	**None:** The site does not contain suitable nesting habitat due to the lack of cliffs or tall buildings.
Haliaeetus leucocephalus bald eagle	FD	SE FP	Occurs along ocean shoreline, lake margins, and rivers for nesting and wintering. Most nests are within one mile of water. Nest in large, old-growth or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**None**: No suitable habitat is present within the project site. There is no recorded occurrence within 5 miles of the site. The most recent occurrence of this species was found 9 miles from the site within cismontane woodland near Lake Del Valle.
Lanius ludovicianus loggerhead shrike		SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**None.** The project site does not contain suitable nesting habitat for this species. There is no recorded occurrence within 5 miles of the site.
Laterallus jamaicensis coturniculus California black rail	—	FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None:** The project site does not contain marsh habitat to sustain this species. There is no recorded occurrence within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Melospiza melodia pusillula Alameda song sparrow	—	SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	**None:** The project site does not contain Salicornia marsh habitat to support this species. There is no recorded occurrence within 5 miles of the site.
Fish				
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	FT	—	Populations in the Sacramento and San Joaquin rivers and their tributaries.	**None:** Although the project site is near a manmade lake, the site does not contain suitable aquatic habitat to support this species. The site is hydrologically isolated from the Sacramento and San Joaquin rivers and their tributaries.
Invertebrates				
Bombus occidentalis western bumble bee		SC	Formerly found in large parts of California but has been reduced in abundance and is now mostly restricted to high meadows or coastal environments. Species requires floral resources, and undisturbed nest and overwintering sites.	**None.** The project site does not contain suitable high meadows or coastal environments, floral resources and undisturbed nest sites to support this species.
Bombus crotchii Crotch bumble bee	—	SC	This species occurs primarily in California, including coastal habitats, western Mojave Desert, San Joaquin Valley, and adjacent foothills through most of southwestern California. It inhabits arid grasslands and shrublands, and its food sources including milkweeds, pincushions, lupines, clovers, phacelias, sages, clarkias, poppies, and buckwheats.	**None.** There is suitable desert scrub habitat and food sources on the project site. There are no historic records of this species in the project area.
Branchinecta longiantenna longhorn fairy shrimp	FE	—	Extremely rare and only found in California's Central Valley. They live in clear to turbid freshwater vernal pools, as well as, water-filled depressions in sandstone, near Tracy, California, grass-bottomed pools in Merced County or claypan pools around Soda Lake in San Luis Obispo County.	**None.** The project site does not contain suitable habitat to support this species. The site lacks freshwater vernal pools.
Branchinecta lynchi vernal pool fairy shrimp	FT	—	Small vernal pools with cool water (10ºC), moderate alkalinity and conductivity, and less than 1 m deep.	**None:** The project site does not contain suitable habitat to support this species. The site lacks vernal pools.
Lepidurus packardi vernal pool tadpole shrimp	FE	—	Found in where vernal pool habitats occur. And has a patchy distribution across the Central Valley of California, from Shasta County southward to northwestern Tulare County, with isolated occurrences in Alameda and Contra Costa counties.	**None:** The project site does not contain suitable habitat to support this species. The site lacks vernal pools.
Mammals				

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Antrozous pallidus Pallid bat	—	SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures and include trees and buildings. Species is very sensitive to disturbance of roosting sites.	**None**: Lack of suitable roosting habitat and ongoing high level of disturbance at site preclude presence of this species. Two recent recorded occurrences of this species was found within 5 miles of the site with the nearest occurring 3.7 miles south (occurrence #105). This occurrence was from over 20 years ago and found within undisturbed oak woodland habitat.
Corynorhinus townsendii Townsend's big-eared bat	—	SSC	Throughout California in a wide variety of habitats. Most common in areas associated with mixed conifer forest, desert scrub, or pine forest habitat. Roosts in caves, mines, and buildings. Extremely sensitive to human disturbance.	**None**: Lack of suitable roosting habitat and ongoing high level of disturbance at site preclude presence of this species. A recorded occurrence of this species was found 2 miles away from the site. This occurrence was recorded 10 years ago and located in undisturbed mountainous habitat to the east. The project site does not contain pine forest habitat.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	—	SSC	Forest habitats of moderate canopy & moderate to dense understory. May prefer chaparral & redwood habitats. Constructs nests of shredded grass, leaves & other material. May be limited by availability of nest-building materials.	**None.** The project parcel does not contain suitable habitat to support this species. The site lacks chaparral and redwood habitats.
Taxidea taxus American badger	—	SSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils, specifically grassland environments. Natal dens occur on slopes.	**None**: Lack of suitable habitat large enough to disperse and roam including forest and stages of shrub. No badger burrows were observed during the field visit. The closest recorded occurrence of this species is 3.8 miles south in grassland habitat and is separated from the project site by residential developments and roadways. The project site does not contain suitable grassland habitat to support this species.
Vulpes macrotis mutica San Joaquin kit fox	FE	ST	Annual grasslands or grassy open stages with scattered shrubby vegetation.	**None**: Lack of suitable habitat large enough to disperse and roam. The closest recorded occurrence of this species is 3.5 miles to the north. The site is cut off from suitable habitat by dense residential development and high-use traffic corridors, including I-580.
Reptiles				
Emys marmorata western pond turtle	—	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	**None.** The project site does not contain habitat to support this species. The nearest recorded occurrence of this species is 2.3 miles away in Cottonwood Creek which empties into with Arroyo Las Positas River. Dense residential developments and roadways separate Arroyo Las Positas River from the project site. It is unlikely for this species to disperse through the site.
Masticophis flagellum ruddocki San Joaquin coachwhip	—	SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.	**None**: Lack of suitable habitat on site and necessary burrows for breeding. No recorded occurrence of this species within the project area.

Scientific Name Common Name	Status		Habitat Description[3]	Habitat Value and Rationale
	ESA[1]	CESA/FGC[2]		
Masticophis lateralis euryxanthus Alameda whipsnake	FT	—	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Specifically, mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	**None**: Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral and oak/woodland habitat onsite.
Phrynosoma blainvillii coast horned lizard		SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads. Often found near ant hills feeding on ants.	**None.** The project parcel does not contain suitable habitat to support this species. There are no occurrences of this species within 5 miles of the project site.

Code Designations

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MBTA	= protected by the Migratory Bird Treaty Act	**—**	= Not State-listed
—	= Not federally listed		

Notes:

[3] **Habitat Description**: Habitat description adapted from CNDDB or other specified source.

[4] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 5 or other specified source.

Sources:

California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed November 16, 2023.

California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed November 16, 2023.

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Appendix B:
Database Searches

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Livermore (3712167) OR La Costa Valley (3712157) OR Niles (3712158) OR Mendenhall Springs (3712156) OR Altamont (3712166) OR Diablo (3712178) OR Tassajara (3712177) OR Byron Hot Springs (3712176) OR Dublin (3712168))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Accipiter striatus sharp-shinned hawk	ABNKC12020	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Alkali Meadow Alkali Meadow	CTT45310CA	None	None	G3	S2.1	
Alkali Seep Alkali Seep	CTT45320CA	None	None	G3	S2.1	
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Amsinckia grandiflora large-flowered fiddleneck	PDBOR01050	Endangered	Endangered	G1	S1	1B.1
Anomobryum julaceum slender silver moss	NBMUS80010	None	None	G5?	S2	4.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arctostaphylos auriculata Mt. Diablo manzanita	PDERI04040	None	None	G2	S2	1B.3
Arctostaphylos manzanita ssp. laevigata Contra Costa manzanita	PDERI04273	None	None	G5T2	S2	1B.2
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Branchinecta longiantenna longhorn fairy shrimp	ICBRA03020	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Calochortus pulchellus Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chloropyron molle ssp. hispidum hispid salty bird's-beak	PDSCR0J0D1	None	None	G2T1	S1	1B.1
Chloropyron palmatum palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cismontane Alkali Marsh Cismontane Alkali Marsh	CTT52310CA	None	None	G1	S1.1	
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Deinandra bacigalupii Livermore tarplant	PDAST4R0V0	None	Endangered	G1	S1	1B.1
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Dipodomys heermanni berkeleyensis Berkeley kangaroo rat	AMAFD03061	None	None	G4T1	S2	
Efferia antiochi Antioch efferian robberfly	IIDIP07010	None	None	G1G2	S1S2	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriogonum truncatum Mt. Diablo buckwheat	PDPGN085Z0	None	None	G1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
Hesperolinon breweri Brewer's western flax	PDLIN01030	None	None	G2	S2	1B.2
Hygrotus curvipes curved-foot hygrotus diving beetle	IICOL38030	None	None	G2	S2	
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Malacothamnus hallii Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S3	SSC
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2T3	S2	SSC
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T3Q	S3	
Phacelia phacelioides Mt. Diablo phacelia	PDHYD0C3Q0	None	None	G2	S2	1B.2
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Plagiobothrys glaber hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
Polemonium carneum Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G2	S2	1B.2
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Threatened	Endangered	G3T2	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Ravenella exigua chaparral harebell	PDCAM020A0	None	None	G2	S2	1B.2
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Streptanthus hispidus Mt. Diablo jewelflower	PDBRA2G0M0	None	None	G2	S2	1B.3
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Sycamore Alluvial Woodland Sycamore Alluvial Woodland	CTT62100CA	None	None	G1	S1.1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Triquetrella californica coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Sink Scrub Valley Sink Scrub	CTT36210CA	None	None	G1	S1.1	
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S3	

Record Count: 99

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

4 matches found. Click on scientific name for details

Search Criteria: Fed List is one of [**FE:FT:FC:FD**] **or** State List is one of [**CE:CT:CR:CC:CD**] , 9-Quad include [**3712176:3712156:3712166:3712167:3712168:3712177:3712178:3712157:3712158**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Amsinckia grandiflora	large-flowered fiddleneck	Boraginaceae	annual herb	(Mar)Apr-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2015 Zoya Akulova
Chloropyron palmatum	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Deinandra bacigalupii	Livermore tarplant	Asteraceae	annual herb	Jun-Oct	None	CE	G1	S1	1B.1	Yes	2001-01-01	No Photo Available
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	FE	None	G1	S1	1B.1	Yes	1988-01-01	No Photo Available

Showing 1 to 4 of 4 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 16 November 2023].

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Alameda County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sterna antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/5524

Northwestern Pond Turtle Actinemys marmorata — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1111

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/2076

Foothill Yellow-legged Frog Rana boylii — Threatened

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5133

Insects

NAME	STATUS

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Palmate-bracted Bird's Beak Cordylanthus palmatus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1616	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey

events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

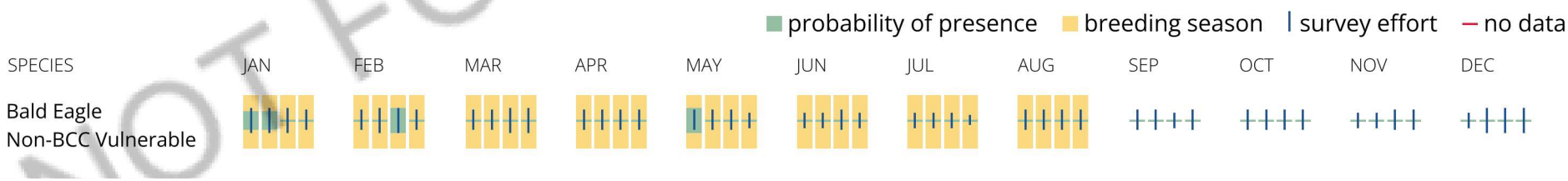
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

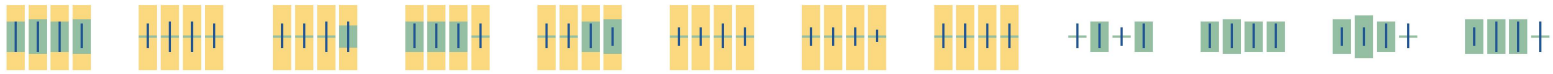
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Golden Eagle
Non-BCC Vulnerable



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Belding's Savannah Sparrow Passerculus sandwichensis beldingi — Breeds Apr 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

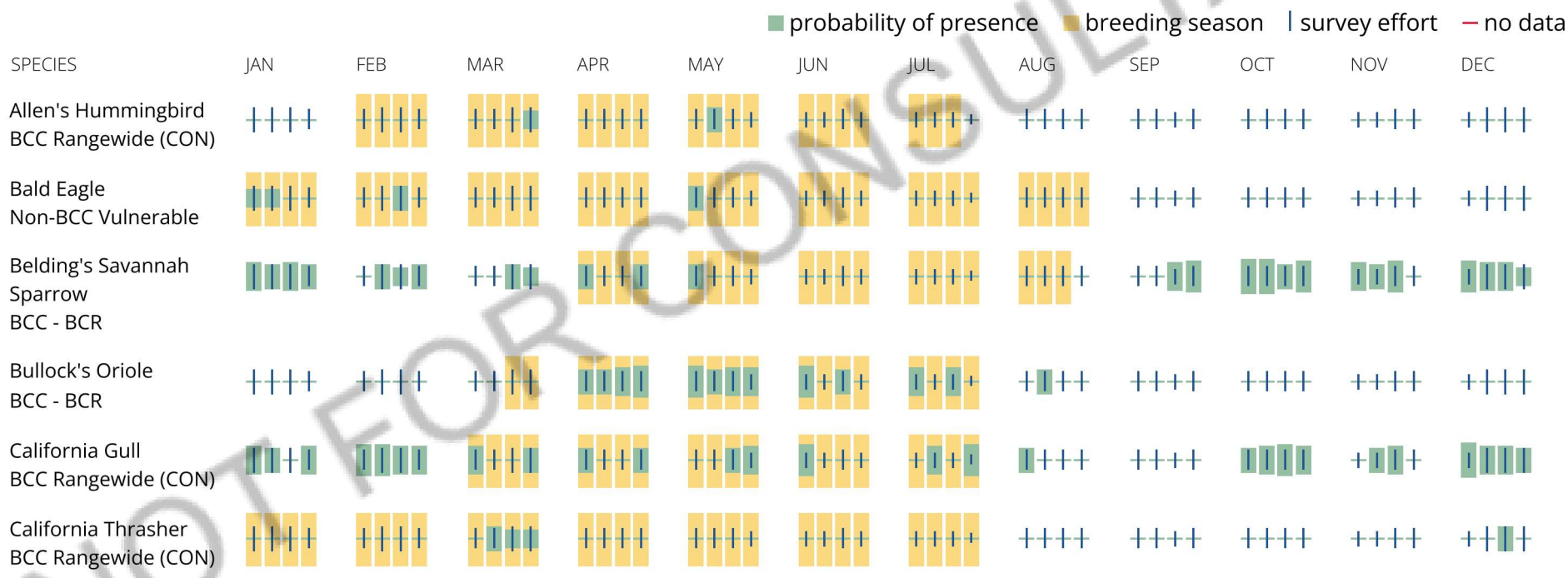
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

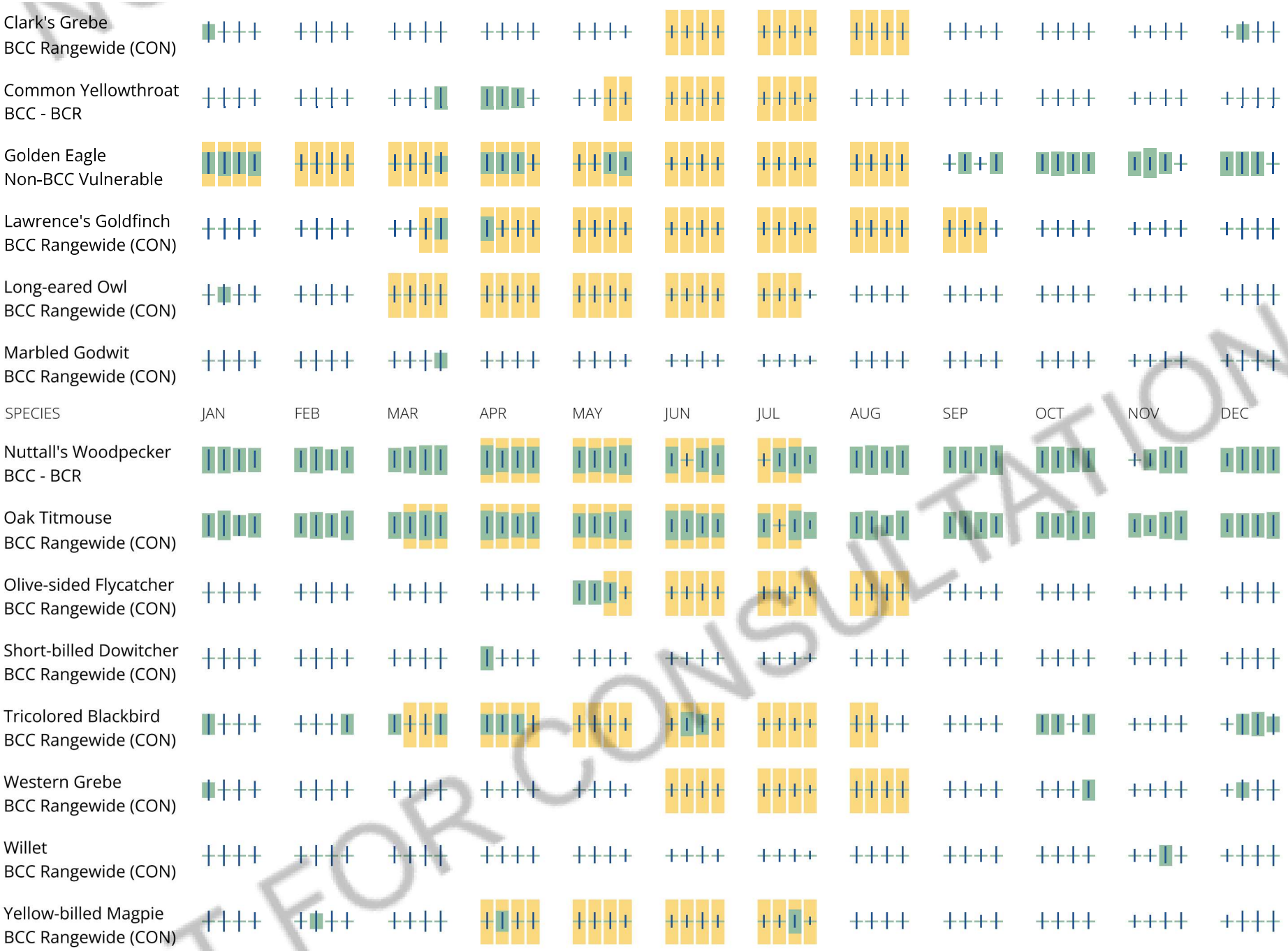
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is

the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND

PUBHx

PUBFx

LAKE

L1UBHx

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal

zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix C:
Site Photographs

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Photograph 1: Constructed swale along the western perimeter of the project site, facing north

Photograph 2: Ungraded Study Area, facing south

Photograph 3: Graded northern offsite improvement area, facing west

Photograph 4: El Charro Road leading to northern offsite improvement area, facing north

Photograph 5: Culvert in drainage swale, located in the eastern offsite improvement area

Photograph 6: Drainage swale located in the eastern offsite improvement area, surrounded by Fremont poplar and willow stands

Photograph 7: Constructed swale located in the southern portion of the project site, drains into culvert, facing northeast

Photograph 8: Fremont poplar and willow stands in eastern offsite improvement area, facing south

Photograph 9: Coyote Brush Scrub in central portion of eastern offsite improvement area, facing west

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Appendix D:
WRA Jurisdictional Memorandum

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wra
Environmental
Consultants

MEMORANDUM - Privileged and Confidential

SUBJECT TO ATTORNEY WORK PRODUCT PRIVILEGE

TO:	Alicia Guerra, Buchalter	**FROM:**	Hope Kingma
DATE:	November 20, 2023		
SUBJECT:	Jurisdictional Memo - Pleasanton Lakes		

On November 8, 2023, Hope Kingma of WRA conducted a site visit to review current site conditions and perform a jurisdictional evaluation of wetlands and waters of the State and U.S. at the Pleasanton Lakes property located north of Busch Road in unincorporated Alameda County (the "Property")(Figure 1, Attachment 1). This memo provides a description of the existing site conditions, features observed on the Property during the 2023 site visit, and a discussion of the jurisdictional status of those features identified onsite.

1.0 EXISTING CONDITIONS

The project site was historically part of a mining operation. There has been some form of channel bisecting the site for years, as illustrated in the historic aerial photographs (Attachment 2). Currently, an incised, man-made stormwater drainage swale bisects the Property, as illustrated in Figure 2, Attachment 1. Grading of this feature along portions of its current alignment was completed in 2019 to provide stormwater drainage across the site following removal of a large mining pit that was once associated with the mining activities on this site. The area of grading activities completed in 2019 is illustrated in this aerial photograph (2020):

The entire swale was recently maintained in October of 2023 following receipt of a grading permit from the County of Alameda authorizing USL PLEASANTON LAKES L.P to grade the site to provide positive drainage and conduct maintenance of the man-made stormwater drainage swale to prevent flooding this coming winter. The low-flow portion of the swale that flows along the southern portion of the site was graded and cleared of debris, and stormwater BMPs were installed at the culvert in the southeastern corner of the site that conveys flows under the road to the Cope Lake to the east. The side slopes of this swale are dominated by ruderal vegetation, as illustrated in the photographs below:

The portion of the swale that flows north to south across the western portion of the site was re-graded to provide a better connection to the southern swale, as shown in this photograph:

The swale that flows north to south across the western portion of the site also curves around to the east to capture additional runoff and divert water away from the housing development that occurs on the western edge of the property, as illustrated in these photographs:

There is an existing ditch along the base of the wall that separates the housing development that occurs on the western edge of the property, as shown in the photograph below, and a temporary detention basin was excavated to hold excess water flowing from the ditch as shown below:

The remaining vegetation on the Property consists of ruderal (weedy) upland species dominated by slender oat (*Avena barbata*), summer mustard (*Hirschfeldia incana*), coyote brush (*Baccharis pilularis*), wild radish (*Raphanus sativus*), yellow starthistle (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), bull thistle (*Cirsium vulgare*), prickly lettuce (*Lactuca serriola*), field bindweed (*Convolvulus arvensis*), spring vetch (*Vicia sativa*), and whitestem filaree (*Erodium moschatum*).

2.0 JURISDICTIONAL STATUS OF MAN-MADE SWALE AND OTHER STORMWATER FEATURES

Although stormwater control features are not specifically included in the list of waters that the agencies consider to be generally non-jurisdictional per the 1986 and 1988 preamble language, 51 FR 41206 (November 13, 1986) and 53 FR 20764 (June 6, 1988), the agencies' longstanding practice is to view stormwater control features that are not built in waters of the United States as non-jurisdictional. The following are not considered waters of the U.S.:

- stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff.

Historic aerial photographs of the project site (Attachment 2) illustrate that no stream or other aquatic features occurred in the vicinity of these constructed features. The alignment of the

constructed swales does not fall within the footprint of a historical stream, marsh, or wetland boundary, and is not a relocated tributary.

Furthermore, stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff are also exempt from CWA jurisdiction. The exemption of the man-made ditches is consistent with the Corps' long-standing, historic position that nontidal ditches excavated in uplands (and historically described as ''dry land'') are not jurisdictional, including stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey stormwater runoff. These features have been maintained for purposes of managing runoff and continue to function for their intended purpose.

The State Water Resources Control Board (SWRCB) adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials into Waters of the State* on April 2, 2019 (the Procedures). The Procedures went into effect on May 28, 2020. The constructed stormwater conveyance drainages on the project site do not meet the definition of a wetland under the State Wetland Definition since these features are artificial (not a wetland created by modification of surface waters of the state) and are subject to ongoing operation and maintenance (State Water Resources Control Board 2019). Per the Procedures, stormwater ditches are not waters of the State since they are artificial wetlands that were constructed, and are currently used and maintained, primarily for one or more of the following purposes:

- Settling of sediment,
- Detention, retention, infiltration, or treatment of stormwater runoff,
- Treatment of surface waters.

The Procedures provide a jurisdictional exemption for artificial wetlands that are currently used and maintained for detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program. This jurisdictional exemption was drafted with NPDES permits in mind.

USL PLEASANTON LAKES

APN: 946-4634-1 & 946-4634-2

ALAMEDA COUNTY CALIFORNIA

EMERGENCY GRADING PLAN

WDID: 2 01C401765

PROJECT NOTES:

1. OWNER: USL PLEASANTON LAKES L.P.
C/O STEELWAVE, LLC
999 BAKER WAY, SUITE 200
SAN MATEO, CA 94404
STEVE DUNN

2. CIVIL ENGINEER: CARLSON, BARBEE & GIBSON, INC.
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CA 94583
(925) 866-0322
LEE ROSENBLATT, RCE 65469

3. BENCHMARK: AN NGS BRASS DISK SET IN BRIDGE SIDEWALK, DESIGNATION P 929 RESET, PID AJ8711, HAVING AN NGVD29 PUBLISHED ELEVATION OF 361.6 FEET.

GENERAL NOTES:

1. THESE PLANS SHOW EXISTING FEATURES INCLUDING BUT NOT LIMITED TO TREES, UTILITIES, AND STRUCTURES THAT MAY BE AFFECTED BY THE CONSTRUCTION OR PLACEMENT OF THE PROPOSED ENGINEERED IMPROVEMENTS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO IMMEDIATELY NOTIFY THE ENGINEER IF THERE ARE ANY EXISTING FEATURES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, THAT COULD IN ANY WAY BE IN POTENTIAL CONFLICT WITH THE DESIGN ON THESE PLANS. ALL WORK WITHIN THE VICINITY OF A POTENTIAL CONFLICT SHALL CEASE UNTIL AN ADEQUATE AND APPROPRIATE SOLUTION IS DETERMINED BY THE ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.

2. THE CIVIL ENGINEER ASSUMES NO RESPONSIBILITY BEYOND THE ADEQUACY OF HIS DESIGN CONTAINED HEREIN.

3. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND DESIGN CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CIVIL ENGINEER.

4. CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS AT THE JOB SITE FOR PUBLIC WORKS, AMBULANCE, POLICE, AND FIRE DEPARTMENTS, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.

5. DURING CONSTRUCTION IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR SAFE TRAFFIC CONTROL IN AND AROUND THE SITE, TO PROTECT THE GENERAL PUBLIC, AND TO PREVENT UNCONTROLLED ACCESS TO THE SITE AT ALL TIMES. THIS MAY INCLUDE BUT NOT BE LIMITED TO SIGNS, FLASHING LIGHTS, BARRICADES AND FLAG PERSONS.

6. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT CARLSON, BARBEE & GIBSON, INC. AT (925) 866-0322 FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.

7. ALL GRADING, SITE PREPARATION, AND PLACING AND COMPACTION OF FILL SHALL BE DONE IN ACCORDANCE WITH THE ENGINEERING DESIGN GUIDELINES FOR UNINCORPORATED ALAMEDA COUNTY GRADING REQUIREMENTS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT.

8. THE CONTRACTOR SHALL CONFIRM THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EARTHWORK QUANTITY AND BALANCE PRIOR TO COMMENCEMENT OF GRADING OPERATIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DISTRIBUTING ANY EXCESS MATERIAL OR SUPPLY MATERIAL AS REQUIRED TO BALANCE PER PLAN.

9. CONTRACTOR SHALL PROVIDE PROPER SHORING IN ALL TRENCHES DEEPER THAN FIVE (5) FEET. ANY DAMAGE RESULTING FROM LACK OF SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS.

10. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDER.

11. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY PERTAINING TO "CONFINED SPACES". ANY MANHOLE, CULVERT, DROP INLET OR TRENCH (WHICH COULD CONTAIN AIR), THAT IS NOT READILY VENTILATED, MAY BE CONSIDERED A "CONFINED SPACE".

12. ENCROACHMENT PERMITS REQUIRED FOR WORK WITHIN EXISTING PUBLIC RIGHTS OF WAY SHALL BE OBTAINED BY THE CONTRACTOR.

13. PRIOR TO COMMENCEMENT OF ANY WORK ON ADJACENT PROPERTY, THE OWNER SHALL OBTAIN WRITTEN PERMISSION FROM AFFECTED PROPERTY OWNERS.

14. EXISTING CURB, GUTTER AND SIDEWALK THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH THEY WERE NOT TO BE REMOVED, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR

15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL GRADE OF CONCRETE.

16. THE OWNER'S CIVIL ENGINEER WILL PROVIDE CONSTRUCTION STAKES. THE NUMBER AND LOCATION OF STAKES REQUIRED SHALL BE DETERMINED BEFORE THE CONSTRUCTION BEGINS. ALL STAKING REQUESTS SHOULD BE DIRECTED TO THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ACTUAL NEED. ANY ADDITIONAL STAKING OR RESTAKING WILL ONLY BE DONE AS DIRECTED AND AUTHORIZED BY THE OWNER OR HIS AUTHORIZED AGENT.

17. ALL EXISTING ELEVATIONS SHOWN ARE AS MEASURED IN THE FIELD UNLESS OTHERWISE NOTED.

18. OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) FOR UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. PHONE 1-811-227-2600. NEITHER THE OWNER NOR THE CIVIL ENGINEER ASSUMES RESPONSIBILITY THAT THE OBSTRUCTIONS INDICATED WILL BE THE OBSTRUCTIONS ENCOUNTERED.

19. THE CONTRACTOR SHALL NOT DISTURB OR DESTROY ANY PERMANENT SURVEY POINTS WITHOUT THE CONSENT OF THE CITY ENGINEER. ANY PERMANENT MONUMENTS OR POINTS DISTURBED OR DESTROYED SHALL BE REPLACED BY A LICENSED ENGINEER OR SURVEYOR AT THE CONTRACTOR'S EXPENSE.

21. ALL GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.

22. ALL GRADED SLOPES ARE MAXIMUM TWO (2) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL.

23. WHERE PAVEMENT IS TO BE EXTENDED, EXISTING IMPROVEMENT ENDS MUST BE SAW-CUT. HMA OR PCC PAVEMENT REMOVED MUST BE SAW-CUT OR REMOVED TO AN EXPANSION JOINT.

24. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF PUBLIC IMPROVEMENTS/FACILITIES DAMAGED BY HIS OPERATIONS INCLUDING BUT NOT LIMITED TO MONUMENTS, BENCHMARKS, STREET PAVEMENT, PAVEMENT MARKINGS, TRAFFIC STRIPING AND SIGNAGE, TRAFFIC LOOPS, FIBER OPTIC, ETC.

25. GRADING, SITE PREPARATION, PLACING AND COMPACTING FILL SHALL BE DONE UNDER THE OBSERVATION OF THE SOIL ENGINEER'S REPRESENTATIVE. SUBSEQUENT TO COMPLETION OF WORK, THE SOILS ENGINEER SHALL SUBMIT TO THE OWNER AND THE CITY A FINAL TESTING AND OBSERVATION REPORT. RECOMMENDATIONS OF THE SOILS REPORT SHALL BE STRICTLY ADHERED TO.

26. THE LOCATION, DEPTH AND EXISTENCE OF UNDERGROUND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE POSITIONS BASED UPON INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR SHALL EXCAVATE INSPECTION HOLES ("POT HOLES") AND DETERMINE THE LOCATION AND DEPTH OF ALL UNDERGROUND STRUCTURES AND UTILITIES THAT ARE IN THE VICINITY OF AND/OR MAY BE AFFECTED BY THE PROPOSED IMPROVEMENT WORK PRIOR TO ANY CONSTRUCTION WORK WHICH COULD DAMAGE OR CONFLICT WITH SAID STRUCTURE AND/OR UTILITIES. ANY DEVIATION FROM THE APPROVED PLAN REQUIRES APPROVAL FROM THE ALAMEDA COUNTY PUBLIC WORKS AGENCY.

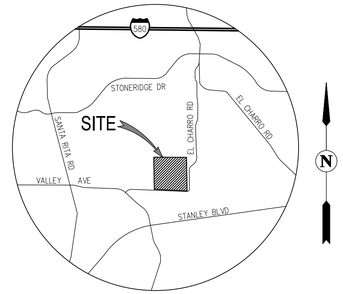
27. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CIVIL ENGINEER OF ANY DIFFERENCES IN LOCATIONS OF EXISTING UTILITIES SHOWN, OR ANY CONFLICTS WITH THE DESIGN THAT BECOME APPARENT DURING CONSTRUCTION, BEFORE CONTINUING WITH WORK IN THAT AREA.

28. THE CONTRACTOR SHALL PROVIDE ADEQUATE COVER FOR THE PROTECTION OF ALL PROPOSED AND EXISTING UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.

29. IF ARCHEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING, OR OTHER ON SITE EXCAVATION, ALL WORK ON SITE SHALL BE STOPPED AND THE CITY IMMEDIATELY NOTIFIED. THE COUNTY CORONER AND THE NATIVE AMERICAN HERITAGE COMMISSION SHALL ALSO BE NOTIFIED AND PROCEDURES FOLLOWED AS REQUIRED IN APPENDIX "K" OF THE CALIFORNIA ENVIRONMENT QUALITY ACT (CEQA).

30. THE S.W.P.P.P. SHALL BE ADHERED TO AT ALL TIMES.

31. CONTRACTOR SHALL OVEREXCAVATE AND RECOMPACT AREAS OF EXISTING FILL PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND/OR REPORT. CONTRACTOR SHALL CONTACT AND COORDINATE DIRECTLY WITH THE GEOTECHNICAL ENGINEER PRIOR TO START OF WORK.



VICINITY MAP
NOT TO SCALE

SHEET INDEX

REVIEWED
ALAMEDA COUNTY PUBLIC WORKS AGENCY
LAND DEVELOPMENT - GRADING DIVISION
Construction shall not be changed from what is shown, on this plan unless authorized by the County. Do not mark or alter this plan. Affixing this stamp on these plans shall not be interpreted as permission to violate or omit any provisions of the adopted codes of any other law, rule, or regulation that is applicable to this construction project.

09/7/2023, 4:10:51 PM
GRD2023-00018
Andy Cho

REGISTERED PROFESSIONAL ENGINEER LEE JORDAN ROSENBLATT 65469 CIVIL STATE OF CALIFORNIA

THESE ARE THE "FINAL RECORD DRAWINGS" FOR THE PROJECT WITH THE ADDITIONS NOTED FOR FIELD CHANGES BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE DEVELOPER, CONTRACTOR AND THE CITY INSPECTOR.

LEE ROSENBLATT RCE 65469 — DATE 01/30/24

APPROVED PLAN FOR GRADING ONLY
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GRD2023-00018
Andy Cho

ALAMEDA COUNTY PUBLIC WORKS AGENCY
GRADING PLANS REVIEWED BY:

CONSTRUCTION AND DEVELOPMENT SERVICES DEPARTMENT
ALAMEDA COUNTY PUBLIC WORKS AGENCY — DATE

NO.	BY	DATE	REVISIONS	CITY APPROVAL

DATE: AUGUST 2023
DRAWN BY: MKA
PROJ. ENGR: MKA
PROJ. MGR: LJR

REGISTERED PROFESSIONAL ENGINEER LEE JORDAN ROSENBLATT 65469 CIVIL STATE OF CALIFORNIA

cbg CIVIL ENGINEERS
SAN RAMON (925) 866-0322
ROSEVILLE (916) 788-4456
WWW.CBANDG.COM
SURVEYORS · PLANNERS

USL PLEASANTON LAKES — BUSCH ROAD — CALIFORNIA
EMERGENCY GRADING PLAN
COVER SHEET
ALAMEDA COUNTY

SHEET NUMBER 1 OF 4

JOB NUMBER 3435-000

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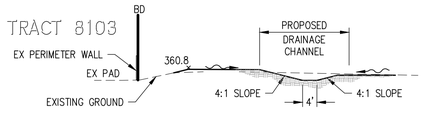
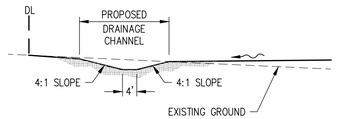
811 Know what's below. Call 811 before you dig.



SECTION A-A



SECTION B-B

LEGEND

- USL PLEASANTON LAKES PROPERTY
- EXISTING LOT LINE
- GRADING DAYLIGHT
- FLOW DIRECTION
- 120.2 SPOT ELEVATION
- FL 120.2 FLOW LINE ELEVATION
- PROPOSED SLOPE (4:1)

EARTHWORK QUANTITIES

DESCRIPTION	CUT (CY)	FILL (CY)
EMERGENCY GRADING	15,000	15,000

REGISTERED PROFESSIONAL ENGINEER LEE JORDAN ROSENBLATT 65469 CIVIL STATE OF CALIFORNIA

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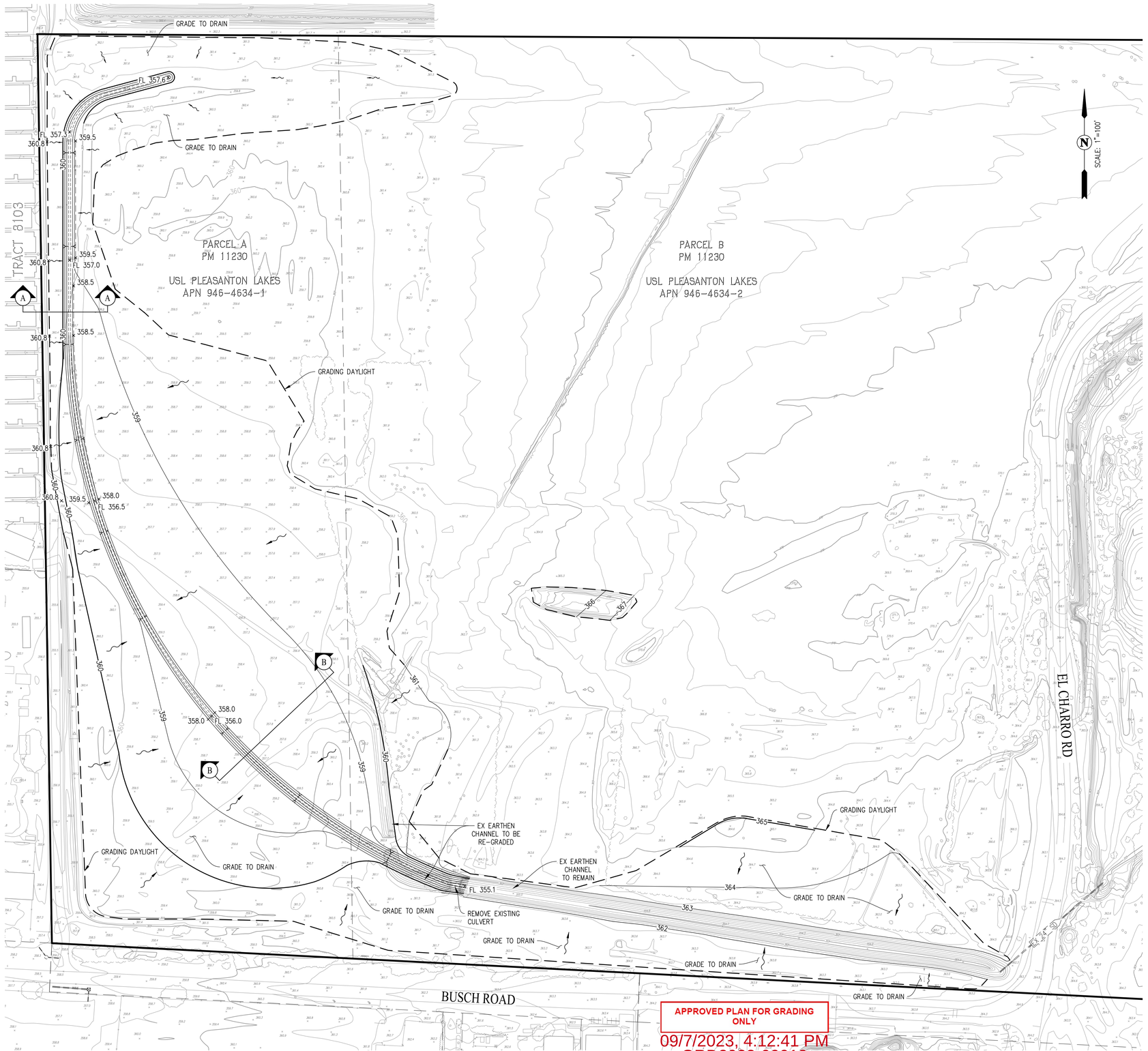
LEE ROSENBLATT RCE 65469 — 01/30/24 DATE

100' 0' 50' 100' 200'

GRAPHIC SCALE



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USL PLEASANTON LAKES — BUSCH ROAD — ALAMEDA COUNTY — CALIFORNIA

EMERGENCY GRADING PLAN

EMERGENCY GRADING PLAN

SHEET NUMBER 2 OF 4

JOB NUMBER 3435-000

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WDID #: 2 01C401765

GENERAL NOTES:

1. LEGALLY RESPONSIBLE PARTY/PERSON (LRP) OWNER/SUBDIVIDER: USL PLEASANTON LAKES L.P.
C/O STEELWAVE, LLC
999 BAKER WAY, SUITE 200
SAN MATEO, CA 94404
STEVE DUNN

2. CIVIL ENGINEER: CARLSON, BARBEE & GIBSON, INC.
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CA 94583
(925) 866-0322
LEE ROSENBLATT, RCE 65469

APPLICABLE (BUT NOT LIMITED TO) CURRENT CASQA STORMWATER BMP CONSTRUCTION HANDBOOK

EC-1	SCHEDULING
EC-3	HYDROMULCH
EC-4	HYDROSEED
NS-1	WATER CONSERVATION PRACTICES
NS-3	PAVING & GRINDING OPERATIONS
NS-8	VEHICLE & EQUIPMENT CLEANING
NS-9	VEHICLE & EQUIPMENT FUELING
NS-10	VEHICLE & EQUIPMENT MAINTENANCE
NS-12	CONCRETE CURING
NS-13	CONCRETE FINISHING
SE-1	SILT FENCE
SE-4	CHECK DAMS
SE-5	FIBER ROLLS
SE-10	DI PROTECTION TYPE 1
SE-10	DI PROTECTION TYPE 2
SE-10	DI PROTECTION TYPE 3
TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-3	ENTRANCE & OUTLET TIRE WASH
WE-1	WIND EROSION CONTROL
WM-1	MATERIAL DELIVERY & STORAGE
WM-2	MATERIAL USE
WM-3	STOCKPILE MANAGEMENT
WM-8	CONCRETE WASTE MANAGEMENT
WM-9	SANITARY/SEPTIC WASTE MANAGEMENT

RISK LEVEL 2 SITES - BEST MANAGEMENT PRACTICE NOTES:

1. RISK LEVEL 2 SITES ARE SUBJECT TO A pH NAL OF 6.5–8.5, AND A TURBIDITY NAL OF 250 NTU.
2. RISK LEVEL 2 SITES REQUIRE A RAIN EVENT ACTION PLAN.
3. RISK LEVEL 2 SITES REQUIRE LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE, FACE OF THE SLOPE AND AT THE GRADE BREAKS OF EXPOSED SLOPES TO COMPLY WITH THE FOLLOWING SHEET FLOW LENGTHS:

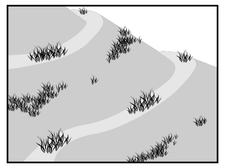
CRITICAL SLOPE/ FLOW LENGTH COMBINATIONS	
0–25%	20 FEET
25–50%	15 FEET
OVER 50%	10 FEET

4. RISK LEVEL 2 SITE MONITORING AND REPORTING REQUIREMENTS:

SUMMARY OF MONITORING AND REPORTING REQUIREMENTS							
RISK LEVEL	VISUAL INSPECTIONS					SAMPLE COLLECTION	
	QUARTERLY NON-STORMWATER DISCHARGE	PRE-STORM EVENT		DAILY STORM BMP	POST STORM	STORMWATER DISCHARGE	RECEIVING WATER
		BASELINE	REAP				
X	X	X	X	X	X	X	N/A

5. IT SHALL BE THE LEGALLY RESPONSIBLE PARTY'S (LRP/DISCHARGER) DUTY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO ENSURE THE ENTIRE SITE IS IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) APPROVED FOR THE SITE, THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD (SWRCB) ORDER NO. 2009–0009 DWQ, NPDES NO. CAS000002 AND THE CASQA CONSTRUCTION BMP GUIDANCE HANDBOOK.
6. THIS PLAN IS INTENDED TO BE UTILIZED FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY AND IS NOT TO BE UTILIZED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS.
7. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN AS NECESSARY IN THE FIELD. DOCUMENT AND REPORT ANY FIELD CHANGES PER THE REQUIREMENTS OF THE SWPPP AND NOTIFY THE CITY OR COUNTY REPRESENTATIVE OF THE FIELD CHANGES.
8. ALL MAINTENANCE AND OPERATION REQUIREMENTS SHALL COMPLY WITH THE SWPPP AND THE CASQA CONSTRUCTION BMP GUIDANCE HANDBOOK.
9. DISCHARGERS SHALL EFFECT AND MAINTAIN PRECAUTIONARY MEASURES NECESSARY TO PROTECT ADJACENT WATERCOURSES AND PUBLIC OR PRIVATE PROPERTY FROM DAMAGE BY EROSION, FLOODING AND DEPOSITION OF MUD OR DEBRIS ORIGINATING FROM THE SITE.
10. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL FOR THE PROJECT AND SHALL INSTALL AND MAINTAIN ANY DEVICES AND MEASURES NECESSARY TO THE SATISFACTION OF THE CITY OR COUNTY ENGINEER AND THE REGIONAL WATER QUALITY CONTROL BOARD (RWQCB).
11. DISCHARGERS SHALL ESTABLISH AND MAINTAIN EFFECTIVE BMP PERIMETER CONTROLS AND STABILIZED ALL CONSTRUCTION ENTRANCES AND EXITS TO SUFFICIENTLY CONTROL EROSION AND SEDIMENT DISCHARGES FROM THE SITE YEAR–ROUND.
12. EROSION CONTROL MEASURES WILL BE PROPERLY IN PLACE YEAR–ROUND. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE DAY RAIN PROBABILITY EXCEEDS 50 PERCENT.
13. INSPECTIONS AND OBSERVATIONS SHALL OCCUR WEEKLY, AND AT LEAST ONCE EACH 24–HOUR PERIOD DURING EXTENDED STORM EVENTS, TO IDENTIFY AND RECORD BMPS THAT NEED MAINTENANCE TO OPERATE EFFECTIVELY, THAT HAVE FAILED OR THAT COULD FAIL TO OPERATE AS INTENDED.
14. DISCHARGERS SHALL IMPLEMENT MEASURES TO CONTROL ALL NON–STORMWATER DISCHARGES DURING CONSTRUCTION.
15. DISCHARGERS SHALL IMPLEMENT EFFECTIVE WIND EROSION CONTROL.
16. CONSTRUCTION TRAFFIC SPEEDS WILL BE LIMITED TO 15 MPH, OR LESS, AS REQUIRED BY THE CONTRACTOR.
17. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF SITE WORK. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE ENTRANCE. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY.
18. APPLY GRAVEL CONSTRUCTION ENTRANCE MATERIAL WITHIN MATERIAL STORAGE AREA.
19. APPLY GRAVEL CONSTRUCTION ENTRANCE MATERIAL WITHIN THE VEHICLE STORAGE AREA.
20. PLACE ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED, MAINTAINED AND STORED IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMPS.
21. IMPLEMENT BMPS TO PREVENT THE OFF–SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS.
22. PAVED STREETS WILL BE MONITORED DAILY AND FREQUENTLY CLEANED. STREETS WILL ALSO BE SWEPT ON AT LEAST A WEEKLY BASIS OR MORE OFTEN, AS NEEDED, TO MAINTAIN CONTINUOUS LITTER AND TRACKING CONTROL. STREET WASHING WILL NOT BE DONE.
23. TRASH RECEPTACLES WILL BE PROVIDED THROUGHOUT THE SITE AND UTILIZED BY ALL WORKERS FOR MISCELLANEOUS TRASH. SITE REFUSE WILL BE PICKED UP ON A WEEKLY BASIS OR AS OFTEN AS NECESSARY IN ORDER TO KEEP THE SITE CLEAN.
24. COVER AND BERM LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, FLY–ASH, STUCCO, HYDRATED LIME, ETC.).
25. CONTAIN AND SECURELY PROTECT STOCKPILED WASTE MATERIAL FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.
26. EXCAVATING, FILLING, BACKFILLING AND GRADING WORK SHALL NOT BE PERFORMED DURING UNFAVORABLE WEATHER CONDITIONS.
27. DISCHARGERS SHALL PROVIDE EFFECTIVE SOIL COVER FOR INACTIVE AREAS AND ALL FINISHED SLOPES, OPEN SPACE, UTILITY BACKFILL AND COMPLETED LOTS. INACTIVE AREAS OF CONSTRUCTION ARE AREAS OF CONSTRUCTION ACTIVITY THAT HAVE BEEN DISTURBED AND ARE NOT SCHEDULED TO BE RE–DISTURBED FOR AT LEAST 14 DAYS.
28. SLOPES WILL BE GRADED SO THAT WATER IS DIRECTED AWAY FROM THE SLOPE FACES AT THE END OF EACH WORKING DAY WHEN A CHANCE OF RAIN IS FORECAST.
29. ALL RILLS, GULLIES, ETC. WILL BE PROMPTLY REPAIRED AS PRACTICAL BY REGRADING OR INSTALLATION OF SOIL, GRAVEL OR SANDBAGS.
30. ALL DRAIN INLETS WILL BE PROTECTED AS THEY ARE COMPLETED, DURING THE ENTIRE COURSE OF CONSTRUCTION.
31. IF SEDIMENT BASINS ARE TO BE USED, DISCHARGERS SHALL, AT A MINIMUM DESIGN SEDIMENT BASINS ACCORDING TO THE METHOD PROVIDED IN CASQA'S CONSTRUCTION BMP GUIDANCE HANDBOOK.
32. AFTER EACH RAINSTORM, SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS, FIBER ROLLS, SILT FENCES AND SILT SACKS. SEDIMENT TRAPS/BASINS SHOULD ALSO BE OBSERVED AND PUMPED DRY AS NECESSARY TO ASSURE PROPER FUNCTION AND CAPACITY.
33. INTERIOR FIBER ROLLS MAY BE REMOVED AS THE AREA COMES UNDER CONSTRUCTION FOR FINISH GRADING AND LANDSCAPING INSTALLATION. PERIMETER PROTECTION SHOULD BE LEFT IN PLACE YEAR–ROUND.
34. GRAVEL CHECK DAMS MAY BE REMOVED FROM UNPAVED ROADWAYS AS THEY COME UNDER CONSTRUCTION.

Hydroseeding EC-4



Categories
- EC Erosion Control ☑
- SE Sediment Control
- TC Tracking Control
- WE Wind Erosion Control ☒
- NS Non-Stormwater Management Control
- WM Waste Management and Materials Pollution Control

Legend: ☑ Primary Category ☒ Secondary Category

Targeted Constituents
- Sediment ☑
- Nutrients
- Trash
- Metals
- Bacteria
- Oil and Grease
- Organics

Potential Alternatives
EC-3 Hydraulic Mulch
EC-5 Soil Binders
EC-6 Straw Mulch
EC-7 Geotextiles and Mats
EC-8 Wood Mulching
EC-14 Compost Blanket
EC-16 Non-Vegetative Stabilization

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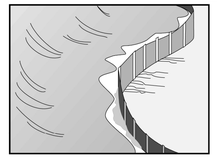
Description and Purpose
Hydroseeding typically consists of applying a mixture of a hydraulic mulch, seed, fertilizer, and stabilizing emulsion with a hydraulic mulcher, to temporarily protect exposed soils from erosion by water and wind. Hydraulic seeding, or hydroseeding, is simply the method by which temporary or permanent seed is applied to the soil surface.

Suitable Applications
Hydroseeding is suitable for disturbed areas requiring temporary protection until permanent stabilization is established, for disturbed areas that will be re-disturbed following an extended period of inactivity, or to apply permanent stabilization measures. Hydroseeding without mulch or other cover (e.g. EC-7, Erosion Control Blanket) is not a stand-alone erosion control BMP and should be combined with additional measures until vegetation establishment.

Typical applications for hydroseeding include:
- Disturbed soil/graded areas where permanent stabilization or continued earthwork is not anticipated prior to seed germination.
- Cleared and graded areas exposed to seasonal rains or temporary irrigation.
- Areas not subject to heavy wear by construction equipment or high traffic.

Silt Fence SE-1



Categories
- EC Erosion Control
- SE Sediment Control ☑
- TC Tracking Control
- WE Wind Erosion Control
- NS Non-Stormwater Management Control
- WM Waste Management and Materials Pollution Control

Legend: ☑ Primary Category ☒ Secondary Category

Targeted Constituents
- Sediment (coarse sediment) ☑
- Nutrients
- Trash
- Metals
- Bacteria
- Oil and Grease
- Organics

Potential Alternatives
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm SE-12 Manufactured Linear Sediment Controls
SE-13 Compost Socks and Berms
SE-14 Biofilter Bags

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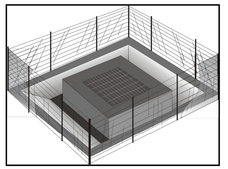
Description and Purpose
A silt fence is made of a woven geotextile that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains water, promoting sedimentation of coarse sediment behind the fence. Silt fence does not retain soil fine particles like clays or silts.

Suitable Applications
Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They could also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion and around inlets within disturbed areas (SE-10). Silt fences should not be used in locations where the flow is concentrated. Silt fences should always be used in combination with erosion controls. Suitable applications include:
- At perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Around inlets.
- Below other small cleared areas.

Storm Drain Inlet Protection SE-10



Categories
- EC Erosion Control
- SE Sediment Control ☑
- TC Tracking Control
- WE Wind Erosion Control
- NS Non-Stormwater Management Control
- WM Waste Management and Materials Pollution Control

Legend: ☑ Primary Category ☒ Secondary Category

Targeted Constituents
- Sediment ☑
- Nutrients
- Trash ☒
- Metals
- Bacteria
- Oil and Grease
- Organics

Potential Alternatives
SE-1 Silt Fence
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm
SE-8 Sandbag Barrier
SE-14 Biofilter Bags
SE-13 Compost Socks and Berms

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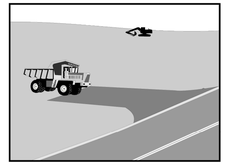
Description and Purpose
Storm drain inlet protection consists of a sediment filter or an impounding area in, around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

Suitable Applications
- Every storm drain inlet receiving runoff from unstabilized or otherwise active work areas should be protected. Inlet protection should be used in conjunction with other erosion and sediment controls to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

Limitations
- Drainage area should not exceed 1 acre.
- In general straw bales should not be used as inlet protection.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.
- Sediment removal may be inadequate to prevent sediment discharges in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use

Stabilized Construction Entrance/Exit TC-1



Categories
- EC Erosion Control ☒
- SE Sediment Control ☒
- TC Tracking Control ☑
- WE Wind Erosion Control
- NS Non-Stormwater Management Control
- WM Waste Management and Materials Pollution Control

Legend: ☑ Primary Objective ☒ Secondary Objective

Targeted Constituents
- Sediment ☑
- Nutrients
- Trash
- Metals
- Bacteria
- Oil and Grease
- Organics

Potential Alternatives
None

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Description and Purpose
A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications
Use at construction sites:
- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations
- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water runoff.

APPROVED PLAN FOR GRADING ONLY
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Andy Cho

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BUSCH ROAD
CALIFORNIA
ALAMEDA COUNTY

EMERGENCY GRADING PLAN
EROSION CONTROL NOTES & DETAILS

SHEET NUMBER 3 OF 4

JOB NUMBER 3435-000

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811 Know what's below. Call 811 before you dig.

LEGEND

- USL PLEASANTON LAKES PROPERTY
- EXISTING LOT LINE
- GRADING DAYLIGHT
- FLOW DIRECTION
- 120.2 SPOT ELEVATION
- FL 120.2 FLOW LINE ELEVATION
- PROPOSED SLOPE (4:1)

EROSION CONTROL LEGEND

- FIELD INLET PROTECTION – (SE-10)
- CURB INLET PROTECTION – (SE-10)
- SILT FENCE – (SE-1)
- HYDROSEED MIX OR HYDROMULCH – (EC-4 OR EC-3)
- STABILIZED CONSTRUCTION ENTRANCE/EXIT – (TC-1)
- EX 18" SD EXISTING STORM DRAIN
- (S) STORMWATER DISCHARGE SAMPLING LOCATION*

NOTE:

* STORMWATER DISCHARGE SAMPLING LOCATIONS ARE SUBJECT TO CHANGE AND WILL BE REMOVED, RELOCATED OR ADDED AT THE QSP'S DISCRETION.

QUALIFIED SWPPP PRACTITIONER (QSP) MARK KNOWN LOCATIONS*

- MATERIALS AND EQUIPMENT STORAGE AREA (WM-1)
- VEHICLE CLEANING/MAINTENANCE/FUELING AREA – (NS-8, NS-9, NS-10)
- SANITARY FACILITY (WM-9)
- C CONCRETE/WASTE WASHOUT (WM-8)

NOTE:

* THE MATERIALS AND EQUIPMENT STORAGE AREA, VEHICLE CLEANING/MAINTENANCE/FUELING AREA, SANITARY FACILITY AND CONCRETE/WASTE WASHOUT WILL BE PLACED AT THE QSP'S DISCRETION AND ARE SUBJECT TO CHANGE.

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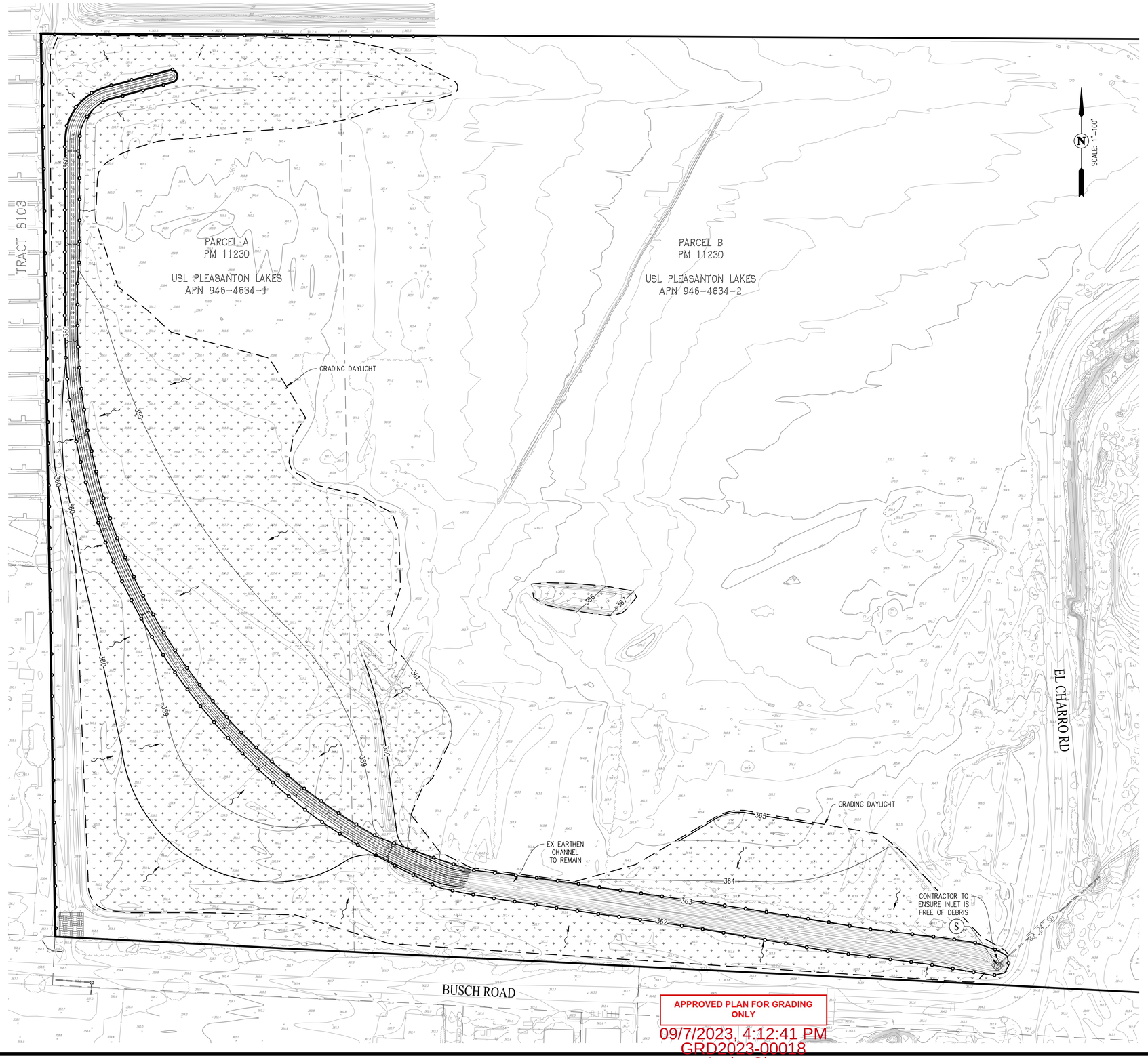
100' 0' 50' 100' 200'
GRAPHIC SCALE



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PROJ. ENGR: MKA
PROJ. MGR: LJR

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USL PLEASANTON LAKES — BUSCH ROAD — ALAMEDA COUNTY — CALIFORNIA

EMERGENCY GRADING PLAN
EROSION CONTROL PLAN

SHEET NUMBER 4 OF 4

JOB NUMBER 3435-000

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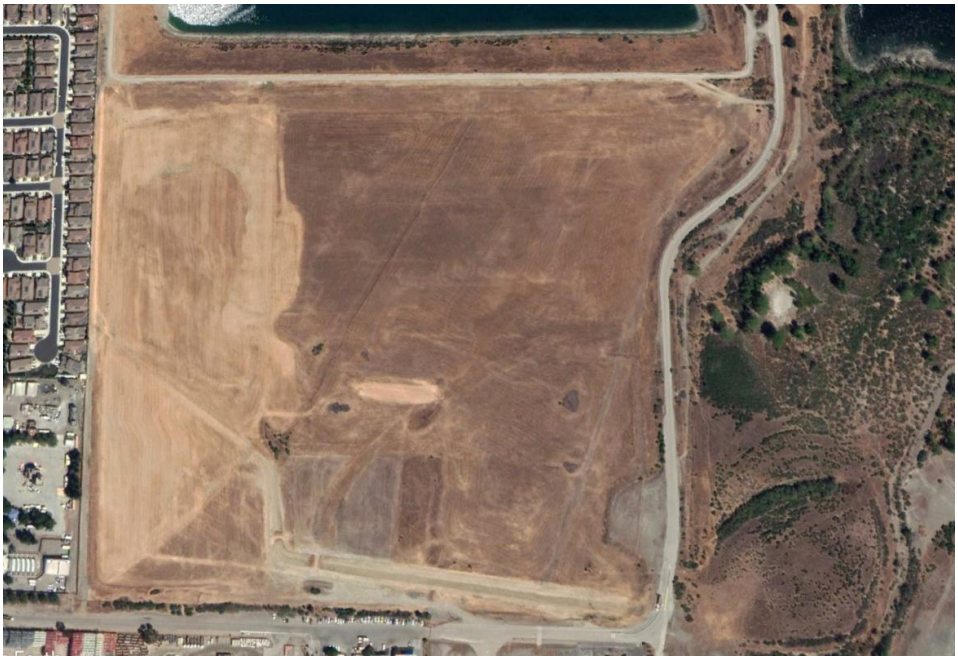
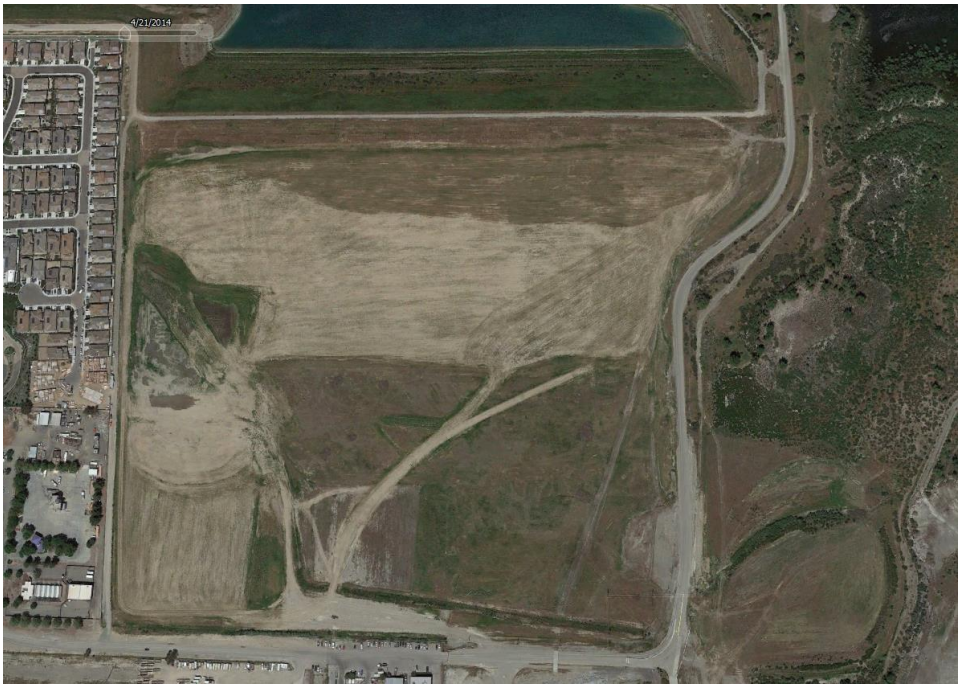
Attachment 2
Historic Aerial Photographs of USL Pleasanton Lakes



2020



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This joint memorandum provides guidance on implementing the activity exemptions in Clean Water Act section 404(f)(1)(C) notwithstanding the definition of "waters of the United States" in effect.

JOINT MEMORANDUM TO THE FIELD BETWEEN THE U.S. DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY CONCERNING EXEMPT CONSTRUCTION OR MAINTENANCE OF IRRIGATION DITCHES AND EXEMPT MAINTENANCE OF DRAINAGE DITCHES UNDER SECTION 404 OF THE CLEAN WATER ACT

I. INTRODUCTION

The U.S. Army Corps of Engineers ("Corps") and the U.S. Environmental Protection Agency ("EPA") (together, "the agencies"), implement Section 404 of the Clean Water Act ("CWA").[1] Section 404 of the CWA regulates the discharge of dredged or fill material into the navigable waters, which the CWA defines as "waters of the United States, including the territorial seas." 33 U.S.C. 1344 and 1362. The agencies are signing this memorandum to provide a clear, consistent approach regarding the application of the exemptions from regulation under Section 404(f)(1)(C) of the CWA for the construction or maintenance of irrigation ditches and for the maintenance of drainage ditches ("ditch exemptions").

This memorandum supersedes previous Corps Regulatory Guidance Letter ("RGL") 07-02, which superseded RGL 87-07. In an effort to provide greater clarity, this memorandum defines the following terms for purposes of implementing the ditch exemptions: "irrigation ditch," "drainage ditch," "construction," and "maintenance." This memorandum also provides a framework for determining the applicability of the ditch exemptions and the "recapture provision" in CWA Section 404(f)(2).

The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

II. BACKGROUND

a. Under Section 404(f)(1)(C) of the CWA (*see also* 33 CFR 323.4(a)(3) and 40 CFR 232.3(c)(3)), discharges of dredged or fill material for the purpose of construction or maintenance of jurisdictional irrigation ditches, or the maintenance (but not construction) of jurisdictional drainage ditches, are not prohibited by or otherwise subject to regulation under Section 404 of the CWA (*i.e.*, these activities are exempt from the need to obtain a Section 404 permit).

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[1] In a 1979 opinion, the U.S. Attorney General Benjamin R. Civiletti determined that EPA has the ultimate responsibility for interpreting the CWA Section 404(f) exemptions. *See* 43 Op. Att'y Gen. 197 (Sept. 5, 1979), https://www.epa.gov/cwa-404/1979-civiletti-memorandum-under-cwa-section-404f. Attorney General Civiletti stated that it is the EPA Administrator who has general responsibility under the Act (33 U.S.C. 1251(d)), and who has general authority to prescribe regulations (33 U.S.C. 1361(a)).

b. Section 404(f)(2) of the CWA states that "[a]ny discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced, shall be required to have a permit under this section." This is commonly referred to as the "recapture provision"; see paragraph c of this section for the regulations implementing this provision.

c. Under 33 CFR 323.4(c) and 40 CFR 232.3(b), exemptions under 33 CFR 323.4(a)(1)-(6) and 40 CFR 232.3(c)(1)-(6) do not apply if the discharge into a water of the United States "is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernable alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration."

III. DEFINITIONS

a. On April 21, 2020, the agencies promulgated a definition of the term "ditch," to mean "a constructed or excavated channel used to convey water." 85 FR 22250. The agencies believe that a clear definition of this term is useful in the context of the ditch exemptions independent of the regulatory text defining "waters of the United States," and therefore this same definition is hereby adopted for the purpose of this memorandum. However, when referred to in this memorandum, the term "ditch" specifically refers to irrigation and drainage ditches.

b. The agencies' regulations define "discharge of dredged material" and "discharge of fill material." *See* 33 CFR 323.2(d) and (f), and 40 CFR 232.2.

c. The agencies' regulations define "waters of the United States." *See* 33 CFR 328.3 and 40 CFR 120.2. It has been the agencies' longstanding practice that certain ditches generally are not considered waters of the United States. However, certain ditches may be a water of the United States, such as certain ditches constructed in or through a jurisdictional water, including a jurisdictional wetland.

d. For the purposes of this memorandum, "irrigation ditch" is defined as a ditch (as defined in paragraph III.a above) that either conveys water to an ultimate irrigation use or place of use ("irrigation water"), or that moves and/or conveys irrigation water (*e.g.*, "run-off" from irrigation) away from irrigated lands ("irrigation return flows").

e. For the purposes of this memorandum, "drainage ditch" is defined as a ditch (as defined in paragraph III.a above) where increasing drainage of a particular land area or infrastructure is at least part of the designed purpose. This includes the following ditch use categories: agricultural, transportation (*e.g.*, roadside, railroad), mosquito abatement, and stormwater management.

f. For the purposes of this memorandum, "related structure" is defined as a structure which is appurtenant to, and functionally related to, an irrigation ditch. Examples of such related structures include, but are not limited to: siphons, pipes, pumps or pump systems, grade control structures, headgates, wingwalls, weirs, diversion structures, and such other facilities. The key to whether a structure is a "related structure" and potentially covered by the irrigation ditch exemption is whether the structure affects the ability (*e.g.*, capacity, design velocities) of the ditch to convey water as designed.

g. For the purposes of this memorandum, "maintenance" is defined as the activity undertaken to preserve or restore the original designed purpose and approximate capacity of the original, as-built configuration of a ditch. Maintenance includes a repair to an existing structure or feature to keep the ditch in its existing state or proper condition, or to preserve it from failure or decline.

h. For the purposes of this memorandum, "construction" is defined as new work, or work that results in a relocation, an extension, or an expansion of an existing ditch and/or related structure. In general, the construction of an irrigation ditch must be intended to primarily serve an irrigation purpose in order for the construction activity to be exempt.

IV. GUIDANCE FOR APPLYING THE DITCH EXEMPTIONS

General Guidance. To determine whether one of the ditch exemptions applies, the following steps should be analyzed:

a. Step 1 is to determine whether the proposed activity will occur in waters of the United States. The agencies' regulations and associated preamble language, guidance documents, and technical manuals may be used to make this determination. If the proposed activity will not occur in waters of the United States, the proposed activity is not prohibited by nor regulated under Section 404 of the CWA.

b. Step 2 is to determine whether the proposed activity involves a discharge of dredged and/or fill material. As noted in paragraph III.b above, the agencies' regulations define these terms. If no discharge of dredged and/or fill material will occur, the proposed activity is not prohibited by nor regulated under Section 404 of the CWA.

c. Step 3 is to determine whether the proposed activity involves an "irrigation ditch" or a "drainage ditch" according to the definitions in Section III of this memorandum. The following clarifications may assist in making this determination:

- Irrigation Ditches:
    - Related structures, as defined in paragraph III.f above, are included in the scope of the irrigation ditch exemption.
    - If a ditch carries only irrigation water, irrigation return flows, and/or overland flow (precipitation and/or snowmelt) to and/or from an irrigated area, that ditch would be considered an irrigation ditch, not a drainage ditch.
    - A ditch that diverts water from a waterbody (*e.g.*, stream, lake, or reservoir) for irrigation purposes is an irrigation ditch and does not become a drainage ditch even if a substantial portion of the flow into or volume of the waterbody is diverted by the irrigation ditch.
- Drainage Ditches:
    - Where a ditch would have the effect of draining wetlands (other than wetlands established due to the presence of irrigation water), the ditch would be considered a drainage ditch, not an irrigation ditch, even if used for irrigation.

d. Step 4 is to determine whether the proposed activity is "maintenance," which is exempt for irrigation and drainage ditches, or "construction," which is exempt for irrigation ditches only.[2] The following clarifications may assist in making this determination:

[2] In many cases, accurate historical records are not available to determine the "as-built" specifications of the original ditch and/or related structures. In these cases, agency staff should work closely with the project proponent to establish an appropriate maintenance depth and/or reference an appropriate structure design to restore the ditch's original designed

- Maintenance (for both irrigation and drainage ditches):
    - Removal of material, including vegetation, from an existing ditch such as by dredging or recontouring in accordance with the historical design and purpose of the ditch, qualifies as maintenance. However, the ditch must not be deepened such that it would drain additional areas compared to the original design.
    - Minor changes to the cross-section of the ditch to conform with current engineering standards (*e.g.*, where more graduated side-slopes result in greater stability) qualify as maintenance, so long as those modifications of the ditch will not result in the drainage, degradation, or destruction of additional jurisdictional waters.
    - Replacement or repair of existing related structure(s) qualify as maintenance as long as the original purpose of the structure is not changed and original approximate capacity of the irrigation ditch or related structures are not increased. Activities related to structures that were not designed to contribute to the original purpose and capacity of the ditch are not covered by the maintenance portion of the irrigation ditch exemption or the drainage ditch exemption. There may, however, be circumstances where a drainage ditch includes associated structures which may be evaluated on a case-by-case basis as to whether the maintenance of such structures is exempt.
- Construction (for irrigation ditches only):
    - Relocation of existing ditches or tributaries, and converting existing ditches into pipes, qualifies as construction. However, these actions should be analyzed in Step 5, below, to determine whether they would be subject to the recapture provision.
- Maintenance (for irrigation and drainage ditches) and/or Construction (for irrigation ditches only) Depending on the Site-specific Circumstances:
    - Sidecasting, for purposes of this memorandum, is the casting of dredged or excavated material to the side of or near the ditch being constructed or maintained. Sidecasting of any dredged material for the purpose of construction or maintenance of jurisdictional irrigation ditches, or the maintenance (but not construction) of jurisdictional drainage ditches, into jurisdictional wetlands or other waters of the United States is exempt. However, these actions should be analyzed in Step 5, below, to determine whether the sidecasting would be subject to the recapture provision.
    - Armoring, lining, and/or piping repair activities qualify as maintenance only where a previously armored, lined, or piped section is being repaired and all work occurs within the footprint of the previous work. All new lining of ditches, where the ditch had not previously been lined, is considered construction.
    - Temporary discharges of fill material in waters of the United States that would be used to facilitate the completion of the exempt ditch maintenance and ditch construction activities described above, such as the placement of temporary cofferdams for erosion and sediment control purposes, are also exempt under Section 404(f)(1)(C) of the CWA, provided the temporary fills are not recaptured under Step 5, below, and provided the temporary fills are removed from waters of the United States in their entirety upon completion of the ditch maintenance or ditch construction activity.

purpose and approximate capacity, while meeting the spirit of the exemption and ensuring adequate protection of aquatic resources. In situations where the potential applicability of the exemption under CWA Section 404(f)(1)(C) to a proposed activity has been raised to the District, and where the District cannot make a determination due to a lack of pertinent factual information, the District should request additional documentation or supporting evidence from the project proponent or inform the proponent that the activity may not qualify for the exemption.

e. Step 5 is to determine applicability of the "recapture provision." CWA Section 404(f)(2) sets forth a two-part test, and both parts must be met to "recapture" an activity (*i.e.*, to bring the activity within the scope of regulation under CWA Section 404, such that a permit would be required).

Part 1: Is the discharge incidental to a proposed activity where the purpose of the activity is to convert an area of the waters of the United States into a use to which it was not previously subject? This is also known as the "change in use" test. The following clarifications may assist in making this determination:

- Construction of an irrigation ditch that cuts through (or across) a jurisdictional waterbody, including wetlands, may be a change in use of the waterbody because the footprint of the ditch and any structure(s) within the jurisdictional water(s) may convert that portion of the waterbody from a non-irrigation use to an irrigation use.
- Conversion of a jurisdictional wetland to a non-wetland is a change in use. However, the development of wetland characteristics in a ditch does not establish a new use for the ditch. The recapture provision would not apply to the maintenance activities of ditches which have developed wetland characteristics even if sediment and vegetation removal occurs to eliminate obstructions to flow.[3]
- Construction of dikes, drainage ditches, or other works or structures used to effect conversion of a wetland from silvicultural to agricultural use (such as by draining the wetland) is a change in use (33 CFR 323.4(c) and 40 CFR 232.3(b)).
- The fill of the former area of existing jurisdictional ditches or tributaries associated with relocation of such waters or converting existing jurisdictional ditches into pipes, is a change in use (*i.e.*, from jurisdictional waters to dry land or to non-jurisdictional waters).

Part 2: If Part 1 of the test is met, will the proposed activity impair the flow or circulation of waters of the United States or reduce the reach of such waters? This determination should be made on a case-by-case basis,[4] and the following clarifications may assist in making this determination:

- The agencies' regulations implementing CWA Section 404(f) (*i.e.*, 33 CFR 323.4(c) and 40 CFR 232.3(b)) specify that "(w)here the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration." The project proponent should provide information to the agencies regarding why this presumption is not met if they request an exemption determination by the agencies.
- A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States (33 CFR 323.4(c) and 40 CFR 232.3(b)). An example of this could be "thin-spreading" dredged material into jurisdictional wetlands. Case-specific information should be considered to determine if such alterations to flow or circulation would rise to the level of impairment.

[3] In certain circumstances, the accumulation of sediment over time may be so extensive that the ditch is no longer capable of being used to convey water, or the intended purpose of the ditch as a drainage resource has been abandoned. The removal of sediment and vegetation in such cases may be considered construction instead of maintenance, depending on the factual circumstances, and may require a permit, assuming the feature is, or the activity at issue is performed in, an otherwise jurisdictional water. When accumulation of sediment or debris occurs in response to a flood, storm, hurricane or similar event or series of events, the maintenance designed to restore such ditches to their original capacity should fall within the scope of the CWA Section 404(f) permit exemption. The maintenance activities performed to restore the ditch, however, must not expand the ditch beyond the contours of the ditch that existed before the event or events occurred.

[4] Because the CWA Section 404(f)(1) exemption for maintenance of irrigation or drainage ditches applies only to maintenance activities that would maintain existing capacity and functionality (not to construction activities), it is unlikely that the recapture provision in CWA Section 404(f)(2) would apply to ditch maintenance activities as defined above.

- A proposed activity for the purpose of construction or maintenance of a ditch that has the effect of substantially increasing or decreasing water levels in a nearby jurisdictional wetland or other jurisdictional water would be an alteration of the flow and circulation of said water(s), and should be analyzed to determine whether that alteration rises to the level of impairment.
- Construction of an irrigation ditch which converts a jurisdictional ditch into a pipe is a change in use of waters of the United States, and by definition also a reduction in their reach, within the meaning of CWA Section 404(f)(2).
- Certain construction or maintenance activities in a ditch have the potential to sever the hydrologic connection of waters of the United States and/or to sever adjacency between a jurisdictional wetland and another water of the United States. Ditch maintenance or construction activities having such an effect would reduce the reach of waters of the United States, and therefore may meet the second part of the recapture provision test. However, if a project proponent is able to demonstrate that hydrologic connectivity is maintained between the waters that would otherwise be severed, such as through the use of a culvert, flood or tide gate, pump, or similar artificial feature, or through the intentional breaches of levees or similar features, the reach of waters of the United States may not be reduced by the activity, although it may result in an impairment of flow or circulation.

V. CONCLUSION

When an activity has been determined in the first four steps of Section IV above to involve discharges of dredged or fill material into waters of the United States, the discharges are for the purpose of construction or maintenance of irrigation ditches or the maintenance (but not construction) of drainage ditches, and the elements of the recapture provision are not satisfied, then the activity is exempt from regulation under Section 404 of the CWA.

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R.D. JAMES
Assistant Secretary of the Army
(Civil Works)

DAVID ROSS

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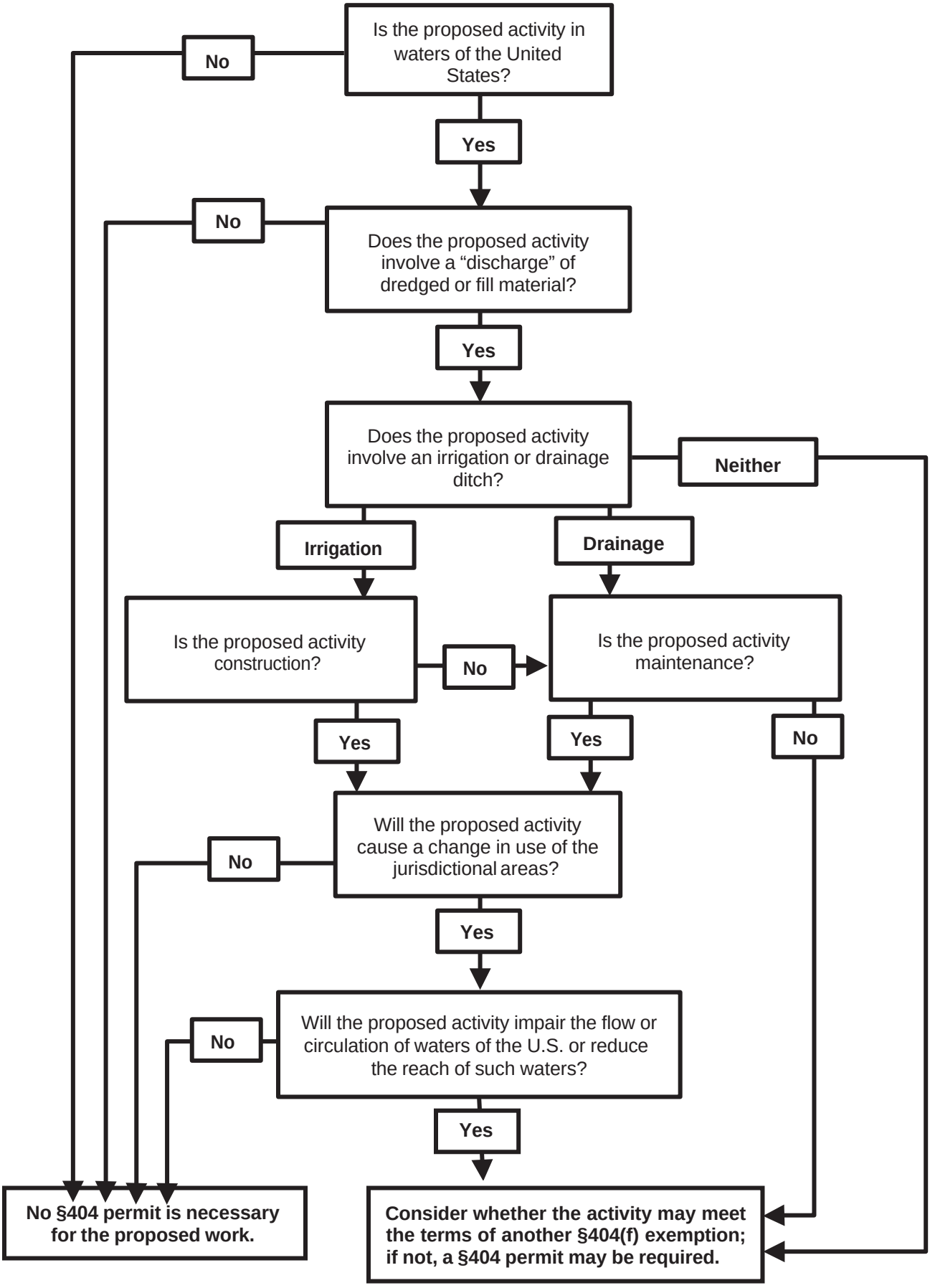
DAVID P. ROSS
Assistant Administrator, Office of Water
Environmental Protection Agency

FLOW CHART ATTACHMENT TO THE JOINT MEMORANDUM TO THE FIELD BETWEEN ARMY AND EPA CONCERNING SECTION 404(f)(1)(C) OF THE CLEAN WATER ACT



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