
Draft Initial Study / Mitigated Negative Declaration for the Pleasanton Stream Maintenance Project

Prepared for:

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1.0 INTRODUCTION AND PURPOSE

This Initial Study of environmental impacts is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations 15000 et. seq.), and the regulations and policies of City of Pleasanton (City). This Initial Study evaluates the potential environmental impacts that might reasonably be anticipated to result from the City's proposed stream maintenance project (Pleasanton Stream Maintenance Project; proposed Project).

The City is the Lead Agency under CEQA and has prepared this Initial Study to address any impacts of implementing the proposed Project. The purpose of the proposed Project is to conduct maintenance activities in stream segments and stormwater detention ponds throughout the City of Pleasanton to improve stormwater conveyance and quality. This would be accomplished through maintenance activities such as weed abatement and silt and rock removal in seventeen stream sections and eight stormwater detention ponds throughout Pleasanton.

2.0 PROJECT INFORMATION

2.1 Project Title

Pleasanton Stream Maintenance Project

2.2 Lead Agency

City of Pleasanton
Operation Services Department
P.O. Box 520
Pleasanton, CA 94566

2.3 Contact Person and Phone Number

Rita Di Candia
rdicandia@cityofpleasantonca.gov
925-931-5513

2.4 Project Location

The Project Area is comprised of 17 stream segments and eight stormwater detention ponds throughout the City of Pleasanton. Apart from seven areas situated on private property, all maintenance areas are owned by the City. Stream segment and detention pond locations and site access are described in Tables 1 and 2, respectively. Stream segments and stormwater detention ponds included in the proposed Project are depicted in Figure 1.

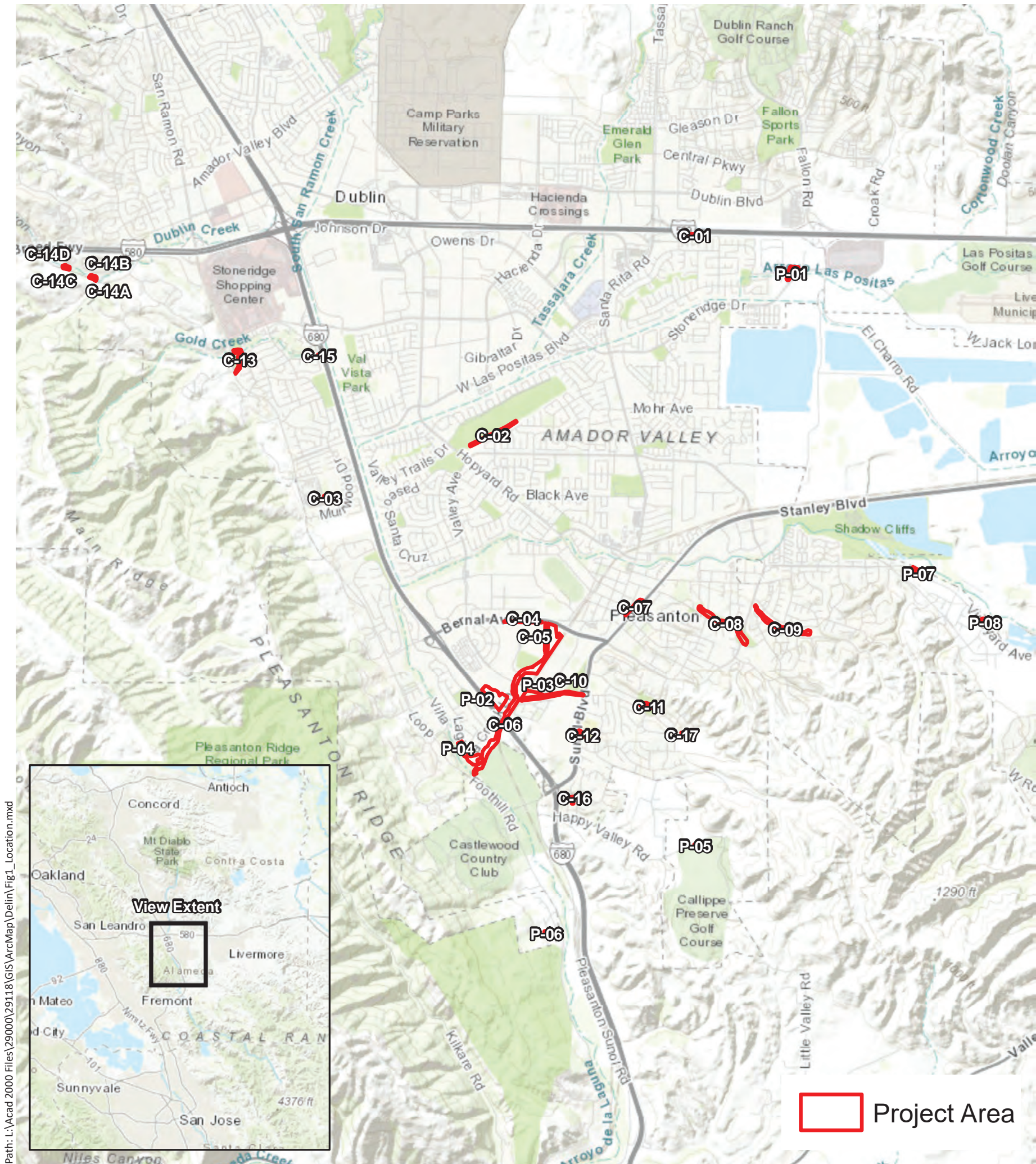
Table 1. Summary Description of the Project's Stream Maintenance Sites

Site #	Site Name	Land Use	Summary Description
C-01	Pimlico Canal	Public Health & Safety (PHS)	Concrete lined ditch running parallel to Interstate 580 east of Santa Rita Road exit, accessible from Pimlico Drive. Connects to channelized USGS Blue Line Stream on the east end.
C-02	Pleasanton Canal	PHS, Parks & Recreation (PR)	Earthen canal, located east of Hopyard Drive. Part of a Blue Line Stream. Accessible via the paved bike path along the Pleasanton canal, or the parking lot for the Hopyard Village.
C-03	Foothill High School Trash Rack	School – High School	Blue Line Stream that connects to an underground system, located west of Interstate 680 and east of Foothill Road. Accessible via a paved pathway.
C-04	Bernal V-ditch	PR	Earthen-lined ditch located east of Interstate 680 and immediately south of Bernal Avenue. Accessible via a paved path. Presumed underground connection to USGS Blue Line Stream, piped connection to Mission Creek.
C-05	Bernal North/South V-ditch	PR	Earthen-lined ditch located immediately south of Bernal Avenue, and east of Interstate 680. Accessible via field, no improved roadway. Connected to a USGS Blue Line Stream, Mission Creek.
C-06	Mission Creek Restoration Project	PR, PHS, Wildland Overlay	Earthen channel and partial Blue Line Stream located east of Laguna Creek Lane and south of Valley Avenue. Accessible via a paved path.
C-07	Lower Kottinger Creek	Medium Density	Earthen channel located east of First Street and adjacent to Lions Wayside Park. Accessible via road. Potential upstream connection to a USGS Blue Line Stream, Arroyo de la Laguna.
C-08	Upper Kottinger Creek	PR, Medium Density	Earthen channel and USGS Blue Line Stream located east of Bernal Avenue and north of Kottinger Drive. Accessible via a paved bike path.
C-09	Touriga Creek	High Density, Medium Density, PR	Earthen channel and USGS Blue Line Stream located east and west of Touriga Drive. Accessible via the dirt road that parallels the creek channel.
C-10	Junipero Canal	Medium Density, Commercial & Limited Industrial	Earthen channel and Blue Line Stream located immediately south of Valley Avenue, and west of Sunol Boulevard. Accessible from a paved bike path and graveled all season road.

C-11	Mission Park Creek	Low Density, PR	Earthen channel located north of Junipero Street and west of Independence Drive. Accessible from a concrete path in Mission Hills Park.
C-12	Cemetery Creek	Commercial, Public & Institutional	Earthen channel that is a Blue Line Stream. Located immediately east of Sunol Boulevard. South side of the creek is on private property. Accessible from the north side of the creek, but there is no paved surface on this side of the creek.
C-13	Gold Creek	PR, Medium Density	Earthen channel that is part of a Blue Line Stream located west of Pleasant Hill Road and east of Foothill Road near the intersection of Stoneridge Drive and Foothill Road. Accessible via the paved path within Moller Park.
C-14	Dublin Canyon Creek	Medium Density, High Density	Blue line stream with a steep bed and bank located west of Canyon Meadow Drive and north of Dublin Canyon Road. Located on private property. Access from the south side of the creek, via Dublin Canyon road, which runs adjacent to the stream.
C-15	Stonedale Channel	Medium Density	Concrete-lined channel running perpendicular to Interstate 680, east of Stonedale Drive, and north of Maywood Drive. Connects Gold Creek to Alamo Canal. Part of a Blue Line Stream. Located on private property within public right-of-way. Access from the west side of the ditch via sidewalk on Stonedale Drive.
C-16	Arlington Creek	Low Density	Earthen channel, appears to connect to a USGA Blue Line Stream, Happy Valley Creek. Located east of Riddell Street and west of Carriage Drive. Located on private property. Accessible via paved pathway.
C-17	Rutledge Place Culvert	Low Density	Culvert located within an earthen channel in a residential development. The feature runs north/south from a culvert beneath Lunch Ranch Road, and is located east of Independence Drive. Located on private property. Access from the north side of the culvert via Lund Ranch Rd. Appears to have downstream connection to Mission Creek, a USGS Blue Line Stream.

Table 2. Summary Description of the Project's Detention Basin Maintenance Sites

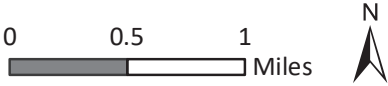
Site #	Site Name	Land Use	Summary Description
P-01	Stoneridge Pond	Medium & High Density, PR, Commercial	An earthen bottom pond located south of Interstate 580 and immediately north of Stoneridge Drive. An artificial water body constructed through channelized portion of a USGS Blue Line Stream, Arroyo Las Positas. Accessible via a concrete road.
P-02	Bernal Detention Pond Central	PHS, PR	An earthen bottom pond located east of Interstate 680 and south of Valley Avenue. An artificial water body adjacent to a channelized feature. Accessible via an all-season unpaved road.
P-03	Canyon Oaks Detention Pond	Medium Density, PHS	An earthen bottom pond located immediately south of Valley Avenue and east of Laguna Creek Lane. An artificial water body that is adjacent to a USGS Blue Line Stream. Accessible via an all-season unpaved road.
P-04	Bernal Detention Pond West	PR	An earthen bottom pond is located west of Interstate 680 and east of Foothill Road. An artificial water body that is adjacent to a USGS Blue Line Stream. Accessible via unpaved all-season road.
P-05	Callippe Detention Pond	Low Density, PR	An earthen bottom pond is located north of Callippe Preserve Golf Course and south of Westridge Lane. An artificial water body excavated in uplands. Accessible via a paved surface street.
P-06	Oak Tree Farms Detention Pond	Rural Density, Low Density	An earthen bottom pond located immediately west of a residential development at the south end of Fondry Court. Input is an unnamed intermittent stream and output is a piped storm drain connection to Arroyo de la Laguna. Located on private property. Accessible via a paved path.
P-07	Vineyard West Detention Pond	PHS, Wildland Overlay	An earthen bottom pond located directly north of Vineyard Avenue and east of Vineyard Terrace. An artificial water body excavated in uplands. Located on private property. Accessible via an unpaved path.
P-08	Vineyard East Detention Pond	PHS, Agriculture and Grazing, Wildland Overlay	An earthen bottom pond located directly northeast of the intersection of Vineyard Ave and Safreno Way. An artificial water body excavated in uplands. Located on private property. Accessible via an unpaved path.



Sources: ESRI World Topo, WRA | Prepared By: SGillespie, 11/19/2019

Figure 1. Project Area Location Map

City of Pleasanton
Stream Maintenance Program
Alameda County, California



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2.5 General Plan Land Use and Zoning Designations

General Plan land use designations for the proposed maintenance areas include agricultural, commercial, industrial, residential, recreational, public/institutional, public health and safety-oriented, and school-related land uses. These are outlined on a site-by-site basis in Tables 1 and 2 above. Zoning for each maintenance area roughly corresponds to these land use designations. Maintenance areas' zoning classifications are related to commercial, industrial, residential, open space, public and institutional, and transportation-related uses.

2.6 Surrounding Land Uses and Setting

Maintenance sites included in the proposed Project are within the City's engineered flood control channels, detention basins, and adjacent access roads. The sites are generally bounded by residential areas, schools, office parks, and/or major thoroughfares in the City of Pleasanton. Figure 2 depicts the location of all maintenance sites proposed by this Project.

3.0 PROJECT DESCRIPTION

3.1 Project Description

3.1.1 Overview

The City of Pleasanton proposes to conduct periodic routine maintenance in its stream corridors and detention basins to improve stormwater conveyance and quality, and prevent flooding during storm events. The routine maintenance is proposed for 17 stream sections and eight stormwater detention ponds located throughout the City in a myriad of settings, including a concrete drainage basin between Pimlico Drive and Interstate 580, a naturalized stream running through Mission Park, and a detention basin in the Bernal Community Park. All proposed maintenance sites are contained within and owned by the City of Pleasanton including channel corridors, detention basins, and adjacent roads, with the exception of four channels and three detention basins, which are located on private property and accessible via City of Pleasanton easements. For descriptions of each maintenance location, refer to Tables 1 and 2 above.

3.1.2 Maintenance Actions

Maintenance actions include sediment, rock, and vegetation removal in and adjacent to stream corridors and detention basins. All activities would be scheduled to begin by April 15 and would be completed by October 31, unless otherwise allowed by environmental regulatory agencies. All materials would be hauled to the City's existing Laguna Creek soil disposal site, located in the southwestern portion of Pleasanton.

In order to minimize impacts to local residents, maintenance actions would be limited to normal working hours, from 8 a.m. to 5 p.m., Monday through Friday, or as allowed by City noise ordinance. Each location would have approximately one to four pieces of equipment working at any given time with two to four crewmembers and a supervisor. Maintenance actions would include the following:

Weed Abatement in Detention Basins

An agricultural tractor equipped with a fail or rotary type mower would be used to abate weeds along and within the maintenance road, along the top of the banks of the basin, on the basin floor, and on the internal and external bank slopes of each basin. Time required for this maintenance action would range from one to two days depending on the size of the basin.

Silt and Rock Removal in Detention Basins

Dump trucks, a backhoe, and an excavator would be used to scrape and off-haul the silt or washed-in layer of rock materials from the basin floor. The time required for this maintenance action would vary from one to four days per site.

Weed Abatement in Streams

A tracked Bobcat with an enclosed cab and mowing attachment would be used along maintenance roads, stream bank tops, and within the channels themselves. Weed abatement along steeper banks or areas unreachable by the Bobcat would occur with gas powered string trimmers. For small sites, the time required for this maintenance action would vary from two to

three hours. Larger sites for which a Bobcat is required would take four to 12 hours. This work may occur at most stream sites.

Silt and Rock Removal in Streams

While less likely to be required as a stream maintenance activity, infrequent silt and rock removal may occasionally be needed within stream areas. If necessary, sand bags and plastic sheeting would be used to temporarily dewater during the dry season. Dump trucks and a backhoe or excavator would be used to remove and haul off silt or washed in rock materials from the streams. This work activity would be infrequent and the time required for each maintenance action would vary from one to three days.

Tule Removal from Streams

Dump trucks and an excavator would be utilized to dig out tules and their roots from streambeds in order to allow flow through existing channels and infrastructure, such as culverts. Removed tules would be loaded into the dump trucks and hauled to Laguna Creek soil disposal site. Tule removal in locations with potential for California Tiger Salamander (CTS) to occur, such as P-08, may use herbicide treatment during the dry season when no water is present instead of mechanical control in order to avoid and minimize the potential to disturb moist soils. Only EPA registered herbicides would be used in channels or basins for tule control. Herbicide application would conform to all applicable County, State, and Federal Regulations and licenses. Streets sweepers would be scheduled to sweep the haul route mid-day and after the last load of the day. Time required for these maintenance actions would vary from one to five days at proposed maintenance site C-10 (Junipero Canal).

Riparian Tree Maintenance

Hand-powered mechanical methods will be used to prune and trim riparian trees along the tops of stream banks as found to be necessary. Trimming may take place in designated sites after storm damage to reduce public health and safety risk from damaged or injured tree limbs.

3.2 Project-Related Approvals, Agreements, and Permits

The information contained in this Initial Study will be used by the City and responsible and trustee agencies as they consider whether or not to approve the proposed Project. Approvals, permits, and consultations required of the proposed Project that are under the jurisdiction of responsible and trustee agencies include but are not necessarily limited to:

U.S. Army Corps of Engineers (Corps)

Clean Water Act Section 404 Regional General Permit

U.S. Fish and Wildlife Service (Service)

Federal Endangered Species Action (FESA) Section 7 Consultation

San Francisco Regional Water Quality Control Board (SF Water Board)

Clean Water Act Section 401 Water Quality Certification

California Department of Fish and Wildlife

California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement
California Endangered Species Act (CESA) Consultation

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4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is potentially significant unless mitigation is incorporated, as indicated by the checklist on the following pages.

- | | | | |
|--|---|-----|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Emissions | Gas | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agricultural Resources | <input checked="" type="checkbox"/> Hazards/Hazardous Materials | | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Hydrology/Water Quality | | <input checked="" type="checkbox"/> Transportation |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use/Planning | | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | | <input checked="" type="checkbox"/> Wildfire |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Population/Housing | | <input type="checkbox"/> Mandatory Findings of Significance |

4.1 Determination

On the basis of this initial evaluation:

- ☐ I find that the project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE

DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Kathleen Yurchak

06/23/2020

Signature

Date

4.2 Initial Study Checklist

This section describes the existing environmental conditions in and near the Project Area and evaluates environmental impacts associated with the proposed Project for 20 topics. The environmental checklist, as recommended in the CEQA Guidelines (Appendix G), includes a series of questions for each topic, and was used to identify environmental impacts that could occur if the proposed project is implemented. The right-hand column in the checklist lists the source(s) for the answer to each question. The cited sources are identified in the footnotes.

Each of the environmental questions was answered, and one of the following four determinations was made for each checklist question:

“No Impact” means that no impact to the resource would occur as a result of implementing the project.

“Less than Significant Impact” means that implementation of the project would not result in a substantial and/or adverse change to the resource, and no mitigation measures are required.

“Less than Significant with Mitigation Incorporated” means that the incorporation of one or more mitigation measures is necessary to reduce the impact from potentially significant to less than significant.

“Potentially Significant Impact” means that there is either substantial evidence that a project-related effect may be significant, or, due to a lack of existing information, could have the potential to be significant.

4.3 Aesthetics

	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
AESTHETICS — Would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4,5
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.3.1 Environmental Setting

Aesthetic resources are often referred to as visual resources because these resources are often plainly visible to the general public. Certain high-quality visual resources are protected such as those in parklands, ridgelines, scenic vistas, and scenic highways. A Scenic Vista is typically defined as a broad panoramic overview of a landscape, often from an elevated perspective, that can be viewed by the public.¹ Highways or roadways are listed by the California Department of Transportation (Caltrans), or by local jurisdictions and counties as state or county Scenic

¹ California Department of Transportation, "Landscape Architecture and Community Livability," accessed January 2, 2020, <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability>.

Highways.² Visual character or quality is the arrangement of all visual features (i.e., anything visible, such as trees, hills, houses, sky, water, towers, roads, power lines, etc.) in a view.³ The arrangement of visible features on the ground produces the visual character of a site and its surroundings.

The City of Pleasanton General Plan does not contain an aesthetic or visual resources chapter, nor reference any designated scenic view or vista. However, the City's visual appeal is nonetheless referenced by way of the General Plan Conservation and Open Space Element and the Community Character Element. The Conservation and Open Space Element includes specific language pertaining to the natural and scenic resources of the City in Goal 2, Policies 1-3 and in Goal 6, Policy 8.⁴ The Open Space element references these priorities in Goal 3, Policy 6.⁵

The proposed Project would consist of work in 17 stream sections and eight stormwater detention ponds throughout the City of Pleasanton. The aesthetics at each proposed maintenance site vary depending on the setting. In general, the City has a small, downtown area surrounded by suburban development. The City is located within a tree-covered valley that is defined by its surrounding hills. The hills can be seen in the distance from most points in the City. The City of Pleasanton was designed to function as a planned, suburban community and as such was designed mostly for transportation by automobiles.⁶

Interstate 680, which traverses the western side of the City in the north-south direction, is designated by the California Department of Transportation (CalTrans) as a State Scenic Highway. CalTrans has also designated Interstate 580 and State Route 84 as Eligible State Scenic Highways.⁷ All of these thoroughfares run through the City of Pleasanton Planning Area. Three Project Areas, Bernal Detention Pond Central (P-02), Stonedale Channel (C-15), and Mission Creek Restoration Project (C-11), are directly adjacent to I-680. Pimlico Canal is directly adjacent to I-580.

4.3.2 Discussion of Impacts

Due to the proximity of some of the Project's proposed maintenance sites to State Scenic Highways, there would be a temporary impact to the scenic resources of the area. The presence of large maintenance equipment would temporarily degrade the visual character of the area. This impact would no longer be experienced after project completion, which

² California Department of Transportation, "Scenic Highways – Frequently Asked Questions," accessed January 2, 2020, <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2>.

³ U.S. Department of Transportation, Federal Highway Administration, "Guidelines for the Visual Impact Assessment of Highway Projects," January 2015, https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx#chap54.

⁴ City of Pleasanton, "Pleasanton General Plan 2005-2025, 7. Conservation and Open Space Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23910>.

⁵ City of Pleasanton, "Pleasanton General Plan 2005-2025, 12. Community Character Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23915>.

⁶ City of Pleasanton, "Complete Streets Policy," December 2012, <http://admin.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23840>.

⁷ California Department of Transportation, "Scenic Highways," accessed January 2, 2020, <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

would vary from several hours to four days. As such, the impact would be less than significant.

- c) ***Less than Significant Impact.*** Project activities would occur in both partially urbanized areas and areas designated for open space usage. Maintenance equipment required to complete project activities may temporarily degrade the typical visual setting of the area. These effects would be short-lived and would cease upon Project completion. There would be no impact in regards to zoning or other regulations that pertain to aesthetics. The maintenance of the sites would leave the areas in the same visual state they experienced prior to project activities.
- d) ***No Impact.*** Conducting the proposed project would not create a significant source of light or glare during daytime hours, to which maintenance activities would be limited. The long-term operation of the project would not result in the addition of new sources of light or glare. Upon completion of maintenance activities, the light and glare conditions at each maintenance site would be identical to existing conditions. Therefore, there would be no impact related to new sources of light or glare adversely affecting day or nighttime views in the area.

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4.4 Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9,10
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8,9,10,11
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8,9,10,11

4.4.1 Environmental Setting

Maintenance areas proposed for inclusion in the proposed Project are zoned for various uses, including agriculture. Areas zoned partially or entirely for agricultural use include Foothill High School Trash Rack (C-03), Pleasanton Canal (C-02), Upper Kottinger Creek (C-08), Touriga

Creek (C-09), and Cemetery Creek (C-12).⁸ None of the proposed maintenance areas are zoned for forestry, timberland, or timberland production.

The California Department of Conservation's Farmland Mapping and Monitoring Tool designates all lands within the Project Area as urban and built-up land, other land, and grazing land.⁹ Proposed maintenance sites located in areas classified as grazing land include Mission Creek Restoration Project (C-11), Bernal Detention Pond Central (P-02), Bernal North/South V-Ditch (C-05), and Vineyard East Detention Pond (P-08).¹⁰ None of the proposed maintenance areas are classified as prime farmland, unique farmland, or farmland of statewide importance. According to the Pleasanton General Plan Conservation and Open Space Element, none of the proposed maintenance areas are within lands under Williamson Act contracts.¹¹

4.4.2 Regulatory Setting

The Williamson Act, a common name for the 1965 California Land Conservation Act, promotes continued agricultural activity on certain land holdings through an incentive program. The Act allows local governments to create contracts with landowners to commit to maintaining their lands as designated for agricultural uses. In exchange, the landowners pay less property tax. These contracts are set for ten-year periods, but renew automatically, thereby making them functionally indefinite in length.

4.4.3 Discussion of Impacts

- a-e) **No Impact.** The Proposed Project would not involve the conversion or alteration of existing farmland or forest land, and no new construction would result from Project activities, therefore no land-use zoning would need changed and no impact would result.

⁸ City of Pleasanton, "Parcel Zoning Map," accessed January 4, 2020, <https://www.cityofpleasantonca.gov/gov/depts/cd/planning/zoning/map.asp>.

⁹ California Department of Conservation, Division of Land Resource Protection, "Farmland Monitoring and Mapping Program, Alameda County," accessed January 4, 2020, <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Alameda.aspx>.

¹⁰ California Department of Conservation, Division of Land Resource Protection, "Alameda County Important Farmland 2016," August 2018.

¹¹ City of Pleasanton, "City of Pleasanton General Plan 2005-2025, 7. Conservation and Open Space Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23910>.

4.5 Air Quality

AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14,15
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14,15
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14,15
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14,15

4.5.1 Environmental Setting

The Project Area is located in the City of Pleasanton in Alameda County, which is part of the San Francisco Bay Air Basin (SF Air Basin). The Bay Area Air Quality Management District (BAAQMD) has jurisdiction over air quality in the SF Air Basin in accordance with the Clean Air Act (CAA) and under the delegation of the California Air Resource Board (CARB) and the U.S. Environmental Protection Agency (US EPA). BAAQMD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review activities. BAAQMD monitors air quality at numerous sites within the nine-county District, although, including one site within the City of Pleasanton.¹²

Ambient air quality standards are generally designed with the health of sensitive receptors in mind. Sensitive receptors are especially vulnerable to air pollution's health effects, and include children, seniors, and people with pre-existing health conditions. Such individuals can often be found at residences, hospitals, and schools. Many of the proposed maintenance areas are located within or near residential areas, parks, and schools where there may be children, elderly

¹² Bay Area Air Quality Management District, Meteorology and Measurement Division, "2018 Air Monitoring Network Plan," July 1, 2019, https://www.baaqmd.gov/~media/files/technical-services/2018_network_plan-pdf.pdf?la=en.

people, and people with pre-existing health conditions. Additionally, there is a proposed maintenance site located on the property of Foothill High School.

4.5.2 Regulatory Setting

Under the authority of the Federal CAA, US EPA establishes maximum ambient concentrations for the six criteria air pollutants under the National Ambient Air Quality Standards (NAAQS). The six criteria air pollutants under the Federal CAA are ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide lead (CO), lead (Pb), and particulate matter of 10 and 2.5 microns in size (PM₁₀ and PM_{2.5}).

For particulate matter, there are separate NAAQS's for particles of different size classes. "Fine particulate matter," designated as PM_{2.5}, is composed of particles with a diameter below 2.5 microns and includes most particles created by the burning of gaseous or liquid fuel, smoking and vaping, and atmospheric reactions between gases. "Respirable particulate matter", designated as PM₁₀, is comprised of particles with a diameter below 10 microns. By definition, PM₁₀ includes all particulate matter classified as PM_{2.5}, as well as additional windblown and mechanically generated dust, including re-suspended road dust and dust from earthmoving activities.

The California CAA establishes maximum allowable concentrations, known as California Ambient Air Quality Standards (CAAQS), for the above-mentioned six criteria pollutants, as well as four additional pollutants (visibility-reducing particles, sulfates (SO₄), hydrogen sulfide (H₂S), and vinyl chloride). The CAAQS are overseen by CARB, which is part of the California EPA (Cal/EPA) and has jurisdiction over local air districts.

Local and regional ambient air quality is assessed relative to both these national standards (NAAQS) and state standards (CAAQS), which are required to be protective of human health (allowing an adequate margin of safety) and public welfare. When air pollution levels within an air basin are below the thresholds set by the NAAQS and CAAQS, the region is said to be in attainment. Similarly, nonattainment status refers to a situation in which air basin pollution levels do not meet these standards. Attainment plans are prepared for non-attainment basins to facilitate compliance with the air quality standards. The SF Air Basin is currently in non-attainment of the O₃ and PM_{2.5} NAAQS and CAAQS and the PM₁₀ CAAQS.¹³

BAAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. As such, BAAQMD has issued a series of air quality management plans to improve air quality in the SF Air Basin and to facilitate compliance with the NAAQS and CAAQS. The most recent plan was issued in April 2017.¹⁴ Projects consistent with the population forecasts identified by the Association of Bay Area Governments are considered consistent with the 2017 Clean Air Plan's transportation and growth-related goals and policies, since these projections form the basis of the land use and transportation control strategies of the Plan. The Plan also assumes general development projects will include feasible strategies (i.e., mitigation measures) to reduce emissions generated during construction and operation.

¹³ Bay Area Air Quality Management District, "Air Quality Standards and Attainment Status," accessed September 2019, <http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>.

¹⁴ Bay Area Air Quality Management District, "Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area - Final 2017 Clean Air Plan," April 19, 2017, http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

Guidance on assessing compliance with the Clean Air Plan is provided in BAAQMD's CEQA Guidelines.¹⁵ Where available, thresholds from the BAAQMD Guidelines are the basis of the below discussion of impacts.

4.5.3 Discussion of Impacts

- a-b) ***Less than Significant with Mitigation Incorporated.*** Maintenance activities would result in short-term increases in emissions from soil disturbance, maintenance traffic, and the use of heavy equipment that generates dust, exhaust, and tire-wear emissions. Maintenance activities would produce respirable particulate matter during ground disturbance and would generate carbon monoxide, ozone precursors, and other emissions from vehicle and equipment operation. Areas that would be disturbed during maintenance actions are relatively small and maintenance activity would be limited in duration, occurring during one dry season with less than two weeks of work at each site. Following maintenance actions, the proposed Project would not directly or indirectly create any emissions. As maintenance activity emissions would occur in small areas over short periods of time and there would be no operational emissions, the proposed Project's overall emissions would be minimal.

BAAQMD's 2017 CEQA Guidelines provide screening criteria for operational and construction-related air quality impacts based on the project's proposed land use types, the project site's size, and proposed construction methodologies. For construction-related impacts, a project would not generate significant concentrations of criteria air pollutants if:

1. It is below the screening size for the proposed land use type;
2. All BAAQMD-recommended BMPs would be implemented; and
3. The project would not include demolition, simultaneous occurrence of more than one construction phase, simultaneous construction of more than one land use type, extensive site preparation, or material transport greater than 10,000 cubic yards of soil per day.

No screening size is provided for open space, stormwater, or stream-related land use. The most closely analogous use is city parks, which have a screening size of 67 acres. By comparison, the proposed Project's overall disturbance area would be smaller than the approximately 95 acre Project Area. The 95-acre estimate is the largest possible size, and maintenance in the entire project area would occur over multiple days. The proposed Project does not include any demolition, simultaneous occurrence of more than one construction phase at any given site, simultaneous construction of more than one land use type, or extensive site preparation. Overall material transport is estimated to be below BAAQMD's screening criterion of 10,000 cubic yards of soil transport per day.¹⁶ This estimate is based on total transport of fill material for the Initial Study/Mitigated Declaration for the 2016 Stream Maintenance Priority Projects. This project included nine stream

¹⁵ Bay Area Air Quality Management District, "California Environmental Quality Act Air Quality Guidelines," May 2017, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

¹⁶ *Ibid.*

reaches and an estimated total transport of 299 cubic yards of material.¹⁷ Moreover, materials would be transported to the appropriate landfill over multiple days as maintenance activities occur at these different locations.

Best management practices (BMPs) recommended by BAAQMD in the 2017 CEQA Air Quality Guidelines are identified below in Mitigation Measure AIR-1 and would be implemented during maintenance activities to minimize emissions. Because of the small area of disturbance, temporary nature of the emissions, and implementation of maintenance measures, the proposed Project would not conflict with or obstruct the applicable air quality plan; nor would it result in a considerable increase in any air pollutant for which the SF Air Basin is non-attainment. Thus, impacts would be less than significant with mitigation incorporated.

Mitigation Measure AIR-1: Air Quality BMPs

The Contractor shall implement the following best management practices (BMPs) recommended by the Bay Area Air Quality Management District (BAAQMD) throughout the duration of maintenance activities. The City of Pleasanton shall be responsible for verifying implementation of these measures.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes.
- All maintenance equipment shall be maintained and properly tuned in accordance with manufacturer's specifications, and all equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign with the telephone number and person to contact at the lead agency regarding any dust complaints shall be posted in or near the project site. The contact person shall respond to complaints and take corrective action within

¹⁷ Alameda County Flood Control and Water Conservation District, Zone 7, "Stream Maintenance – Priority Projects 2016, Final Initial Study/ Mitigated Negative Declaration," July 2016, https://www.zone7water.com/images/pdf_docs/env_documents/strm-maint-prjcts_2016_is-mind_final.pdf

48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

- c) ***Less than Significant with Mitigation Incorporated.*** Several maintenance areas are within residential areas or near sensitive land uses such as schools and parks. Sensitive receptors could therefore be temporarily exposed to air pollutants from maintenance activities. Maintenance activities would be limited in duration, taking place over a period of less than two weeks at each site. Potential exposure to pollutants would therefore be limited to the short-term. To ensure that acute exposure to substantial concentrations of air pollutants would not occur, the contractor would be required to implement BMPs outlined under Mitigation Measure AIR-1. BMPs would minimize generation of pollutants of concern such as respirable particulate matter and carbon monoxide, reducing potential exposures to less than significant levels. Thus, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations; and impacts would be less than significant with mitigation incorporated.

Mitigation Measure AIR-1: Air Quality BMPs

Please see above, Discussion of Impacts (a-b).

- d) ***Less than Significant Impact.*** Maintenance activities would involve the use of gasoline or diesel-powered equipment that emits exhaust fumes. These activities would take place intermittently throughout the workday, and the associated odors are expected to dissipate within the immediate vicinity of the work area. Furthermore, potential odors associated with maintenance emissions would be limited in scope and duration due to the short-term nature of maintenance and the small area of disturbance at each site. In the long-term, the proposed Project would not introduce any new land uses, including land uses associated that generate emissions leading to odors. Existing streams and detention ponds would undergo routine maintenance, and would not change in use or capacity in a way which would create odor-generating emissions. Thus, the proposed Project would not result in emissions such as those leading to odors, which would adversely affect a substantial number of people, and a less than significant impact would occur.

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4.6 Biological Resources

BIOLOGICAL RESOURCES — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21,22, 23
b) 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20,23
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21,22
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40,41

BIOLOGICAL RESOURCES — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.6.1 Environmental Setting

Biological Communities

This section relies on the information and findings presented Appendices A (Aquatic Resources Delineation Report) and B (Biological Resource Assessment). The Project Area includes seven sensitive and five non-sensitive biological communities. The non-sensitive biological communities observed in the Project Area include developed land, landscaped land, coyote brush scrub, ruderal grassland, and coast live oak woodland. Additionally, seven sensitive biological communities were observed in the Project Area: riparian, ephemeral stream, intermittent stream, perennial marsh, perennial stream, detention basin, and drainage ditch. Descriptions of each biological community are contained in the following sections. Biological communities within the Project Area are also summarized in Table 3, below, and shown in Figures 3-1 through 3-25 in Appendix B to this IS/MND.

Table 3. Summary of Biological Communities within the Project Area

Community Type	Area (acres)
Non-sensitive Biological Communities	
Coast Live Oak Woodland	3.95
Coyote Brush Scrub	1.28
Ruderal Grassland	39.04
Developed/Landscaped	12.54
Sensitive Biological Communities	
Riparian Coast Live Oak Woodland	21.67
Detention Basin	9.71
Intermittent Stream	1.08
Ephemeral Stream	0.93
Perennial Marsh	0.04
Perennial Stream	2.37
Drainage Ditch	2.45

Non-Sensitive Biological Communities

Coast Live Oak Woodland

Coast live oak woodland is known to be present in California's inner and outer Coast Ranges, Transverse Ranges, and on the southern coast from northern Mendocino County south to San Diego County. This vegetation community is typically located on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained substrates of sand or loam that are high in organic content.¹⁸ Coast live oak woodland occupies approximately 25.6 acres of the Project's proposed maintenance sites, of which about 4 acres are non-sensitive communities. A majority of the coast live oak woodland community can be found within the riparian corridor areas of the channel segments and along the riparian corridors of detention ponds, with some woodland occurring just outside of the riparian corridor. Dominant species in the tree layer include coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and black walnut (*Juglans hindsii*). A majority of tree stands at proposed maintenance sites lack density, allowing for the presence of a denser-than-average shrub and an herb layer dominated by coyote brush (*Baccharis nigra*), Himalayan blackberry (*Rubus armeniacus*), and canary ivy (*Hedera canariensis*).

¹⁸ Sawyer, J. T. Keeler-Wolf and J. Evens. California Native Plant Society, Berkeley CA, "A Manual of California Vegetation" 2009.

Coyote Brush Scrub

Coyote brush scrub is known to be present in the outer Coast Ranges and the Sierra Nevada Foothills from Del Norte County south to San Diego County. This vegetation community is typically located in river mouths, riparian areas, terraces, stabilized dunes, coastal bluffs, open hillsides, and ridgelines on variable substrate underlain with sand or clay.¹⁹ Plant species associated with coyote brush scrub at the proposed maintenance sites consist of coyote brush (*Baccharis pilularis*) and ruderal grassland.

Ruderal Grassland

The Project's proposed maintenance sites are dominated by ruderal grassland. Although not described in the literature, ruderal grassland includes areas that are partially developed or were used in agriculture in the past. These areas are not currently used for agricultural activities and have been allowed to revert to a semi-natural condition. Based on soil conditions, vegetation composition, and a review of historical imagery, many of the proposed maintenance sites have historically consisted of agricultural land. Dominant plant species observed in the ruderal herbaceous grasslands at proposed maintenance sites include wild oat (*Avena sativa*), Harding grass (*Phalaris aquatica*), Italian rye grass (*Festuca perennis*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), along with additional ruderal species.

Developed/ Landscaped

There are developed and landscaped lands at maintenance sites proposed by the Project. There is no described Holland alliance for developed or landscaped areas. Within the proposed maintenance sites, developed land consists of paved roads or trails (see Figures 3-1 through 3-25 in Appendix B), while landscaped areas are comprised of native and non-native plants maintained through irrigation, pruning, and/ or fertilizing. Most of the landscaped areas in the proposed maintenance sites are found within the stream segments that run through public parks.

Sensitive Biological Communities

Riparian Coast Live Oak Woodland

Riparian coast live oak woodland is a sensitive natural community that occurs as a subset of the coast live oak woodland habitat in the Project Area. Within the Project Area approximately 21.67 acres of riparian coast live oak woodland habitat occurs as a sensitive natural community in areas directly adjacent to maintenance sites proposed by the Project. Riparian woodland is not classified as sensitive biological community existing in *A Manual of California Vegetation, Online Edition* (CNPS 2019b). However, this community does contain elements of the communities described as coast live oak woodland (*Quercus agrifolia* Woodland Alliance; Rarity ranking G5, S4; CNPS 2019b). The overstory is generally open to dense and the understory is generally open. Dominant riparian forest tree layer includes coast live oak, valley oak, and black walnut, with lower densities of willow and sycamore. The understory shrub species include Himalayan blackberry, willow, and toyon (*Heteromeles arbutifolia*). The understory herbaceous species include wild oat, soft brome (*Bromus hordeaceus*), and fennel (*Foeniculum vulgare*).

¹⁹ *Ibid.*

Detention Basin

The Project Areas consist of eight (8) manmade detention basins that are used as flood control features. These ponds receive stormwater flow through a series of culverts that connect to various other City channels and natural streams. No open water was observed within any of the ponds during the site assessments except for P-02, which had standing water within the northernmost basin that was diked by a riprap dam preventing water from flowing into other portions of the pond. Vegetation on the banks of the basin was dominated by Harding grass, wild oat, and curly dock (*Rumex crispus*). Vegetation within the basin was dominated by cattail (*Typha latifolia*), seaside barley (*Hordeum marinum*), and rabbitsfoot grass (*Polypogon monspeliensis*).

Intermittent Stream

The proposed Project contains intermittent stream segments. Intermittent streams are linear features within which water flows for a portion of the year, generally drying out during the driest time of the year. Intermittent streams generally have a well-developed riparian corridor dominated by coast live oak, coyote brush, valley oak, and black walnut. Streams and their riparian corridors are considered sensitive under CEQA and are protected by federal and state laws.

Ephemeral Stream

There are ephemeral streams among the proposed maintenances sites. Ephemeral streams are linear features within which water flows only during or immediately after a significant rain event. As such, these streams are dry for most of the year. Streams and their riparian corridors are considered sensitive under CEQA and are protected by federal and state laws.

Perennial Marsh

The proposed Project contains perennial marsh habitat the Arlington Creek maintenance site (C-16). This determination was given for the perennial bulrush vegetation that is dominant in the feature. Arlington Creek is located directly in a residential development to the east of Riddell Street and to the west of Arlington Drive. An intermittent stream feature runs from east to west within the Creek, which opens into an intervening section of perennial marsh as the stream feature turns south. Vegetation observed within the marsh includes California bulrush (*Schoenoplectus californicus*) and smartweed (*Persicaria* sp.). The perennial marsh then thins and returns to an intermittent stream feature with a defined bed and bank running south out of the proposed maintenance area.

Perennial Stream

There are perennial streams delineated within the proposed Project Area at the Mission Creek Restoration Project (C-06) and Dublin Canyon Creek (C-14) maintenance sites. Perennial streams are linear features with a distinct bed and bank that have a continuous flow of water all year during years of normal rainfall. Flowing water was observed at both of these features.

The Mission Creek Restoration Project feature spans from Bernal Avenue to Arroyo de la Laguna and travels south. Valley Avenue bisects the feature, which continues flowing under the road via culverts; it also travels under an Interstate 680 bridge. Habitat along this creek varies from coast live oak, coyote brush scrub, and riparian. Water was observed throughout much of the channel with the northernmost portion of the creek being dry. The Mission Creek Restoration Project

conveys water through a natural channel with its southern tip ending in a concrete channel that drains into Arroyo de la Laguna.

The proposed maintenance site Dublin Canyon Creek consists of four short segments of the Dublin Canyon Creek and is located near the entrance of two residential developments, just south of I-580. Each segment has a distinct, steep bed and bank with mature riparian vegetation consisting of coast live oak, willow, and sycamore.

Drainage Ditch

The proposed Project includes six manmade channelized drainage ditches, namely Pimlico Canal (C-01), Pleasanton Canal (C-02), Bernal V-ditch (C-04), Bernal North/South V-ditch (C-05), Junipero Canal (C-10), and Stonedale Channel (C-15). These drainage ditches vary from concrete lined to engineered earthen channels that are used as flood control conveyance. Dominant vegetation within the earthen channels/ ditches composed largely of weedy upland species including Harding grass, wild oat, bristly ox-tongue (*Helminthotheca echioides*), and Italian rye grass.

Special-Status Species

Special-Status Plant Species

Sixty-two special-status plant species have been documented within the vicinity of the Project's proposed maintenance sites. Figure 2 summarizes the potential of these species to occur within the sites proposed by this Project. Two special-status plant species were determined to have a high potential to occur within some of the proposed maintenance sites due to the presence of relatively suitable habitat and recently documented proximity. Additionally, two plant species on the East Bay Locally Rare Plants list were observed within the proposed maintenance sites: The coast live oak, which is present in all the mapped coast live oak woodland and riparian communities, and the black walnut, which is only in the mapped riparian community. However, the black walnut tree is only considered to be native to three sites in the state,²⁰ none of which are in the City of Pleasanton; therefore, the black walnut is not considered to be a locally rare tree in the City of Pleasanton.

Species Considered Present in the Project Area

Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), CNPS List 1B.1.

Congdon's tarplant is an annual herb in the aster family (Asteraceae). It blooms from May through October and its nearest and most recent occurrence was documented in 2011, 1.7 miles northwest of Pimlico Canal (C-01).²¹ Congdon's tarplant habitat varies from valley and foothill grassland in elevations ranging from 0 to 755 feet.^{22,23} This species can be associated with alkaline or saline soils. Proposed maintenance sites C-05, C-06, P-01, P-02, P-03, P-04, and P-06 support some potential grassland habitat on alkaline soils for Congdon's tarplant which can tolerate disturbed areas therefore it has a moderate

²⁰ Jepson Flora Project, "Jepson eFlora," accessed January, 2020, <http://ucjeps.berkeley.edu/eflora/>.

²¹ California Natural Diversity Database, accessed 2019.

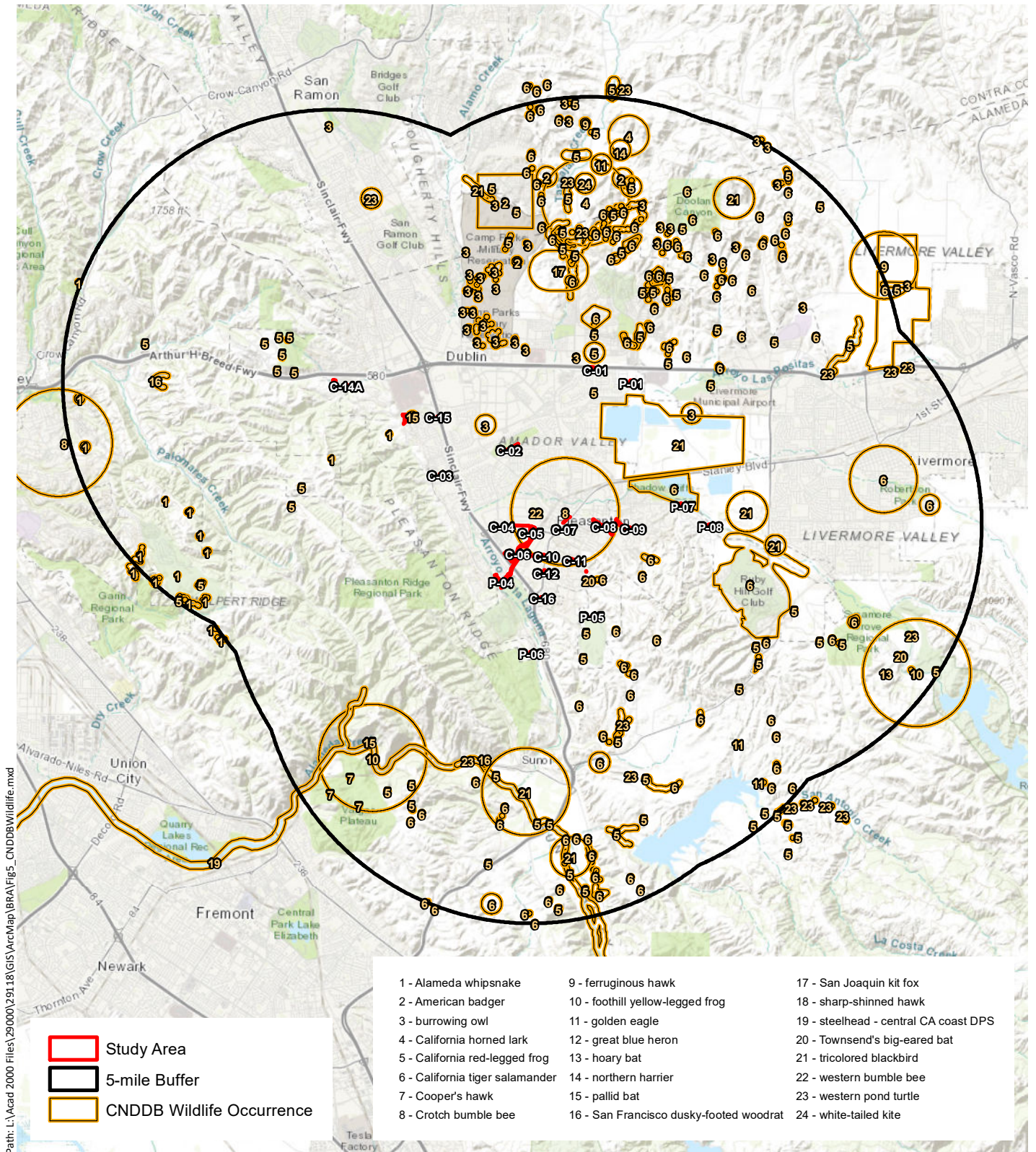
²² California Department of Fish and Wildlife, Wildlife and Habitat Data Analysis Branch, "California Natural Diversity Database," 2019.

²³ California Native Plants Society, accessed 2019.

potential to occur onsite, but was not observed during the July or October 2019 site assessments.

San Joaquin spearscale (*Extriplex joaquinana*), CNPS List 1B.2. The San Joaquin spearscale is an annual herb in the goosefoot family (Chenopodiaceae) that blooms from April to October. It typically occurs in seasonal alkali sink scrub and wetlands in chenopod scrub, alkali meadow, and valley and foothill grassland habitat at elevations ranging from 0 to 2,740 feet.^{22,23} The San Joaquin spearscale is known from Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Solano, Tulare, and Yolo counties. The nearest and most recent CNDDB occurrence was documented in 2002, 0.6 miles north of Stoneridge Pond (P-01). Proposed maintenance sites C-05, C-06, P-01, P-02, P-03, and P-04 support some disturbed foothill grassland habitat on alkaline soils and due to the proximity of the nearest and most recent occurrence there is a moderate potential this species could occur within the Project Area, but was not observed during the July or October 2019 site assessments.

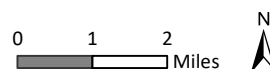
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Sources: ESRI World Topo, CNDDDB September 2019, WRA | Prepared By: JSChuster, 1/21/2020

Figure 3. Special-status Wildlife Species within 5-mile Radius of Study Area

City of Pleasanton
Stream Maintenance Program
Alameda County, California



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Coast live oak (*Quercus agrifolia*). East Bay Locally Rare A.2. The coast live is an evergreen tree in the oak family (Fagaceae) that blooms from February to April. It occurs in valleys and slopes of mixed evergreen forest, foothill woodland, and oak woodland at elevations below 4,725 feet.²⁰ Coast live oak is known from 33 counties in California. The species is relatively common and was observed in proposed maintenance sites C-06, C-08, C-09, C-11, C-12, C-13, C-14 and C-16 in riparian and coast live oak communities.

Special-Status Wildlife Species

Thirty-nine special-status wildlife species have been documented within the vicinity of the Project's proposed maintenance sites. Figure 3 summarizes the potential of these species to occur within the sites proposed by this Project. One special-status wildlife species was observed within proposed maintenance site Junipero Canal (C-10) during the site assessment conducted for the Biological Resources Assessment Report (Appendix B to this IS/MND), while eight others were determined to have a moderate or high potential to occur within the Project Area. Additionally, native birds within the Project Area are protected by the federal Migratory Bird and Treaty Act (MBTA) MBTA and the California Fish and Game Code (CFGF). The remaining 30 special-status species documented within the vicinity of the Project were determined to have no potential to occur or be unlikely to occur within the Project Area. These determinations were made based on a lack of required habitat elements, or because the species are absent from the Project Area and its surroundings. Those species determined to be unlikely or to have no potential to occur typically require habitat elements which are absent from the maintenance sites proposed by the Project and their surrounds, including:

- vernal pools
- perennial aquatic features
- old growth redwood or fir forest
- coastal marsh
- sandy beaches or alkaline flats
- caves, mine shafts or abandoned buildings
- wildlife movement corridors

The species observed, or those with a moderate or high potential to occur within the Project Area are discussed in more detail below.

Species Considered Present in the Project Area

Tricolored blackbird (*Agelaius tricolor*), CDFW State Threatened. The tricolored blackbird is a locally common resident of the Central Valley and California coast. Most tricolored blackbirds reside in the Central Valley March through August, then moving into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter.²⁴ This species breeds adjacent to freshwater, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used.²⁵ This species is highly colonial;

²⁴ Beedy, E. C., W. J. Hamilton, III, R. J. Meese, D. A. Airola, and P. Pyle, "Tricolored Blackbird (*Agelaius tricolor*)," version 3.1. In *The Birds of North America* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.tribla.03.1>

²⁵ Shuford, W.D. and T. Gardali, "California Bird Species of Special Concern: A ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California," In *Studies of*

nesting habitat must be large enough to support a minimum of 30 pairs of birds, and colonies are often substantially larger with up to thousands of pairs. The tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage up to 5.6 miles from their colonies, although in most cases only a small part of the area within this range provides suitable foraging.²⁶

This species was identified during field assessments at the proposed maintenance site Junipero Canal (C-10). While it was not clear whether an established breeding colony currently exists at this location, several individuals were seen moving as a group through tall aquatic vegetation. Several proposed maintenance sites, chiefly Junipero Canal (C-10), Bernal Detention Pond Central (P-02), and Canyon Oaks Detention Pond (P-03) possess dense stands of cattails or tules that may provide a suitable location for a breeding colony. Due to the presence of potentially suitable nesting and foraging habitat, combined with field observations, this species has a high potential to occur within the Project Area at sites C-10, P-02, and P-03.

Species with High Potential to Occur in the Project Area

Northern harrier (*Circus hudsonius [cyaneus]*), CDFW Species of Special Concern.

The northern harrier occurs as a resident and winter visitor of open habitats throughout most of California, including freshwater and brackish marshes, grasslands and fields, agricultural areas, and deserts. Harriers typically nest in treeless areas within patches of dense, relatively tall vegetation, the composition of which is highly variable; Nests are placed on the ground and often located near water or within wetlands.²⁷ Harriers are birds of prey and subsist on a variety of small mammals and other vertebrates.

Multiple maintenance sites proposed by this Project (specifically P-02, P-03, P-04, and C-10) provide suitable nesting habitat for this species amid emergent vegetation or otherwise slightly sheltered areas near wetlands. The proposed maintenance sites with the greatest potential to support this species are those without adjacent dense urban/residential matrix. Foraging opportunities are present across the sites in open grassland areas and in wetlands. Given the availability of both nesting and foraging habitat in the areas of the Project, this species has high potential to occur.

White-tailed Kite (*Elanus leucurus*). CDFG Fully Protected. The white-tailed kite is a resident of open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. Vegetative structure and prey availability seem to be more important habitat elements for the white-tailed kite than associations with specific plants or vegetative communities. Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from

Western Birds 1: Western Field Ornithologists, Camarillo, California and the California Department of Fish and Game, Sacramento, California, 2008.

²⁶ Hamilton III, W.J. and R.J. Meese, "Habitat and Population Characteristics of Tricolored Blackbird Colonies in California, 2005 Final Report," U.C. Davis for California Department of Fish and Game, 2006.

²⁷ Shuford, W.D. and T. Gardali, "California Bird Species of Special Concern: A ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California," In *Studies of Western Birds 1: Western Field Ornithologists, Camarillo, California and the California Department of Fish and Game, Sacramento, California, 2008.*

shrubs to trees greater than 150 feet tall.²⁸ This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

Nearby riparian habitats and open spaces are likely to provide suitable foraging habitat for white-tailed kites. Small mammal burrows are present within several maintenance sites proposed by this Project, and open spaces directly adjacent to the City limits likely provide increased foraging opportunity. Suitable nesting trees are present throughout the areas included in the Project, though sites located within dense residential areas are unlikely to support nesting for this species. Since nesting substrates are scattered throughout the areas of the proposed Project and foraging habitat is widely available, there is a high potential for this species to occur within the Project Area.

Burrowing Owl (*Athene cunicularia*), CDFG Species of Special Concern. The burrowing owl typically favors flat, open grassland or gentle slopes and sparse shrub land ecosystems. These owls prefer annual or perennial grasslands, typically with sparse or nonexistent tree or shrub canopies; however, they also colonize debris piles and old pipes. In California, burrowing owls are found in close association with California ground squirrels (*Otospermophilus beecheyi*). Burrowing owl exhibits high site fidelity and usually use the abandoned burrows of ground squirrels for shelter and nesting.

Ground squirrel burrows were observed during a site visit conducted by WRA biologists. The squirrels were mainly at proposed maintenance sites located in southwestern Pleasanton, (i.e. C-04, C-05, P-02, and P-03). In several cases, burrows were observed on excavated banks of detention ponds or in other locations where owls, if confirmed present, could be adversely affected by the proposed Project. At the creek sites, ground squirrel activity was chiefly present on open, level areas adjacent to drainages where vegetation height and other conditions were highly suitable for burrowing owl occupation in both wintering and breeding. However, this species has been documented to nest throughout the region, including within the Project Area. Due to the presence of active ground squirrels in close proximity to proposed maintenance sites and the presence of nearby burrowing owl breeding populations, there is high potential for this species to occur in the Project Area within or adjacent to site C-04, C-05, P-02, and P-03.

Species with Moderate Potential to Occur in the Project Area

Loggerhead shrike (*Lanius ludovicianus*), CDFW Species of Special Concern. The loggerhead shrike is a year-round resident and winter visitor of lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation and barbed wire fences. Shrikes nest in trees and large shrubs, and nests are usually placed three to ten feet off the ground.²⁹

²⁸ *Ibid.*

²⁹ Shuford, W.D. and T. Gardali, "California Bird Species of Special Concern: A ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California," In *Studies of Western Birds 1: Western Field Ornithologists, Camarillo, California and the California Department of Fish and Game, Sacramento, California, 2008.*

This species prefers open grasslands with scattered trees or shrubs, which is present throughout the Project Area. Additionally, this species is known to occur in the vicinity of the Project's proposed maintenance sites.³⁰ However, nesting substrates in areas with potential for this species to occur would not likely be impacted by project work unless tree removal was scheduled as part of maintenance.

Although the loggerhead shrike is known to occur in the vicinity of the Project and the bird's typical foraging habitat is present, nesting habitat is unlikely to be directly impacted by the proposed Project, therefore the species has a moderate potential to occur within the Project Area.

California Tiger Salamander (*Ambystoma californiense*), Federal Threatened, State Threatened. The California tiger salamander (CTS) is restricted to grasslands and low-elevation foothill regions in California (generally under 1,500 feet) where it uses seasonal aquatic habitats for breeding. CTS breed in natural ephemeral pools, or ponds that mimic ephemeral pools, and occupy substantial areas surrounding the breeding pool as adults. CTS spend most of their time in the grasslands surrounding these breeding pools. They survive hot, dry summers by estivating (going through a dormant period) in refugia, such as the burrows created by ground squirrels and other mammals, and deep cracks or holes in the ground, where the soil atmosphere remains near the water saturation point. During wet periods, CTS may emerge from refugia and feed in the surrounding grasslands.

CTS occurrences are generally documented in the vicinity of C-17, P-05, P-07, and P-08 (CDFW 2019). Other Study Areas are surround by complete barriers to dispersal (e.g. large arterial roads) and thus are unlikely to support event transient individuals of this species. All three of the aforementioned Study Areas are ephemeral in nature, and likely do not hold water for a sufficient period of time for CTS larvae to attain metamorphosis. However, ground squirrel burrows exist near P-05, P-07, and P-08 and provide potential upland or estivation habitat for CTS. C-17 is located in a developed residential area where hardscaping precludes burrowing mammal activity. Generally, these areas are separated from known CTS occurrences to some degree by significant barriers to dispersal, such as roads or highly-maintained landscaped areas. The Callippe Detention Pond maintenance site (P-05) is the most accessible by source populations of CTS. However, it is not suitable breeding habitat due to its design-function to quickly draw down and disperse stormwater. The nearest occurrence of this species is located in the open space adjacent to the Callippe golf course, and is approximately 0.5 mile to the southeast. This occurrence is within potential dispersal distance, although habitat present within Study Area P-05 is marginal and barriers to dispersal exist between this Study Area and known occurrences in the form of roads and highly-maintained golf course areas.

The Project Area is also partially surrounded by developments, which may be a complete barrier to CTS, preventing colonization from known extant populations. No apparent upland or aquatic movement corridors exist between the proposed maintenance sites and extant populations of CTS within the known dispersal distance of the species, approximately 1 mile. Without viable corridors between a source population and the

³⁰ California Department of Fish and Wildlife, Wildlife and Habitat Data Analysis Branch, "California Natural Diversity Database," 2019.

Project Area, there is no potential for CTS to use the Project's proposed maintenance sites as upland habitat.

Although barriers to dispersal exist between the proposed maintenance sites and the regional extant populations of CTS, CTS may incidentally use nearby maintenance sites that support intermittent streams, ephemeral streams, or detention basins as aquatic dispersal habitat in some years during movements in precipitation events. Additionally, several proposed sites are within the known dispersal distance of CTS from extant populations. Therefore, CTS has a moderate potential to occur in portions of the Project Area, specifically Study Area C-18, P-05, P-07, and P-08.

California Red-legged Frog (*Rana draytonii*), Federal Threatened, CDFW Species of Special Concern. The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, CRLF disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat are characterized by dense, shrubby, riparian vegetation and deep, still, or slow-moving water. Breeding occurs between late November and late April. CRLF estivates during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds.

Potential aquatic habitat for CRLF is limited to proposed maintenance sites C-06, C-14, and P-02, all of which appear to hold water for sufficient duration for CRLF to complete their aquatic life-history. C-14 is particularly close to documented CRLF occurrences, although the documented occurrences are chiefly on the opposite (north) side of Interstate 680. The many detention ponds, intermittent streams, and ephemeral streams in the Project Area do not constitute aquatic breeding or non-breeding habitat due to the rapid draw-down of standing water, and as these features were designed to capture and or rapidly dissipate storm flow. By design as flood-control infrastructure, these features also lack aquatic and upland vegetation, and do not effectively function as upland or dispersal habitat due to the lack of cover from predation.

The nearest documented occurrence of this species is more than two miles away from most of the Project's proposed maintenance sites, which is beyond CRLF's longest known dispersal distance. Proposed maintenance sites closer to extant populations are largely surrounded by barriers, such as residential developments and paved roads that prevent dispersal and immigration to, and colonization of, these sites. Perennial aquatic habitat is present at the proposed Upper Kottinger Creek maintenance site (C-08), though this location is surrounded on all sides by residential development and is believed to be completely isolated. Due to the presence of potential aquatic habitat with proximal extant populations at the Mission Creek Restoration Project (C-06), Stonedale Channel (C-15) and Bernal Detention Pond Central (P-02), this species has moderate potential to occur in the Project Area.

Alameda whipsnake (*Masticophis lateralis euryxanthus*). Federal Threatened, State Threatened. The range of the Alameda whipsnake (AWS) is restricted to California's inner Coast Range in western and central Contra Costa and Alameda Counties.³¹ AWS is associated with scrub communities, including mixed chaparral, chamise-redshank

³¹ U.S. Fish and Wildlife Service, "Endangered and Threatened Wildlife and Plants, Final Determination of Critical Habitat for the Alameda Whipsnake (*Masticophis lateralis euryxanthus*)," Vol. 65, No. 192, October 3, 2000.

chaparral, coastal scrub, annual grassland, and oak woodlands that lie adjacent to scrub habitats and contain areas of rock outcroppings. Rock outcroppings are important for AWS as they are a favored location for lizard prey. Whipsnakes frequently venture into adjacent habitats, including grassland, oak savanna, and occasionally oak-bay woodland.

The physical and biological features required for habitation by AWS include: scrub/shrub communities with a mosaic of open and closed canopy; woodland or annual grassland plant communities contiguous to lands containing scrub communities; lands containing rock outcrops, talus, and small mammal burrows within or in proximity to scrub communities; and accessible dispersal habitat.³² Use of habitats other than scrub by AWS is now known to be more common, especially for corridor movement. Thus, habitats adjacent to scrub habitat, including grassland and riparian communities, are considered essential to AWS conservation.³³

Most of the proposed maintenance sites assessed for this proposed Project are located outside of the known range of AWS. Maintenance sites located east of Interstate 680 are unlikely to provide habitat for AWS due to the presence of complete barriers to dispersal, including Interstate Highways, residential developments, and commercial developments. Additionally, most sites do not provide the physical and biological features necessary to support AWS. Specifically, most sites are located in developed areas without scrub communities, and lack the following: known extant contiguous populations of AWS, rock outcroppings, and burrowing mammal activity.

Unlike other proposed maintenance sites assessed, the Oak Tree Farms Detention Pond (P-06) is located adjacent to a large swath of suitable habitat, is characterized by oak scrub and ruderal open spaces, and overlaps with AWS critical habitat, as discussed in the Critical Habitat section below. However, despite potentially suitable habitat in the immediate vicinity, the portions of this maintenance site that will be impacted by the proposed stream maintenance activities provide very little habitat value for resident AWS. Since the Oak Tree Farms Detention Pond may be used as a movement corridor for dispersing individuals, and due to the proximity of this maintenance site to suitable habitat and its location within the boundaries of designated Critical Habitat for this species, AWS has moderate potential to occur in this maintenance site.

4.6.2 Regulatory Setting

Critical Habitat

The proposed Oak Tree Farms Detention Pond maintenance site (P-06) is located at the most extreme eastern edge of Unit 3 of the designated critical habitat of AWS. However, Critical Habitat mapping is not fine-tuned and suitable habitat must still be evaluated. During site visits described in the Biological Resources Assessment (Appendix C), no rocky outcrops, a critical habitat element for AWS, were observed. Woodland/scrub mosaic is not present in any areas that would be disturbed as a result of the proposed Project. Additionally, small mammal burrows were absent or lacking around the Oak Tree Farms Detention Pond, suggesting the prey base at this site is poor. Although this proposed maintenance site falls within designated Critical Habitat for AWS,

³² U.S. Fish and Wildlife Service, "Alameda Whipsnake Critical Habitat Final Rule" In *Federal Register*, Vol. 71, No. 190: 58176-58231 October 2, 2006.

³³ *Ibid.*

the site lacks the physical and biological features required to support AWS. Moreover, the proposed Project therefore neither removes nor modifies designated Critical Habitat in a way that would affect AWS either positively or negatively.

Essential Fish Habitat

No essential fish habitat is present within the Project Area.

Wildlife Corridors

A review of the California essential connectivity project³⁴ showed that the westernmost edge of the Project Area is located within an essential connectivity area, core reserve or corridor, landscape block, or general wildlife corridor identified in the California Department of Fish and Wildlife (CDFW) Biogeographic Information and Observation System (BIOS).³⁵ While some overlap exists between the Project Area and an essential connectivity area, these overlapping areas are defined as “less permeable”, indicating impacts to that portion of the proposed Project should not have a significant impact on habitat connectivity, particularly given the proposed timing, short duration, limited scope, and fundamentally low impact of the proposed Project on wildlife species to utilize this area as a corridor at the time Project activities would occur, or after Project completion.

The Project Area varies in land cover types, but is generally surrounded by suburban residential development or ruderal/landscaped open spaces that are intended and used for human recreation. The presence of anthropogenic features, such as roads and contiguous housing tracts, and the lack of intact natural communities or other areas that would provide necessary elements for wildlife to persist, indicate the Project Area does not likely function as a wildlife corridor. It does not provide a logical connection between two or more core habitats, or provide a linkage between areas commonly used by wildlife for daily, or annual activities. Given the extensive open space surrounding the City of Pleasanton, wildlife movement is much more likely to occur across natural landscapes than in the proposed maintenance sites.

Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act (CWA), state regulations such as the Porter-Cologne Act, the California Fish and Game Code (CFGC), and the California Environmental Quality Act (CEQA) or local ordinances and policies such as city or county Tree Ordinances, Special Habitat Management Areas, General Plans, and Habitat Conservation Plans.

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates “Waters of the United States” under Section 404 of the CWA. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps*

³⁵ *California Department of Fish and Wildlife, Wildlife and Habitat Data Analysis Branch, “Biogeographic Information and Observation System,” accessed 2019, <https://wildlife.ca.gov/data/BIOS>.*

of Engineers Wetlands Delineation Manual (Corps Manual; Environmental Laboratory 1987), *A Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States* (“OHWM Guide;” Corps 2005), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Supplement* (Arid West Supplement; Corps 2008), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as “other waters” and are often characterized by an ordinary high-water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

Waters of the State

The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes “isolated” wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by the California Department of Fish and Wildlife (CDFW) under Sections 1600-1616 of CFGC. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.³⁶ The term “riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself”.³⁷

³⁶ California Department of Fish and Wildlife. 2018. *BIOS - California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

³⁷ CDFG. 1994. *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607*. Environmental Service Division, California Department of Fish and Game, Sacramento, CA.

Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database. Sensitive plant communities are also identified by the CDFW.³⁸ Vegetation alliances in the CNDDDB are ranked 1 through 5 based on NatureServe's (2017) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or the USFWS must be considered and evaluated under the CEQA. Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

Special-Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA). These Acts afford protection to both listed and proposed species. In addition, CDFW Species of Special Concern (SSC), and National Marine Fisheries Service (NMFS) Species of Concern (SOC), are species that face extirpation if current population and habitat trends continue. U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, which have the potential to nest within the area, sensitive species included in USFWS Recovery Plans, and CDFW special-status invertebrates, are also considered special-status species. Although CDFW SSC generally have no special legal status, they are given special consideration under the CEQA.

In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918 (MBTA). Under this legislation, destroying active nests, eggs, and young is illegal. Bat species designated as "High Priority" by the Western Bat Working Group (WBWG) qualify for legal protection under Section 15380(d) of CEQA Guidelines. Species designated "High Priority" are defined as "imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats".

Plant species listed in the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded reduced to no protection under CEQA, but are included in this analysis for completeness. A description of the CNPS Ranks and associated threat codes are provided below in Table 4.

³⁸ California Department of Fish and Wildlife. Biogeographic Data Branch. 2017. California Natural Diversity Database (CNDDDB). Sacramento Field Office. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed August 2017.

Table 3. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Critical Habitat

Critical habitat is a term defined in the FESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The FESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects that they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the FESA "jeopardy standard". However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

Essential Fish Habitat

Essential Fish Habitat (EFH) is regulated through the NMFS, a division of the National Oceanic and Atmospheric Administration (NOAA). Protection of EFH is mandated through changes implemented in 1996 to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to protect the loss of habitat necessary to maintain sustainable fisheries in the United States. The Magnuson-Stevens Act defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" [16 USC 1802(10)]. The NMFS further defines essential fish habitat as areas that "contain habitat essential to the long-term survival and health of our nation's fisheries". Essential Fish Habitat can include the water column, certain bottom types such as sandy or rocky bottoms, vegetation such as eelgrass or kelp, or structurally complex coral or oyster reefs. Under regulatory guidelines issued by the NMFS, any federal agency that authorizes, funds, or undertakes action that may affect EFH is required to consult with the NMFS (50 CFR 600.920).

Wildlife Corridors

Wildlife movement between suitable habitat areas typically occurs via wildlife movement corridors. The primary function of wildlife corridors is to connect two larger habitat blocks, also referred to as core habitat areas. Core habitat areas are important for wildlife that may travel between different types of habitat in order to complete various stages of their lifecycle. Wildlife corridors must be considered under CEQA.

Local Policies, Ordinances, and Regulations

City of Pleasanton General Plan

The City of Pleasanton General Plan outlines conservation goals and policies in the City of Pleasanton. These policies include land use, zoning, housing, and conservation among additional policies. All 25 proposed maintenance sites are either zoned as agriculture or as low-density residential land use. The Project Area also lies within the East Alameda County Conservation Strategy (EACCS) boundaries.³⁹ These policies provide a framework to protect natural resources while improving and streamlining the environmental permitting process.

City of Pleasanton Tree Ordinance

The proposed Project is within the City of Pleasanton and, therefore, the City's Tree Ordinance is the appropriate regulation to reference for guidance on tree protections and provisions.⁴⁰ Per the City's Tree Preservation Ordinance, trees that meet a certain height and circumference are considered Heritage trees, and are thereby protected by the ordinance. Heritage trees may be of any species, and can be publicly or privately owned. Removal of heritage trees requires a permit from the City's Landscape Architect.

Alameda County Regulation of Trees in County Right-Of-Way

The Alameda County Municipal Code contains its own additional tree regulations⁴¹ which outline the requirements for protecting trees that occur in a right-of-way. Prohibited activities include anything that could injure or damage a tree, such as the use of mechanical weeding devices and the attaching of materials to these trees. The Director of the Alameda County Public Works Agency has the authority to approve of the removal of a tree from the right-of-way as a part of a scheduled tree removal and replacement program, or in conjunction with an approved roadway improvement project.

4.6.3 Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** There are three candidate, sensitive, or special-status plant species with potential to occur within the Project's

³⁹ ICF International, "Final Draft: East Alameda County Conservation Strategy," Prepared for: East Alameda County Conservation Strategy Steering Committee, October, 2010.

⁴⁰ City of Pleasanton, "Pleasanton Municipal Code, Chapter 17.16 – Tree Preservation," accessed January 21, 2020, <https://qcode.us/codes/pleasanton/>.

⁴¹ Alameda County, "Alameda County, California – Code of Ordinances, Chapter 12.11 – Regulation of Trees in County Right-of-Way, accessed January 21, 2020, https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT12PUROPA_CH12.11RETTCORI-W.

proposed maintenance sites. Of the 39 special-status wildlife species documented from within the vicinity of the Project, eight were determined to be present, have moderate potential to occur, or have high potential to occur within proposed maintenance sites: Loggerhead shrike, white-tailed kite, burrowing owl, California red-legged frog, California tiger salamander, Alameda whipsnake, northern harrier, and tricolored blackbird.

Noise, ground disturbance, and other proposed maintenance activities could cause a temporary disturbance to these species, and may have potentially adverse effects on other species protected by the MBTA or CDFW. Potential impacts to these species or their habitats could occur during the removal of vegetation, silt, and rock from stream corridors and detention basins, tree trimming along riparian corridors, or due to disturbance associated with the maintenance activities.

The removal of vegetation could result in the direct take of nests containing eggs or young, including for the special-status white-tailed kite, loggerhead shrike, northern harrier, and tricolored blackbird. Visual and auditory disturbance associated with the proposed maintenance activities could also result in burrowing owl nest abandonment. However, implementation of **Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, and BIO-8** would reduce the impact of the proposed maintenance activities to birds to a less than significant level.

Mitigation Measure BIO-1: Best Management Practices (BMPs)

The following BMPs were developed to ensure that maintenance activities would be conducted to protect and enhance existing habitat. When heavy equipment must access sensitive areas such as the creek bed and riparian banks, measures shall be taken to avoid harm to trees and compaction of soil and the area shall be stabilized and restored after maintenance is complete.

1. Dry season work window for in-stream, in-channel, and in-pond work between April 15 and October 31. The City may request work be authorized by the regulatory agencies to begin earlier than the start of the dry season and extend past the end of the dry season, subject to agency approval.
 - i. Work in concrete lined channels between April 15 and October 31
 - ii. Work in earthen channels between May 1 and October 31
 - iii. Work in detention basins between August 15 and October 31
2. Access to channels and ponds for the purposes of maintenance shall be minimized to the amount necessary. Access points should avoid large mature trees and native vegetation to the extent feasible. Temporary access locations shall be sited to minimize tree removal.
3. No heavy equipment shall be operated in streambeds.
4. Control of weeds and grasses on channel access roads or shoulders by mowing shall take place between April 1 and October 31.
5. Before the first significant rainfall (defined as 0.5 inch of rain in a 24-hour period) occurs, all in-channel equipment shall be removed.
6. Exposed soils in upland areas shall be stabilized via hydroseeding or with erosion control fabric/ blankets.

7. Staging shall occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation to the extent feasible. To the extent practical, all maintenance equipment and materials shall be contained within the existing service roads, paved roads, or other pre-determined staging areas.
8. Maintenance-related materials, including sediment, shall not be stockpiled or stored where they could spill into water bodies or storm drains or where they shall cover aquatic or riparian vegetation.
9. No runoff from the staging areas may be allowed to enter water of the U.S. / State, including the creek channel or storm drains, without being subject to adequate filtration (e.g., vegetated buffer, wattles, silt screens). Runoff from the proposed maintenance sites to other waters of the U.S. / State is prohibited.
10. All maintenance-related items including equipment, stockpiled material, temporary erosion control treatments and trash shall be removed within 72 hours of maintenance action completion. All residual soils and/ or materials shall be cleared from the maintenance site.
11. All soils shall be disposed of in an approved location.

Mitigation Measure BIO-2: Special Status Plants

Prior to any maintenance work in maintenance areas where San Joaquin spearscale or Congdon's tarplant may occur, a focused botanical survey shall occur. in grassland habitats underlain with alkaline soils.

1. Each year, prior to any vegetation removal or ground-disturbing activities, a focused special-status plant survey shall occur in areas of suitable habitat (grassland on alkaline soils) for Congdon's tarplant and San Joaquin spearscale in Study Areas C-05, C-06, and P-01 through P-04 as well as suitable habitat for Congdon's tarplant at Study Area P-06 prior to the start of the Project. These plant surveys will be required to confirm the presence or absence of these species.
2. Surveys shall be conducted in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018). These guidelines require special-status plant surveys to be conducted at the proper time of year when special status species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern.
 - a. If no special-status plant species are found, then the Project activities that year will not have any impacts to the species and no additional mitigation measures are necessary.
 - b. If the survey determines that one or more special-status plant species are present within the Project Area, direct and indirect impacts of the Project on the species shall be avoided where feasible through the establishment of activity exclusion zones, where no ground-disturbing activities shall take place, including the staging or other temporary work areas. Activity exclusion

zones for special-status plant species shall be established prior to maintenance activities around each occupied habitat site, the boundaries of which shall be clearly marked with standard orange plastic exclusion fencing or its equivalent. The establishment of activity exclusion zones shall not be required if no maintenance action-related disturbances would occur within 50 feet of the occupied habitat site. The size of activity exclusion zones may be reduced through consultation with a qualified biologist.

3. If exclusion zones and avoidance of impacts to special-status species within the Project Area are not feasible, vegetation management activities such as mowing will be conducted under the guidance of the qualified biologists to reduce potential impacts. The activities shall be timed to avoid the blooming period of the species, after the month of August.
4. If exclusion zones and full avoidance is not feasible, then the loss of individuals or occupied habitat of special-status plants shall be enumerated and compensated for through either the restoration by seed collection, planting, and subsequent management of propagules from on-site or preservation by acquisition, protection, and subsequent management of other existing off-site occurrences. Before the implementation of compensation measures, the Project's applicant shall provide detailed information to the lead agency on the quality of restored or preserved habitat, location of the restored or preserved occurrences, provisions for protecting and managing the areas, the responsible parties involved, and other pertinent information that demonstrates the feasibility of the compensation. A mitigation plan identifying appropriate mitigation ratios at a minimum ratio of 1:1 shall be developed in consultation with, and approved by, the lead agency prior to the commencement of any activities that would impact special-status plant species that occur within the Project Area. A mitigation plan may include but is not limited to the following: plant collection, planting, maintenance, and monitoring plans with success criteria for a restoration site, the acquisition of off-site mitigation areas presently supporting the special-status species within the Project Area, purchase of credits in a mitigation bank that is approved to sell credits for special-status plants, or payment of in-lieu fees to a public agency or conservation organization (e.g. a local land trust) for the preservation and management of existing populations of special-status plants.

Mitigation Measure BIO-3a: Nesting Birds

Work on the proposed Project shall be conducted outside of the bird nesting season (generally February 1 – August 31) to the extent practicable. It is also recommended that any trees and shrubs in or adjacent to a proposed maintenance site that are proposed for removal be removed during the non-breeding season (September 1 through February 1), if possible. In the event that work must occur during the bird nesting season, pre-action nesting bird surveys shall be conducted within 14-days of ground disturbance at the maintenance site on an individual site-basis to determine whether active nests are present that may be disturbed, and to avoid disturbance to active nests, eggs, and/or young of nesting birds.

In the event that an active nest (defined as containing live eggs, chicks, or young) is located, a no-disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g. due to predation). Exclusion buffer

sizes differ depending on species, location, and placement of nest and shall be determined and implemented in the field by the surveying ornithologist.

Minimization measures for both special-status species and common nesting birds are the same and implementation of Mitigation Measure BIO-3 would reduce impacts to nesting birds to less than significant levels.

Mitigation Measure BIO-3b: Tricolored Blackbird Mitigation Measure

Removal of wetland vegetation within Study Area where tricolored blackbird has the potential to occur (see Table 9 of Appendix A) should be limited to the non-nesting season, generally August 16 – March 14 for this species. If working outside of the nesting season is not possible, pre-construction nesting bird surveys (MM BIO-3) should also include an assessment for the presence of tricolored blackbird. If nesting tricolored blackbird are found within a Study Area, avoidance 250-foot buffer should be implemented around the vegetation that contains the nesting colony until such time as nests within the colony are no longer active. With the implementation of this measure, the Project's impact to nesting tricolored blackbird would be reduced to a less than significant level.

Mitigation Measure BIO-4: Burrowing Owl

Maintenance actions performed at any maintenance site with potential burrowing owl habitat within 500-feet (see Table 9 of Appendix A) shall be preceded by a pre-activity survey focused on detecting burrowing owl. Burrowing owl take avoidance surveys should be conducted in accordance with the *CDFW Staff Report on Burrowing Owl Mitigation* (2012). These surveys often consist of a minimum of two surveys that are conducted 14 days and within 48 hours prior to the start of work to determine whether burrowing owls occur in an area where they may be adversely affected by the proposed Project. Level of survey effort will be determined in consultation with CDFW. Pre-activity surveys for burrowing owl are not restricted to the nesting season.

If determined to be present, exclusion buffers of up to 500 feet during the nesting season (March 15 through August 31) and 250 feet in the non-nesting season shall be established and maintained around occupied burrows until such time as the burrow becomes unoccupied through natural processes. If avoidance is not feasible, a minimization and monitoring plan shall be prepared for burrows following CDFW guidance (CDFW 2012). The plan shall outline methods to reduce disturbance of Project activities, and may include monitoring of owls during work, installation of visual barriers, or other methods as appropriate for the owl locations and Project activities proposed. Avoidance of occupied burrows as determined through pre-activity surveys and, under certain circumstances, minimization and monitoring plan implementation, will reduce the impacts to burrowing owl to a less than significant level.

Mitigation Measure BIO-5: California Tiger Salamander (CTS)

The mitigation measures listed below have been obtained from the Programmatic Biological Opinion for CTS for small projects within the San Francisco Bay Area.⁴² and are similar to those that would likely be required by the USFWS and CDFW following consultation if consultation with USFWS and/or CDFW is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to CTS:

1. Work at maintenance sites where potential exists for CTS to be present shall be conducted during the dry season and when aquatic features are likely to be dry. This is generally considered to be May 1 – October 31.
2. The qualifications of qualified biologist(s) shall be submitted to the USFWS for review and written approval at least thirty (30) calendar days prior to the start of work.
3. A qualified biological monitor should be onsite during all activities at C-06 and P-02 that may result in take of CTS including vegetation removal, silt removal, and ground disturbance.
4. A qualified biologist should conduct an education training for employees working on the Project. Personnel would be required to attend the training that would cover topics such as identification and legal protection of the species, as well as project specific avoidance and minimization measures.
5. Plastic monofilament netting (erosion control matting, or wrapping around wattles), or similar material in any form should not be used on the Project in order to avoid entangling, strangling, or trapping CTS.
6. To minimize temporary habitat disturbances, Project-related vehicle traffic should be restricted to established roads, and maintenance activity areas. Project-related vehicles shall observe a 15-mile per hour speed limit within maintenance activity areas.
7. All maintenance equipment should be maintained to prevent leaks of fuels, lubricants, or other potentially toxic fluids.
8. In order to avoid attracting predators of CTS, all trash shall be deposited in covered or closed trash containers that are removed from the Project Area regularly.

⁴² U.S. Fish and Wildlife Service, "Programmatic Biological Opinion for Issuance of Permits for Projects that May Affect the Threatened California Tiger Salamander in Nine San Francisco Bay Area Counties, California," December 11, 2014. Accessed January 2020. Available online at: [https://www.fws.gov/sacramento/es/Consultation/Programmatic-Consultations/Documents/2014-F-0660 CTS Bay Area Programmatic for Small Projects.pdf](https://www.fws.gov/sacramento/es/Consultation/Programmatic-Consultations/Documents/2014-F-0660%20CTS%20Bay%20Area%20Programmatic%20for%20Small%20Projects.pdf)

9. Initial ground disturbance activities shall cease no less than 30 minutes before sunset and shall not begin again prior to no less than 30 minutes after sunrise.
10. No work in wet weather or within 48 hours of a rain event defined as 0.25 inch of rain within a 24-hour period.
11. Removal of vegetation and any soil disturbance in Study Areas where CTS has potential to occur shall be conducted with hand tools. Soil manipulations at locations with potential for CTS to occur shall further not disturb the soil subsurface to avoid take of individuals in underground refugia.
12. If herbicide applications are anticipated as part of vegetation management at any Study Area with potential for CTS to occur, applications should be made outside of the wet season (i.e. applied May 1 – October 31) to avoid runoff events into downstream waters and when the Study Area is dry.

Mitigation Measure BIO-6: California Red-legged Frog (CRLF)

The mitigation measures listed below have been obtained from the Programmatic Biological Opinion for CRLF for small projects within the San Francisco Bay Area and are similar to those that will be required by the USFWS following consultation.⁴³ If consultation with USFWS is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to CRLF:

1. To the extent practicable, initial ground-disturbing activities shall be avoided between November 1 and March 31 because that is the time period when CRLF are most likely to be moving through upland areas. When ground-disturbing activities must take place between November 1 and March 31, the Corps through the applicant shall ensure that daily monitoring by the Service-approved biologist is completed for the California red-legged frog.
2. A qualified biologist(s) shall be onsite during all activities that may result in take of CRLF at C-06 and C-14.
3. The qualifications of the qualified biologist(s) shall be submitted to the Service for review and written approval at least 30 calendar days prior to the date earthmoving is initiated at the Project Area.
4. The qualified biologist shall conduct employee education training for employees working on earthmoving and/or maintenance activities. Personnel shall be required to attend the presentation which shall describe the CRLF, avoidance, minimization, and conservation measures, legal protection of the animal, and other related issues.

⁴³ U.S. Fish and Wildlife Service, "Programmatic Biological Opinion for Issuance of Permits for Projects that May Affect the Threatened California Red-Legged Frog in Nine San Francisco Bay Area Counties, California," June 18, 2014. Accessed January 2020. Available online at: https://www.fws.gov/sacramento/es/Consultation/Programmatic-Consultations/Documents/Programmatic_BO_CRLF_9_San_Francisco_Bay_Area_Counties.pdf

5. To minimize temporary habitat disturbances, project-related vehicle traffic shall be restricted to established roads and maintenance activity areas. Project-related vehicles shall observe a 15-mile per hour speed limit within maintenance activity areas.
6. All maintenance equipment shall be maintained to prevent leaks of fuels, lubricants, or other potentially toxic fluids.
7. •Plastic monofilament netting (erosion control matting, or wrapping around wattles), or similar material in any form shall not be used on the Project in order to avoid entangling, strangling, or trapping CRLF.
8. In order to avoid attracting predators of CRLF, all trash shall be deposited in covered or closed trash containers that are removed from the Project Area regularly.
9. No work in wet weather or within 48 hours of a rain event defined as 0.25 inch of rain within a 24-hour period shall occur.
10. Work in Study Areas with potential for CRLF to occur shall be conducted only after the Study Areas have naturally dried.

Mitigation Measure BIO-7: Alameda Whipsnake

If consultation with USFWS and/or CDFW is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined during consultation and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to AWS:

- The qualifications of qualified biologist(s) shall be submitted to the USFWS for review at least thirty (30) calendar days prior to the start of work.
- A qualified biologist should conduct an education training for employees working on the Project. Personnel would be required to attend the training that would cover topics such as identification and legal protection of the species, as well as project specific avoidance and minimization measures.
- Maintenance activities performed within Study Area P-06, where potential for take of individual AWS exists, shall be overseen by a qualified biological monitor. The qualified biological monitor will be present during all ground disturbing activities.
- Prior to start of work each day, the qualified biological monitor will inspect the work area and should AWS be discovered on any portion of the Study Area work will be postponed and the snake will be allowed to leave of its own volition. Work would not resume until the qualified biologist has determined the AWS has left the work area and is out of harm's way.

Mitigation Measure BIO-8: Roosting Bats

The following measures shall be implemented to avoid and minimize impacts to roosting bats:

- To the extent practicable, work that involves disturbance of potential bat roost habitat should be scheduled to occur between October and March to avoid the bat maternity season.
- If limiting work to this window is not feasible and noise disturbances are anticipated to exceed the baseline level of disturbance at a maintenance site, or in the event that trees greater than 12" DBH are slated for removal, a bat roost habitat assessment shall be performed at least 30 days prior to the commencement of maintenance actions. The bat roost assessment shall be performed by a qualified bat biologist and shall assess whether potential bat roosting habitat is present, and whether maintenance actions within any given maintenance site shall result in direct or indirect impacts to roosts that may be present.
 - The assessment shall consist of visual examination of trees (greater than 12" DBH), buildings, bridges, or other structures in the immediate vicinity, or along access routes of each maintenance site. The assessment would address conditions that may be favorable or unfavorable for bat use such as maintenance materials

used, thermal conditions, frequency of disturbance, and evidence of potential predators. If maternity roosts are detected during the assessment, additional avoidance measures may be required.

- Any larger trees or branches (>6 inches in diameter) that are downed in the course of maintenance actions should be left on the ground for a minimum of 24 hours before being chipped, off-hauled, or otherwise processed, to ensure any roosting bats therein have the opportunity to leave the vicinity of their own volition.

b,c) ***Less than Significant with Mitigation Incorporated.*** The Proposed Project has the potential to permanently impact up to approximately 38.25 acres of sensitive communities, including 21.67 acres of riparian coast live oak woodland, 9.62 acres of detention basins, 1.08 acres of intermittent stream, 0.93 acres of ephemeral stream, 0.04 acres of wetlands, 2.37 acres of perennial stream, and 2.45 acres of drainage ditch. No land conversions are included in the proposed Project. The proposed maintenance activities would result in temporary impacts to the stream channels and detention ponds. Disturbance may include but is not limited to removal of riparian vegetation, weed abatement, and silt and rock removal.

Streams and lakes are subject to jurisdiction by Corps under Section 404 of the CWA, the RWQCB under Section 401 of the CWA, and CDFW under Sections 1600-1616 of the CFGC. Work in streams generally requires Section 404 and 401 permits from Corps and RWQCB. A 1602 Lake and Streambed Alteration Agreement is generally required if alterations to streambeds or lakes is proposed, or if a Project involves work within or adjacent to streambeds. Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from CDFW and may require a Section 401 permit. CDFW jurisdiction typically extends to the top of bank or the outer edge of riparian vegetation, whichever is further from the stream. The permits may require mitigation for the small footprint of the project's riparian and stream impacts.

With this and implementation of Mitigation Measures BIO-9, BIO-10, BIO-11, and BIO-12 below, the Project's adverse effects on sensitive biological communities, riparian habitat, and state and federally protected wetlands would be less than significant.

Mitigation Measure BIO-9: Vegetation Management Mitigation Measures

1. Herbaceous layers that provide erosion protection and habitat value shall be left in place.
2. Vegetation along the boundary of the Study Areas shall be preserved to the extent feasible to maintain temporary soil stabilization.
3. Removal of mature trees shall be avoided whenever possible.
4. Vegetation removed from the Study Areas shall be handled in a manner to prevent spread of seed and shall be contained so that stray plant parts do not leave the site or contaminate adjacent areas.

Mitigation Measure BIO-10: Silt and Rock Removal

1. Upland soils or areas above ordinary high-water mark exposed from maintenance activities shall be stabilized using erosion control fabric or hydroseeding.

2. Erosion control fabric shall consist of natural fibers that will biodegrade over time.
3. Other erosion control measures shall be implemented as necessary to ensure that sediment or other contaminants do not reach surface water bodies for stockpiled or reused/ disposed sediments.
4. After sediment removal, the creek shall be graded so that the transition between the existing creek/ channel both upstream and downstream is smooth and continuous between the maintained and non-maintained areas and does not present a barrier of sediment or other blockages that could erode once flows are restored to the creek or channel.
5. BMPs including silt fencing, fiber rolls, and/or wattles, shall be implemented throughout the duration of Project activities to minimize the potential for sediment movement offsite.

Mitigation Measure BIO-11: Riparian Woodland

Project activities resulting in the maintenance actions in riparian communities may require a 401 permit from RWQCB and an SAA from the CDFW under Section 1602 of the CDFG. The City would apply for permits from the appropriate regulatory agencies and comply with terms. Terms of these permits would likely include, but not necessarily be limited to, the mitigation measures listed below:

1. To the extent feasible, maintenance to riparian trees shall be avoided unless they are directly affecting stream flow or are considered a flood hazard.
2. If riparian vegetation requires removal for access to maintenance site, non-native species and/ or quick growing species shall be targeted first for removal. Removal of native, mature trees shall be avoided whenever possible.
3. If any Project activity results in the permanent impact of sensitive riparian habitat it shall be replaced at a replacement-to-loss ratio of 3:1 (three acres of riparian habitat created for each acre disturbed). Mitigation would occur either through the purchase of mitigation credits from a local riparian mitigation bank or pursuant to a site-specific mitigation plan. At a minimum, this plan shall identify mitigation areas, a planting plan, and success criteria, along with remedial measures to compensate for lack of success.

Mitigation Measure BIO-12: Aquatic Resources

Project activities resulting in the maintenance actions in aquatic resources may require a Section 404 permit from the USACE, Section 401 permit from RWQCB, and/or an SAA from the CDFW under Section 1602 of the CDFG. The City would apply for permits from the appropriate regulatory agencies and comply with terms prior to initiating maintenance actions in streams or detention basins. The City and contractors shall comply with the conditions of these regulatory permits. If repair activities affect the active channel, the work area will be isolated from flowing stream segments using silt fences, wattles, and/or cofferdams.

The following dewatering BMPs will be used to help minimize impacts to sensitive aquatic resources and species during Project implementation:

1. A water diversion plan will be prepared and approved by the agencies prior to implementation.
2. A qualified biologist will be present to monitor coffer dam installation, dewatering, and removal.
3. To the extent feasible, work will occur during the dry season.
4. Cofferdams or diversion structures shall be constructed from materials that are fully contained and can be completely removed from the aquatic resources, such as clean, bagged gravel, sandbags, or rubber bladders. Once maintenance is complete, the diversion structures will be fully removed as soon as possible.

Project specific mitigation for impacts to features jurisdictional to state and federal agencies will be determined during the wetland permitting process with a minimum of 1:1 required. Mitigation could include land conservation and management in perpetuity, on-site habitat enhancement and restoration, payment of in-lieu fees to authorized conservation organizations, or a combination of these measures. Habitat enhancement and restoration would require a mitigation and monitoring plan to ensure environmental impacts are mitigated and the sensitive habitats are returned to a natural state after the project is complete

- a) ***Less than Significant with Mitigation Incorporated.*** The Project Area is variable in land cover but is generally surrounded by suburban residential development or ruderal/landscaped open spaces that are intended and used for human recreation. The presence of anthropogenic features such as roads and contiguous housing tracts, and lack of intact natural communities or other areas that would provide necessary elements for wildlife to persist, mean that the Project Area does not likely function as a wildlife corridor. It does not provide any logical connection between two or more core habitats or provide a linkage between areas commonly used by wildlife for daily, or annual activities. Furthermore, given the extensive open space surrounding the city of Pleasanton, wildlife movement is much more likely to occur across natural landscapes than the portions of the Project Area subject to the proposed Project.

The proposed maintenance site Oak Tree Farms Detention Pond (P-06) may potentially be used as a movement corridor for dispersing Alameda Whipsnake. Additionally, the California red-legged frog may use some proposed maintenance sites as migration corridors during the wet season. However, with implementation of Mitigation Measures BIO-6 and BIO-7, a less than significant impact would occur.

- e) ***Less than Significant with Mitigation Incorporated.*** Within the overall Project Area, there are numerous protected/ ordinance sized trees, as defined by the City and Alameda County. Activities that compact soil, trench through roots, or pile soil up around the base of trees may adversely affect the health of protected trees. The removal or injury of protected trees would require permits or mitigation measures under the City Municipal Code (Chapter 17.16).

Disturbance or removal of trees in natural channels shall not exceed the minimum necessary to complete maintenance activities. Precautions shall be taken to avoid other damage to vegetation by people or equipment. Branches and/or limbs overhanging the channel and impacting water flows shall be properly pruned. Trees may be removed from natural channels if and only if they are below ordinary high-water mark and they are restricting the capacity of the channel and they are causing erosion or flooding. Any trees which must be cut are to be cut at ground level and the root mass left in place to maintain bank stability.

Mitigation Measures BIO-13 and BIO-14 shall be implemented to assure that impacts to protected trees are less than significantly impacted. Implementation of the following measures will reduce potential impacts on protected trees to a less-than-significant level.

Mitigation Measure BIO-13: Avoid Trees

To the extent feasible, activities will avoid impacts to protected trees. Avoidance is considered to be the exclusion of any maintenance work on protected trees. If complete avoidance is not feasible, Mitigation Measure BIO-14 will be implemented.

Mitigation Measure BIO-14: Comply with Tree Ordinances

The Project proponent will comply with the local ordinances, including replacement ratios, and submit permit applications for removal, trimming, damage, or relocation of all protected trees covered by the applicable City or County ordinance listed in Sections 2.3.2 and 2.3.3.

- f) **No Impact.** No state, regional, or federal habitat conservation plans or Natural Community Conservation Plans have been adopted for the Project Area. No impact would occur.

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4.7 Cultural Resources

CULTURAL RESOURCES — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

This section examines the potential impacts of the proposed project on cultural resources. Tribal cultural resources are addressed in Section 4.21, *Tribal Cultural Resources*. For the purposes of this analysis, the term cultural resource is defined as follows:

Indigenous and historic-era sites, structures, districts, and landscapes, or other evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or another reason. These resources include the following types of CEQA-defined resources: historical resources, archaeological resources, and human remains.

The term indigenous, rather than prehistoric, is used in this section as a synonym for “Native American–related”. This section relies on the information and findings presented in *Historic Property Survey Report/Finding of Effect: Twenty Stream Maintenance Projects, City of Pleasanton, Alameda County, California* (Basin Research Associates [Basin] 2020). That report, provided in Appendix C, details the results of the cultural resources study, which examined the environmental, ethnographic, and historic background of the Project Area, emphasizing aspects of human occupation.

4.7.1 Environmental Setting

Records Search

At the request of Basin, on August 29 and December 4, 2019, staff of the Northwest Information Center (NWIC), Sonoma State University, conducted records searches for the Project Area and areas within 0.25 mile thereof. The NWIC maintains the California Historical Resources Information System (CHRIS) records relevant to the Project Area and vicinity. The NWIC has record of three previously recorded cultural resources within

the Project Area, one immediately adjacent to the Project Area, and another 18 outside but within 0.25 mile of the Project Area. The three previously recorded resources in the Project Area consist of one archaeological resource (P-01-000063) and two architectural resources (P-01-001775, -011624). The previously recorded resource immediately adjacent to the Project Area (P-01-010610) is an archaeological resource.

P-01-000063 is an indigenous archaeological resource with reported human burials, midden, fire-affected rock, groundstone artifacts, shell, and flaked-stone artifacts. The resource was mapped by CHRIS as within the eastern portion of the C-14 (Dublin Canyon) portion of the Project Area; it does not appear that the resource has been previously evaluated for eligibility for listing in the California Register of Historical Resources (California Register), and previous cultural resources reports document that the resource was previously destroyed by housing developments. P-01-001775 is the Pleasanton Canal, an earth channelized flood control and drainage canal modified and constructed in the mid-1980s present in the C-02 (Pleasanton Canal) portion of the Project Area; the resource was previously evaluated as not eligible for the California Register. P-01-0011624 is the Niles Canyon Transcontinental Railroad District, mapped as intersecting the C-10 (Junipero Canal) portion of the Project Area; the resource is listed in the National Register of Historic Places (National Register), eligible under Criterion A, and is therefore automatically listed in the California Register. P-01-010610 is an extensive indigenous archaeological site with more than 400 human burials, thousands of artifacts and abundant diagnostic artifacts dating it to between 3,500 and 150 years before present. The resource was previously mapped as approximately 30 feet south of the C-10 (Junipero Canal) portion of the Project Area. P-01-010610 was previously evaluated as California Register-eligible and subsequently subject to extensive data recovery efforts as part of a housing development project that destroyed the site.

Native American Correspondence

On August 6 and December 23, 2019, Basin contacted the California Native American Heritage Commission (NAHC), requesting a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may be interested in the proposed project. The NAHC replied on August 16 and December 27, 2019, stating that the SLF has no record of sacred sites in the Project Area. The reply also included a list of Native American representatives to contact regarding the proposed project.

In August and December 2019, Basin sent letters with proposed project information to the Native American contacts identified in the NAHC's replies; letters were sent to the following groups: Amah Mutsun Tribal Band of Mission San Juan Bautista; Indian Canyon Mutsun Band of Costanoan; Muwekma Ohlone Indian Tribe of the San Francisco Bay Area; North Valley Yokuts Tribe; The Confederated Villages of Lisjan; The Ohlone Indian Tribe; and, the Costanoan Rumsen Carmel Tribe.

Responses were received from two Native Americans representatives. The first was received on August 28, 2019 from Michelle Zimmer, of the Amah Mutsun Tribal Band of Mission San Juan Bautista. Christopher Canzonieri, of Basin, and Ms. Irene Zwierlein, of the Amah Mutsun Tribal Band of Mission San Juan Bautista, had a subsequent phone

call, during which Ms. Zwierlein recommended that maintenance crews receive cultural sensitivity training in areas that may yield potential indigenous archaeological material and that archaeologists on the proposed project have experience in Northern and Central California archaeology. The second response was received on September 29, 2019 via email from Katherine Erolinda Perez, Chairperson of the North Valley Yokuts Tribe, who emailed Basin a series of recommended mitigation measures, which included avoiding potential tribal cultural resources, workers awareness training for tribal cultural resources, and maintenance activity monitoring, and protocol for inadvertent discovery of cultural resources and tribal cultural resources.

Note, no California Native American tribes previously requested notification regarding City projects for potential consultation under California Public Resources Code (PRC) § 21080.3 (i.e., Assembly Bill [AB] 52). Therefore, no formal consultation pursuant to PRC § 21080.3 (see AB 52), was required for the proposed project.

Appendix D presents documentation of correspondence with Native American representatives regarding the proposed project to date.

Field Survey

In August and December 2019, and February 2020, Basin conducted a cultural resources pedestrian survey of the Project Area, covering all portions of the Project Area. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced no more than approximately 5 meters apart and inspecting the surface for cultural material or evidence thereof. During the pedestrian survey, no archaeological resources or architectural resources were identified in the Project Area.

Summary of Cultural Resources Identified

Through background research conducted for the proposed project, three previously recorded cultural resources, one archaeological resource (P-01-000063) and two architectural resources (P-01-001775, -011624) were identified in the Project Area. However, P-01-001775 (Pleasanton Canal) does not meet the age requirements for California Register-eligibility and previous documentation for P-01-000063 shows that the resource has been destroyed and is no longer present in the Project Area. Finally, during the field survey, no cultural resources, including any of the three previously recorded in the Project Area were identified. It appears that P-01-011624 (Niles Canyon Transcontinental Railroad District), though mapped as being partially within the Project Area, does not have any components actually in the Project Area.

In summary, through background research and field survey, no cultural resources appear to be present in the Project Area. Therefore, no historical resources or unique archaeological resources, as defined by CEQA, appear to be present in the Project Area.

4.7.2 Regulatory Setting

California Environmental Quality Act

CEQA (codified at PRC § 21000 *et seq.*) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources.

The State implements provisions in CEQA through its statewide comprehensive cultural resources surveys and preservation programs. Typically, a resource must be more than 50 years old to be considered as a potential historical resource. The State of California Office of Historic Preservation advises recordation of any resource 45 years or older, since there is commonly a five-year lag between resource identification and the date that planning decisions are made.

Historical Resources

CEQA Guidelines recognize that a historical resource includes: 1) a resource in the California Register; 2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); and 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC § 21084.1 and PRC § 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines* (codified at PRC § 15000 *et seq.*), then the site may be treated in accordance with the provisions of PRC § 21083, pertaining to unique archaeological resources.

Unique Archaeological Resources

As defined in PRC § 21083.2 a “unique archaeological resource” is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines note that if an archaeological resource is not a unique archaeological, historical resource, or tribal cultural resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (PRC § 15064.5[c][4]).

Tribal Cultural Resources

Impacts to tribal cultural resources also are considered under CEQA (PRC § 21084.2). PRC § 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in PRC § 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [PRC] § 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The criteria for eligibility for the California Register are based upon the criteria for listing on the National Register (PRC § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance. Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Public Resources Code § 5097

California PRC § 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains that are taken from a Native American grave or cairn. Any person who knowingly or willfully obtains or possesses any Native American artifacts or human remains is guilty of a felony, which is punishable by imprisonment. Any person who removes, without authority of law, any such items with an intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment. PRC § 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

California Native American Historic Resource Protection Act

The California Native American Historic Resources Protection Act of 2002 imposes civil penalties, including imprisonment and fines up to \$50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code § 7050.5

Section 7050.5 of the California Health and Safety Code (HSC) protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC § 5097.98 (and reiterated in PRC § 15064.59[e]) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery.

4.7.3 Discussion of Impacts

The following analysis describes archaeological resources, both as historical resources, according to CEQA Guidelines § 15064.5, as well as unique archaeological resources, as defined in PRC § 21083.2(g), under Question b.

- a) **No impact.** Through background research conducted for the proposed project, two previously recorded architectural resources (P-01-001775, -011624) were identified in the Project Area. However, P-01-001775 (Pleasanton Canal) does not meet the age requirements for California Register-eligibility, as it was constructed in the 1980s; therefore, P-01-001775 does not qualify as an historical resource, as defined in CEQA Guidelines § 15064.5. P-01-011624 is the Niles Canyon Transcontinental Railroad District and is listed in the National Register and, therefore, is automatically listed in the California Register. Therefore, the resource qualifies as an historical resource, as defined in CEQA Guidelines § 15064.5. However, during the field survey conducted for the proposed project, no components of the resource were identified in the Project Area.

In summary, no architectural resources were identified in the Project Area. As such, there are no known historical resources, as defined in CEQA Guidelines § 15064.5, in the Project Area. Therefore, the proposed project would result in no impact on historical resources, and no mitigation is required.

- b) **Less than Significant with Mitigation Incorporated.** Through background research conducted for the proposed project, one previously recorded archaeological resource (P-01-000063) was identified in the Project Area, and one previously recorded archaeological resource (P-01-010610) was identified approximately 30 feet south of the Project Area. P-01-000063 was previously mapped as within the eastern portion of the C-14 (Dublin Canyon) portion of the Project Area and the resource does not appear to have been previously evaluated for California Register-eligibility. Previous cultural resources reports document that the resource was previously destroyed by housing developments. P-01-010610 is an extensive indigenous archaeological site with more than 400 human burials and thousands of artifacts. The resource was previously mapped as approximately 30 feet south of the C-10 (Junipero Canal) portion of the Project Area. P-01-010610 was previously evaluated as California Register-eligible and subsequently subject to extensive data recovery efforts as part of a housing development project that destroyed the site.

During the field survey conducted for the proposed project, no archaeological resources, including any evidence of P-01-000063 or P-01-010610, were identified in the Project Area. As such, there are no known archaeological resources that may qualify as historical resources (as defined in CEQA Guidelines § 15064.5) or unique archaeological resources (as defined in PRC § 21083.2(g)) present in the Project Area. Therefore, the proposed project is not anticipated to impact any archaeological resources, pursuant to CEQA Guidelines § 15064.5.

Although the proposed project is not anticipated to impact any archaeological resources, there remains the possibility that previously unrecorded archaeological deposits are present in the Project Area. If such deposits are present and were found to qualify as archaeological resources pursuant to CEQA Guidelines § 15064, impacts of the proposed project on archaeological resources could be potentially significant.

Such potentially significant impacts would be reduced to less than significant with mitigation incorporated by implementing **Mitigation Measure CULT-1**.

Mitigation Measure CULT-1: Implement Unanticipated Discovery Protocol for Archaeological Resources, including Potential Tribal Cultural Resources.

If indigenous or historic-era archaeological resources are encountered during proposed project development or operation, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The City and a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, shall be immediately informed of the discovery. The qualified archaeologist shall inspect the find within 24 hours of discovery and notify the City of their initial assessment.

If the City determines, based on recommendations from the qualified archaeologist, that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines § 15064.5), or a tribal cultural resource (as defined in PRC § 21074), the resource shall be avoided if feasible. Avoidance means that no activities associated with the proposed project that may affect cultural resources shall occur within the boundaries of the resource or any defined buffer zones. If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is indigenous), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC § 21083.2, CEQA Guidelines § 15126.4. This shall include documentation of the resource and may include data recovery or other measures. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource. The resource and treatment method shall be documented in a professional-level technical report to be filed with the California Historical Resources Information System. Work in the area may commence upon completion of approved treatment and under the direction of the qualified archaeologist.

- c) ***Less than Significant with Mitigation Incorporated.*** No human remains have been identified in the Project Area through archival research, field surveys, or Native American consultation. Also, the land use designations for the Project Area do not include cemetery uses, and no known human remains exist within the

Project Area. Therefore, the proposed project is not anticipated to disturb any human remains.

However, because the proposed project would involve ground-disturbing activities, it is possible that such actions could unearth, expose, or disturb previously unknown human remains. In the event that human remains were discovered during proposed project maintenance activities, impacts on the human remains resulting from the proposed project would be significant if those remains were disturbed or damaged. Implementation of **Mitigation Measure CULT-2** would reduce any potential impacts on human remains to a less-than-significant level through identification, consultation, and avoidance.

Mitigation Measure CULT-2: Implement Unanticipated Discovery Protocol for Human Remains.

If human remains are uncovered during proposed project maintenance activities, all work shall immediately halt within 100 feet of the find and the Alameda County Coroner shall be contacted to evaluate the remains and follow the procedures and protocols set forth in CEQA Guidelines § 15064.5(e)(1). If the county coroner determines that the remains are Native American, the County shall contact the California Native American Heritage Commission, in accordance with California Health and Safety Code § 7050.5(c) and PRC § 5097.98. As required by PRC § 5097.98, the City shall ensure that further development activity avoids damage or disturbance in the immediate vicinity of the Native American human remains, according to generally accepted cultural or archaeological standards or practices, until the City has conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

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4.8 Energy

ENERGY — Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact	Source
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	48,49
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	47,50,51

4.8.1 Environmental Setting

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximate amount of energy contained in common energy sources are as follows: gasoline, 115,000 BTUs per gallon; diesel, 138,500 BTUs per gallon; natural gas, 21,000 BTUs per pound; electricity, 3,414 BTUs per kilowatt-hour (kWh).⁴⁴

Total energy usage in California was 7,881 trillion BTUs in 2017, which equates to an average of 200 million BTUs per capita. Of California's total energy usage, the breakdown by sector is 40% transportation, 23% industrial, 18% residential, and 19% commercial.⁴⁵ Petroleum satisfies 45% of California's energy demand, natural gas 28%, and electricity 11%. Coal fuel accounts for less than 1% of California's total energy demand.⁴⁶ Electric power and natural gas in California are generally consumed by stationary users, whereas petroleum consumption is generally accounted for by transportation-related energy use. The other sources are made up of renewable energy sources, which includes wind and solar power, among other sources.

The proposed Project would not have any operational energy needs as the streams and detention basins proposed for maintenance would continue to passively trap and convey water. All energy consumption would therefore occur during maintenance activities through vehicle fuel use.

4.8.2 Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA), and the

⁴⁴ U.S. Department of Energy, "Alternative Fuels Data Center – Fuel Properties Comparison," October 29, 2014, http://www.afdc.energy.gov/fuels/fuel_comparison_chart.pdf.

⁴⁵ U.S. Department of Energy, Energy Information Administration, "California State Profile and Energy Estimates," November 15, 2018, <https://www.eia.gov/state/?sid=CA>.

⁴⁶ U.S. Department of Energy, Energy Information Administration, "State Energy Consumption Estimates 1960 Through 2017," June, 2019, https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf.

Federal Energy Regulatory Commission (FERC) all have substantial influence over energy policies and programs. Generally, these federal agencies influence and regulate transportation energy consumption through establishing and enforcing fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding of transportation infrastructure improvements.

At the state level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes, and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from rules that otherwise would preempt setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal Regulations

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. The act includes tax incentives for the following: energy conservation improvements in commercial and residential buildings; fossil fuel production and clean coal facilities; and construction and operation of nuclear power plants, among other things.

Energy Independence and Security Act of 2007

Signed into law in December 2007, this broad energy bill included an increase in auto mileage standards, and also addressed biofuels, conservation measures, and building efficiency. The U.S. EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. The bill amended the CAFE standards to mandate significant improvements in fuel efficiency (i.e., average fleet wide fuel economy of 35 miles per gallon (mpg) by 2020, versus the previous standard of 27.5 mpg for passenger cars and 22.2 mpg for light trucks).⁴⁷

State Regulations

Title 24 (California Energy Code)

The California Energy Code (Title 24, Part 6, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The provisions of the California Energy Code apply to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances; they also give guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The CEC adopted the 2005 changes to the Building Efficiency Standards, which

⁴⁷ U.S. Environmental Protection Agency, "Summary of the Energy Independence and Security Act," December 19, 2007, <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>.

emphasized saving energy at peak periods and seasons, and improving the quality of installation of energy-efficiency measures. It is estimated that implementation of the 2005 Title 24 standards have resulted in an increased energy savings of 8.5 percent relative to the previous Title 24 standards. Compliance with Title 24 standards is verified and enforced through the local building permit process.⁴⁸ The 2008 Title 24 Standards, which had an effective date beginning August 1, 2009, include added provisions that require, for example, “cool roofs” on commercial buildings; increased efficiency in heating, ventilating, and air conditioning systems; and increased use of skylights and more efficient lighting systems.⁴⁹ Title 24 Standards were further updated with the 2013 Building Energy Efficiency Standards, which are estimated to lead to 25 percent less energy consumption for residential buildings and 30 percent savings for nonresidential buildings over 2008 Energy Standards. 2013 standards, which updated codes for lighting, space heating and cooling, ventilation, and water heating, took effect on July 1, 2014.

California Global Warming Solutions Act of 2006

In September 2006, the governor signed AB 32, the Global Warming Solutions Act of 2006, which mandates that California’s GHG emissions be reduced to 1990 levels by 2020. The act directs the California EPA to work with state agencies to implement a cap on GHG emissions (primarily carbon dioxide) from stationary sources of such as electric power generation facilities, and industrial, commercial, and waste-disposal sectors. Since carbon dioxide emissions are directly proportional to fossil fuel consumption, the cap on emissions is expected to have the incidental effect of forcing a reduction in fossil fuel consumption from these stationary sources. Specifically, AB 32 directs the California EPA to work with other state agencies to accomplish the following: 1) promulgate and implement GHG emissions cap for the electric power, industrial, and commercial sectors through regulations in an economically efficient manner; 2) institute a schedule of greenhouse gas reductions; 3) develop an enforcement mechanism for reducing GHG; 4) establish a program to track and report GHG emissions.⁵⁰

Senate Bill 32

Enacted in 2016, Senate Bill (SB) 32 (Pavley, 2016) codifies the 2030 GHG emissions reduction goal of Executive Order B-30-15 by requiring CARB to ensure that state-wide GHG emissions are reduced to 40 percent below 1990 levels by 2030. Similar to AB 32, a reduction in GHG emissions typically corresponds with a reduction in energy usage as the bulk of GHGs result from the combustion of fossil fuel.

SB 32 was coupled with a companion bill: AB 197 (Garcia, 2016). Designed to improve the transparency of CARB’s regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning state-wide programs, policies and investments related to climate change. AB 32 requires CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG emissions. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to

⁴⁸ California Energy Commission, “Building Efficiency Standards – Title 24,” <http://www.energy.ca.gov/title24>.

⁴⁹ California Energy Commission, “2008 Building Energy Efficiency Standards,” December 2008, <https://www2.energy.ca.gov/2008publications/CEC-400-2008-001/CEC-400-2008-001-CMF.PDF>.

⁵⁰ Assembly Bill 32, the California Global Warming Solutions Act, Passed August 31, 2006, <http://www.arb.ca.gov/cc/docs/ab32text.pdf>.

achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Local Regulations

In addition to federal and state regulations and guidelines, the City of Pleasanton General Plan includes an Energy Element⁵¹ with goals and policies relevant to energy use.

4.8.3 Discussion of Impacts

- a) ***Less than Significant Impact.*** The Project would require the use of diesel and other fuels for trucks and equipment during maintenance activities, but these activities would be short-term and completed as efficiently as possible for practical and financial reasons, among other considerations. There would be no ongoing energy consumption in the operational phase of the project in excess of the current baseline condition. Given the importance of maintaining stream corridors and detention basins for stormwater conveyance for public health and safety reasons, the minor and temporary amount of energy used for maintenance activities is not wasteful, inefficient, or unnecessary. Impacts in this regard would therefore be less than significant.
- b) ***Less than Significant Impact.*** The Project would remove sediment, rock, and vegetation both within and adjacent to stream corridors and detention basins. The degree of energy consumption due to the new storm drain system would not be changed from current baseline conditions. The proposed Project would not hinder or obstruct state or local energy efficiency plans. The City of Pleasanton adopted a Climate Action Plan in 2012, which outlines multiple policies and measures focused on energy efficiency and energy use reduction. Impacts would be less than significant.

⁵¹ City of Pleasanton, "The Pleasanton General Plan 2005-2025, 10. Energy Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23913>.

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4.9 Geology and Soils

GEOLOGY AND SOILS — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53,57
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,54,57
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	55,56
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53,54
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53

GEOLOGY AND SOILS — Would the project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51,53

4.9.1 Environmental Setting

Soils

The City of Pleasanton is located within the Amador Valley, which is part of the Coast Range Geologic province. The Coast Range province is a large area of folded and faulted rocks along the western edge of the North American continent. The Amador Valley joins the San Ramon Valley to the north and the Livermore Valley to the east. The underlying geology of Pleasanton is composed of sedimentary rock in the Pleasanton Ridge and Southeast Hills, thick deposits of sediment on the Valley floor, and areas of older landslide deposits.⁵¹

The maintenance sites proposed by this Project are composed of ten soil series: Azule, Clear Lake, Danville, Diablo, Gravel Pits, Los Osos, Pleasanton, Positas, Sunnyvale, Sycamore, Yolo, and Zamora.⁵² The Azule, Danville, Diablo, Los Osos, Pleasanton, Yolo, and Zamora series are all composed of deep or moderately-deep, well-drained soils while the Clay Lake, Gravel Pits, Sunnyvale, and Sycamore series are all composed of poorly-drained soils.

Seismicity

Pleasanton is located within the seismically active San Francisco Bay region, one of the most seismically active zones in the United States. The faults in the region are capable of generating earthquakes of at least 8.0 in magnitude on the Richter scale, producing violent ground shaking in Pleasanton. The Calaveras and Verona Faults run through the city of Pleasanton.⁵³ The Hayward Fault runs about 6 miles west of Pleasanton, and the Greenville Fault runs 10 miles east of Pleasanton.

Liquefaction and Lateral Spreading

Soil liquefaction is a phenomenon primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction soils lose strength and ground failure may occur. According to the City of Pleasanton General Plan, about 12,000 acres of Pleasanton are susceptible to liquefaction. Liquefaction can cause lateral spreading, resulting in the displacement of large blocks or soil down slopes or towards stream channels. Lateral spreading is most likely to occur during a combination of seismic activity and heavy rainfall. However, coastal locations in and around the Bay Area are considered to be at low risk for expansive soil

⁵² U.S. Department of Agriculture, Natural Resources Conservation Service, "Web Soil Survey," accessed July 2019, <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

⁵³ Association of Bay Area Governments Resilience Program, "Alquist-Priolo Earthquake Fault Zone Interactive Fault Rupture Map," accessed November 20, 2019, <http://resilience.abag.ca.gov/earthquakes/#FAULTS>.

behavior because these areas are permanently saturated.⁵⁴ In Pleasanton, lateral spreading could occur along the arroyos where surface materials are made up of alluvial and fluvial deposit such as clays, sands, and gravels.

Landslide

According to the City of Pleasanton General Plan, about 17,700 acres of the Pleasanton Planning Area are within earthquake-induced landslide areas or are mostly made up of landslide deposits. Generally, the areas in the City of Pleasanton most at risk of earthquake-induced landslides are near the Calaveras Fault and Verona Fault. The level areas of the City largely lack landslide deposits, and are therefore at low risk of future landslides.

Based on Landslide Inventory Maps from the California Geologic Survey,^{55,56} there are two active or historic landslide locations near proposed Project sites. One active landslide area is within one mile of the Gold Creek (C-13) and Dublin Canyon Creek (C-14) maintenance sites, and a second small active landslide area is one mile from Gold Creek and Stonedale Channel (C15). There are also a number of dormant landslide locations near proposed maintenance sites, rated as either mature or old. No young, dormant landslide areas are present near the proposed Project.

4.9.2 Regulatory Setting

Safety standards and building specifications relating to earthquakes, seismic-related ground failure, landslides, geology, and soils are mainly regulated via the Alquist-Priolo Earthquake Fault Zoning Act, as amended in 1994, as well as the California Building Code (CBC).

The Alquist-Priolo Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the state's California Geological Survey agency to compile and maintain up-to-date maps of surface traces of known active earthquake faults. Before a new project is permitted, cities and counties require a geologic investigation to demonstrate that proposed buildings will not be constructed on active Alquist-Priolo fault zones.

The CBC, based on the International Code Council, requires specific tests for masonry and other building elements of newly constructed buildings to ensure structures can adequately resist seismic forces during earthquakes.

4.9.3 Discussion of Impacts

- a-i) ***Less than Significant Impact.*** Some of the proposed maintenance sites are located within designated Alquist-Priolo Earthquake Fault Zones, as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1974. Most of the City of Pleasanton is considered to be a liquefaction zone. However, given that all maintenance activities associated with the

⁵⁴ City of Pleasanton, "Emergency Operations Plan," March, 2018, <http://www.cityoflivermore.net/civicax/filebank/documents/17884/>.

⁵⁵ California Geologic Survey, Perez, F.G., "Landslide Inventory Map of the Livermore Quadrangle," December, 2010.

⁵⁶ California Geologic Survey, Wieggers, M.O., "Landslide Inventory Map of Dublin Quadrangle," December, 2010.

proposed maintenance Project would be brief in duration, the risk of loss, injury, or death resulting from seismic activity is low, therefore a less than significant impact would occur.

- a-ii) **Less than Significant Impact.** The potential for seismic ground-shaking within Project Areas is mostly within the “severe” to “violent” range according to the Association of Bay Area Government’s (ABAG) Resilience Program due to the Project’s proximity to the active Calaveras, Verona, Hayward, and Greenville Faults.⁵⁷ The proposed Project would not create a need or opportunity for people to reside on-site, and thus be exposed to such ground shaking long-term. If an earthquake were to occur during the maintenance actions, it could create a risk for workers on-site, but under the obligation of the Occupational Safety and Health Act (OSHA), maintenance workers would be trained to take the necessary precautions to maintain worker safety in the event of an earthquake. Given these legal obligations, the impacts related to this topic would be less than significant.
- a-iii) **Less than Significant Impact.** About 12,000 acres within the City of Pleasanton are in liquefaction zones. According to ABAG’s Resilience Program hazards map, the Project would be susceptible to liquefaction should seismic activity or heavy rainfall occur. However, all maintenance activities associated with the project would occur during the dry season, therefore the likelihood of damage to the Project due to liquefaction is low. In addition, the Project would be subject to all Federal, State, and local regulations for seismic conditions, including the CBC. Given this, impacts would be less than significant.
- a-iv) **Less than Significant Impact.** Landslides are frequently triggered by strong ground motions. They are an important secondary earthquake hazard. The term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. About 17,000 acres of the City of Pleasanton are within areas susceptible to earthquake-induced landslides, with the hilly areas near the Calaveras and Verona Faults most at risk. None of the proposed maintenance sites are in active or historic landslide zones. Additionally, the Project is subject to all Federal, State, and local regulations and standards for seismic conditions, including the CBC, and does not involve the building of any new structures. Given the low risk of landslides in the Project site and the legal obligations associated with seismic building design, impacts associated with seismic landslides would be less than significant.
- b) **Less than Significant Impact.** Maintenance activities would involve some soil disturbance, which could temporarily expose soils to wind and water erosion. However, the Project would not cause a substantial change to erosion and accretion patterns in the long-term because the maintenance would not alter the overall existing drainage pattern of the area. Temporary maintenance impacts related to run-off from the removal of soil, sediment, and vegetation buildup in streams and detention ponds could occur, but standard measures from the required Stormwater Pollution Prevention Program (SWPPP) would be implemented to ensure impacts from runoff would remain less than significant. As such, impacts on soil would be less than significant.
- c,d) **Less than Significant Impact.** As discussed above, the proposed Project is not located in areas of active or historic landslides and is not anticipated to be susceptible to landslides. The Project is, however, located in areas at risk of liquefaction and lateral

⁵⁷ Association of Bay Area Governments Resilience Program, “Alameda County Hazard Map,” accessed November 20, 2019, <http://resilience.abag.ca.gov/earthquakes/alameda/>.

spreading. The soil types in the Project Area are similar to those throughout the rest of Pleasanton and have not been identified as presenting special risk of lateral spreading or collapse. Further, the Project does not propose construction of new structures that would create risk to life or property. The Project would improve the stability and capacity of the stormwater conveyance by providing routine maintenance to stream corridors and detention ponds. Furthermore, as mentioned above, the project is subject to all Federal, State, and local regulations, and standards for seismic conditions. Impacts would be less than significant.

- e) ***Less than Significant Impact.*** The proposed Project would provide maintenance to Pleasanton's existing stormwater drainage system. The soils in the maintenance areas already support stormwater conveyance, and the Project would not change the baseline condition of these soils. Therefore, impacts would be less than significant.
- f) ***Less than Significant Impact.*** The Project Area follows existing utility rights-of-way on previously disturbed land. Excavation of soil would be required, but much of the soil is cut and fill-Urban land complex and is therefore non-native and unlikely to contain any paleontological resources. The ground disturbance associated with the Project would not change the topography or geologic substructures of the vicinity, except to improve existing stream-flow, and would therefore not change any unique geologic features. Impacts would be less than significant.

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4.10 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	59

4.10.1 Environmental Setting

Greenhouse gases (GHGs) are heat-trapping gases that, when emitted to the earth's atmosphere, contribute to an abnormally fast rate of planetary warming. The consequences of these warming patterns include rising sea levels and increased frequency and intensity of natural disasters, among other issues. The major GHGs released by human activity are carbon dioxide (CO₂), methane, and nitrous oxide. Although less potent than other GHGs such as methane, CO₂ is the most common and therefore the greatest contributor to man-made global warming. Accordingly, GHGs are expressed in terms of CO₂ equivalents (CO_{2e}) based on their global warming potential.

4.10.2 Regulatory Setting

Assembly Bill 32, adopted in 2006, established the Global Warming Solutions Act of 2006,⁵⁸ which requires the State to reduce GHG emissions to 1990 levels by 2020. Senate Bill 97, adopted in 2007, required the Governor's Office of Planning and Research to develop CEQA guidelines for the mitigation of greenhouse gas emissions, and the Resources Agency certified and adopted the amendments to the guidelines on December 30, 2009. According to CEQA Guidelines Section 15064.4, the lead agency may quantitatively or qualitatively assess the proposed Project's impact on GHGs. The Lead Agency should consider the proposed Project's reasonably foreseeable incremental contribution to the effects of climate change using evolving scientific knowledge, state regulatory schemes, and an appropriate timeframe for the proposed Project.

The Bay Area Air Quality Management District

The City of Pleasanton adopted its Climate Action Plan in 2012.⁵⁹ The Climate Action Plan is the City's primary guidance document on attaining AB 32 standards. It outlines goals, strategies, and

⁵⁸ California Air Resources Board, "Assembly Bill 32 Overview," accessed November 21, 2019, <https://ww3.arb.ca.gov/cc/ab32/ab32.htm>.

⁵⁹ City of Pleasanton, "Climate Action Plan," 2012, <http://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=24757>.

next steps to attain the City's GHG reduction goals as well as providing background information pertinent to these efforts. According to the Climate Action Plan, Pleasanton's annual emissions totaled 770,844 metric tons CO_{2e} in 2005. In accordance with AB 32, the City is required to reduce annual emissions to 655,000 metric tons CO_{2e} by 2020. Strategies to achieve this reduction include changes to transportation and land use, energy consumption and generation, water use and wastewater treatment, and solid waste disposal.⁶⁰

4.10.3 Discussion of Impacts

- a) **Less-than-Significant Impact.** The proposed Project would not directly or indirectly generate substantial amounts of GHG emissions in the long-term. The proposed Project would involve removal of sediment and vegetation in detention basins, in culverts, along streams, and lined ditches. Emissions associated with these activities would be limited to the short term and would occur during maintenance activities.

In the short-term, the proposed Project would require the use of gasoline- and/or diesel-powered equipment including an excavator, dump truck, Bobcat, and tractor with a mower for several hours to several days for each maintenance action. Excess sediment and vegetation would be transported up to 3.5 miles from the stream maintenance and detention basin sites with trucks powered by gasoline or diesel. Given these short distances and the short duration of maintenance actions, the proposed Project would not generate substantial amounts of GHG emissions.

In summary, the proposed Project would not directly or indirectly emit any GHGs in the long-term. During maintenance activities, equipment use and material hauling would generate GHGs, but the small scope and limited duration of maintenance activities make it such that any such GHGs would not be considered significant. Accordingly, the proposed Project would not directly or indirectly generate GHGs which may have a significant impact on the environment; and a less-than-significant impact would occur.

- b) **Less than Significant Impact.** The proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The Bay Area Air Quality Management District (BAAQMD) does not have a formal threshold for measuring compliance with their Clean Air Plan's goal of reducing GHG emissions. BAAQMD does, however, recommend lead agencies evaluate their project's GHG emissions in the context of state-wide AB 32 goals. This assessment is consistent with the City of Pleasanton's Climate Action Plan, which outlines goals and recommendations for the City to achieve its requisite AB 32 GHG reductions.

Given the proposed Project's relatively minimal contribution to the region's GHGs (as discussed in response to Impact (a) above) and that the proposed Project would not be growth-inducing, the proposed Project would not impede the attainment of AB 32 goals. As such, the proposed Project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

⁶⁰ City of Pleasanton, "Climate Action Plan," 2012, <http://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=24757>.

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4.11 Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	63,64
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	63
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	63
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	61,62,64
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed Project result in a safety hazard or excessive noise for people residing or working in the proposed Project Site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	65
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67,68
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63

4.11.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22, Section 66261.10 of the California Code of Regulations as a substance with physical, chemical, or infectious characteristics which may cause or contribute to mortality or illness or pose a threat to human health or the environment when mismanaged. Chemical and physical properties which may cause a substance to be considered hazardous include toxicity, ignitability, corrosivity, and reactivity.

Under Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) maintains a list of hazardous substance sites. This list, referred to as the “Cortese List,” includes CALSITE hazardous material sites, sites with leaking underground storage tanks, and landfills with evidence of groundwater contamination. The State Water Resource Control Board (State Water Board) *GeoTracker* database similarly documents hazardous waste sites throughout the state but focuses on groundwater contamination. Both databases indicate that some maintenance areas are within a mile of hazardous material sites, some of which are currently active.^{61,62}

According to *GeoTracker*, there is one active remediation site about one mile away from two proposed stream maintenance sites. All other *GeoTracker* cleanup sites within one mile of proposed maintenance sites are either in the site assessment phase, eligible for closure, or are in the assessment and interim remedial action phase.

According to the Cortese List there are no Federal superfund sites within five miles of the proposed Project. There are three voluntary cleanup sites proximate to proposed maintenance sites. The first cleanup site (EnviroStor ID 01280050) was certified as complete on December 12, 2003 by DTSC. The second voluntary cleanup site (EnviroStor ID 60000786) is inactive and awaiting evaluation as of September 3, 2008. Soils at this site were last sampled in 2007 and did not indicate the presence of volatile organic chemicals (VOCs). However, organochlorine pesticides were detected in one sample at a level above the residential Environmental Screen Levels and California Human Health Screening Levels. This cleanup site is within 0.3 miles of proposed maintenance site C-03. The third voluntary cleanup site (EnviroStor ID 60000883) was referred to Alameda County by DTSC on November 17, 2010. There is also an active cleanup site approximately 1.4 miles from proposed site P-01. This cleanup project (EnviroStor ID 01970012) has a number of contaminants of concern including DDT, dioxin, and metals. A former incinerator (EnviroStor ID 70000157) resides approximately 1.2 miles from one of the maintenance sites proposed by the Project, but was deemed to not pose a threat to human health or the environment under a residential land use scenario in December of 2005.

4.11.2 Discussion of Impacts

a-c) **Less than Significant.** In the long-term, the stream and stormwater detention pond maintenance would require infrequent use, transport, or disposal of hazardous materials

⁶¹ Department of Toxic Substances Control, “EnviroStor Database,” Accessed November 26, 2019. <https://www.envirostor.dtsc.ca.gov/public/map/>.

⁶² State Water Resources Control Board, “GeoTracker,” Accessed November 26, 2019. <https://geotracker.waterboards.ca.gov/datadownload>.

to operate gas-driven equipment. As such, there would be minimal long-term risks associated with the use, transportation, or disposal of hazardous materials, and long-term risks of accident and upset conditions releasing hazardous materials into the environment would be minimal given the infrequency of maintenance activities, and the quantities of fuels and lubricants used.

Maintenance activities would require use of motorized equipment, creating the need for routine use of small quantities of hazardous materials, such as fuels and lubricants, during the six-month maintenance activities period. For some of the proposed Project maintenance areas, the use of motorized equipment would take place within a residential community, or within 0.5 miles of a school.

Maintenance activities would take place during the dry season and equipment would be staged off-site, minimizing the risk of hazardous material spills adversely affecting the downstream environment. Nonetheless, use of hazardous materials in close proximity to aquatic resources and a residential community would create a small risk of releasing hazardous materials into the environment. In Alameda County, contractors are required to implement California Stormwater Quality Association (CASQA) construction Best Management Practices (BMPs).⁶³ Specifically, the CASQA Materials and Waste Management BMPs dictate how and when equipment should be stored, how best to fuel vehicles to prevent spills, and how spills should be handled.⁶⁴ With adherence to these CASQA BMPs, the proposed Project would not create significant hazards through routine transport, use, or disposal of hazardous materials, nor would it create a significant hazard to the public through reasonably foreseeable accident and upset conditions involving hazardous materials. Accordingly, impacts would be less than significant.

- d) **Less than Significant.** According to the California DTSC *EnviroStor* and State Water Board *GeoTracker* databases, none of the Project's proposed maintenance sites are included on the list of hazardous material sites compiled pursuant to Government Code Section 65962.5. A number of sites are within one mile of hazardous waste sites, including an active remediation site, three voluntary cleanup sites, and a former incinerator. However, the implementation of CASQA BMPs would reduce the potential risks posed by nearby hazardous waste sites through the established spill preparedness protocols and vehicle maintenance requirements. Given that none of the proposed maintenance sites are located on listed hazardous materials sites, and that the risk of release of hazardous materials during Project activities would be minimal with the implementation of CASQA BMPs, impacts would be less than significant.
- e) **No Impact.** Two maintenance sites proposed by the project, P-01 and C-01, are within the area of influence of Livermore Municipal Airport.⁶⁵ The proposed Project would not introduce any tall structures, sources of light, or habitat which may attract more birds to

⁶³ Alameda County Clean Water Program, "Construction," Accessed January 7, 2020, <https://www.cleanwaterprogram.org/businesses/construction.html>.

⁶⁴ California Stormwater Quality Association, "Best Management Practices for Waste Management and Materials Pollution Control," November 2009, <https://www.cleanwaterprogram.org/images/uploads/C6%20CASQA%20BMPs%20Waste%20and%20Materials%20Management.pdf>.

⁶⁵ Environmental Science Associates, "Livermore Municipal Airport, Airport Land Use Compatibility Plan." August 2012, https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf.

any of the proposed sites. As such, the proposed Project would not create a hazard to flight. Furthermore, the Livermore Municipal Airport's Land Use Compatibility Plan⁶⁶ provides noise contours for the airport up to Community Noise Level Equivalent Level (CNEL) of 65, calculated using the average sound level over a 24-hour period with 5 dB and 10 dB penalties added to sound generated from 7am to 10pm and 10pm to 7am, respectively. Proposed maintenance site P-01 is on the edge of the extent of the airport's 55 CNEL noise contour, and no other sites are within the airport's noise contours, indicating minimal background noise from airport-related activity. As the proposed Project would not create hazards or excessive noise for people living in the vicinity of an airport, no impact would occur.

- f) ***Less than Significant with Mitigation Incorporated.*** The City of Pleasanton is characterized by its residential, small-town feeling and by its surrounding rural lands. The City's streets were therefore designed to accommodate minimal through-traffic. Most streets in the vicinity of the Project Area are classified as local roadways and permit on-street parking. Maintenance equipment would be staged off-site using on-street parking when not in use, minimizing the risk of obstructing emergency response during evenings and weekends, when maintenance activities would not occur. During maintenance work hours, however, given the narrow design of adjacent roadways it is possible that on-site maintenance equipment could obstruct emergency response outlined in the Pleasanton Emergency Operations Plan⁶⁷ in the event of an evacuation or should emergency vehicles require passage.

Mitigation Measure HAZ-1 requires notification of police and fire departments 72-hours prior to the start of maintenance activities and compliance with the City of Pleasanton's recommended traffic BMPs during maintenance activities, minimizing the risk of obstructing emergency access. Following maintenance activities, the proposed Project would not interfere with an emergency response plan, as Project modifications would generally be confined to detention ponds and stream corridors which do not contain any emergency response infrastructure. The proposed Project would therefore not lead to physical modification or obstruction of emergency response infrastructure such as communication systems or roadways.⁶⁸ As such, the proposed Project would not impair implementation of or physically interfere with implementation of an emergency response or evacuation plan, and impacts would be less than significant with mitigation incorporated.

Mitigation Measure HAZ-1:

The contractor shall implement the following actions throughout the duration of maintenance activities to maintain adequate emergency access to the site and through the adjacent neighborhood:

⁶⁶ *Ibid.*

⁶⁷ City of Pleasanton, "Emergency Operations Plan," March, 2018, <http://www.cityoflivermore.net/civicax/filebank/documents/17884/>.

⁶⁸ City of Pleasanton, "Pleasanton General Plan 2005-2025, 5. Public Safety Element, February 5, 2013, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23899>.

- Traffic controls, flag persons, signage, and safety site controls shall be used at all times when work is being done in the City's right-of-way or equipment is obstructing the right-of-way;
- The contractor shall obtain all clearances and permits required by the City for work within its right-of-way prior to the start of maintenance activities;
- The contractor shall comply with truck routes specified in the grading application, if any;
- The City or a representative of the City shall prepare a parking plan. The contractor shall comply with the parking plan and shall not damage adjoining or nearby parking strips;
- If any other construction Projects are being implemented in the vicinity of the Project Area, the contractor shall coordinate all parking, maintenance activity processes, and deliveries with other nearby construction sites;
- The contractor shall notify the Pleasanton Police Department and the Livermore-Pleasanton Fire Department of maintenance activities at minimum 72 hours prior to its start.

- g) ***Less than Significant with Mitigation Incorporated.*** Many proposed Project maintenance sites would be accessed by relatively narrow, local roadways. The proposed Project would not increase fire risk in the long-term, as no new structures or fuel sources would be introduced to the Project Area and the proposed Project would not draw new people who would be exposed to fire risk to the area.

In the short-term, the presence of motorized equipment at proposed detention pond and stream corridor maintenance sites during the dry season may lead to a small, temporary increase in fire risk. Mitigation measure HAZ-2 requires the contractor to remove potential fuel sources, such as dried vegetation, and requires service trucks to be equipped with fire extinguishers, among other fire risk reducing measures. With implementation of Mitigation Measure HAZ-2, the proposed Project would not exacerbate wildfire risks, and would not expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would accordingly be less than significant with mitigation incorporated.

Mitigation Measure HAZ-2:

During maintenance activities, the maintenance contractor shall implement the following best management practices to prevent fire hazards:

- Staging areas, welding areas, or areas slated for development using spark producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak.
- Vehicle engines shall be shut down during refueling.
- No smoking, open flames, or welding shall be allowed in refueling or service areas.

- Service trucks shall be equipped with fire extinguishers.
- Any maintenance equipment that normally includes a spark arrester shall be equipped with an arrester in good working order.

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4.12 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	78
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	73
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i) Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69,71

4.12.1 Environmental Setting

Hydrology

Two of the areas where maintenance would be conducted are located within 100-year flood zones: Pleasanton Canal (C-02) and Stoneridge Detention Pond (P-01).⁶⁹ There are an additional five proposed maintenance sites located within 500-year flood zones. Most maintenance sites are also located within a dam inundation zone due to the City's proximity to the Del Valle Reservoir.⁷⁰ No parts of the proposed Project are within tsunami inundation zones.⁷¹

The proposed Project is located within the Alameda Creek Watershed, which has a surface area of approximately 432,000 acres (675 square miles).⁷² In addition to Alameda Creek, the watershed includes the Arroyo de la Laguna, Arroyo del Valle, Arroyo Mocho, Chain of Lakes, Shadow Cliffs Lake, Del Valle Reservoir, and San Antonio Reservoir.⁷³ Groundwater recharge primarily comes from the Arroyo de la Laguna, Arroyo del Calle, Arroyo Mocho, and part of the Chain of Lakes.

Water Quality

Groundwater quality within the City of Pleasanton water supply is satisfactory according to both the Zone 7 Water Agency and the City of Pleasanton water quality monitoring programs.^{74,75} Neither agency has detected significant levels of volatile organic compounds or contaminants within the City's water supply. The Regional Water Quality Control Board has characterized the Arroyo de la Lagunas, Arroyo las Positas, Arroyo del Calle, Arroyo Mocho, and Alameda Creek as impaired by diazinon, a pesticide used on a variety of agricultural crops.⁷⁶ Use of the pesticide for non-agricultural functions was banned in 2004, and is now strictly regulated by the EPA.⁷⁷ As a result, diazinon levels in the creeks have diminished in recent years.

⁶⁹ City of Pleasanton, "City of Pleasanton General Plan 2005-2025, 5. Public Safety Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23899>.

⁷⁰ *Ibid.*

⁷¹ California Governor's Office of Emergency Services, "MyHazards," accessed January 5, 2020, <http://myhazards.caloes.ca.gov/>.

⁷² City of Pleasanton, "City of Pleasanton General Plan 2005-2025, 8. Water Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23911>.

⁷³ Oakland Museum of California, "Creek and Watershed Map of the Pleasanton & Dublin Area," accessed January 5, 2020, http://explore.museumca.org/creeks/WholeMaps/4_Pleasanton%20Creek%20Map.pdf.

⁷⁴ Zone 7 Water Agency, "Reports & Planning Documents," accessed January 5, 2020, <http://www.zone7water.com/library/reports-planning-documents>.

⁷⁵ City of Pleasanton, "Water Quality," accessed January 5, 2020, http://www.cityofpleasantonca.gov/gov/depts/os/water_quality.asp.

⁷⁶ United States Environmental Protection Agency and San Francisco Bay Water Board, "Bay Area Urban Creeks – Diazinon and Pesticide-Related Toxicity," June 15, 2015.

⁷⁷ United States Environmental Protection Agency, "Cancellation of Certain Agricultural Uses of Diazinon," January, 2007, accessed January 5, 2020, https://archive.epa.gov/pesticides/reregistration/web/html/diazinon_cancellation_fs.html.

Pleasanton is part of the Alameda Countywide Water Pollution Prevention Program (Countywide Program).⁷⁸ The Countywide Program is a collaboration between 17 member-agencies, which include the County of Alameda and various cities in the County, as well as the Alameda County Water District. The Countywide Program holds a Municipal Regional Permit (MRP) that covers countywide stormwater discharges pursuant to the National Pollutant Discharge Elimination System (NPDES) program under the Clean Water Act (CWA). The MRP is part NPDES permit CAS612008, ORDER No. R2-2015-0049, and is administered by the San Francisco Regional Water Quality Control Board (SF Water Board). MRP implementation programs include pesticide, mercury, polychlorinated biphenyl, and copper controls; construction site control; water quality monitoring; and others. Construction site control measures include erosion control, run-on and run-off control, sediment control, active treatment systems, and non-stormwater management⁷⁹.

The City of Pleasanton's Public Works Division oversees NPDES compliance for public and private projects. The City's Storm Water Management and Discharge Control Ordinance requires applicants follow current California Stormwater Quality Association (CASQA) construction Best Management Practices (BMPs) to prevent debris and dirt from flowing into the City's storm sewer system.⁸⁰

4.12.2 Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** The proposed Project would not have any long-term impacts on water quality. The removal of sediment, rock, and vegetation in and adjacent to stream corridors and detention basins would temporarily affect water quality, however, impact would be minor given the small scale of the proposed Project and the short timescales of each proposed maintenance activity.

Other water quality impacts that could result from the proposed maintenance include potential erosion or spills. Maintenance activities would occur in the dry season, when the flows of streams and detention basins is at a minimum. Implementation of best management practices would further reduce the possibility of adverse effects on water quality. Thus, with the implementation of HYDRO-1, impacts would be less than significant with mitigation incorporated.

Mitigation Measure HYDRO-1:

The Contractor shall implement earthmoving best management practices as recommended by the Alameda County Clean Water Program to prevent erosion and siltation during maintenance activities. Compliance shall be verified by the City of Pleasanton through, at minimum, one site inspection during maintenance activities. These measures include, but are not necessarily limited to:

⁷⁸ Clean Water Program, "About the Clean Water Program," accessed January 5, 2020, <https://www.cleanwaterprogram.org/about-us.html>

⁷⁹ California Regional Water Quality Control Board - San Francisco Bay Region, "Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit CAS612008," November 19, 2015, https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2-2015-0049.pdf.

⁸⁰ City of Pleasanton, "Pleasanton Municipal Code, Chapter 9.14 Stormwater Management and Discharge Control," accessed January 5, 2020, <https://qcode.us/codes/pleasanton/>.

- Grading and excavation work shall occur during dry weather;
- All denuded areas shall be stabilized through installation of temporary erosion controls such as erosion control fabric or bonded fiber matrix. These controls shall be maintained until vegetation is established;
- Sediment shall be prevented from migrating off-site and storm drain inlets shall be protected by installing and maintenance appropriate BMPs such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- Excavated soil shall be stored and transferred on-site to the extent feasible;
- Stockpiled landscaping materials shall be protected from wind and rain through storage under tarps; and
- Any erodible landscape material shall not be applied within two days prior to a forecasted rain event.

- b) **No Impact.** The proposed Project would perform necessary routine maintenance activities on stream corridors and stormwater detention ponds. The proposed Project would not require introduction of new impervious surfaces in areas previously penetrable for groundwater recharge purposes. Furthermore, the proposed Project would not require any use of groundwater.

There may be a small, temporary increase in on-site water use during maintenance activities. This water would be provided by the Zone 7 Water Agency's existing water supply, which is sourced predominantly from the South Bay Aqueduct. The proposed Project would not likely require dewatering in the creek bed, as maintenance activities are scheduled to occur during the dry season. It is unlikely that any groundwater would be encountered during maintenance activities, as maintenance activity would occur in the footprint of existing stream corridors and detention ponds. Given the small size of the proposed Project, as well as the short duration of maintenance activity, the proposed Project would not interfere with groundwater recharge or management, and no impact would occur.

- c-i) **Less than Significant with Mitigation Incorporated.** The proposed Project would conduct routine maintenance on detention ponds and stream corridors within the footprint of the City of Pleasanton's existing system. No new installation of impervious surfaces would occur.

Although the proposed Project would be beneficial in the long-term, excavation, grading, and vegetation removal could temporarily increase the rate of erosion during the as-needed maintenance period. The risk of causing additional erosion is relatively low given that maintenance activities would be carried out in the dry season, when rainfall is unlikely to occur and cause siltation, and each site would experience maintenance activity for only a brief amount of time. Nonetheless, construction best management practices as required by Mitigation Measure HYDRO-1 would further reduce the possibility of erosion and siltation within and downstream from maintenance sites. Thus, the proposed Project would not alter drainage patterns in a way which would result in substantial erosion or siltation on- or off-site, and impacts would be less than significant with mitigation incorporated.

Mitigation Measure HYDRO-1:

Please see above.

- c-ii) ***No Impact.*** The proposed Project would not create new sources of surface runoff or introduce impervious surfaces which would alter the rate of surface runoff. Stream and detention pond maintenance would generally be confined to the footprint of the existing system, and no new impervious surface would be needed. The routine maintenance would enhance the water conveyance system's ability to continue to convey flood flows adequately. As such, adjacent properties would not experience increased flood risk. As the proposed Project would improve flood conveyance by maintaining existing storm water infrastructure, the proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding, therefore no impact would occur.
- c-iii) ***No Impact.*** The proposed Project would improve stormwater conveyance in the proposed Project vicinity by providing routine maintenance to stream corridors and detention ponds throughout the City of Pleasanton, helping the system continue to function properly. The proposed Project would not create any new sources of runoff water or polluted runoff, as it would not expand the system's footprint, replace pervious surfaces with impervious materials, nor create new sources of pollution. Thus, no impact would occur.
- d) ***Less than Significant with Mitigation Incorporated.*** The proposed Project includes two maintenance sites located within a 100-year floodplain, and many sites within the Del Valle Reservoir dam inundation zone. None of the proposed sites are within a tsunami inundation zone. Maintenance activities would occur during the dry season when risk of flooding and dam inundation are at a minimum. Given this, and with the implementation of mitigation measure HYDRO-1, risk of release of pollutants due to flood hazards would be less than significant with mitigation incorporated.

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4.13 Land Use and Planning

LAND USE AND PLANNING – Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	81,82

4.13.1 Environmental Setting

The Project Area is located in the City of Pleasanton in Alameda County, California. The locations of the proposed maintenance sites are shown in Figure 1. The locations of the stream maintenance areas also have residential and open space land use designations per the City's General Plan⁸¹, as shown in figure. The residential land use designations range from rural to medium density and allow for the development of single-family homes and other compatible uses identified in the City's Zoning Ordinance.⁸² Accordingly, many of the sites where stream maintenance would be conducted are residential, with single-family homes adjacent.

There are no Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) applicable to the Project. The following provisions of the City's General Plan and Zoning Ordinance are designed to avoid or mitigate environmental impacts and are relevant to the Project:

City of Pleasanton General Plan Goals, Policies, and Programs

LAND USE ELEMENT

Goal 2: Achieve and maintain a complete well-rounded community of desirable neighborhoods, a strong employment base, and a variety of community facilities.

Policy 4: Allow development consistent with the General Plan land Use Map.

Program 4.1: Ensure consistency between the General Plan Land Use Map and the zoning designation for all properties within the City's sphere of influence.

Policy 8: Preserve and enhance the character of existing residential neighborhoods.

⁸¹ City of Pleasanton, "Pleasanton General Plan Land Use Map 2005-2025," January 4, 2012, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23897>.

⁸² City of Pleasanton, "Pleasanton Municipal Code, Title 18 Zoning," accessed January 6, 2020.

Program 8.1: Enforce the provisions of the City's Zoning Ordinance and related planning ordinances to maintain the character of existing residential neighborhoods.

Policy 10: Provide flexibility in residential development standards and housing type consistent with the desired community character.

Program 10.1: Use planned unit development (PUD) zoning for residential properties that have unique characteristics or to accommodate development that does not fit under standard zoning classifications.

Policy 19: Preserve designated open space areas for the protection of public health and safety, the provision of recreational opportunities, agriculture and grazing, the production of natural resources, the preservation of wildlands, water management and recreation, and the physical separation of Pleasanton from neighboring communities.

Program 19.1: Preserve open space by way of fee purchase, developer dedications, conservation and scenic easements, transfer of development rights, Williamson Act contracts, open-space zoning categories, and other means which may become available.

Policy 21: Preserve scenic hillside and ridge views of the Pleasanton, Main, and Southeast Hills ridges (Measure QQ, Nov. 2008).

Program 21.1: Continue to implement the land-use and development standards of the Pleasanton Ridglands Initiative of 1993 (Measure F).

WATER ELEMENT

Goal 1: Preserve and protect water resources and supply for long-term sustainability.

Policy 1: To ensure sustainability, promote the conservation of water resources.

Program 1.4: Work with Zone 7 Water Agency to investigate innovative and more efficient ways to recharge aquifers and other groundwater resources.

Goal 2: Provide healthy water courses, riparian functions, and wetlands for humans, wildlife, and plants.

Policy 2: Preserve and enhance streambeds and channels in a natural state.

Program 2.1: Develop and implement ordinances and policies that provide for the preservation and restoration of riparian functions, and establish mitigation requirements for modifications to riparian corridors.

Program 2.2: Develop policies and standards in cooperation with Zone 7 that include restoring riparian corridors when flood- and erosion-control activities require channelization.

Program 2.4: Design projects adjacent to the arroyos to protect habitat areas.

Program 2.5: Work with Zone 7 Water Agency Management Master Plan to restore arroyos consistent with its Stream Management Master Plan.

Goal 3 Ensure a high level of water quality and quantity at a reasonable cost, and improve water quality through production and conservation practices which do not negatively impact the environment.

Policy 3: Protect the quality and quantity of surface water and groundwater resources in the Planning Area.

Program 3.11: Support Zone 7 in implementing its Stream Management Master Plan so as to protect and enhance the water quality of streams and groundwater.

Goal 6: Minimize stormwater runoff and provide adequate stormwater facilities to protect property from flooding.

Policy 8: Ensure an adequate storm drainage system to serve existing and future development.

Program 8.2: Design local storm drainage improvements to carry appropriate design-year flows resulting from buildout of the General Plan.

Policy 11: Implement stormwater runoff requirements, as required by the State Regional Water Quality Control Board and the Alameda County-wide Clean Water Program, with as little impact on development and business costs as possible.

Program 11.7: Review the City's erosion and sedimentation prevention program to ensure that erosion prevention controls and enforcement are being implemented. Create an ordinance, if necessary, to accomplish these requirements.

OPEN SPACE ELEMENT

Goal 2: Preserve and enhance the natural resources of the Planning Area, including plant and wildlife habitats, heritage trees, scenic resources, and watercourses.

Policy 1: Preserve and enhance natural wildlife habitats and wildlife corridors

Program 1.4: Develop and implement ordinances and policies that provide for the preservation of wildlife corridors and riparian vegetation, and establish mitigation requirements which minimize the barriers across wildlife corridors that roadways and developments can create.

Goal 4: Designate, preserve, and protect the archaeological and historic resources within the Pleasanton Planning Area.

Policy 5: Preserve and rehabilitate those cultural and historic resources which are significant to Pleasanton because of their age, appearance, or history.

Program 5.2: Follow the recommendations contained within archaeological and historical architecture studies regarding rehabilitation or preservation of archaeologically or historically significant structures and sites.

Program 5.3: Continue to include a standard condition of project approval to require the cessation of all construction and grading activities within the vicinity of any discovered prehistoric or historic artifacts, or other indications of cultural resources, until any such find

is evaluated by a qualified professional archaeologist, and appropriate mitigation is approved by the City.

4.13.2 Discussion of Impacts

- a) *No Impact.*** The proposed Project maintenance sites are in areas designated as residential and open space in the City of Pleasanton. Although the proposed Project would occur in existing residential communities, it would not create any new barriers to movement within the City. Through various maintenance activities, existing stream corridors and detention basins would be maintained or restored. No new structures would be erected and no road closures would be required. As the proposed Project would not introduce any barriers to movement within adjacent residential communities, the proposed Project would not divide an existing community, and no impact would occur.
- b) *Less than significant Impact.*** When assessing a Project's impacts related to consistency with land use policies and plans, general consistency with the intent and spirit of such plans should be considered. Inconsistency with a single policy does not itself present a significant impact if the proposed Project would be generally consistent with applicable land use policies and regulations. The proposed Project is consistent with the Pleasanton General Plan, and supports Plan policies of maintaining stormwater infrastructure. As there are no major conflicts with the City's General Plan and the proposed Project would support some of the Plan's objectives and policies adopted for the purposes of avoiding an environmental impact, a less than significant impact would occur.

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4.14 Mineral Resources

MINERAL RESOURCES — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	83,84
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	83,84

4.14.1 Environmental Setting

The proposed maintenance sites are largely within residential or built-out areas in the City of Pleasanton. There are no known mineral resources on or near the Project as documented in the California Department of Conservation's Mines Online database⁸³, nor are any of the proposed maintenance sites located within any resource recovery sites listed in or protected by the City of Pleasanton General Plan.⁸⁴ The closest proposed maintenance sites to the City's Aggregate Resource Area of Regional Significance are sites P-07 and P-08, Vineyard West and Vineyard East Detention Ponds, respectively, each located adjacent to the Resource Area Boundary and to the southwest of Shadow Cliffs.

4.14.2 Discussion of Impacts

- a, b) **No Impact.** There are no known mineral resource recovery sites within or near the Project Area, as documented by the State of California and the City of Pleasanton. As there are no important mineral resources in the Project Area, the proposed Project would not result in a loss of an available mineral resource recovery site of local or statewide importance, and no impact would occur.

⁸³ California Department of Conservation, "Mines Online," 2016, <https://maps.conservation.ca.gov/mol/index.html>.

⁸⁴ City of Pleasanton, "Pleasanton General Plan 2005-2025, 7. Conservation and Open Space Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23910>.

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4.15 Noise

NOISE — Would the proposed Project result in:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	86,87, 88
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	88
c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the proposed Project expose people residing or working in the proposed Project Site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	89,90, 91,92

4.15.1 Environmental Setting

Basics of Noise

Sound is described in terms of loudness and pitch. The standard unit for measuring loudness is the decibel (dB), which is quantified on a logarithmic scale. The human ear is not equally sensitive to a given sound level at all pitches. A special pitch-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady background noise from many distant and indistinguishable noise sources. Superimposed on this background noise is sound from individual local sources, which may be intermittent or continuous. Several rating scales have been developed to analyze the adverse effect of noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is dependent on the energy of noise itself as well as time of day. Noise scales that are applicable to this analysis are as follows:

- L_{eq} – $A_n L_{eq}$, or equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. The L_{eq} of a time-varying noise and that of a steady noise

are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- CNEL – The Community Noise Equivalent Level is a 24-hour average L_{eq} with a 5 dBA “weighting” during the hours of 7:00 P.M. to 10:00 P.M. and a 10 dBA “weighting” added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.7 dBA CNEL.

For residential uses, environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA.⁸⁵ Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

It is widely accepted that in the community noise environment the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors, such as the weather and reflecting or barriers, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically “hard” locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically “soft” locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The normal noise attenuation within residential structures with open windows is about 17 dBA, while the noise attenuation with closed windows is about 25 dBA.⁸⁶

⁸⁵ Office of Planning and Research, *State of California General Plan Guidelines, October 2003 (in coordination with the California Department of Health Services)*.

⁸⁶ *National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers, 1971.*

Noise Environment

Pleasanton exhibits moderate levels of noise, most of which is related to vehicular traffic. According to the City's General Plan, primary sources of noise include vehicular traffic on major roadways (Interstates 580 and 680) and vehicle-generated noise along Stanley Boulevard, First Street, Stoneridge Drive, Hopyard Road, Santa Rita Road, West Las Positas Boulevard, Foothill Road, Vineyard Avenue, and Valley Avenue. Based on noise measurements taken in 2007, noise levels in the City ranged from 53 to 70 dBA, and averages were slightly greater than 65 dBA. The City's noise ordinance limits construction noise to 86 dBA for any location outside a Project Area's plane.⁸⁷

4.15.2 Discussion of Impacts

- a) **Less than Significant.** In the long term, the proposed Project would not generate any noise. Storm drain and detention pond maintenance would improve stormwater conveyance and would not introduce any new noise-generating land uses. During maintenance activities, the proposed Project would require the use of motorized equipment such as an excavator, dump truck, backhoe, and tracked Bobcat. Use of this equipment would occur on weekdays between 8 a.m. and 5 p.m. in accordance with City Ordinance²⁸ and to minimize impacts to local residents. The City of Pleasanton Noise Regulations²⁹ allow up to 83 dBA of noise from each individual piece of maintenance equipment, measured from 25 feet away from the source, and up to 86 dBA of noise for any location outside the Project Area plane. According to the Federal Highway Administration, dump trucks, excavators, and backhoes each generate a maximum noise level of approximately 85 dBA as measured 50 feet away.⁸⁸ Individual pieces of maintenance equipment and the use of multiple pieces of equipment simultaneously could temporarily generate noise in excess of the Noise Ordinance standard of 83 dBA. To minimize maintenance-related noise, the proposed Project would comply with California Vehicle Code Section 21750, which requires use of proper muffling equipment. Additionally, maintenance activities would not start until 8A.M. and end by 8 P.M., per the City's Noise Ordinance. With implementation of these requirements, the proposed Project would not result in a substantial temporary or permanent increase in ambient noise in excess of established standards, and impacts would be less than significant.

Maintenance Noise BMPs

- a) The Contractor shall implement the following noise Best Management Practices throughout the duration of maintenance activities:
- Maintenance activity hours shall be clearly posted on a sign at the entrance to the maintenance site;
 - Residences adjacent to the maintenance site shall be notified of construction in writing 72 hours prior to the start of maintenance activities;

⁸⁷ City of Pleasanton, "Pleasanton Municipal Code, Chapter 9.04.100 – Construction," accessed July 23, 2019, <http://www.nonoise.org/lawlib/cities/ordinances/Pleasanton,%20California.pdf>.

⁸⁸ Federal Highway Administration, "Construction Equipment Noise Levels and Ranges," in *Construction Noise Handbook*, 2017, https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook09.cfm.

- All equipment used on-site shall be muffled and maintained in good working condition. All internal combustion engine-drive equipment shall be fitted with mufflers in good condition;
 - Unnecessary idling of internal combustion engines shall be prohibited and all equipment shall be turned off when not in use.
- b) ***Less than Significant Impact.*** The proposed storm drain and detention pond maintenance would not produce any ground-borne noise or vibration in the long-term. Maintenance activities would be limited to weekday, daytime hours, resulting in minimal disturbance to nearby residents. As the proposed Project would not generate ground-borne noise or vibration in the long-term and would do so in limited quantities in the short-term, a less than significant impact would occur.
- c) ***Less than Significant Impact.*** The nearest airports to the Project are Livermore Municipal Airport and Hayward Executive Airport. Livermore Municipal Airport has two runways and operates as a Division of the City of Livermore's Public Works Department. The airport and is considered a general aviation reliever airport, meaning the airport can be used to relieve congestion at Commercial Service airports.⁸⁹ Livermore Municipal Airport's nearest runway is approximately 1.3 miles southeast of the nearest proposed maintenance site, P-01, and approximately 2.0 miles from sites P-07 and P-08. Proposed maintenance sites P-01 and C-01 are within Livermore Municipal Airport's area of influence, and P-01 is on the edge of the extent of the airport's 55 CNEL noise contour.⁹⁰ Hayward Executive Airport is a municipal airport that also functions as a reliever airport.⁹¹ The airport has two runways that support both small airplanes and large corporate jets. Hayward Executive Airport's nearest runway is approximately 9.3 miles southwest of the nearest proposed maintenance site, C-14. All proposed maintenance sites are outside Hayward Executive Airport's influence area.⁹²

⁸⁹ City of Livermore, "Livermore Airport," Accessed December 2019, http://www.cityoflivermore.net/citygov/pw/public_works_divisions/airport/.

⁹⁰ Environmental Science Associates, "Livermore Municipal Airport, Airport Land Use Compatibility Plan." August 2012.

⁹¹ Coffman Associates, Inc., "Hayward Executive Airport, Airport Master Plan." April 2002.

⁹² Environmental Science Associates, "Hayward Executive Airport, Airport Land Use Compatibility Plan." September 2010.

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4.16 Population and Housing

POPULATION AND HOUSING — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	93,94,95, 96
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	93,94,95, 96

4.16.1 Environmental Setting

The locations where stream maintenance actions would occur are generally located in residential areas in Pleasanton. As of 2018, Pleasanton had a population of approximately people 82,000.⁹³ Housing stock and population in Pleasanton have changed since the last recession ended in 2012, during which time there were about 72,000 residents and 27,118 housing units^{94,95}. On average, the City has seen the construction of an average of 320 net new units annually since 2012⁹⁶. As of 2018, there were 29,043 housing units in Pleasanton, 73% of which were owner-occupied.

4.16.2 Discussion of Impacts

- a) **No Impact.** The proposed Project would not affect population growth as no new jobs, businesses, homes, or other growth-inducing elements are proposed. Most of the Project Area is situated in built-out residential neighborhoods with little opportunity for further development or population growth. A few temporary jobs would be created during

⁹³ State of California, Department of Finance, "2018 American Community Survey-Total Population and Median Age." Accessed December 10, 2019, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/#ACS2018x1.

⁹⁴ State of California, Department of Finance, "2012 American Community Survey-Total Population and Median Age," Accessed December 10, 2019, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/#ACS2012x1

⁹⁵ State of California, Department of Finance, "2012 American Community Survey- Housing Characteristics Occupancy, Cost, Tenure, Units by Type," Accessed December 10, 2019, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/#ACS2012x1

⁹⁶ State of California, Department of Finance, "2018 American Community Survey-Housing Characteristics Occupancy, Cost, Tenure, Units by Type". Accessed December 10, 2019, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/#ACS2018x1.

maintenance activities but would likely be filled by contractors already local to the area. The proposed Project would maintain existing stormwater infrastructure life and would not expand capacity of the stormwater system. As no permanent jobs, housing, or other population growth-inducing elements are proposed and any temporary maintenance jobs would likely be filled locally, the proposed Project would not induce substantial population growth, and therefore would result in no impact.

- b) **No Impact.** The Project would not displace any housing or people. Project elements include storm drain and detention pond maintenance, some of which would occur within residential areas. Adjacent housing would not be affected by the proposed Project. Further, the proposed Project does not contain any growth-inducing elements such as construction of new homes, roads, or employment centers, or expansion of facilities or services which could subsequently facilitate population growth. The proposed Project would therefore not induce any population growth which may result in displacement of existing people or housing. As the proposed Project would not displace any people or housing, there would be no impact.

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4.17 Public Services

PUBLIC SERVICES — Would the proposed Project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	51
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	51,99
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	100
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	51,101
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.17.1 Environmental Setting

Fire

Fire services within Pleasanton city limits are provided by the Livermore-Pleasanton Fire Department (LFPD). The LFPD has ten fire prevention vehicles of different types to serve different needs, including forest fires. The Department also has an established goal of responding within five minutes of call receipt, 90 percent of the time.

In addition to Safety Operations, the department also has Fire Prevention, Safety Education, and Disaster Preparedness divisions⁹⁷. In total, the LFPD maintains 10 stations and one training center, five of which are within the City of Pleasanton, including the department's headquarters. Each City is responsible for the maintenance of its own buildings, light-duty vehicles, and fire apparatus. Together, the stations within Pleasanton field a daily on-duty force of 18 personnel.⁵¹

The station closest to the majority of proposed maintenance sites is Station #4, located at 1600 Oak Vista Parkway in Pleasanton, California.

⁹⁷ City of Livermore, "Livermore-Pleasanton Fire Department," accessed December 10, 2019, <http://www.cityoflivermore.net/citygov/fire/>

The California Department of Forestry and Fire Protection (Cal Fire) Sunol Forest Fire Station is located southwest of Pleasanton city limits by the intersection of I-84 and I-680. This Cal Fire Station provides fire services to the Pleasanton Ridge, Southeast Hills, and pockets of unincorporated land adjacent to Pleasanton city limits.⁹⁸ Proposed maintenance site P-06 at Oak Tree Farms Detention Pond is in the area serviced by this Cal Fire Station, and would require over five minutes of travel time from this station should fire services be needed.

Police

Police services for the proposed Project are provided by the Pleasanton Police Department. As of 2018 the Department included 55 sworn officers.⁹⁹ The Department's headquarters is located at 4833 Bernal Avenue in Pleasanton. According to the Pleasanton General Plan, Pleasanton experiences crime rates lower than similarly sized cities.

Schools

The proposed Project is within the jurisdiction of the Pleasanton Unified School District. All proposed maintenance sites are within areas serviced by this District's nine elementary schools, three middle schools, and three high schools.¹⁰⁰

Parks

The City of Pleasanton has 44 community and neighborhood parks. The City's 371 acres of parkland provides over five acres of neighborhood and community parks per 1,000 population,¹⁰¹ exceeding the goals established in the Pleasanton General Plan. Additionally, the City manages 600 acres of undeveloped open space.

4.17.2 Discussion of Impacts

- ai-v) **No Impact.** The proposed Project would not involve the construction of any additional housing, infrastructure, or employment centers that may induce population growth. There would therefore not be any permanent increase in demand by the general public for fire protection, police protection, schools, parks, or other public facilities. There could be a temporary, minimal increase in demand for fire or police services to accommodate maintenance activities. Any such increase would be limited to the six-month maintenance activities period and would be insufficient in scope and duration to necessitate new facilities. As no fire or police protection, school, park, or other public facilities are proposed and no increase in the need for such facilities would occur, there would be no impact.

⁹⁸ Alameda County Fire Department, "Fire Stations/ Facilities, ACFD Station 14", accessed December 12, 2019.
<https://www.acgov.org/fire/about/station14.htm>

⁹⁹ City of Pleasanton, "Pleasanton Police Department Annual Report 2018," accessed December 12, 2019.
<https://www.cityofpleasantonca.gov/gov/depts/police/annualreports.asp>

¹⁰⁰ Pleasanton Unified School District, "School Locator," accessed December 12, 2019.
<http://apps.schoolsitelocator.com/index.html?districtCode=17274>.

¹⁰¹ City of Pleasanton, "Parks and Recreation Master Plan," June 3, 2014.
<http://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=24609>

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4.18 Recreation

RECREATION — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.18.1 Environmental Setting

The City of Pleasanton manages 44 parks and 371 acres of open space. Four of the proposed maintenance sites are located within Pleasanton parks, and eight parks are adjacent to proposed sites. All proposed maintenance sites are within 0.5 miles of a park or recreation facility with the exception of C-14, P-08, and C-16.

4.18.2 Discussion of Impacts

- a) **No Impact.** The proposed Project would not involve the construction or expansion of any additional housing, infrastructure, or businesses that would induce population growth and increase demand for recreational facilities in the City of Pleasanton, therefore the project results in no impact.
- b) **No Impact.** The proposed Project would not include construction of any recreational facilities that might have an adverse physical effect on the environment.

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4.19 Transportation

TRANSPORTATION — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	102,103
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c) Substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	102, 105

4.19.1 Environmental Setting

The City of Pleasanton is served by an extensive road network which includes freeways, arterials, collectors, and local streets. Most City streets feature at least 11-foot-wide travel lanes, curbs, gutters, and sidewalks.¹⁰² The City generally prohibits on-street parking on arterial streets, but allows parking on local and collector streets when sufficient right-of-way exists. The proposed project would limit the staging of maintenance equipment to local and collector roads in accordance with these City regulations and to reduce the impact of staging on local traffic.

Regional public transit facilities located within the City of Pleasanton include Bay Area Rapid Transit (BART), the Altamont Commuter Express (ACE) Train, and BART express bus service. Local transit facilities within the City include the Livermore Amador Valley Transit Authority (LAVTA), which provides public bus service to the Tri-Valley communities of Pleasanton, Dublin, and Livermore. None of the maintenance proposed by the Project is expected to interfere with these regional and local transportation systems.

The City of Pleasanton has developed a Pedestrian and Bicycle Master Plan (PBMP)¹⁰³ that builds upon the City's General Plan blueprint for a system of bikeways in Pleasanton. The PBMP plan seeks to improve pedestrian and bicyclist safety, create a continuous trail network, promote

¹⁰² City of Pleasanton, "The Pleasanton General Plan 2005-2025, 3. Circulation Element," 2005.
<https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23898>.

¹⁰³ City of Pleasanton, "Pedestrian and Bicycle Master Plan," 2018.
<http://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=32630>.

alternatives to driving, and educate residents about the walking and bicycling opportunities within the City. Many of the Project's proposed maintenance sites would overlap with or run adjacent to these shared use paths, trails, and bicycle lanes. Appropriate signage would be used as appropriate to indicate path, trail, and bicycle lane closures while maintenance is conducted.

Discussion of Impacts

- a,d) ***Less than Significant with Mitigation Incorporated.*** The primary plans and ordinances addressing the circulation system in the City of Pleasanton are the General Plan Circulation Element, the Pedestrian and Bicycle Master Plan (PBMP), Title 11 of the City's Municipal Code,¹⁰⁴ and the Neighborhood Traffic Calming Program (NTCP).¹⁰⁵ Relevant policies from the Circulation Element include requirements to facilitate the free flow of vehicular traffic on major arterials, such as by discouraging additional on-street parking on arterials (Policy 3, Program 3.5) and restrictions on parking near intersections to ensure visibility and traffic safety (Policy 8, Program 8.5). The PBMP includes policies that promote low traffic stress on facilities for bicyclists (Policy 2-1). The City's Municipal Code Title 11 requires vehicles to be parked at least 15 feet away from fire hydrants and to avoid parking in bicycle lanes (chapter 11.36). The NTCP includes policies that dictate the need to maintain access across the city for emergency vehicles (Policy 2).

Mitigation Measure HAZ-1 (see Section 4.9) requires preparation of a parking plan and coordination with emergency service providers during maintenance activities, which would facilitate consistency with the policies of the General Plan, PBMP, NTCP, and Municipal Code. No long-term impacts to transportation policies or emergency access would occur as the proposed Project would not physically alter roadways or increase their usage. The proposed Project would not conflict with a plan, policy, or program addressing the circulation system or result in inadequate emergency access. As such, no long-term impact would occur and short-term impacts would be mitigated to less than significant levels, therefore overall impact would be less than significant with mitigation incorporated.

- b) ***Less than Significant Impact.*** CEQA Guidelines Section 15064.3(b) provides considerations for a lead agency evaluating a project's transportation impacts, dictating that vehicle miles traveled (VMT) are generally the most appropriate measure of transportation impacts and that a qualitative analysis of maintenance VMT is often most appropriate. Section 15064.3(b) further stipulates that a Project's effects on automobile delay do not constitute significant environmental impacts.

The proposed Project would have no long-term effects on VMT. The proposed Project would not create any new roads or introduce any new facilities which might induce additional driving, such as recreational, retail, or residential facilities. Furthermore, the proposed Project would not have any impact on existing roadways or transit facilities. As such, no permanent change in VMT would result.

¹⁰⁴ The City of Pleasanton, "Pleasanton Municipal Code, Title 11 Vehicles and Traffic," <https://qcode.us/codes/pleasanton/>.

¹⁰⁵ The City of Pleasanton, "Neighborhood Traffic Calming Program," May 2012, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23868>.

During maintenance activities, the proposed Project would result in the hauling of materials, worker transportation, and movement of equipment to and from maintenance sites, which would temporarily increase VMT.

Soils being exported for disposal would travel approximately three to five miles from the maintenance sites to the City's Laguna Creek soil disposal site, located in the southwestern portion of Pleasanton. Maintenance equipment would be staged on paved surfaces near maintenance sites. Excess VMT associated with movement of equipment and materials would be temporary and would terminate upon completion of maintenance activities. Given the temporary, minimal nature of maintenance-related VMT and the lack of permanent increase in VMT, the proposed Project would not conflict with CEQA Guidelines Section 15064.3(b), and a less than significant impact would occur.

- c) ***Less than Significant Impact.*** The proposed Project would not involve any physical modifications to roadways which would introduce design hazards. Furthermore, the proposed Project would not facilitate any population growth or changes in land use which would introduce incompatible uses. During maintenance activities, heavy equipment would be transported to and from the maintenance sites using area roadways. This would be temporary and would be carried out by an experienced contractor, minimizing the likelihood of hazards from incompatible uses. As such, the proposed Project would not increase hazards due to a design feature or incompatible uses, and a less than significant impact would occur.

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4.20 Tribal Cultural Resources

TRIBAL CULTURAL RESOURCES — Would the proposed Project:					
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

This section examines the potential impacts of the proposed project on tribal cultural resources. Much of the background context and methods used for the analysis of potential impacts from the proposed project on tribal cultural resources and cultural resources are the same.

For the purposes of this analysis, the term *tribal cultural resource* is defined as follows:

Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to

be eligible for listing, in the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), or a local register of historical resources.

The term indigenous, rather than prehistoric, is used in this section as a synonym for “Native American–related”. This section relies on the information and findings presented in *Historic Property Survey Report/Finding of Effect: Twenty Stream Maintenance Projects, City of Pleasanton, Alameda County, California* (Basin Research Associates [Basin] 2020). That report, provided in Appendix C, details the results of the cultural resources study, which examined the environmental, ethnographic, and historic background of the Project Area, emphasizing aspects of human occupation.

4.20.1 Environmental Setting

Records Search

At the request of Basin, on August 29 and December 4, 2019, staff of the Northwest Information Center (NWIC), Sonoma State University, conducted records searches for the Project Area and areas within 0.25 mile thereof. The NWIC maintains the California Historical Resources Information System (CHRIS) records relevant to the Project Area and vicinity. The NWIC has record of one previously recorded indigenous archaeological resource (P-01-000063) within the Project Area, and one indigenous archaeological resource (P-01-010610) immediately adjacent to the Project Area.

P-01-000063 is an indigenous archaeological site with reported human burials, midden, fire-affected rock, groundstone artifacts, shell, and flaked-stone artifacts. The resource was mapped by CHRIS as within the eastern portion of the C-14 (Dublin Canyon) portion of the Project Area; it does not appear that the resource has been previously evaluated for eligibility for listing in the California Register of Historical Resources (California Register), and previous cultural resources reports document that the resource was previously destroyed by housing developments.

P-01-010610 is an extensive indigenous archaeological site with more than 400 human burials, thousands of artifacts and abundant diagnostic artifacts dating it to between 3,500 and 150 years before present. The resource was previously mapped as approximately 30 feet south of the C-10 (Junipero Canal) portion of the Project Area. P-01-010610 was previously evaluated as California Register-eligible and subsequently subject to extensive data recovery efforts as part of a housing development project that destroyed the site.

Native American Correspondence

On August 6 and December 23, 2019, Basin contacted the California Native American Heritage Commission (NAHC), requesting a search of the NAHC’s Sacred Lands File (SLF) and a list of Native American representatives who may be interested in the proposed project. The NAHC replied on August 16 and December 27, 2019, stating that the SLF has no record of sacred sites in the Project Area. The reply also included a list of Native American representatives to contact regarding the proposed project.

In August and December 2019, Basin sent letters with proposed project information to the Native American contacts identified in the NAHC's replies; letters were sent to the following groups: Amah Mutsun Tribal Band of Mission San Juan Bautista; Indian Canyon Mutsun Band of Costanoan; Muwekma Ohlone Indian Tribe of the San Francisco Bay Area; North Valley Yokuts Tribe; The Confederated Villages of Lisjan; The Ohlone Indian Tribe; and, the Costanoan Rumsen Carmel Tribe.

Responses were received from two Native Americans representatives. The first was received on August 28, 2019 from Michelle Zimmer, of the Amah Mutsun Tribal Band of Mission San Juan Bautista. Christopher Canzonieri, of Basin, and Ms. Irene Zwierlein, of the Amah Mutsun Tribal Band of Mission San Juan Bautista, had a subsequent phone call, during which Ms. Zwierlein recommended that maintenance crews receive cultural sensitivity training in areas that may yield potential indigenous archaeological material and that archaeologists on the proposed project have experience in Northern and Central California archaeology. The second response was received on September 29, 2019 via email from Katherine Erolinda Perez, Chairperson of the North Valley Yokuts Tribe, who emailed Basin a series of recommended mitigation measures, which included avoiding potential tribal cultural resources, workers awareness training for tribal cultural resources, and maintenance activity monitoring, and protocol for inadvertent discovery of cultural resources and tribal cultural resources.

Note, no California Native American tribes previously requested notification regarding City projects for potential consultation under California Public Resources Code (PRC) § 21080.3 (i.e., Assembly Bill [AB] 52). Therefore, no formal consultation pursuant to PRC § 21080.3 (see AB 52), was required for the proposed project.

Appendix D presents documentation of correspondence with Native American representatives regarding the proposed project to date.

Field Survey

In August and December 2019, and February 2020, Basin conducted a cultural resources pedestrian survey of the Project Area, covering all portions of the Project Area. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced no more than approximately 5 meters apart and inspecting the surface for cultural material or evidence thereof. During the pedestrian survey, no archaeological resources were identified in the Project Area.

Summary of Tribal Cultural Resources Identification Efforts

Through background research conducted for the proposed project, one previously recorded indigenous archaeological resource (P-01-000063) was identified in the Project Area, and one indigenous archaeological resource (P-01-010610) was identified immediately adjacent to the Project Area. P-01-000063 was previously mapped as within the eastern portion of the C-14 (Dublin Canyon) portion of the Project Area and the resource does not appear to have been previously evaluated for California Register-eligibility. Previous cultural resources reports document that the resource was previously

destroyed by housing developments. P-01-010610 is an extensive indigenous archaeological site with more than 400 human burials and thousands of artifacts. The resource was previously mapped as approximately 30 feet south of the C-10 (Junipero Canal) portion of the Project Area. P-01-010610 was previously evaluated as California Register-eligible and subsequently subject to extensive data recovery efforts as part of a housing development project that destroyed the site.

4.20.2 Regulatory Setting

California Environmental Quality Act

CEQA (codified at PRC § 21000 *et seq.*) is the principal statute governing environmental review of projects occurring in California. CEQA requires lead agencies to determine whether a proposed project would have a significant effect on the environment, including a significant effect on tribal cultural resources. Under CEQA (PRC § 21084.1), a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.

Assembly Bill 52 and Tribal Cultural Resources

Assembly Bill (AB) 52, enacted in September 2014, recognizes that California Native American Tribes have expertise with regard to their tribal history and practices. The law established a new category of cultural resources, *tribal cultural resources*, in CEQA to consider tribal cultural values when determining the impacts of projects on cultural resources (PRC § 21080.3.1, 21084.2, and 21084.3).

Impacts to tribal cultural resources also are considered under CEQA (PRC § 21084.2). PRC § 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in PRC § 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [PRC] § 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria of PRC § 21074(a) is also a tribal cultural resource if the landscape is geographically defined in terms of the size and scope. A historical resource as described in PRC § 21084.1, a unique archaeological resource as defined in PRC § 21083.2, or a non-unique archaeological resource as defined in PRC § 21083.2 may also be a tribal cultural resource under CEQA if it meets the criteria identified in PRC § 21074(a).

AB 52 requires CEQA lead agencies to analyze the impacts of projects on tribal cultural resources separately from impacts on archaeological resources (PRC § 21074 and

21083.09) because archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines tribal cultural resources in a new section of the PRC (§ 21074; see above). Lead agencies must engage in additional consultation with California Native American Tribes (PRC § 21080.3.1, 21080.3.2, and 21082.3).

The provisions of AB 52 apply to projects for which a notice of preparation or notice of negative declaration/ mitigated negative declaration was filed on or after July 1, 2015. As such, AB 52 applies to the proposed project.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The criteria for eligibility for the California Register are based upon the criteria for listing on the National Register (PRC § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance. Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Public Resources Code § 5097

California PRC § 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains that are taken from a Native American grave or cairn. Any person who knowingly or willfully obtains or possesses any Native American artifacts or human remains is guilty of a felony, which is punishable by imprisonment. Any person who removes, without authority of law, any such items with an intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment. PRC § 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

California Native American Historic Resource Protection Act

The California Native American Historic Resources Protection Act of 2002 imposes civil penalties, including imprisonment and fines up to \$50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code § 7050.5

Section 7050.5 of the California Health and Safety Code (HSC) protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC § 5097.98 (and reiterated in PRC § 15064.59[e]) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery.

4.20.3 Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** During the field survey conducted for the proposed project, no indigenous archaeological resources, including any evidence of P-01-000063 or P-01-010610, were identified in the Project Area. As such, there are no known indigenous archaeological resources that may qualify as tribal cultural resources (as defined in PRC § 21074) present in the Project Area. Additionally, during outreach efforts to Native American representatives and the NAHC, no tribal cultural resources were identified in the Project Area.

In summary, no tribal cultural resources, as defined in PRC § 21074, have been identified in the Project Area through archival research, field survey, or Native American consultation. Therefore, the proposed project is not anticipated to impact any tribal cultural resources.

Although the proposed project is not anticipated to impact any tribal cultural resources, there remains the possibility that previously unrecorded archaeological deposits, including human remains, are present in the Project Area. If such deposits are present and were found to qualify as tribal cultural resources, pursuant to PRC § 21074, any impacts of the proposed project on the resource would be potentially significant.

Such potentially significant impacts would be reduced to less-than-significant with mitigation incorporated by implementing **Mitigation Measures CULT-1** and **CULT-2** (See Section 4.7, *Cultural Resources*).

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4.21 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS — Would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Have sufficient water supplies available to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	107
c) Result in a determination by the wastewater treatment provider which serves or may serve the proposed Project that it has adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	106,107, 108
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	111,113, 114
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	110,113, 114

4.21.1 Environmental Setting

Water for the City of Pleasanton is provided by the Zone 7 Water Agency (80%), which is predominantly sourced from the South Bay Aqueduct, and by City-owned wells (20%).¹⁰⁶ Zone 7

¹⁰⁶ City of Pleasanton, "Water Quality," accessed December 19, 2019, http://www.cityofpleasantonca.gov/gov/depts/os/water_quality.asp.

has a current sustainable water supply of about 86,100 acre-feet per year, and manages a local groundwater basin with a capacity of 240,000 acre-feet.¹⁰⁷

The City has a wastewater management system with approximately 255 miles of gravity sewers, 25,192 feet of force main, and ten pump stations. The system has an average daily dry weather flow of 7 million gallons. The City also receives wastewater from the Castlewood Area of Alameda County. The Dublin San Ramon Service District (DSRSD) treats and disposes of the City's wastewater stream.¹⁰⁸ The City is entitled to half of the DSRSD treatment capacity of 17 million gallons per day.

Pleasanton Garbage Service, Inc. handles all solid waste management activities for the City. As of 2016 the City was generating 96,744 tons of solid waste per year.¹⁰⁹ All solid waste is taken to the Pleasanton Transfer Station which is owned and operated by Pleasanton Garbage Service, Inc. Solid waste is subsequently disposed of at the Vasco Road Landfill in Livermore, which is owned and operated by Republic Services. As of 2013, the Vasco Road Landfill had 5.6 million tons of capacity remaining and a projected closure in 2022.¹¹⁰

The main solid waste management planning document for the City of Pleasanton is the Source Reduction and Recycling Element.¹¹¹ This was incorporated into Alameda County's Integrated Waste Management Plan.¹¹² Both of these plans describe the steps the City and County will take to comply with the California Integrated Waste Management Act, which requires all California entities to divert 50 percent of their solid waste away from landfills by the year 2000 and to continue that diversion rate thereafter. The Alameda County Waste Reduction and Recycling Initiative Charter Amendment (Measure D) expanded the diversion requirement to a 75 percent by the year 2010.¹¹² Per the City's Waste Reduction Ordinance, waste diversion plans must be developed prior to issuance of a building or demolition permit and typically require the permittee to maintain records of waste diversion and compliance throughout the construction process.¹¹³

4.21.2 Discussion of Impacts

- a) **No Impact.** The proposed stream corridor and detention basin maintenance would not require the relocation or construction of new or expanded water supply or distribution, wastewater treatment, electric power, natural gas, or telecommunications facilities. The

¹⁰⁷ City of Pleasanton, "The Pleasanton General Plan 2005-2025, 8. Water Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23911>.

¹⁰⁸ City of Pleasanton, "Sewer System Management Plan," July 2018, http://www.cityofpleasantonca.gov/documents/SSMP/Sewer%20System%20Management%20Plan%20-2018%20Audit_Final.pdf.

¹⁰⁹ SCS Engineers and StopWaste, "2017-18 Waste Characterization Study," September 5, 2018.

¹¹⁰ Alameda County Waste Management Authority, "Alameda County Integrated Waste Management Plan," March 22, 2017.

¹¹¹ City of Pleasanton, "The Pleasanton General Plan 2005-2025, 6. Public Facilities and Community Programs Element," July 21, 2009, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23909>.

¹¹² Stop Waste, "Construction and Demolition (C&D) Recycling Requirements in Alameda County," March, 2016, <http://www.stopwaste.org/resource/policies/construction-and-demolition-debris-ordinances-alameda-county-matrix>.

¹¹³ City of Pleasanton, "Waste Management Plans," 2017, <http://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=30482>.

proposed Project would not increase demand for or alter any of the aforementioned utilities. As such, the proposed project would result in no impact.

- b) ***Less than Significant Impact.*** The proposed Project would not require a significant increase in water use at any point throughout its expected duration. Any potential local increase in water use would be negligible relative to Zone 7 Water Agency's annual sustainable water supply of approximately 86,000 acre-feet. In the long-term the proposed maintenance would not result in any long-term changes to City water use. Accordingly, a less than significant impact would occur.
- c) ***No Impact.*** The proposed Project would not expand any human-serving land uses such as recreation, retail, or residences or introduce any new infrastructure that would facilitate the later expansion of such uses. The proposed Project would therefore not be growth-inducing and would not create a need for additional wastewater treatment capacity. The proposed Project would include the maintenance of Pleasanton stream corridors and detention basins to improve stormwater conveyance and quality. The Project would only improve stormwater conveyance systems already in place and would not create any new demand or indirectly affect wastewater treatment systems. As such, the wastewater treatment provider would have adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments, and no impact would occur.
- d) ***Less than Significant Impact.*** The proposed Project would not generate solid waste in the long-term, but would generate solid waste during maintenance activities. The solid waste generated through the proposed maintenance activities would consist of sediment, rock, and vegetation. The amount of waste generated would not be known until proposed Project activities are completed. These waste materials would be disposed of at the Laguna Creek soil disposal site. This disposal site is not associated with the Vasco Road Landfill used by the City of Pleasanton for solid waste disposal, therefore waste generated by the proposed Project would not be incorporated into the City's main landfill and would not impact the ability of the City to reach its solid waste reduction goals. As such, a less than significant impact would occur.
- e) ***Less than Significant Impact.*** No Federal solid waste reduction statutes applicable to the proposed Project were identified. The United States Environmental Protection Agency encourages solid waste reduction, but does not impose any substantive requirements. The State of California has a goal of 75% recycling, composting, or source reduction of solid waste by 2020, which is to be attained using a statewide approach. Per chapter 9 of the Pleasanton Municipal Code, the City requires waste reduction during construction.¹¹⁴ Proposed Project activities must comply with the waste reduction provisions of chapter 9 of the Pleasanton Municipal Code. With this measure, the proposed Project would comply with State and local requirements to reduce solid waste. Following maintenance activities, the proposed Project would not generate any solid waste. As there would be no long-term impact and short-term impacts would be mitigated through compliance with the Pleasanton Municipal Code, the proposed Project would comply with all applicable

¹¹⁴ City of Pleasanton, "Pleasanton Municipal Code, Chapter 9.21 - Construction and Demolition Debris," accessed December 18, 2020, <https://qcode.us/codes/pleasanton/>.

Federal, State, and local waste reduction requirements, and impacts would be less than significant.

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4.22 Wildfire

WILDFIRE					
If located in or near state responsibility areas or lands classifies as very high fire hazard severity zones, would the proposed Project:	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant Impact</i>	<i>No Impact</i>	<i>Source</i>
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

4.22.1 Environmental Setting

According to the Public Safety Element of the Pleasanton General Plan, the City has over 7,000 acres of land designated as Special Fire Protection Areas that are within wildland-urban interface fire-threat areas.¹¹⁵ Seven maintenance sites proposed by the Project are within Special Fire Protection Areas: Stoneridge (P-01), Callippe (P-05), Oak Tree Farms (P-06), Vineyard West (P-07), and Vineyard East (P-08) detention ponds, Mission Creek Restoration Project (C-06) and Cemetery Creek (C-12). All of these sites receive fire protection services from the Livermore-Pleasanton Fire Department with the exception of Oak Tree Detention Pond, which receives

¹¹⁵ City of Pleasanton, "Pleasanton General Plan 2005-2025, 5. Public Safety Element," February 5, 2013, <https://www.cityofpleasantonca.gov/civicax/filebank/blobdload.aspx?BlobID=23899>.

services from the California Department of Forestry and Fire Protection (CalFire) Sunol Forest Fire Station.⁹⁸

According to Cal Fire's public fire hazard severity zone (FHSZ) data, maintenance sites within areas of State responsibility include C-14, Dublin Canyon Creek (High FHSZ) and P-05, Callippe Detention Pond (Moderate FHSZ).¹¹⁶ Under local responsibility is proposed maintenance site P-06, Oak Tree Farms Detention Pond, which is classified as Very High FHSZ.¹¹⁷ Areas that are designated as in Very High or High FHSZ are at a significant risk for loss of life or property if a fire were to occur. No other proposed maintenance sites are within fire hazard severity zones.

4.22.2 Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** The City of Pleasanton is characterized by its residential, small-town feeling City surrounded by rural lands. The City's streets were therefore designed to accommodate minimal through-traffic. Most streets in the vicinity of the Project Site are classified as local roadways and permit on-street parking. Maintenance equipment would be staged off-site using on-street parking when not in use, minimizing the risk of obstructing emergency response during evenings and weekends, when maintenance activities would not occur. During maintenance activity hours, however, given the narrow design of adjacent roadways it is possible that on-site maintenance equipment could obstruct emergency response in the event of an evacuation or should emergency vehicles require passage.

Mitigation Measure HAZ-1 requires notification of emergency service providers 72-hours prior to the start of maintenance activities and compliance with the City of Pleasanton's recommended traffic BMPs during maintenance activities, minimizing the risk of obstructing emergency access. Following maintenance activities, the proposed Project would not interfere with an emergency response plan, as Project modifications would generally be confined to detention ponds and stream corridors which do not contain any emergency response infrastructure. The proposed Project would therefore not lead to physical modification or obstruction of emergency response infrastructure such as communication systems or roadways. As such, the proposed Project would not impair implementation of or physically interfere with implementation of an emergency response or evacuation plan in a very high fire hazard severity zone, and impacts would be less than significant with mitigation incorporated.

Mitigation Measure HAZ-1

Please see section 4.9, Hazards and Hazardous Materials, above.

- b) ***Less than Significant with Mitigation Incorporated.*** Many proposed Project maintenance sites would be accessed by relatively narrow, local roadways. The proposed Project would not increase fire risk in the long-term, as no new structures or fuel sources would be introduced to the Project Area and the proposed Project would not draw new people who would be exposed to fire risk to the area.

¹¹⁶ [Calfire] California Department of Fire and Forestry, *Fire Hazard Severity Zones in SRA (Alameda County, CA, November 7, 2007)*, https://osfm.fire.ca.gov/media/7271/fhszs_map1.pdf.

¹¹⁷ [Calfire] California Department of Fire and Forestry, *Fire Hazard Severity Zones in the LRA as Recommended by CALFIRE (Alameda County, CA, September 3, 2008)*, https://osfm.fire.ca.gov/media/6638/fhszl_map1.pdf.

In the short-term, the presence of motorized equipment at proposed detention pond and stream corridor maintenance sites during the dry season may lead to a small, temporary increase in fire risk. Mitigation measure HAZ-2 requires the contractor to remove potential wildfire fuel sources, such as dried vegetation, and requires service trucks to be equipped with fire extinguishers, among other fire risk reducing measures. With implementation of Mitigation Measure HAZ-2, the proposed Project would not exacerbate wildfire risks, and would not expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would accordingly be less than significant with mitigation incorporated.

Mitigation Measure HAZ-2

Please see section 4.9, Hazards and Hazardous Materials, above.

- c) ***No Impact.*** The proposed Project would not require the installation of any infrastructure that may exacerbate fire risk, such as power lines or utilities, nor would it require the installation of infrastructure intended to reduce wildfire risk or facilitate emergency response, such as roads, fuel breaks, or emergency water sources. The proposed stormwater maintenance Project would not have any long-term impact on wildfire risk. Short-term increases in wildfire risk during maintenance activities would not be sufficiently severe nor occur over a long enough period to require installation of risk attenuating infrastructure. As the proposed Project would not require installation or maintenance of associated infrastructure that may exacerbate fire risk, nor result in temporary or ongoing environmental impacts, no impact would occur.
- d) ***Less than Significant Impact.*** Two of the maintenance sites proposed by the Project are in FHSZs in close proximity to residential structures. During proposed Project maintenance activities, fire risk would be temporarily exacerbated by the use of motorized equipment in and around stream corridors and detention basins. However, with implementation of Mitigation Measure HAZ-2, fire risk would be minimal. Additionally, Mitigation Measure WILD-1 would require prohibit maintenance activities from occurring during “Red Flag” days. Any fires that might start would be small and would not result in downstream landslide and flooding. Thus, impacts would be less than significant with mitigation incorporated.

Mitigation Measure WILD-1:

During “red flag” days (i.e., days during which Calfire issues a warning for weather events which may result in extreme fire behavior that will occur within 24 hours) maintenance activities shall be prohibited.

Mitigation Measure HAZ-2:

Please see section 4.9, Hazards and Hazardous Materials, above.

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4.23 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Source
a) Does the proposed Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Does the proposed Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Does the proposed Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- a) **Less than Significant with Mitigation Incorporated.** The proposed Project does not have the potential to substantially degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory. As illustrated throughout this document, the proposed Project would have generally beneficial effects on wildlife populations through habitat restoration. Any potentially adverse effects to wildlife during maintenance activities would be reduced to less than significant levels through implementation of mitigation measures discussed in Section 4.4, Biological Resources. The proposed Project would remove riparian vegetation, but vegetation would be

replanted and there would be no long-term impacts on plant communities. Furthermore, as discussed in Section 4.5, Cultural Resources, the proposed Project would not eliminate important examples of major periods of California history or prehistory. Thus, the proposed Project's impacts would be less than significant with mitigation incorporated.

- b) **Less than Significant with Mitigation Incorporated.** Other projects in the watershed with the potential to alter maintenance sites' hydrology or water quality could result in cumulative impacts. However, given that the proposed Project would result in long-term beneficial effects, its contribution to any such effects would not be cumulatively considerable. Other maintenance projects with substantial temporal and spatial overlap with the proposed Project's maintenance actions could result in cumulative impacts related to transportation and hazards due to the use of residential roadways by heavy equipment and maintenance workers. However, the proposed Project's contribution would not be cumulatively considerable, as mitigation discussed in Section 4.17, Transportation, would assure coordination with other ongoing maintenance projects and minimize potential impacts. Furthermore, no maintenance projects were identified with substantial temporal and spatial overlap that would potentially result in cumulative impacts. Thus, the proposed Project would not result in impacts that are individually limited but cumulatively considerable, and this impact would be less than significant with mitigation incorporated.
- c) **Less than Significant with Mitigation Incorporated.** Maintenance-related impacts to Air Quality, Biological and Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Transportation and Wildfire have the potential to adversely affect human beings. With implementation of the various city, state, or federal requirements, BMPs, and Mitigation Measures included in this Initial Study, the proposed Project would not result in substantial adverse effects to human beings, either directly or indirectly. This impact would therefore be less than significant with mitigation incorporated.

APPENDIX A: AQUATIC RESOURCES DELINEATION REPORT
WRA, INC.

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Clean Water Act Section 404 Delineation of Waters of the United States

City of Pleasanton Stream and Pond Maintenance
Pleasanton, Alameda County, California

Prepared for:

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Date: December 2019

WRA Project #: 29118



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LIST OF ACRONYMS

CARI	California Aquatic Resources Inventory
CFR	Code of Federal Regulations
Corps	U. S. Army Corps of Engineers
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
NETR	Nationwide Environmental Title Research
NL	Not Listed
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate
OHWM	Ordinary High Water Mark
PRISM	Parameter-Elevation Regressions on Independent Slopes Model
SFEI	San Francisco Estuary Institute
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
WRA	WRA, Inc.

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1.0 INTRODUCTION

1.1 Project Background and Location

WRA has been retained by The City of Pleasanton (City) to conduct a delineation of approximately 95-acres of Project Area for waters of the United States on a series of channels, ditches, and detention ponds in Alameda County. The Project Area includes 25 disparate Study Area locations; all creek segments, all drainage ditches, and 6 of the 8 detention ponds occur in the City of Pleasanton, Alameda County, California (Study Areas Location Map, Appendix A, Figure 1). Two detention ponds, Vineyard West and Vineyard East Detention Ponds, are located outside of the City urban boundary in unincorporated Alameda County.

The City is proposing to conduct routine maintenance activities at these Study Area streams and stormwater detention ponds. The City seeks to periodically remove debris, sediment, and/or vegetation from approximately seventeen (17) creek/channel sections and eight (8) stormwater detention ponds to maintain their flood control and stormwater treatment capacities (Table 1). Maintenance will also include the pruning or trimming of riparian trees occurring along the tops of stream banks as found to be necessary.

Table 1. Twenty-five Study Area Locations

Study Area	Feature Name
Creeks	
C-01	Pimlico Canal
C-02	Pleasanton Canal
C-03	Foothill High School Trash Rack
C-04	Bernal V-ditch
C-05	Bernal North/South V-ditch
C-06	Mission Creek Restoration Project
C-07	Lower Kottinger Creek
C-08	Upper Kottinger Creek
C-09	Touriga Creek
C-10	Junipero Canal
C-11	Mission Park Creek
C-12	Cemetery Creek
C-13	Gold Creek
C-14	Dublin Canyon Creek
C-15	Stonedale Channel
C-16	Arlington Creek
C-17	Rutledge Place Culvert
Detention Ponds	
P-01	Stoneridge Pond
P-02	Bernal Detention Pond Central
P-03	Canyon Oaks Detention Pond
P-04	Bernal West Detention Pond
P-05	Callippe Detention Pond
P-06	Oak Tree Farms Detention Pond
P-07	Vineyard West Detention Pond
P-08	Vineyard East Detention Pond

In July and October, 2019, WRA conducted a routine wetland delineation of the Study Areas to determine the presence of potential wetlands and non-wetland waters potentially subject to federal jurisdiction under Section 404 of the Clean Water Act (CWA). This report presents the results of this delineation, which are subject to verification by the U.S. Army Corps of Engineers (Corps).

2.0 Regulatory Background

Section 404 of the Clean Water Act gives the Environmental Protection Agency (EPA) and the Corps regulatory and permitting authority regarding discharge of dredged or fill material into “navigable waters of the United States.” Section 502(7) of the CWA defines “navigable waters” as “waters of the United States, including territorial seas.” Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) defines the term “waters of the United States” as it applies to the jurisdictional limits of the authority of the Corps under the CWA. A summary of the definition of “waters of the United States” in 33 CFR 328.3 (a) includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) territorial seas; (4) impoundments of waters listed here; (5) tributaries to the above waters; (6) waters and wetlands adjacent to the above waters; and (7) prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools, and Texas coastal prairie wetlands, provided these features have a significant nexus to the above listed waters¹; (8) all waters located within the 100-year floodplain of waters listed above in items 1-3 or within 4,000 feet of the high tide line (HTL) or ordinary high water mark (OHWM) of a water listed above in items 1-5, provided those waters are determined to have a significant nexus to waters identified in items 1-3 above. For purposes of the determining Corps jurisdiction under the CWA, “navigable waters” as defined in the CWA are the same as “waters of the U.S.” defined in 33 CFR 328.3.

Areas not considered to be “waters of the United States” as defined in 33 CFR 328.3 (b), are summarized as follows: (1) waste treatment systems; (2) prior converted cropland; (3) specific classes of ditches, including (i) ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary, (ii) ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands, and (iii) ditches that do not flow, either directly or through another water, into a water identified in 33 CFR 328.3 paragraphs (a) (1) through (3); (4) artificially irrigated areas that would otherwise revert to dry land and manmade aquatic features in otherwise dry land such as stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, cooling ponds, reflecting pools, swimming pools, small ornamental waters, depressions incidental to mining and construction activity, erosional features, and puddles; (5) groundwater; (6) stormwater control features; (7) wastewater recycling structures, groundwater recharge basins, percolation ponds for wastewater recycling, and distribution networks for wastewater recycling.

2.1 Wetlands

Wetlands are defined in 33 CFR 328.3 (c) as:

...those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal

¹ Wetlands and non-wetland waters in this category are similarly situated and are combined, for purposes of a significant nexus analysis, in the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of 33 CFR 328.3.

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The basis for determining whether a given area is a wetland for the purposes of Section 404 of the CWA is outlined in the Corps *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Delineation Manual* for the respective region. As defined in 33 CFR 328.4 (c), the extent of federal jurisdiction within wetlands is defined as extending to the limit of the wetland as determined using the methods outlined in the manuals.

2.2 Non-Wetland Waters

The limit of federal jurisdiction in tidal non-wetland waters extends to the HTL which is defined in 33 CFR 328.4 (a) as:

...the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

The limit of federal jurisdiction in non-tidal non-wetland waters extends to the OHWM which is defined in 33 CFR 328.3 (e) as:

...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

3.0 PROJECT AREA DESCRIPTION

Project Area elevations range from approximately 300 to 440 feet. The Project Area consists of 25 Study Areas that capture a mixture of natural creeks, drainage channels, and detention ponds used and maintained by the city of Pleasanton. Nearly all Study Areas within the Project Area were historically used for various agricultural purposes such as row crops dating back to 1949 (NETR 2019). All Study Areas are located in the vicinity of existing infrastructure, residential, or commercial developments. The City of Pleasanton excavated the majority of the detention ponds in upland areas prior to 2002 with P-01 remaining as an undeveloped field until approximately 2012.

3.1 Vegetation

The dominant vegetation types in the Project Area's 25 Study Areas are ruderal grassland, riparian forest, landscaped areas, coast live oak woodland, perennial marsh and coyote brush scrub. Each of the 17 channel sites (designated by C-#) and eight (8) detention pond sites (designated by P-#) typically supports a mixed vegetation assemblage, representing a subset of vegetation types that occur across all Study Areas. Ruderal grassland includes areas that have been partially developed, residential areas, or lands that have been used in the past for agriculture. Dominant plant species observed in ruderal herbaceous grassland in the Project Area include wild oat (*Avena sativa*, UPL), Italian rye grass (*Festuca perennis*, FAC), and yellow star thistle (*Centaurea solstitialis*, NL). Dominant riparian forest tree layer includes coast live oak (*Quercus agrifolia*, NL), valley oak (*Quercus lobata*, FACU), and black walnut (*Juglans hindsii*, FAC), with lower densities of willow (*Salix* sp.) and sycamore (*Platanus racemosa*, FAC). Dominant plant species observed in perennial marsh in the Project Area include California bulrush (*Schoenoplectus californicus*, OBL), smartweed (*Persicaria* sp.) and goosefoot (*Chenopodium* sp.). Landscaped areas contain lawn and ornamental trees. Coast live oak woodland is dominated by coast live oak trees that grow in various canopy density, from open to closed. The coyote brush scrubland is dominated by mature coyote brush (*Baccharis pilularis*, NL).

3.2 Soils

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service Soil Survey for *Alameda Area, California* (NRCS 2019) and California Soils Resources Lab (CSRL) SoilWeb (CSRL 2019) indicates the Project Area is composed of ten soil series: *Azule*, *Clear Lake*, *Danville*, *Diablo*, *Gravel Pits*, *Los Osos*, *Pleasanton*, *Positas*, *Sunnyvale*, *Sycamore*, *Yolo* and *Zamora*. The Project Area has 12 soil series, which are described below and in Appendix C.

Azule Series: The Azule series consists of moderately deep, well drained soils on hills with slopes of 9 to 75 percent. These soils form in material weathered from consolidated alluvium and from soft shale and fine grained sandstone and have medium to rapid runoff and slow permeability. In a typical profile, the surface layer is very dark grayish brown (2.5Y 3/2) slightly acid clay loam, 6 inches thick. This is underlain by very dark grayish brown to light yellowish brown (2.5Y 6/4) slightly acid clay to 25 inches. From 25 to 40 inches, the soil consists of light olive brown (2.5Y 5/4) consolidated sediment. Within the Project Area, this series occurs in Study Area C-13.

Clear Lake Series: The Clear Lake series consists of clays that formed under poorly drained conditions. These soils are underlain by alluvium from basic and sedimentary rock and occur on plains and flat basin areas. In a typical profile, the surface layer is black (N 4/0) or very dark gray (10YR 3/1) clay, about 39 inches thick. This is underlain by a dark-gray moderately alkaline clay that has light gray mottles, black (10YR 2/1) when moist. At a depth of about 46 inches, it is gray and light brownish-gray, moderately alkaline clay. At a depth of about 60 inches, it is light gray to white, mildly alkaline sandy clay loam. Within the Project Area, this series occurs in Study Area C-14.

Danville Series: The Danville series consists of very deep, well drained soils that formed in alluvium. Danville soils are on fans and terraces. The Danville silty clay loam,

3 to 10 percent slopes soil map unit occurs in Study Area. Within the Project Area, this series occurs in Study Area C-03.

Diablo Series: The Diablo series consists of moderately deep, well drained soils on hillslopes and mountain slopes. They formed from residuum weathered from calcareous shale. These soils are well drained and have very high runoff. The soil ecological setting is considered clayey hills and they are not considered to be hydric. Within the Project Area, this series occurs in Study Area C-14.

Gravel Pits: The gravel pits soil map unit consists of extremely gravelly sand up to 60 inches deep. Runoff is very low. Gravel pits make up 95 percent of the composition and are non-hydric soils. The remaining 5 percent are other minor components including stream terraces, which are hydric soils. No landform positions are provided for this soil type. Within the Project Area, this series occurs in Study Area P-07.

Los Osos Series: The Los Osos series consists of moderately deep, well drained soils on uplands with slopes of 5 to 75 percent. They formed in material weathered from firm to hard sandstone and shale. These soils have very high runoff and slow permeability. A typical profile includes five soil horizons: A, Btss1, Btss2, C, and Cr.

The A horizon is a very dark grayish brown (10YR 3/2) moderately acid (pH 6.0) loam from 0 to 14 inches. Beneath this, from 14 to 24 inches, is the Btss1 layer, a dark yellowish brown (10YR 4/4), moderately acid clay. This is underlain, from 24 to 32 inches, by the Btss2 horizon, a dark yellowish brown, slightly acid (pH 6.5) clay loam. Beneath this is the C horizon, a light olive brown (2.5Y 5/4), neutral (pH 7.0) sandy loam. The deepest horizon, from 39 to 43 inches, is the Cr horizon, a brown (10YR 4/3) sandstone. Within the Project Area, this series occurs in Study Areas C-14 and P-06.

Pleasanton Series: The Pleasanton map unit consists very deep, well drained and fine-loamy soils. They are located on nearly level to gently sloping alluvial fans and terraces. A typical Pleasanton series profile includes five soil horizons: Ap, A, B2t, B3, and C. The Ap horizon is a very dark grayish brown (10YR 3/2), slightly acid (pH 6.3) and gravelly fine sandy loam from 0-9 inches. Beneath this is an A horizon from 9-21 inches containing very dark grayish brown (10YR 3/2), neutral (pH 6.8) and gravelly fine sandy loam. This is underlain by a Bt horizon from 21-48 inches containing a 10YR 3/3), neutral (pH 7.3) and gravelly sandy clay loam. This is underlain by a B horizon from 48-64 inches containing a dark brown (10YR 3/3), neutral (pH 7.3), gravelly loam. The final horizon in the soil profile is a C horizon from 64-72 and contains a slightly alkaline (pH 7.4), dark yellowish brown (10YR 4/4) and gravelly fine sandy loam near gravelly loam.

Pleasanton gravelly loam, 3 to 12 percent slopes map unit occurs in Study Area. Within the Project Area, this series occurs in Study Areas C-03, C-09, C-13, P-05, and P-08.

Positas Series: The Positas series soils consist of well drained to excessively drained, shallow to moderately deep gravelly loam soils on nearly level to very steep high terraces south of the Livermore Valley. These soils formed in poorly sorted clay, sand, and gravel that are weakly consolidated in places. This well-drained soil has a very slowly permeable subsoil. Runoff is slow to medium, and the available water holding capacity is low.

Positas soils sloped at 2 to 20 percent and 20 to 40 percent series occur in the Study Area. Within the Project Area, this series occurs in Study Areas C-06, C-08, C-09, C-11, C-12, C-13, and C-16.

Sunnyvale Series: The Sunnyvale series consists of poorly drained, calcareous soils on nearly level valley floors north of Pleasanton. The surface soil is gray, granular, slightly calcareous, heavy clay loam. Sunnyvale soils are often used for irrigated row crops, for pasture, and for dry-farmed grain. A representative profile for the Sunnyvale series consists of an Ap horizon from 0 to 6 inches with dark gray to very dark grey (N4/ - N3/) silty clay. Similar colors are seen in an Alc2 horizon of silty clay from 6 to 14 inches. A Clca horizon extends from 14 to 34 inches, with light grey to dark grey (N7/ - N3/) silty clay.

Sunnyvale clay loam over clay: Is found on nearly level valley floors. The texture of surface soil ranges from silt loam to heavy clay loam or heavy silty clay loam. In some small areas the surface soil is strongly calcareous. This soil is poorly drained, the permeability of the subsoil is moderately slow, and runoff is slow. This soil type is hydric (NRCS 2018). Within the Project Area, this series occurs in Study Areas C-01, C-02, C-05, C-06, C-10, P-02, P-03, and P-04,.

Sunnyvale clay loam, drained: The Sunnyvale series consists of poorly drained silty clays that are underlain by alluvium from material derived from sedimentary rock. These soils are in low positions on the alluvial plains and have slopes of less than 2 percent. Sunnyvale silty clay, drained, as it occurs on alluvial flats and in depressions, and is hydric (NRCS 2018). The drained subtype of this series is typically used for agriculture such as row crops, sugar beets, prunes, and pears. Within the Project Area, this series occurs in Study Areas C-04 and P-02.

Sycamore Series: This soil unit consists of very deep, poorly drained soil that formed in alluvium derived from sedimentary rock. It is located on floodplains and has slopes of 0 to 2 percent, with elevations ranging from 10 to 50 feet. These soils have been artificially drained, runoff is slow, and permeability is moderate. The surface layer is a moderately alkaline silt loam about 18 inches thick that typically has a matrix chroma of 2. The water table is at a depth of 72 inches in most areas (USDA 1981). Within the Project Area, this series occurs in Study Areas C-04, C-06, P-01, and P-04..

Yolo series: The Yolo series consists of very deep, well drained soils that formed in alluvium from mixed rocks. Yolo soils are on alluvial fans and flood plains. Slopes range from 0 to 20 percent, but are typically 0 to 2 percent. The soil is well drained with slow to medium runoff and moderate permeability. Tillage pans have developed over broad areas and tend to restrict permeability. Within the Project Area, this series occurs in Study Areas C-04, C-05, C-06, C-07, C-08, C-11, C-15, and C-17.

Zamora series: The Zamora series consists of very deep, well drained soils that formed in alluvium from mixed rocks. Zamora soils are on nearly level to strongly sloping alluvial fans, stream terraces, and floodplains, usually with 0 to 9 percent slopes at elevations ranging from 30 to 1,300 feet. Mean annual precipitation ranges from 14 to 30 inches. Zamora soils exist in a dry, subhumid, mesothermal climate with hot dry summers and cool moist winters. Native vegetation typically consists of annual grasses, forbs, and widely spaced oaks. A typical profile includes five soil horizons: Ap, Bt1, Bt2,

Bt3, and Bwk. Within the Project Area, this series occurs in Study Areas C-06, P-04, and P-06.

3.3 Hydrology

The Project Area consists of natural creek segments (C-03, C-06, C-08, C-09, C-11, C-12, C-13, C-14, C-16, C-17, and P-06) and engineered or excavated channels and basins (C-01, C-02, C-04, C-05, C-07, C-10, C-15, and P-01) that are connected to surrounding creeks within the City of Pleasanton. Additional basins that were excavated in uplands occur (P-02, P-03, P-04, P-05, P-07, and P-08). The Project Area detention ponds are used as flood control features which are connected to the Project Area channels and creeks via culverts. Arroyo de la Laguna, a freshwater perennial stream, bounds nearly all Project Area sites to the west with C-06 functioning as a major artery that directs flow to Arroyo de la Laguna. Approximately 2,000 ft. south of Arroyo de la Laguna's connection to Arroyo Valle, which travels mainly east to west within the Project Area, the palustrine wetland feature transitions to a riverine feature (NWI 2019). All channel parcels of the Project Area are connected to Arroyo de la Laguna or Arroyo Valle, directly or indirectly. Other sources of hydrology to the Project Area is precipitation and surface run-off from adjacent lands. Precipitation typically occurs during the winter months, with little rainfall in the spring and summer. Average annual rainfall is 19 inches (NACSE 2019) with precipitation for the 2018 water year being slightly below average at approximately 15 inches for the entire Project Area (AHPS 2019).

4.0 METHODS

WRA, Inc. (WRA) biologists performed a delineation of aquatic resources within the Project Area in July and October of 2019. Prior to conducting the evaluation, WRA reviewed a range of background materials including the *Soil Survey of Alameda County* (USDA, 1980), the CSRL online soil viewer (CSRL 2019), the National Wetland Inventory (USFWS 2019), the California Aquatic Resource Inventory (SFEI 2019) and the U.S. Geological Survey (USGS) Livermore quadrangle map (USGS 2018). WRA also reviewed historic aerial imagery from Google Earth (Google Earth 2019) and Nationwide Environmental Title Research (NETR 2019).

During the on-site evaluation, WRA followed the methods outlined in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement; Corps 2008) and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* ("OHWM Guide"; Lichvar and McColley 2008). Potentially jurisdictional wetlands were identified and their boundaries mapped using the Routine Method described in the Corps Manual. The jurisdictional limits of non-wetland waters under Section 404 of the CWA were field checked based on a combination of field indicators described in the OHWM Guide.

4.1 Wetlands

4.1.1 Routine Method

WRA followed the Routine Method to evaluate the Project Area for the presence or absence of indicators of the three wetland parameters described in the Corps Manual (Environmental Laboratory 1987) and Arid West Supplement (Corps 2008). Data on vegetation, hydrology, and soils were collected at sample points within potential wetland communities and adjacent upland areas. Sample points that contained positive indicators for hydrophytic vegetation, hydric soils, and wetland hydrology were considered to be wetland. Except in cases of atypical or problematic wetland situations (i.e., difficult wetland situations, as described below), sample points that lacked one or more indicators were considered to be upland. Sample point data were reported on Arid West Supplement data forms. Sample point locations were recorded using a handheld GPS unit with sub-meter accuracy. Wetland boundaries were identified in the field using a combination of indicators observed on the ground, most often minor shifts in topography and changes in dominant vegetation, in addition to other indicators.

4.2 Non-Wetland Waters

This study also evaluated the presence of non-wetland waters potentially subject to Corps jurisdiction under Section 404 of the CWA. Non-wetland waters subject to Corps jurisdiction include lakes, rivers, and streams (including intermittent and ephemeral streams) in addition to all areas below the OHWM in non-tidal areas.

Perennial streams are defined as having flowing water year-round and determinations were based on presence of flowing water observed during site visits. Intermittent streams are defined as having flowing water during a portion of the year, often with groundwater providing input water for stream flow although it may not have flowing water during dry periods. Intermittent streams can show localized damp or wet areas during the dry season, more continuous flow indicators, or evidence of high flow regime than ephemeral streams. Ephemeral streams are defined as having flowing water occur only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Thus, determinations between intermittent and ephemeral streams were based on the interpretation of the location of the stream bed and flow indicators during dry season conditions.

4.3 Areas Potentially Exempt from Section 404 Jurisdiction

Some areas that meet the technical criteria for wetlands or waters may not be jurisdictional under the CWA per Section 404 regulations and the Corps Manual. Included in this category are:

- Some man-induced wetlands, including areas that are maintained only due to the presence of man-induced hydrology (1987 Corps Manual)
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (33 CFR 328.3a)
- Ditches dug wholly in, and draining only uplands and that do not carry a relatively permanent flow of water (51 Fed. Reg. 41206, Corps 2008)

- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing (51 Fed. Reg. 41206)
- Artificial reflecting or swimming pools, or other similar ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons (51 Fed. Reg. 41206)
- Areas that are isolated from and/or do not have a significant nexus to navigable waters of the U.S. (Corps 2008)

Features meeting the criteria for wetlands and non-wetland waters within the Project Area were evaluated in the context of these exemptions for making determinations of areas potentially within the Corps' jurisdiction.

5.0 RESULTS

Descriptions of the aquatic resources identified within the Project Area that are potentially subject to federal jurisdiction under Section 404 of the CWA and/or Section 10 of the RHA are provided in the following sections. Maps showing the location and extent of aquatic resources mapped within the Project Area are provided as Appendix B. Photographs of the Study Areas are provided as Appendix D. A list of all plant species observed during the delineation site visits is included as Appendix E. Table 2 below names the features to be regularly maintained by the City, what the feature type and general origin, and what WRA anticipates the regulatory status under the Corps to be based on the 2015 Clean Water Rule.

Table 2. Stream and Pond Features and Potential for Corps Jurisdiction

Number	Name	Feature Category	Potential Corps Jurisdiction?	Condition and Rationale
C-01	Pimlico Canal	Drainage Ditch	Yes	Concrete channel. Connects to channelized USGS Blue Line Stream on east end that then connects to Arroyo Mocho.
C-02	Pleasanton Canal	Drainage Ditch	Yes	Earthen engineered channel. Pleasanton Canal is a channelized USGS Blue Line Stream.
C-03	Foothill High School	Ephemeral Stream	Yes	Earthen channel. A USGS Blue Line Stream, unnamed feature that then connects to undergrounded system.
C-04	Bernal V-ditch	Drainage Ditch	Yes	Earthen engineered channel. Presumed underground connection to USGS Blue Line Stream, piped connection to Mission Creek
C-05	Bernal North/South V-ditch	Drainage Ditch	Yes	Earthen engineered channel. Connection to USGS Blue Line Stream, Mission Creek
C-06	Mission Creek Restoration Project	Ephemeral and Perennial Stream	Yes	Earthen engineered and natural channel. Mission Creek and downstream connection to a USGS Blue Line Stream, Arroyo de la Laguna.
C-07	Lower Kottinger Creek	Ephemeral Stream	Yes	Earthen engineered channel. Appears to have potential upstream connection to USGS Blue Line Stream, Kottinger Creek.
C-08	Upper Kottinger Creek	Intermittent Stream	Yes	Earthen channel. A USGS Blue Line Stream, Kottinger Creek.
C-09	Touriga Creek	Intermittent Stream	Yes	Earthen channel. A USGS Blue Line Stream.
C-10	Junipero Canal	Drainage Ditch	Yes	Earthen engineered channel. A USGS Blue Line Stream, Mission Creek.
C-11	Mission Park Creek	Ephemeral Stream and Detention Pond	Yes	Earthen channel. Mapped as historic portion of Mission Creek.
C-12	Cemetery Creek	Ephemeral Stream	Yes	Earthen channel, USGS Blue Line Stream.
C-13	Gold Creek	Ephemeral Stream	Yes	Earthen channel, USGS Blue Line Stream called Gold Creek.
C-14	Dublin Canyon Creek	Perennial Stream	Yes	Earthen channel, USGS Blue Line Stream called Dublin Creek
C-15	Stonedale Channel	Drainage Ditch	Yes	Engineered channel connects Gold Creek to Alamo Canal
C-16	Arlington Creek	Intermittent Stream and Perennial Marsh	Yes	Earthen channel, appears to connect to USGS Blue Line Stream named Happy Valley Creek

Number	Name	Feature Category	Potential Corps Jurisdiction?	Condition and Rationale
C-17	Rutledge Place Culvert	Ephemeral Stream	Yes	Earthen channel appears to have downstream connection to Mission Creek
P-01	Stoneridge Pond	Detention Pond	Yes	Earthen detention pond. Artificial water body, constructed through channelized portion of a USGS Blue Line Stream, Arroyo Las Positas.
P-02	Bernal Detention Pond Central	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body adjacent to channelized feature.
P-03	Canyon Oaks Detention Pond	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body that is adjacent to USGS Blue Line Stream.
P-04	Bernal Detention Pond West	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body that is adjacent to USGS Blue Line Stream.
P-05	Callippe Detention Pond	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body excavated in uplands.
P-06	Oak Tree Farms Detention Pond	Detention Pond and Ephemeral Stream	Yes	Earthen detention pond and earthen channel. Input is unnamed intermittent stream and output is piped stormdrain connection to Arroyo de la Laguna.
P-07	Vineyard West Detention Pond	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body excavated in uplands.
P-08	Vineyard East Detention Pond	Detention Pond	Exempt (b6)	Earthen detention pond. Artificial water body excavated in uplands.

5.1 Section 404 of the Clean Water Act

5.1.1 Non-wetland Waters

A summary of aquatic resource acreages and linear channel length is provided in Table 3. Five types of non-wetland waters were delineated in the Study Area: drainage ditch, intermittent stream, ephemeral stream, perennial stream, and detention pond (Table 3). The five types of non-wetland waters are associated with natural creek segments, channelized drainage ditches and detention ponds throughout Pleasanton and the Project Area. There are 17 Study Area creek or channel segment features that generally convey water to the west/ southwest towards Arroyo de la Laguna. Two detention ponds are used as flood control features; one has a direct input from an intermittent stream and one appears to have been constructed by excavation in the location of a channel.

Table 3. Summary of Potentially Jurisdictional Features Mapped in the Project Area

Habitat Type	Classification*	Acres	Linear Feet	Potential Section 404 Waters of the U.S. (acres/linear feet)
Non-wetland Waters				
Drainage Ditch	R4, R6	2.45	7,632	2.45/ 7,632
Intermittent Stream	R4	1.18	5,920	1.18/ 5,920
Ephemeral Stream	R6	0.92	4,537	0.92/ 4,537
Perennial Stream	R3	2.36	5,255	2.36/ 5,255
Detention Pond	P	1.94	N/A	1.94
Wetland Waters				
Perennial Marsh	R4SB7	0.04	N/A	0.04
Total:		8.90	23,343	8.90/ 23,343

*See Federal Geographic Data Committee 2013

Drainage Ditch

Six drainage ditches (Study Areas C-01, C-02, C-04, C-05, C-10, and C-15) were delineated within the Project Area and throughout the City of Pleasanton. All of these reaches are channelized, used for drainage purposes, and can be categorized as drainage ditches.

Pimlico Canal: C-01 is located immediately south of Interstate 580 and north of Pimlico Drive. C-01 is a concrete lined drainage ditch with culverts feeding into the eastern and western portions of the linear feature. The edge of the concrete is lined with ruderal grassland with the rest of the Study Area is pavement. No water was observed in the ditch at the time of the site visit.

Pleasanton Canal: C-02 is located immediately south of the Pleasanton Sports Complex and north of a residential area. C-02 is a linear earthen channel that runs northeast to southwest. The channel is bordered by ruderal grassland along the top of bank with paved and developed areas occurring just outside of the ruderal grassland. No water was observed within the channel at the time of the site visit.

Bernal V-Ditch: C-04 flows between culverts from east to west along Bernal Avenue. Patelco Sports Complex borders the linear feature to the south. This linear feature is an engineered earthen drainage ditch with ruderal grassland located along the ordinary high water mark and at the top of bank. Some scattered riparian trees, such as black walnut, were observed along the top of bank. Outside the top of bank and riparian area, a paved road and paved trail are present. No water was observed within the ditch at the time of the site visit.

Bernal North/ South Ditch: C-05 is an engineered, linear drainage ditch which runs north to south perpendicular to Bernal Avenue and adjoins to Study Area C-06. The dominant vegetative community is ruderal grassland – some scattered riparian trees, such as black walnut and catalpa (*Catalpa bignonioides*) occur along the ditch. No water was observed within the ditch at the time of the site visit.

Junipero Canal: C-10 is an engineered linear earthen drainage ditch that runs east to west along Valley Avenue. Detention Basin P-03 is located along the north side of the ditch but it is unclear if this feature is connected. The drainage ditch has two overcrossings: Case Avenue and a former railbed, now informally used as a public trail. Below the OHWM, the ditch was dominated by obligate plant species, such as cattail (*Typha sp.*, OBL) and California bulrush. Above the OHWM, the banks were dominated by ruderal grassland. Some water was observed pooling under the Case Avenue Bridge, which, based on site observations, originates from localized nuisance flows.

Stonedale Channel: C-15 is a concrete-lined engineered channel which passes through two culverts: one on the western side of the channel which runs under Interstate 680 and a second on the eastern side of C-15 under Stonedale Drive. Vegetation observed within the channel includes cattails and watercress (*Nasturtium officinale*, OBL). A few inches of ponded water was observed within the ditch at the time of the site visit.

Intermittent Stream

Five intermittent stream segments were delineated throughout Project Area: Study Areas C-07, C-08, C-09, C-11, C-16.

Upper Kottinger Creek: C-08 runs adjacent to the north of Kottinger Drive and flows under Adams Way and Bernal Avenue via a series of concrete and cobblestoned culverts. Kottinger Community Park is located between Adams Way and Bernal Avenue and portions of the creek bank are landscaped with grass and developed with paved foot paths. Species observed within the associated riparian corridor includes valley oak and cottonwood (*Populus fremontii*, NL). Water was observed pooling at these culverts but creek segments between culverts were dry with shallow yet defined earthen bed and banks.

Touriga Creek: C-09 runs adjacent to Palomino Drive from Bernal Avenue and runs east to west through various residential area and its western-most point ends at Vintage Hills Park. C-09 runs under Concord Street and Touriga Drive via concrete culverts; some nuisance flow was

observed pooling on either side of these road crossings. C-09 has an associated riparian corridor; species species observed included valley oak, coast live oak, and Mexican fan palm (*Washingtonia robusta*, FACW). Portions of C-09 are landscaped with grass and developed with paved foot paths and residential area. Aside from water pooling near the road crossings, the creek was dry at the time of the site visit.

Mission Park Creek: C-11 is a small intermittent stream segment located within Mission Park. Within the Study Area, the creek flows from an engineered basin at the eastern end of the park, into a culverted segment beneath a recreational grass area, and daylights in the western portion of the park. While the creek has an associated coast live oak and weeping willow (*Salix babylonica*, FAC) riparian corridor, most of the Study Area is landscaped with ornamentals. No water was present within the creek at the time of the site visit. Minimal ponding originating from nuisance flows were observed within the basin.

Arlington Creek: C-16 is an intermittent creek located in a residential development in the southern portion of the City. The channel is earthen bed and banks with bank shelving for ordinary high water marks. A portion of the creek opens into an in-stream perennial marsh and resumes back to intermittent stream within the southern portion of Study Area. The northern portion of the creek runs east/ west through a culvert that travels under Arlington Drive and then occurs along a residential yard. Vegetation observed within the associated riparian corridor include willow and coyote brush. No water was observed within the creek at the time of the site visit.

Ephemeral Stream

There were seven ephemeral streams delineated within the Project Area; C-03, C-06, C-07, C-12, C-13, C-17, P-06. Water is conveyed in these features briefly during and following a precipitation event.

Foothill High School Trash Rack: C-03 is located within the boundaries of Foothill High School, adjacent to school recreation areas and campus. This segment of naturalized creek contains a defined earthen bed and bank with an OHWM as bank shelving. Species observed in the riparian corridor include black walnut and valley oak. No water was observed at the time of the site visit.

Mission Creek Restoration Project: A majority of C-06 is perennial stream with a small channelized northern portion that is ephemeral. It runs northeast/ southwest and sits south of Bernal Avenue. This portion of C-06 was dry at the time of the site visit.

Lower Kottinger Creek: C-07 is an ephemeral stream which runs through Lions Wayside Park and Delucchi Park in downtown Pleasanton. The stream is has an incised earthen bed and bank, portions of which have been stabilized with grouted rock. The creek has an associated riparian corridor; plant species observed in the riparian corridor include coast live oak, valley oak, walnut, and ornamental tree species. No water was observed in the northern reach at the time of the site visit. The lower reach had a few inches of clear flowing water that appear to be nuisance flows originating at the Neal Street overcrossing.

Cemetery Creek: C-12 is an ephemeral creek which flows perpendicular to Sunol Boulevard, adjacent to Pleasanton Veterans Memorial. This feature has a distinct earthen bed and bank and an associated riparian corridor dominated by black walnut and blue gum (*Eucalyptus globulus*, NL). No water was observed within the creek at the time of the site visit.

Gold Creek: C-13 is an ephemeral creek which runs adjacent to Foothill Road near the Stoneridge Drive/Foothill Road intersection. Located within Moller Park, the creek has a distinct riparian corridor dominated by coast live oak and buckeye (*Aesculus californica*, NL). Outside of the corridor, the park is predominantly landscaped with grass and walking paths. No vegetation was present in the channel. Ponded water occurred at some culvert locations but flowing water was not observed.

Rutledge Place Culvert: C-17 is located immediately south of Lund Ranch Road within a residential development. The feature runs from a culvert beneath Lund Ranch Road, flows north/ south and has a distinct earthen bed and bank. Vegetation observed includes coast live oak, valley oak, and a bare understory.

Oak Tree Farms Detention Pond: C-18 is located immediately west of a residential development at the southern end of Fondry Court with open and undeveloped land to the west. C-18 consists mainly of an ephemeral channel with distinct earthen bed and bank that feeds south to a detention pond P-06 (described with detention ponds below). Primary vegetation observed within the P-06 Study Area was ruderal grassland with some small younger coast live oak trees denoting the southern boundary of the channel's larger, off-site riparian corridor. The channel was dry at the time of the survey.

Perennial Stream

There were two perennial streams (Study Areas C-06 and C-14) delineated within the Project Area. Flowing water was observed at both of these features.

Mission Creek Restoration Project: C-06 spans from Bernal Avenue to Arroyo de la Laguna and travels south. Valley Avenue bisects C-06 which continues flowing under the road via culverts; it also travels under an Interstate 680 bridge. Habitat along this creek varies from coast live oak, coyote brush scrub, and riparian. Water was observed throughout much of the channel with the northernmost portion of the creek being dry. Mission Creek conveys water through a natural channel with its southern tip ending in a concrete channel that drains into Arroyo de la Laguna. Slowly flowing water of several inches to up to several feet deep were observed in different segments of the channel.

Dublin Canyon Creek: C-14 consists of four short segments of Dublin Canyon Creek and is located near the entrance of two residential developments, just south of I-580. Each segment has a distinct, steep bed and bank with mature riparian vegetation consisting of coast live oak, willow and sycamore. Flowing water was observed within the creek.

Detention Pond

There are two potentially jurisdictional detention ponds (Study Areas P-01 and P-06) located within the Project Area. These detention ponds are used as flood control features and are generally dry during the dry summer months.

Stoneridge Pond: P-01 is located immediately north of Stoneridge Drive with a parking lot adjacent to the north and Stoneridge Creek Way bordering the ponds western edge. Some riparian corridor was observed along the footpath that extends from Stoneridge Creek Way into the southwest tip of P-01. Habitat bordering above the ordinary high water mark of the basin

includes ruderal grassland which is surrounded by landscaped and developed area. The pond was dry at the time of the site visit.

Oak Tree Farms Detention Pond: P-06 consists mainly of detention pond that drains to the south with input from a distinct bed and bank/ephemeral stream feature north of it. The main biological community observed at P-06 was ruderal grassland; vegetation observed included yellow star thistle, Harding grass (*Phalaris aquatica*, FACU) and black mustard (*Brassica nigra*, NL). The detention pond was dry at the time of the survey and connects into culverts at the southeast end.

5.1.2 Wetland Waters

One in-stream wetland feature was delineated within the Project Area; a perennial marsh located within Arlington Creek (C-16). This determination was given for the perennial bulrush vegetation that is dominant in the feature. C-16 is located directly in a residential development to the east of Riddell Street and to the west of Arlington Drive. An intermittent stream feature runs east to west within C-16 which opens into an intervening section of perennial marsh as the stream feature turns south. Vegetation observed within the marsh includes California bulrush and smartweed. The perennial marsh then thins and returns to an intermittent stream feature with a defined bed and bank running south out of the Project Area.

5.2. Areas Exempt from Section 404 Jurisdiction

Non-Jurisdictional Areas Under the 2015 Rule

Currently, the state of California is subject to 2015 Clean Water Rule, and definitions included therein, published by the EPA and the Corps in 2015 (the “2015 Clean Water Rule” or the “Rule”). In the 2015 Clean Water Rule, waters of the U.S. are defined in paragraph (a) and include six feature types. However, the rule retains CWA exclusions and also has added back specific exclusions in the Rule, paragraph (b). The categorically excluded features below are not considered waters of the U.S. (33 CFR 328.3)(b), even where they otherwise may meet definitions for included features defined in paragraph 33 CFR 328.3 (a). As relevant here, the Rule excludes certain stormwater basins, including those (b6) stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

Table 3 below names the features to be regularly maintained by the City, what the feature type and general origin, and what WRA anticipates the regulatory status under the Corps to be based on the 2015 Clean Water Rule and the non-jurisdictional (b6) definitions would be. The site analysis provides an origin assessment based upon review of the Alameda Creek Watershed and Arroyo de la Laguna subwatershed (Sowers and Richard 2003). The non-jurisdictional (b6) exemption for stormwater control features constructed to convey, treat, or store stormwater that are created in dry land is directly applicable to the following Study Areas: Bernal Detention Pond Central (P-02), Canyon Oaks Detention Pond (P-03), Bernal West Detention Pond (P-04), Happy Valley Golf Course Detention Pond (P-05), Vineyard West Detention Pond (P-07), and Vineyard East Detention Pond (P-08).

Exempt Detention Ponds

There are six detention ponds (Study Areas P-02, P-03, P-04, P-05, P-07, and P-08) located within the Project Area that are presumed to be exempt from Corps jurisdiction. These

detention ponds are used as flood control features and are generally dry during the dry summer months.

Bernal Central Detention Pond: Study Area P-02 is located just north of where Interstate 680 and Laguna Creek Lane intersect and appears to have been entirely excavated in uplands. P-02 contains a series of different basins that vary in elevation and size with some being dammed by rip-rap walls. The basin located in the northwest corner of P-02 contained water that was dammed by a rip-rap wall along the southern end; all other basins were dry. Some riparian habitat was observed along the top of bank which included cottonwood and coyote brush.

Canyon Oaks Detention Pond: Study Area P-03 is located immediately north of C-10 and appears to be entirely excavated in uplands. The detention pond contains two distinct basins that lacked vegetation and had a dry, cracked surface. Vegetation community observed outside of the dry basin comprised of ruderal grassland.

Bernal West Detention Pond: Study Area P-04 is located adjacent to the southern end of C-06 and has residential area bordering the pond to the north. The detention pond appears to have been entirely excavated in uplands. Some standing water was observed near the culvert at the trail entrance that begins at Laguna Creek Lane. Habitat outside of the basin consisted of ruderal grassland.

Happy Valley Golf Course Detention Pond: Study Area P-05 is bordered by Westbridge Lane to the north and residential area to the west and the detention pond appears to have been entirely excavated in uplands. The basin was dry at the time of the site visit. Ruderal grassland occurs along the bank with some developed land along the western portion of the basin.

Vineyard West Detention Pond: Study Area P-07 is located immediately north of Vineyard Avenue with agriculture fields to the south and several ponds/ lakes to the north including Island Pond and Shadow Cliffs Lake. Surrounding area to the south includes residential development. The detention pond appears to have been excavated entirely in uplands. P-07 is a long detention pond feature with culverts located on the eastern and western portions of the site. Vegetation community observed includes ruderal grassland. Rip rap berms were observed near the culverts with a paved path occurring near the northwest border of the site. No water was observed during the site visit.

Vineyard East Detention Pond: Study Area P-08 is located approximately 0.5 miles to the south of P-07 immediately north of Vineyard Avenue. The detention pond appears to have been entirely excavated in uplands. Biological communities observed includes ruderal grassland and riparian; vegetation observed includes wild oat, yellow star thistle and willow. No water was observed at the time of the site visit. Portions of the top of bank surrounding the pond are developed with a gravel driving path.

5.3 Uplands

The majority of upland within the Project Area are ruderal non-native forb and grassland areas. Dominant vegetation in areas determined to be uplands included wild oat, ripgut brome, harding grass, black walnut, coyote brush and yellow star thistle.

6.0 CONCLUSIONS

The results of this delineation of aquatic resources was based on conditions observed during the time of the assessment and information provided to WRA by The City of Pleasanton. It should be noted that the Corps makes all final decisions regarding regulatory jurisdiction, and WRA recommends securing a Jurisdictional Determination from the Corps before embarking on any project activities that could result in the loss of Waters of the United States.

7.0 REFERENCES

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APPENDIX A

FIGURES

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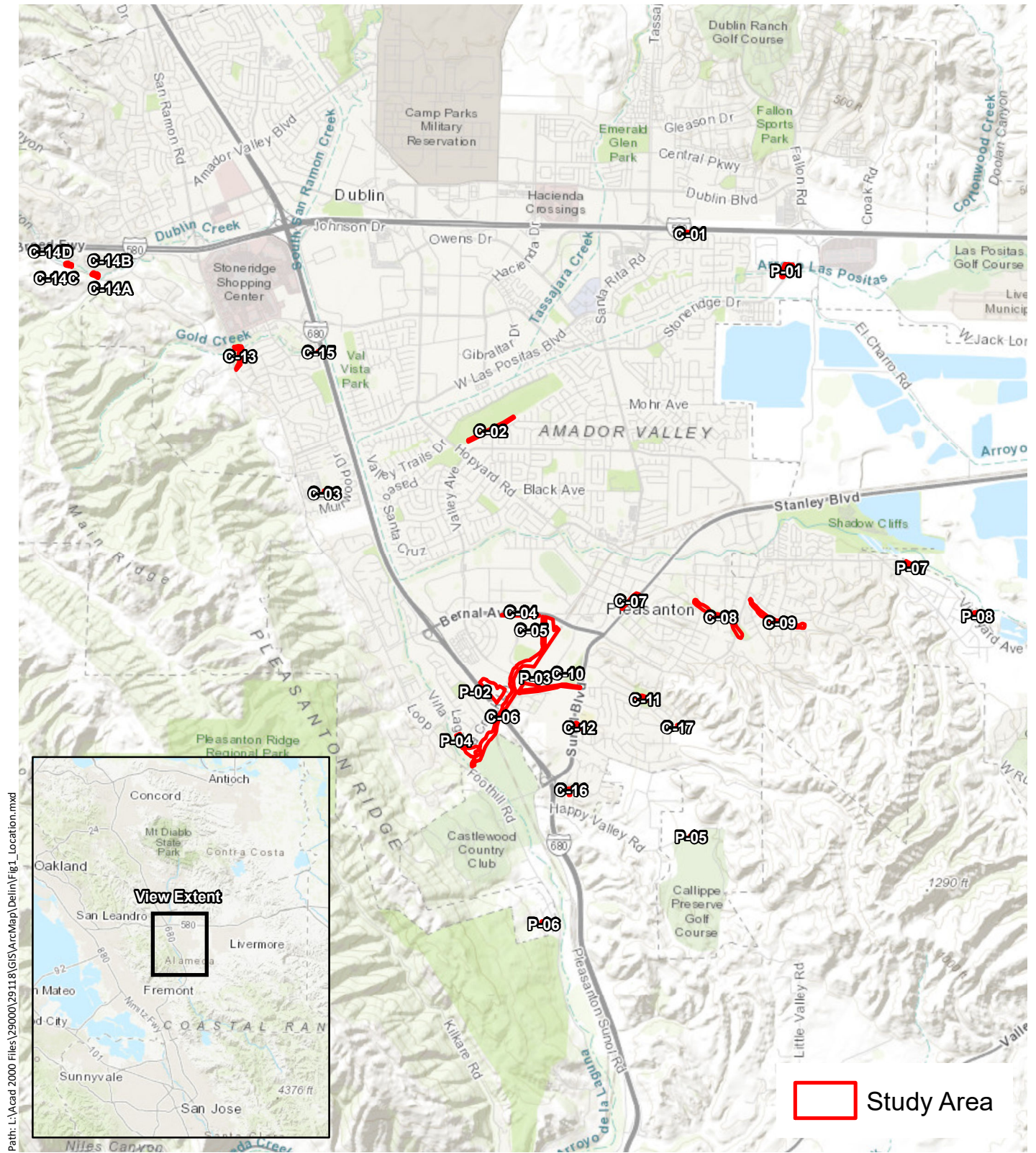
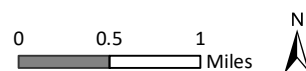


Figure 1. Study Area Location Map

City of Pleasanton
Stream Maintenance Program
Alameda County, California



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APPENDIX B



POTENTIAL WETLANDS AND WATERS OF THE UNITED STATES

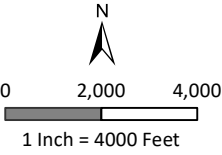
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Appendix B-1.
Potential Section 404
Jurisdictional Features
(Overview)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



-  Study Area
-  Appendix Index



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Appendix B-2.
Potential Section 404
Jurisdictional Features
(C-01)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

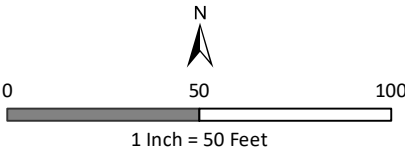
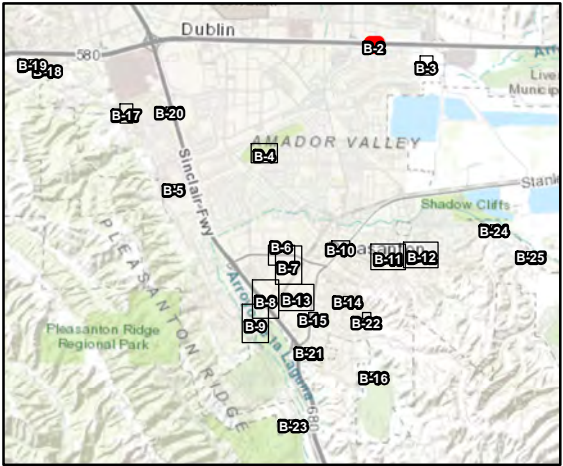


Study Area

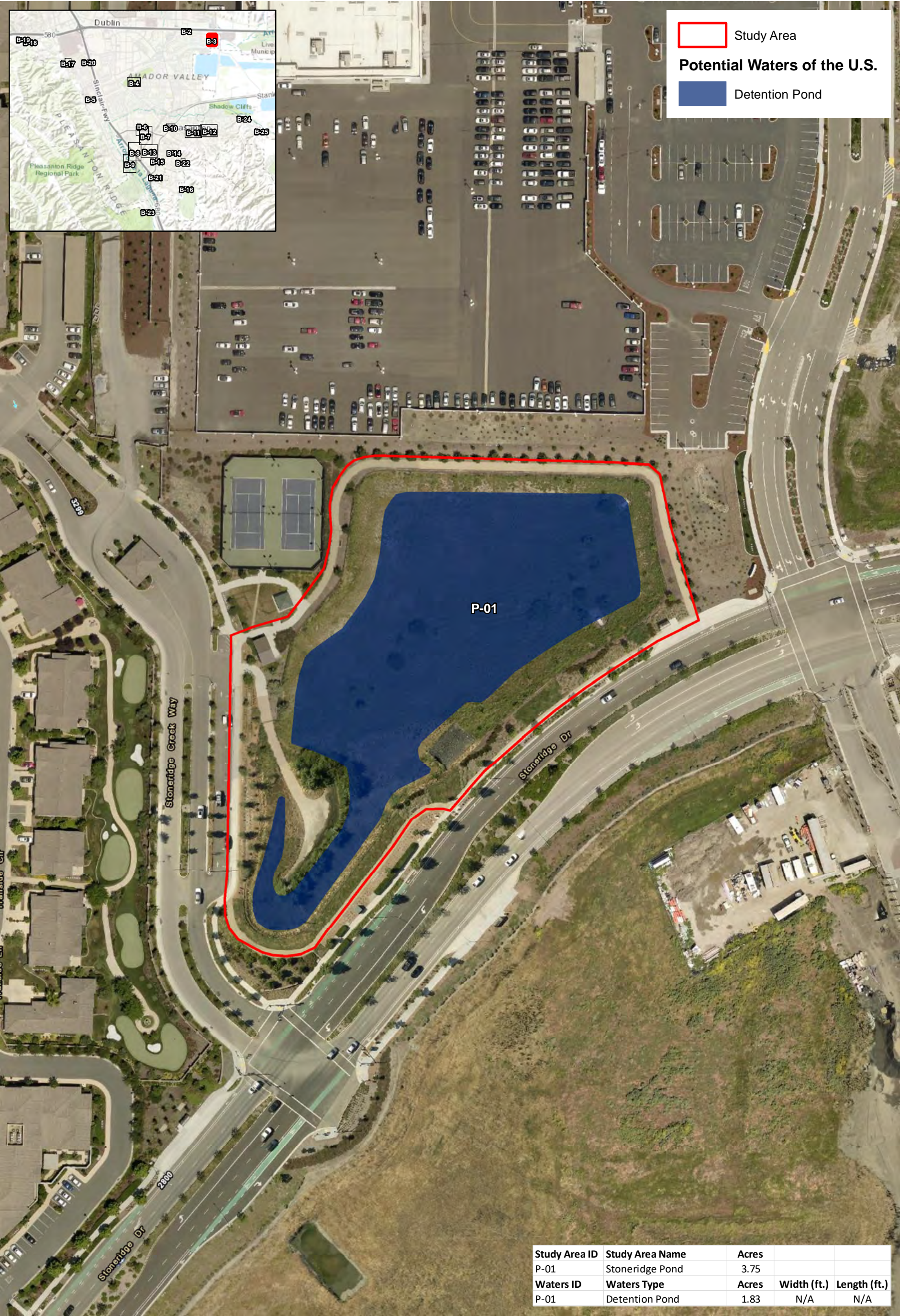
Potential Waters of the U.S.



Drainage Ditch



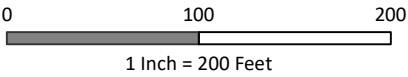
Study Area ID	Study Area Name	Acres		
C-01	Pimlico Canal	0.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-01	Drainage Ditch	0.11	10	495



Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-3. Potential Section 404 Jurisdictional Features (P-01)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



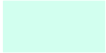
Appendix B-4.
Potential Section 404
Jurisdictional Features
(C-02)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

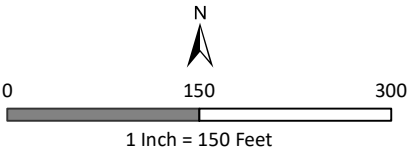
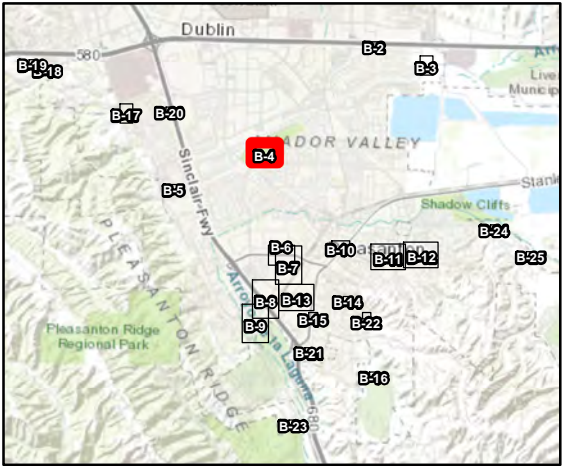


Study Area

Potential Waters of the U.S.

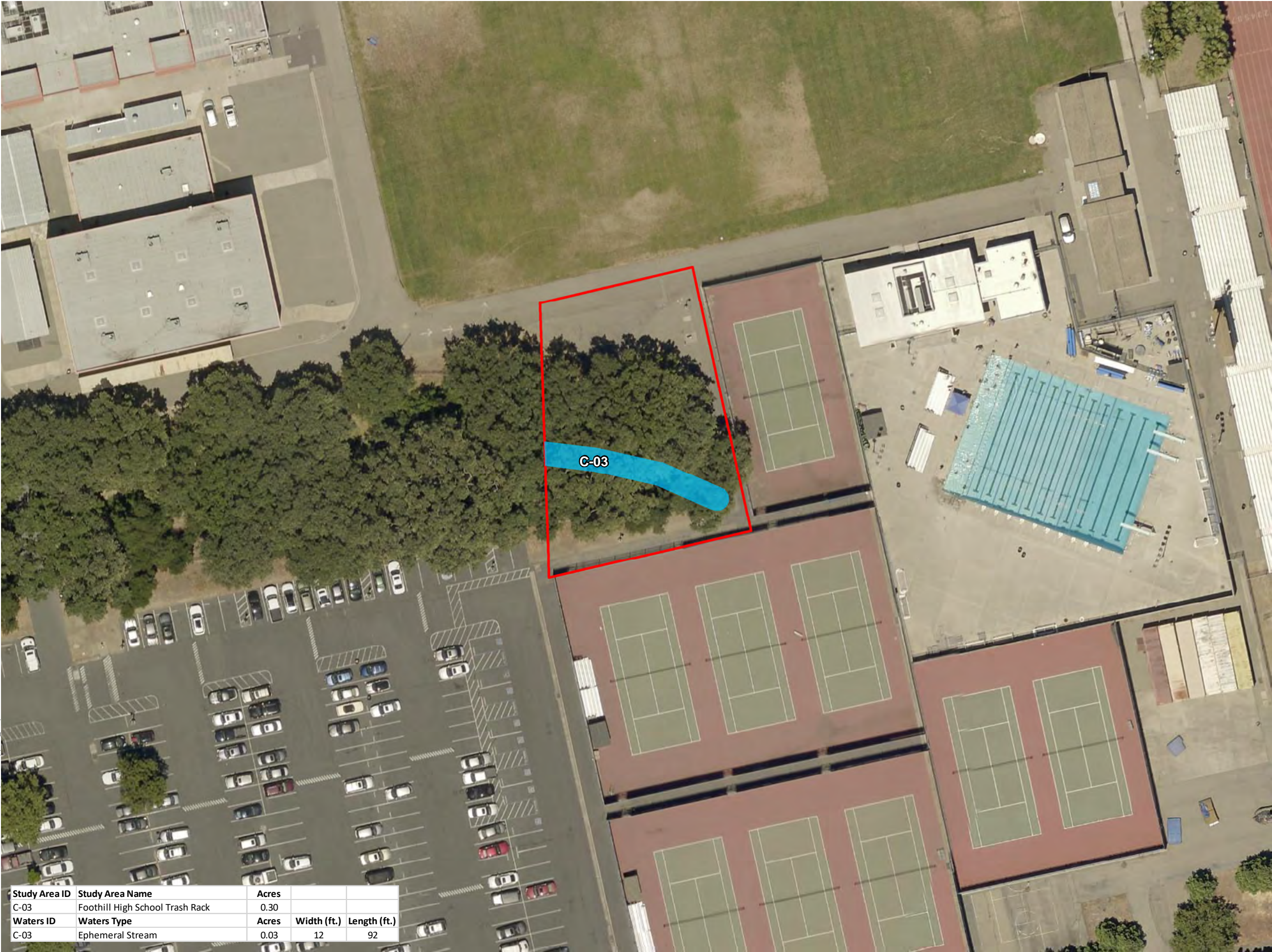


Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-02	Pleasanton Canal	3.42		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-02	Drainage Ditch	0.71	15	2060

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



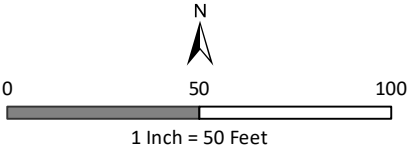
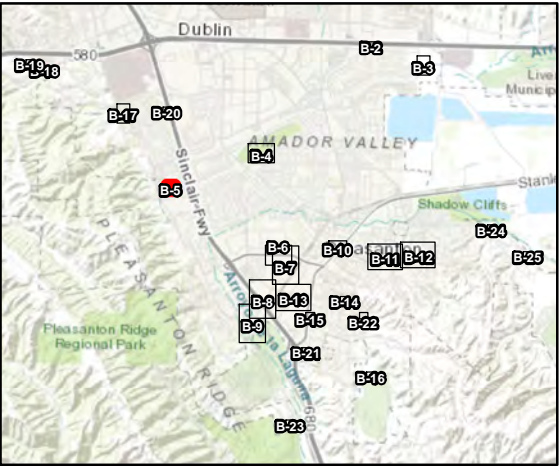
Appendix B-5.
Potential Section 404
Jurisdictional Features
(C-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

Study Area

Potential Waters of the U.S.

Ephemeral Stream

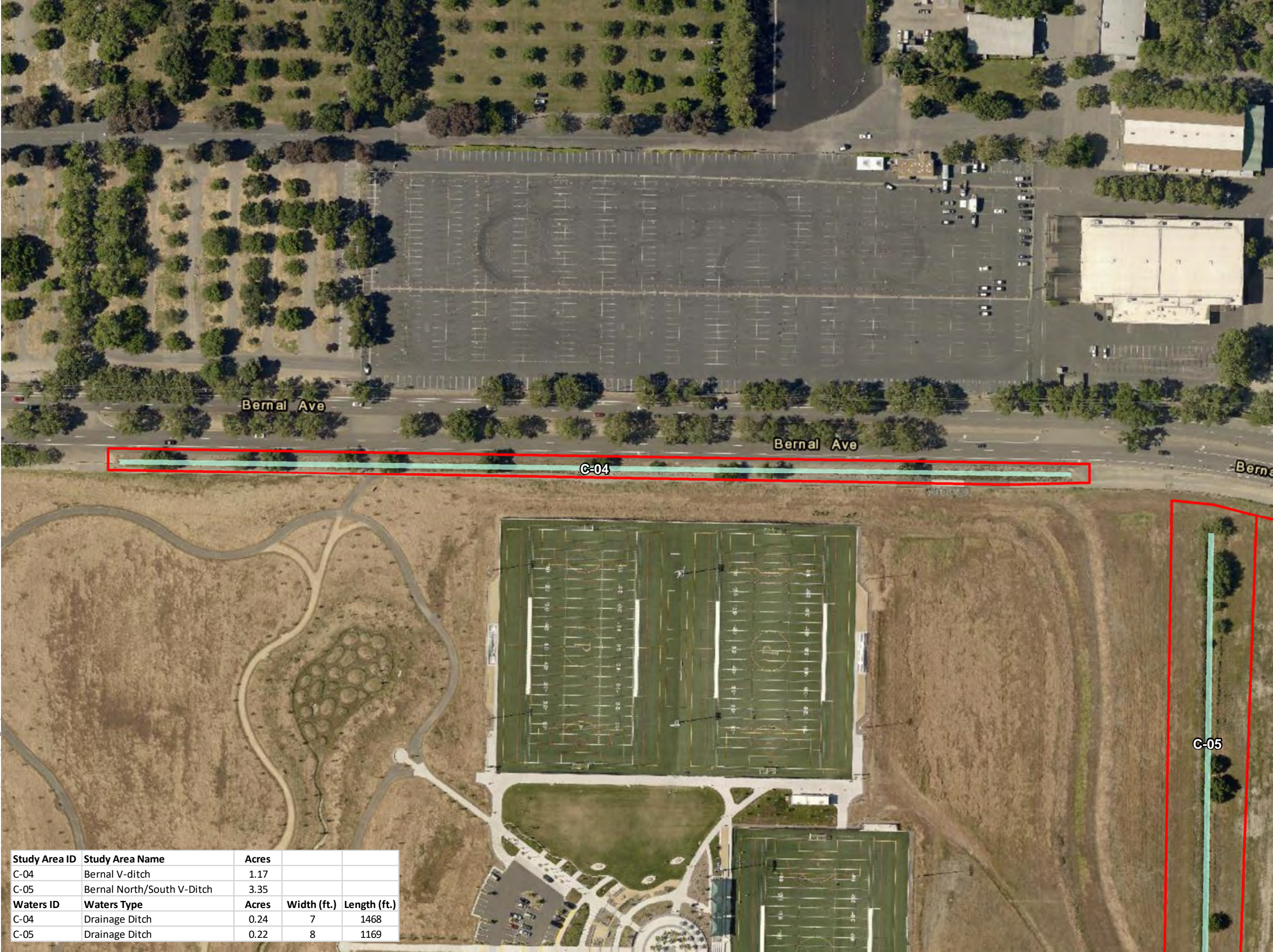


Study Area ID	Study Area Name	Acres		
C-03	Foothill High School Trash Rack	0.30		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-03	Ephemeral Stream	0.03	12	92

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

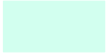
Appendix B-6.
Potential Section 404
Jurisdictional Features
(C-04, C-05)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

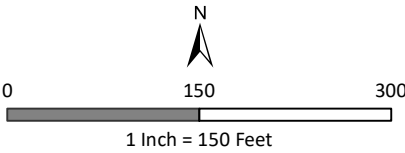
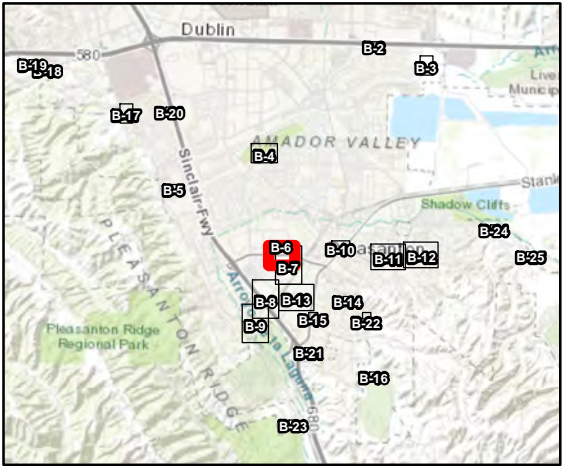


Study Area

Potential Waters of the U.S.



Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-04	Bernal V-ditch	1.17		
C-05	Bernal North/South V-Ditch	3.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-04	Drainage Ditch	0.24	7	1468
C-05	Drainage Ditch	0.22	8	1169

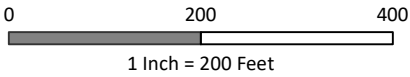
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/26/2019

Appendix B-7. Potential Section 404
Jurisdictional Features (C-04, C-05, C-06)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



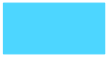
Appendix B-10.
Potential Section 404
Jurisdictional Features
(C-07)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area

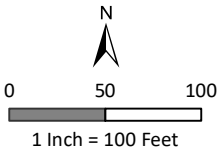
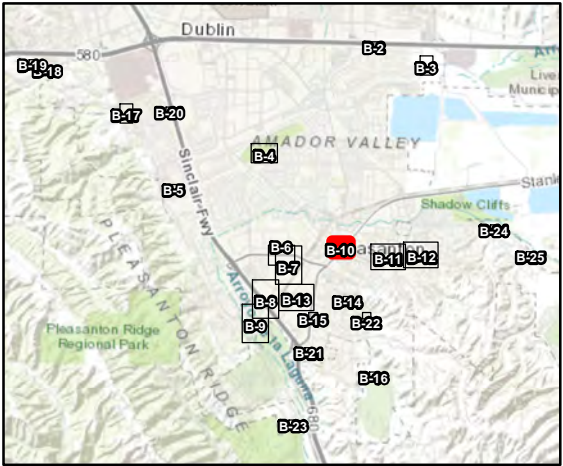
Potential Waters of the U.S.



Ephemeral Stream



Intermittent Stream



Appendix B-11.
Potential Section 404
Jurisdictional Features
(C-08)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

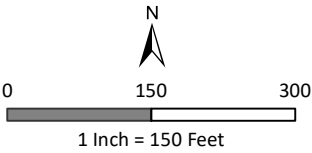
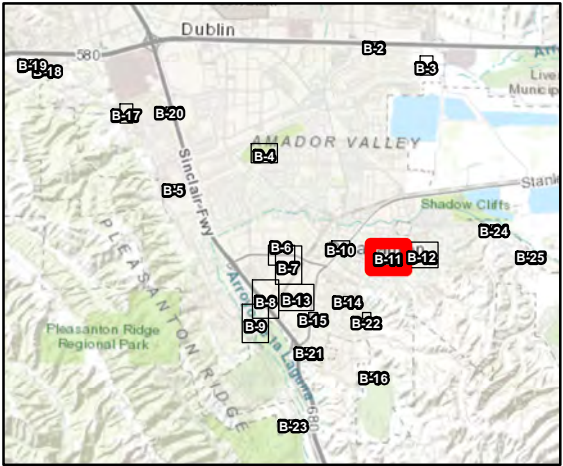


Study Area

Potential Waters of the U.S.



Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-08	Upper Kottinger Creek	8.01		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-08	Intermittent Stream	0.34	6	2450

Appendix B-12.
Potential Section 404
Jurisdictional Features
(C-09)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

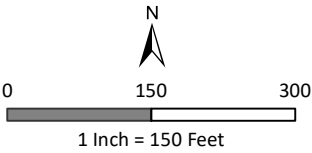
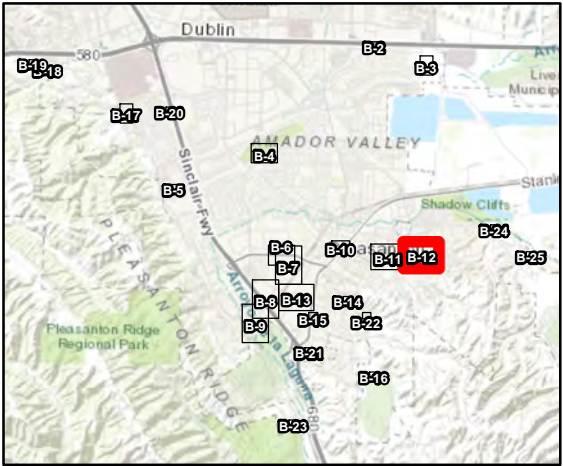


Study Area



Intermittent Stream

Potential Waters of the U.S.



Study Area ID	Study Area Name	Acres		
C-09	Touriga Creek	6.63		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-09	Intermittent Stream	0.58	10	2537

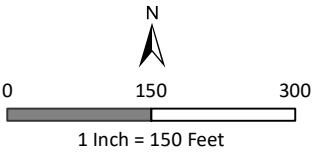
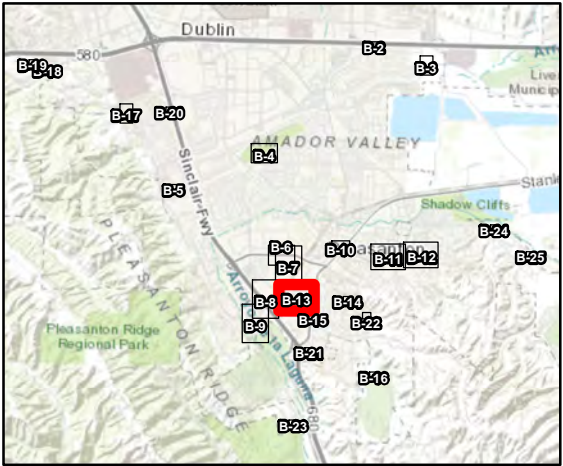
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-13.
Potential Section 404
Jurisdictional Features
(C-10, P-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

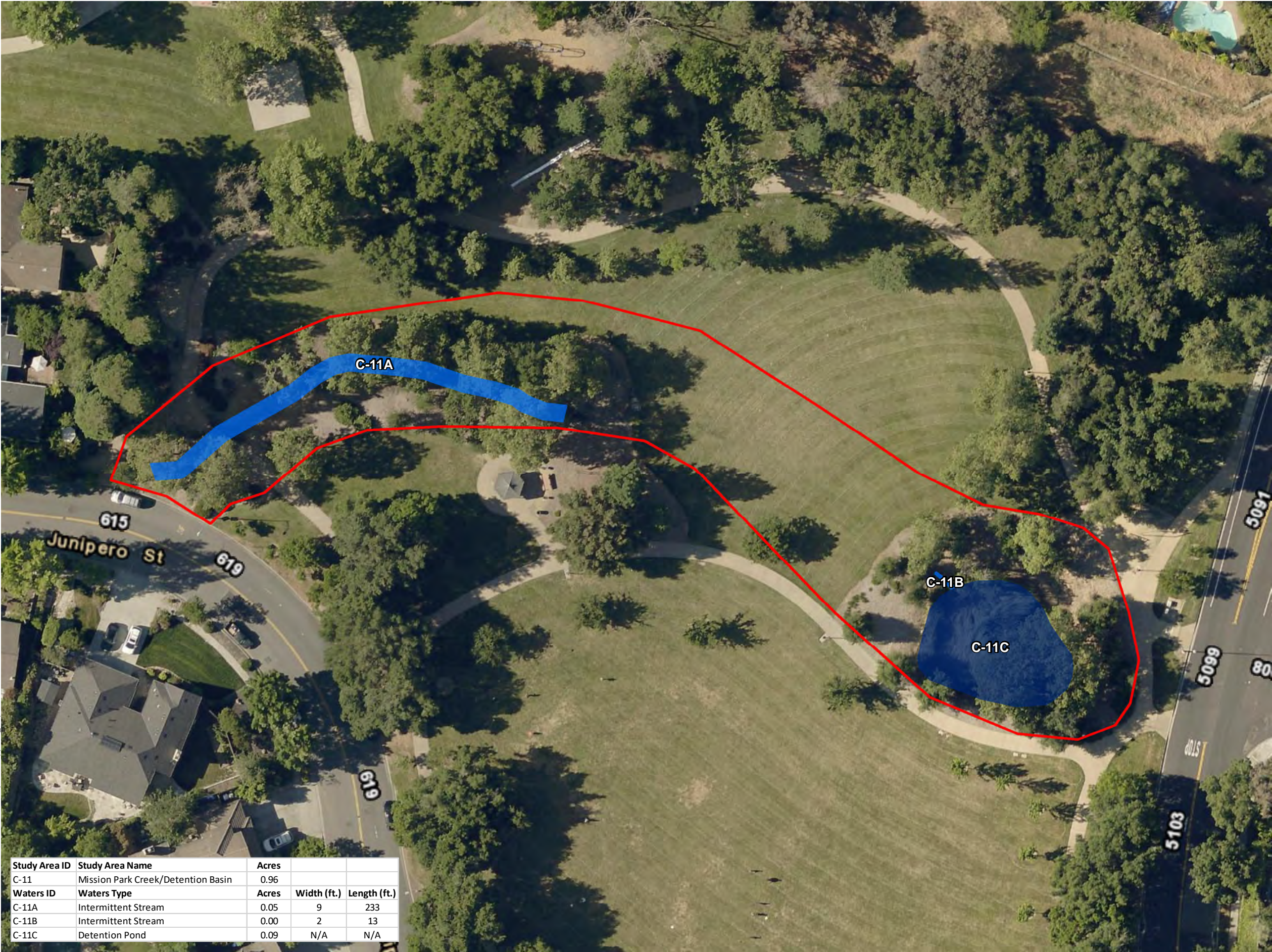


- Study Area
- Potential Waters of the U.S.**
- Drainage Ditch
- Exempt Features**
- Detention Pond



Appendix B-14.
Potential Section 404
Jurisdictional Features
(C-11)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

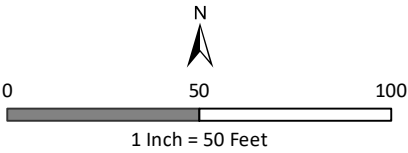
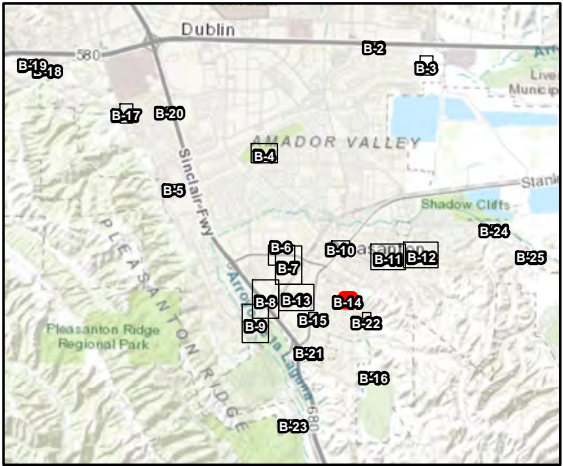


Study Area

Potential Waters of the U.S.

Detention Pond

Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-11	Mission Park Creek/Detention Basin	0.96		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-11A	Intermittent Stream	0.05	9	233
C-11B	Intermittent Stream	0.00	2	13
C-11C	Detention Pond	0.09	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-15.
Potential Section 404
Jurisdictional Features
(C-12)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

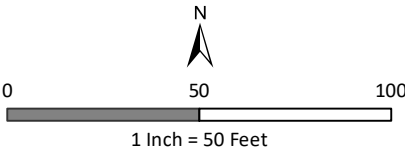
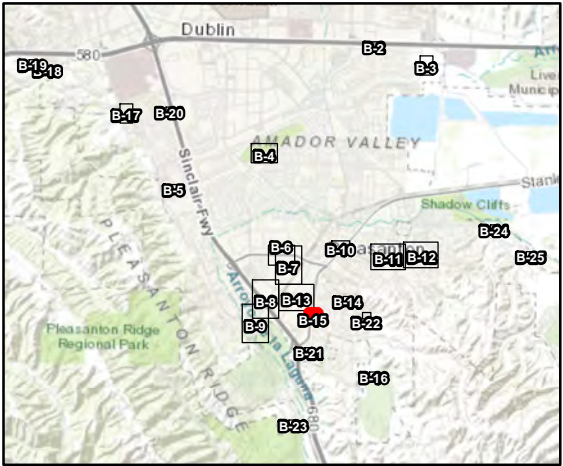


Study Area

Potential Waters of the U.S.



Ephemeral Stream



Study Area ID	Study Area Name	Acres		
C-12	Cemetery Creek	0.81		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-12	Ephemeral Stream	0.05	6	365

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-16.
Potential Section 404
Jurisdictional Features
(P-05)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

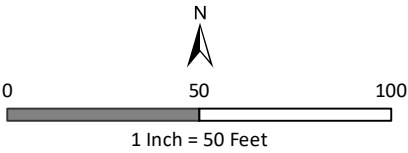
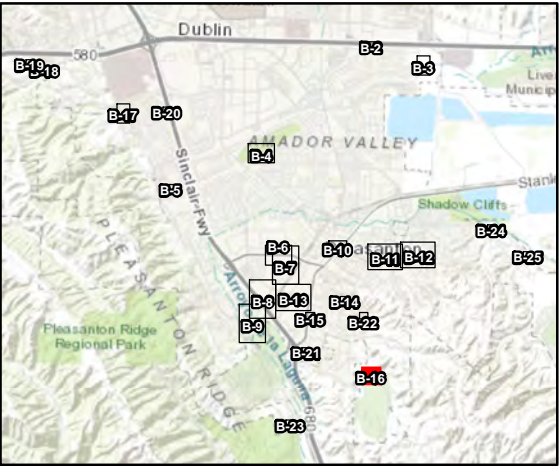


Study Area

Exempt Features

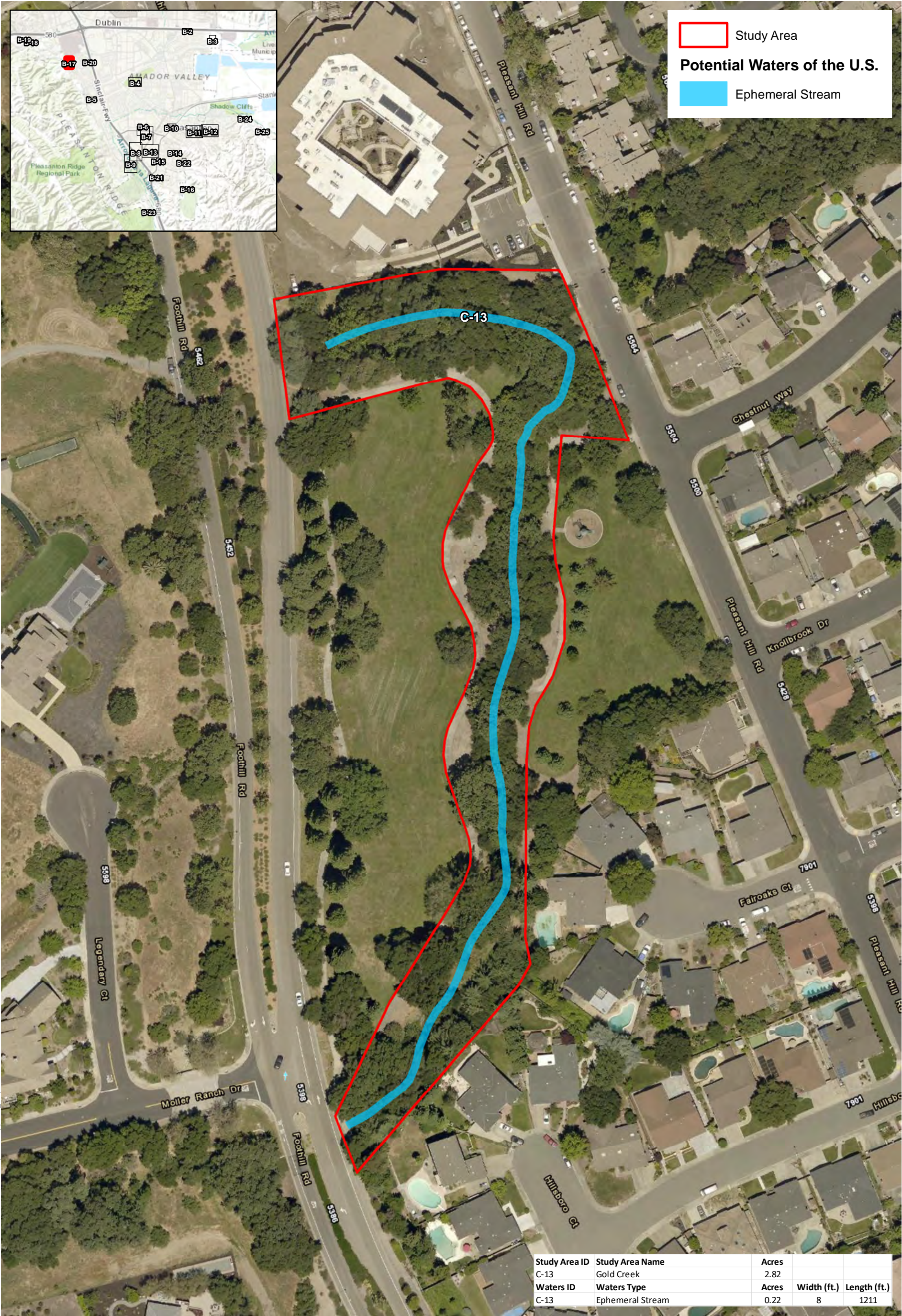


Detention Pond



Study Area ID	Study Area Name	Acres		
P-05	Callippe Detention Pond	0.18		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
P-05	Detention Pond	0.08	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-18.
Potential Section 404
Jurisdictional Features
(C-14A, C-14B)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

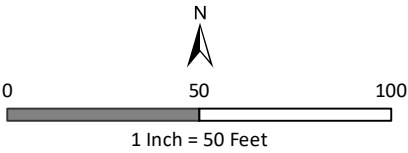
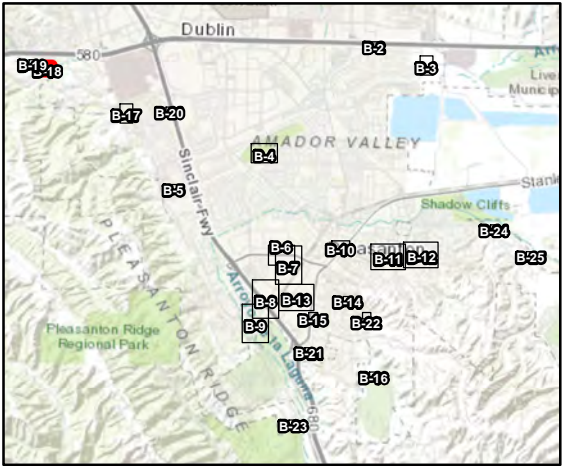


Study Area

Potential Waters of the U.S.



Perennial Stream



Study Area ID	Study Area Name	Acres		
C-14A	Dublin Canyon Creek Segment A	0.52		
C-14B	Dublin Canyon Creek Segment B	0.37		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-14A	Perennial Stream	0.05	15	157
C-14B	Perennial Stream	0.04	15	126

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-19.
Potential Section 404
Jurisdictional Features
(C-14C, C-14D)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

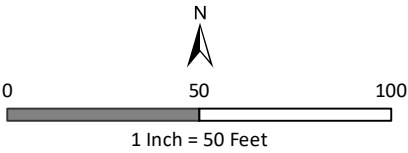
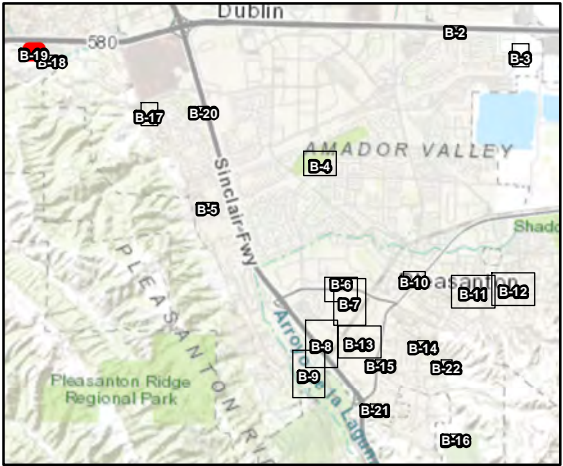


Study Area

Potential Waters of the U.S.



Perennial Stream



Study Area ID	Study Area Name	Acres		
C-14C	Dublin Canyon Creek Segment C	0.42		
C-14D	Dublin Canyon Creek Segment D	0.36		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-14C	Perennial Stream	0.04	15	119
C-14D	Perennial Stream	0.03	10	107

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

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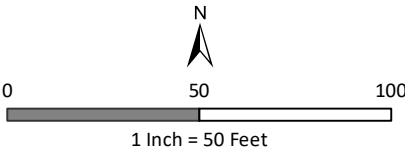
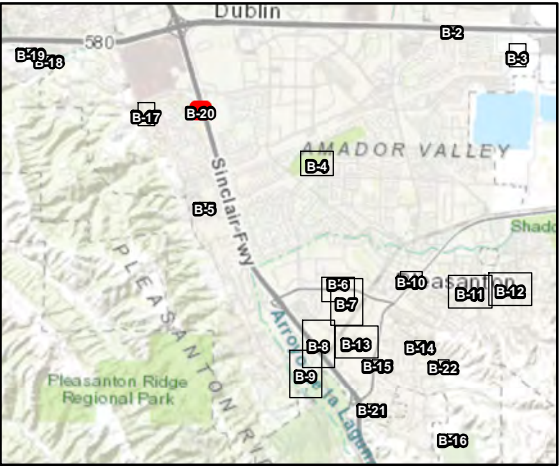
Appendix B-20.
Potential Section 404
Jurisdictional Features
(C-15)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

 Study Area

Potential Waters of the U.S.

 Drainage Ditch

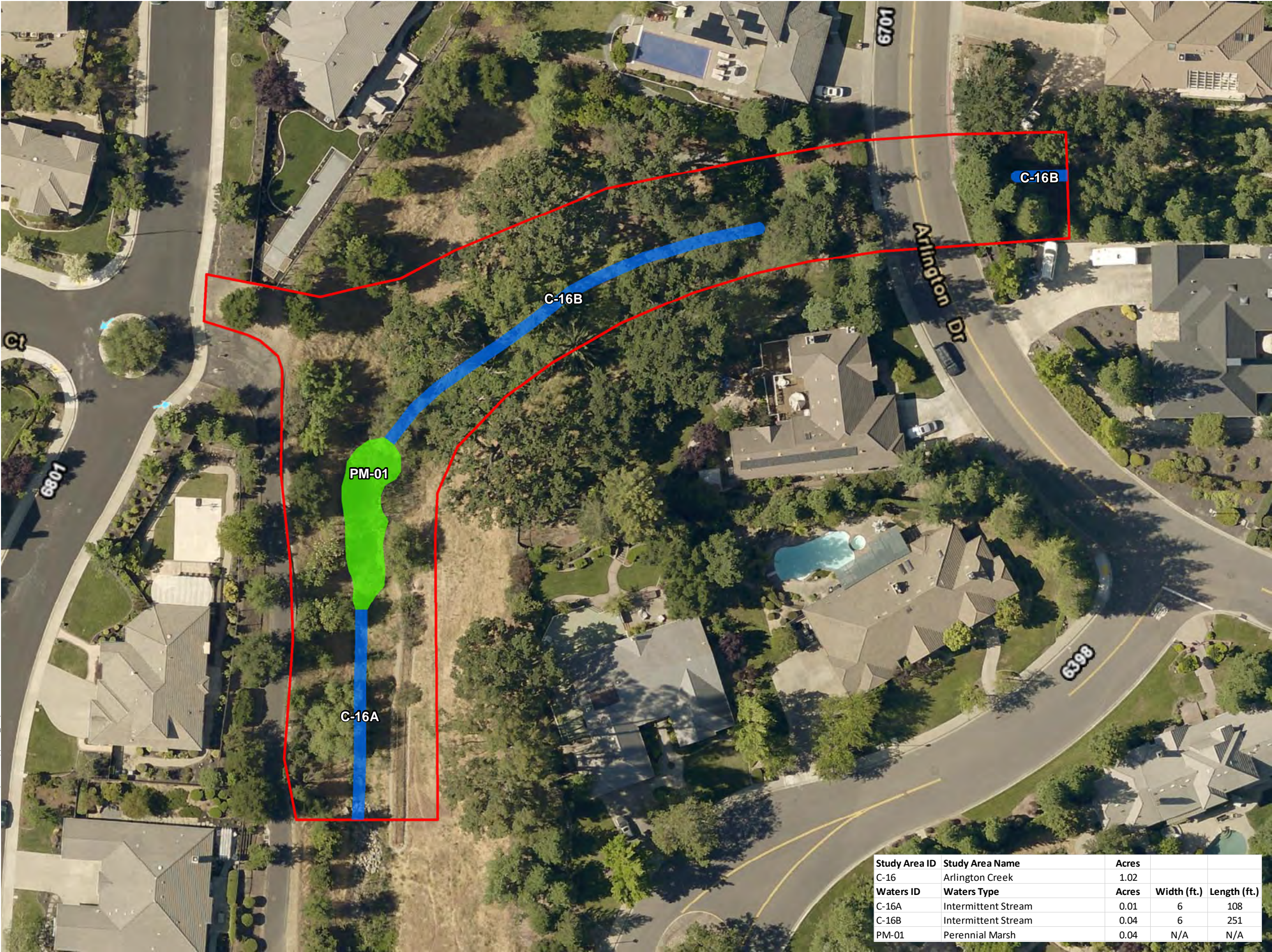


Study Area ID	Study Area Name	Acres		
C-15	Stonedale Channel	0.08		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-15	Drainage Ditch	0.01	6	67

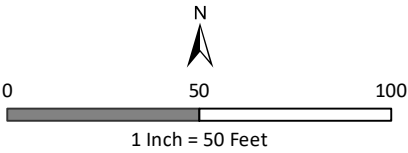
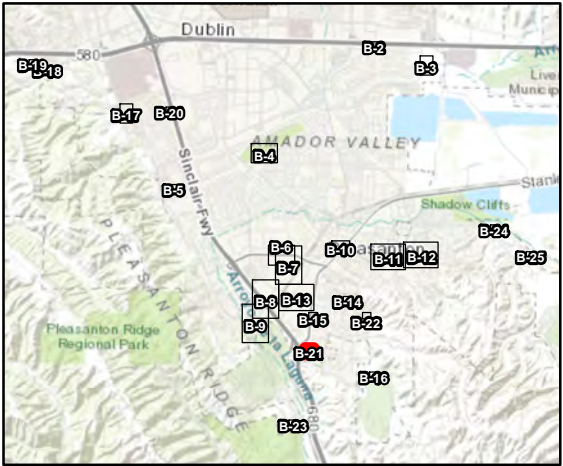
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-21.
Potential Section 404
Jurisdictional Features
(C-16)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Potential Waters of the U.S.
- Perennial Marsh
- Intermittent Stream





Appendix B-22.
Potential Section 404
Jurisdictional Features
(C-17)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

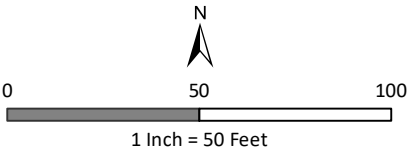
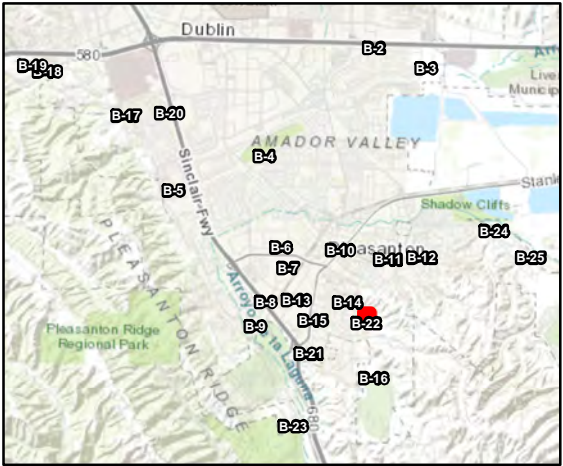


Study Area

Potential Waters of the U.S.



Ephemeral Stream



Study Area ID	Study Area Name	Acres		
C-17	Rutledge Place Culvert	0.09		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-17	Ephemeral Stream	0.01	5	60



Study Area ID	Study Area Name	Acres		
P-06	Oak Tree Farms Creek/Detention Pond	0.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-18	Ephemeral Stream	0.01	4	102
P-06	Detention Pond	0.02	N/A	N/A

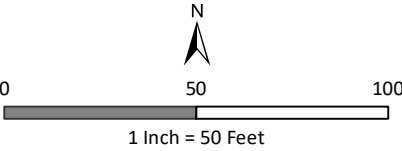
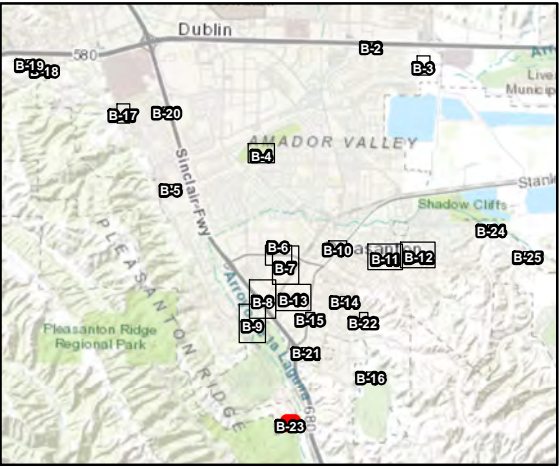
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-23.
Potential Section 404
Jurisdictional Features
(P-06)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

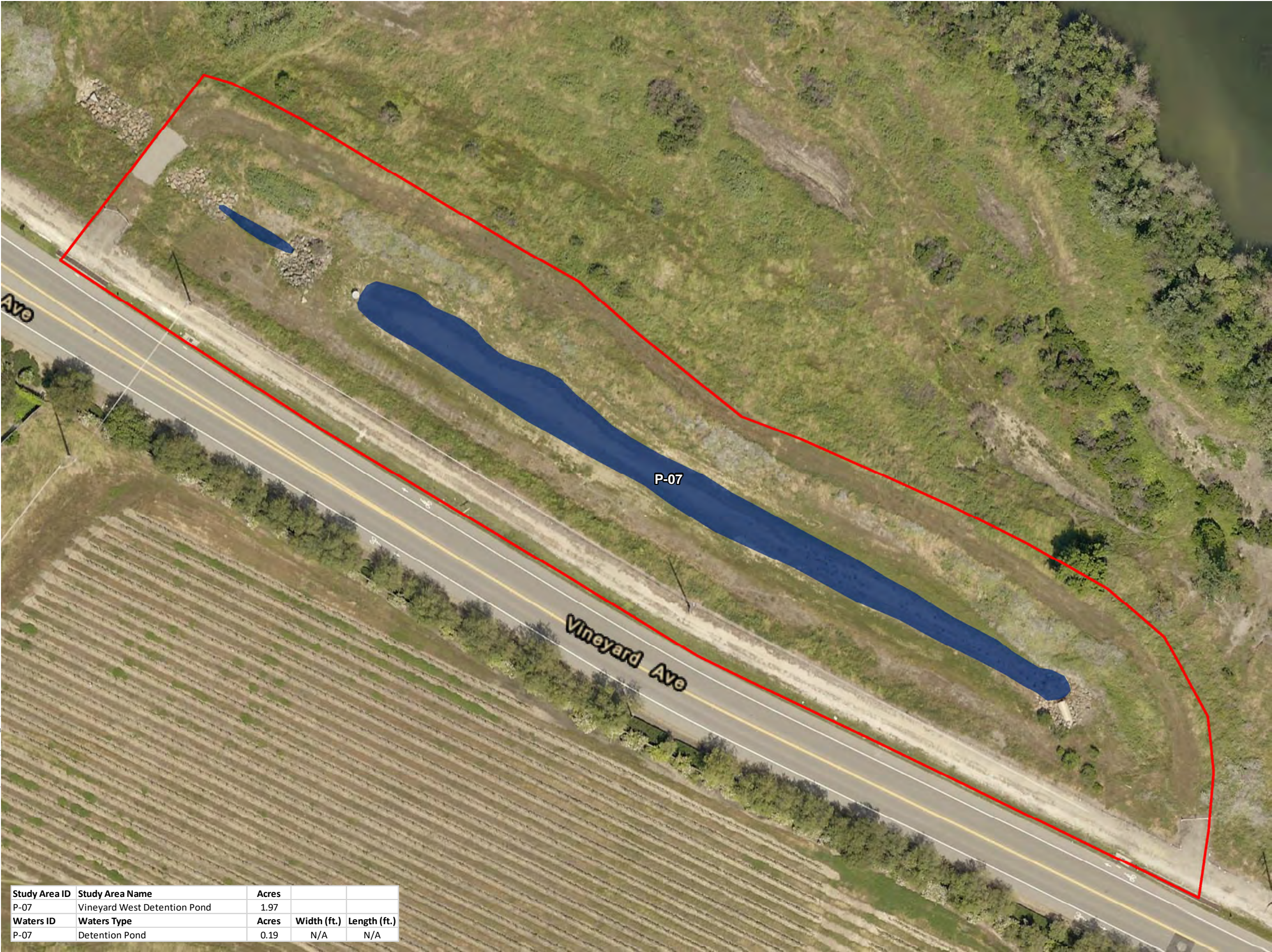
- Study Area
- Detention Pond
- Ephemeral Stream

Potential Waters of the U.S.



Appendix B-24.
Potential Section 404
Jurisdictional Features
(P-07)

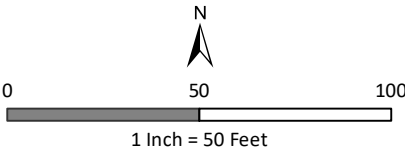
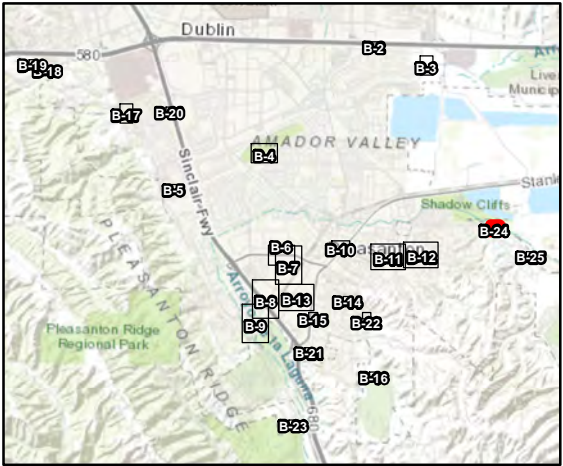
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Exempt Features

 Detention Pond



Study Area ID	Study Area Name	Acres		
P-07	Vineyard West Detention Pond	1.97		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
P-07	Detention Pond	0.19	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-25.
Potential Section 404
Jurisdictional Features
(P-08)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

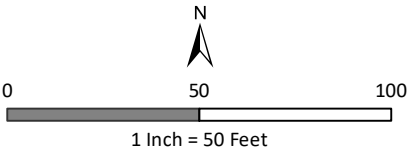
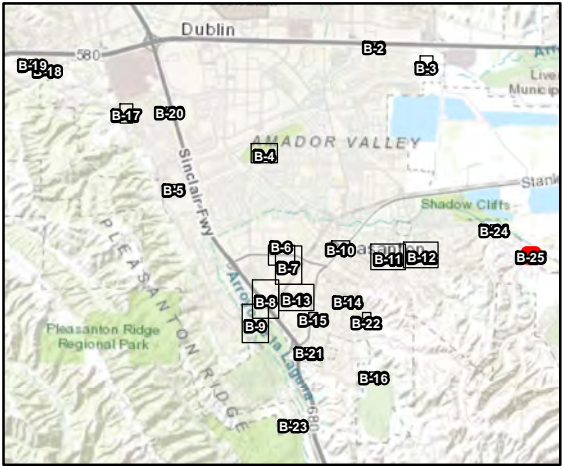


Study Area

Exempt Features



Detention Pond



Study Area ID	Study Area Name	Acres		
P-08	Vineyard West Detention Pond	1.45		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
P-08	Detention Pond	0.23	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

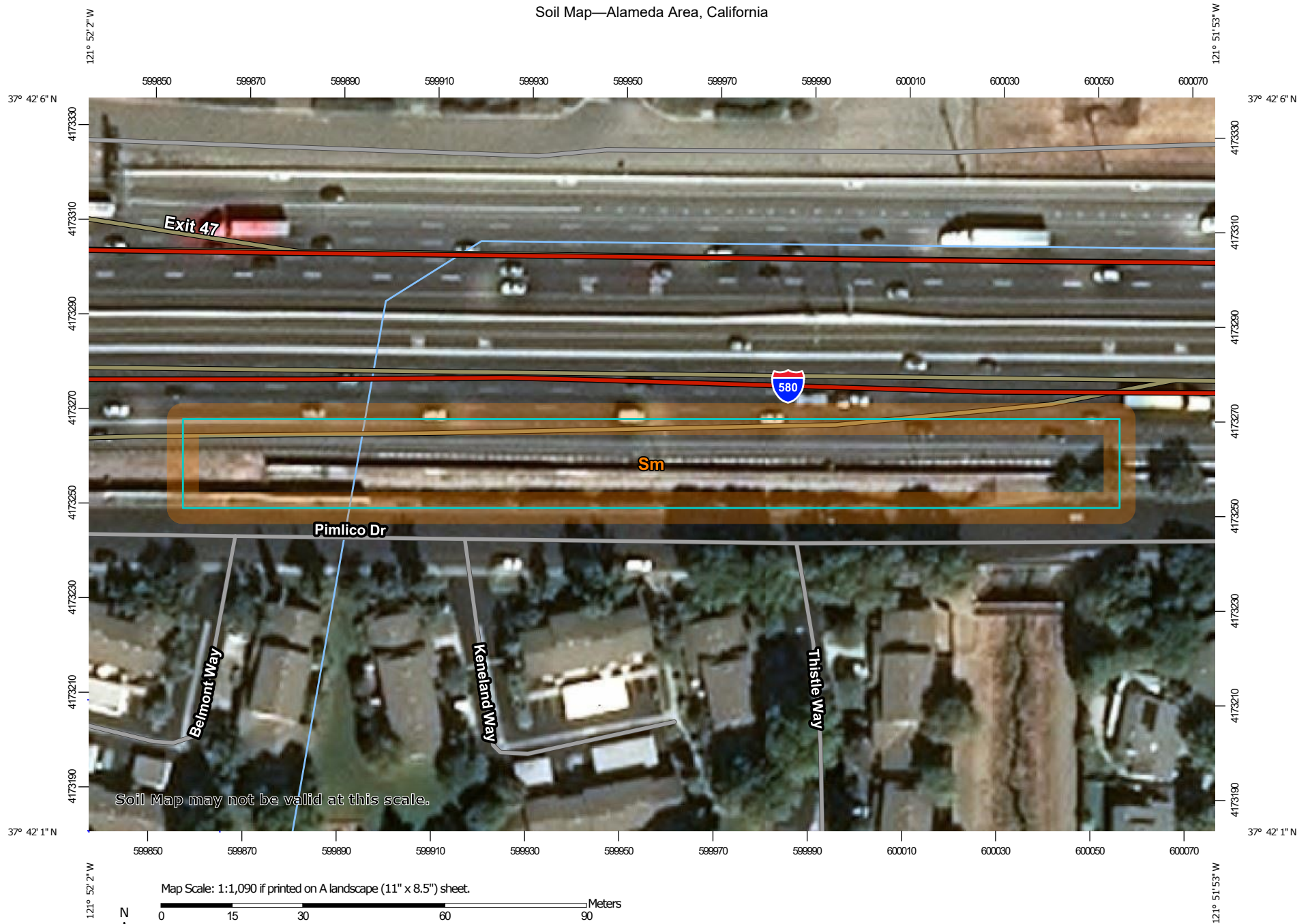


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APPENDIX C
SOILS IN THE PROJECT AREA

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Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

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

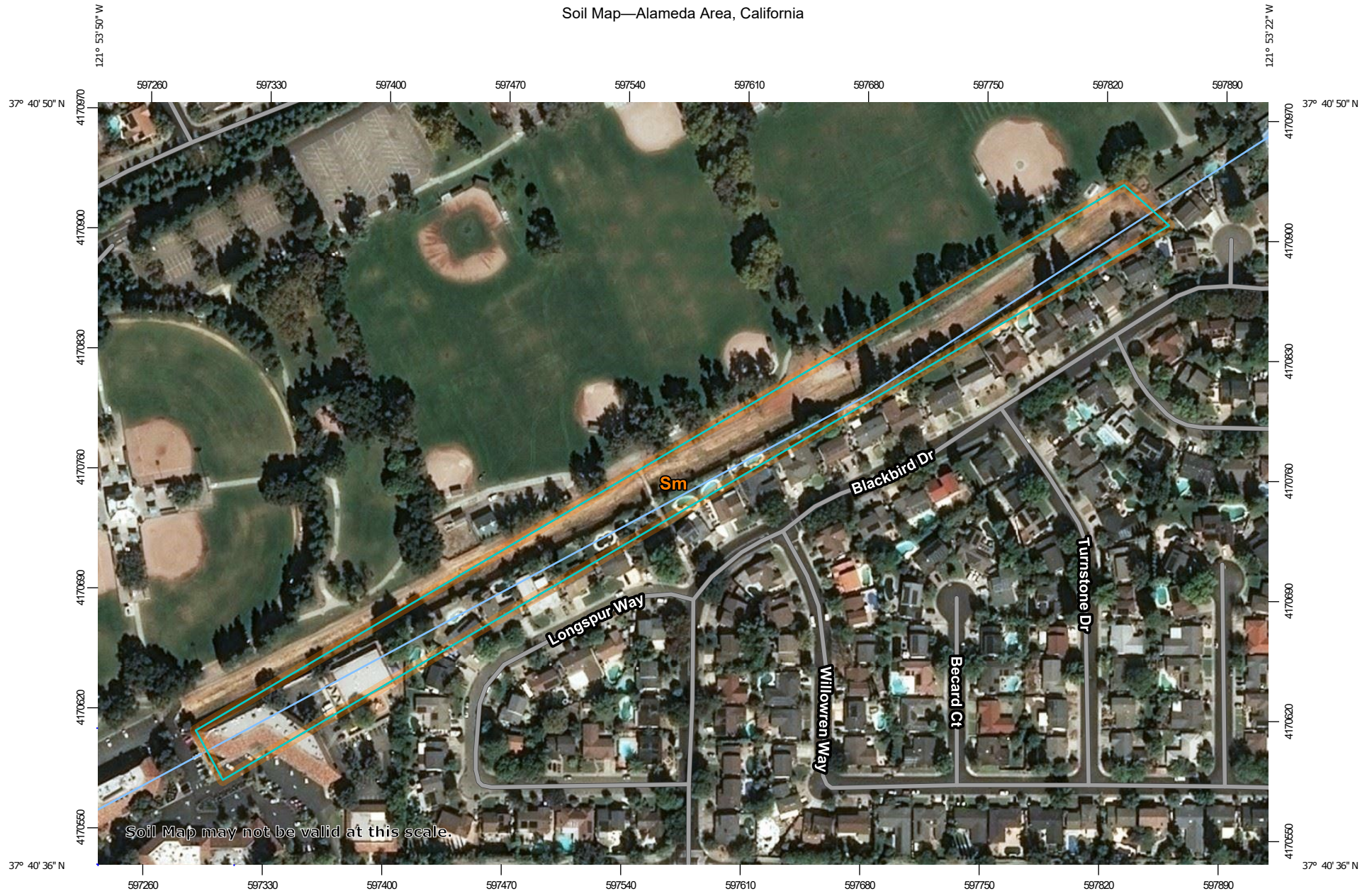
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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

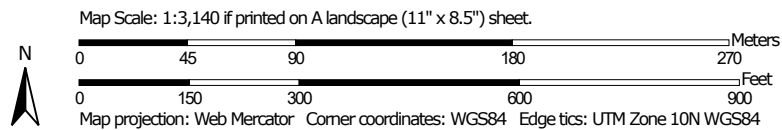
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

7/15/2019
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 14, 2018

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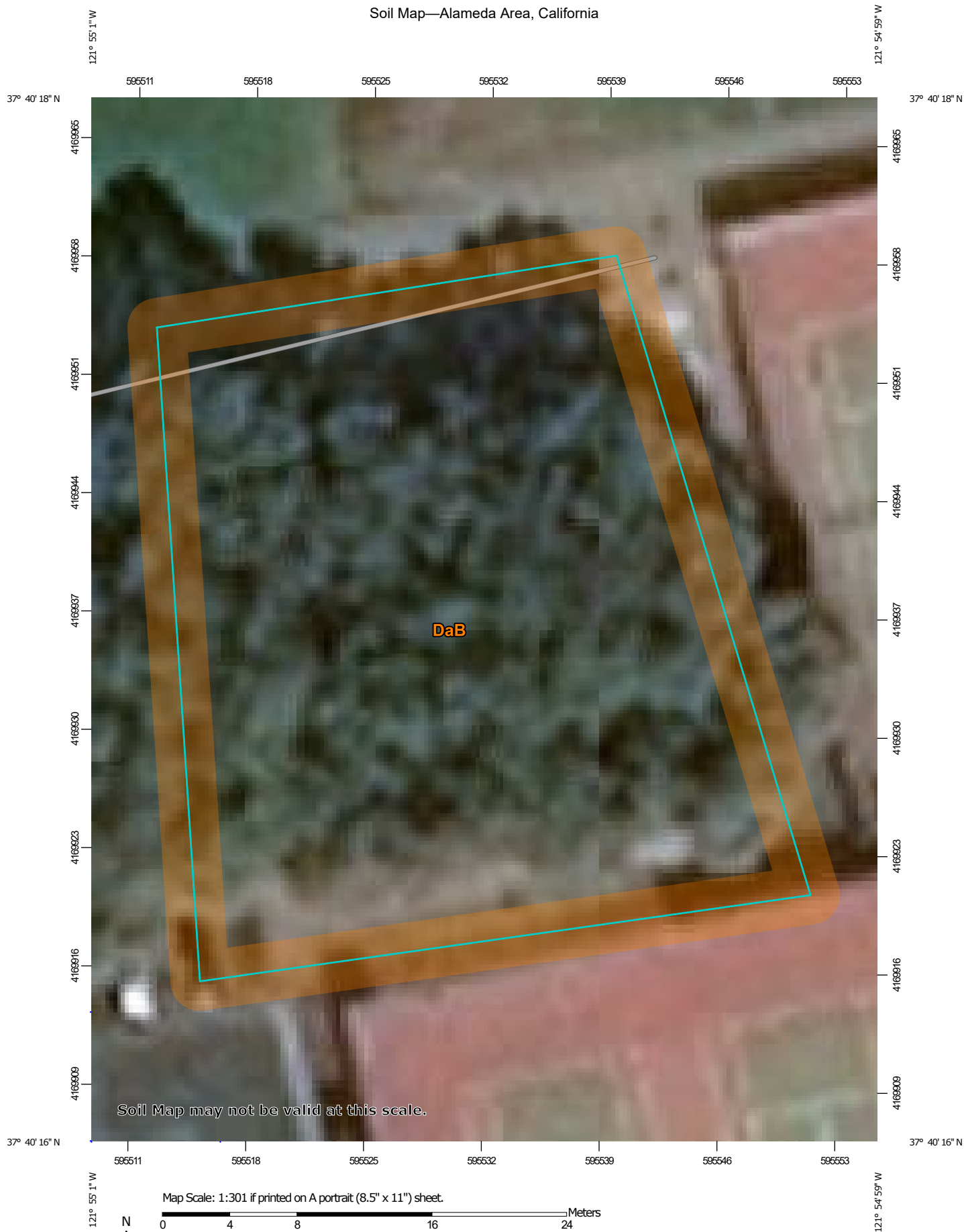
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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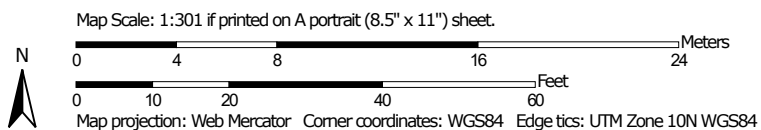
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	5.3	100.0%
Totals for Area of Interest		5.3	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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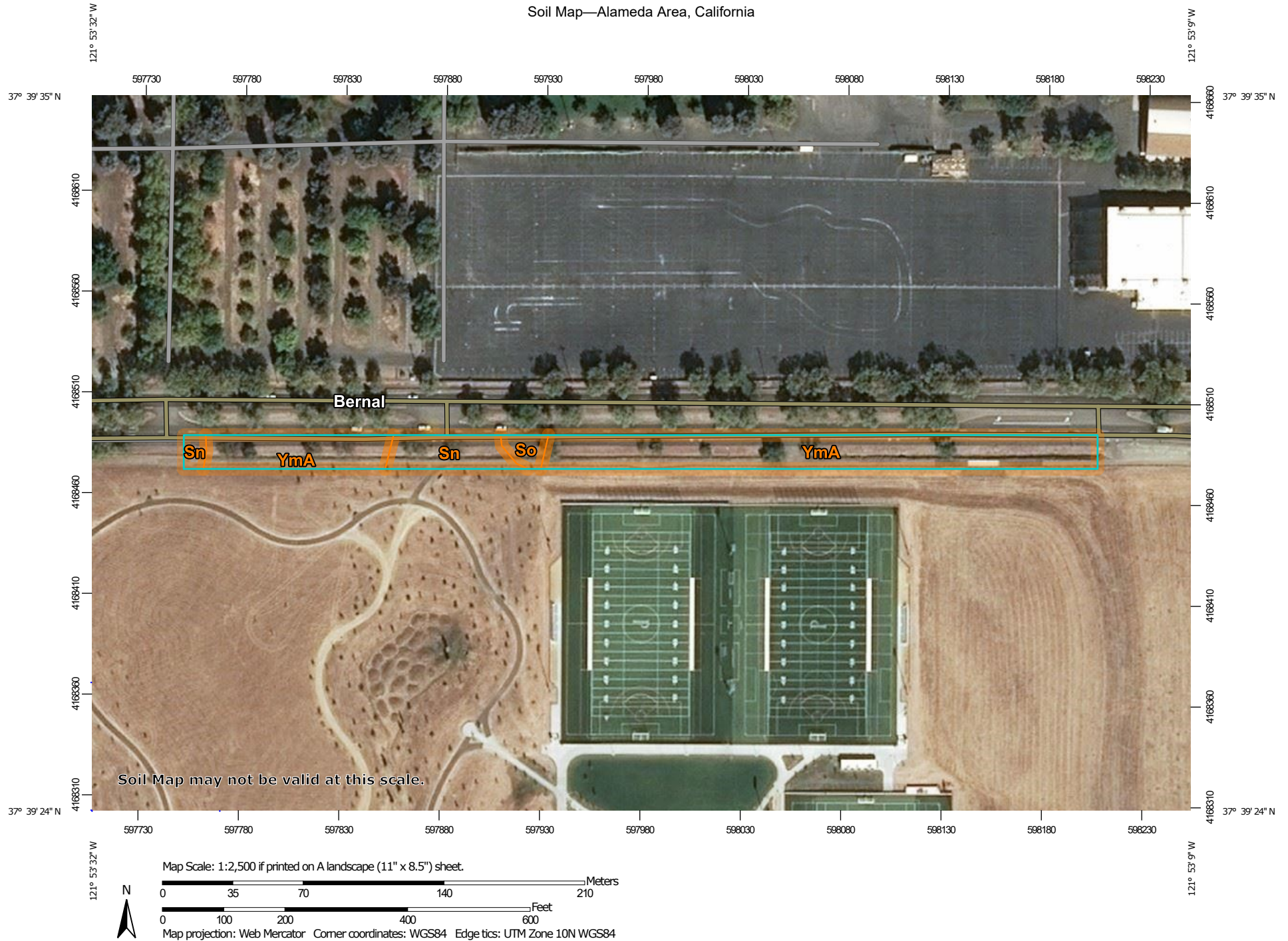
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DaB	Danville silty clay loam, 3 to 10 percent slopes	0.3	100.0%
Totals for Area of Interest		0.3	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 14, 2018

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Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sn	Sunnyvale clay loam, drained	0.3	15.4%
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	0.1	3.9%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	1.5	80.6%
Totals for Area of Interest		1.9	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	0.3	11.1%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.8	88.9%
Totals for Area of Interest		3.1	100.0%

Soil Map—Alameda Area, California



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

7/12/2019
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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

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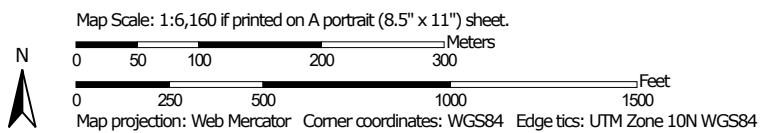
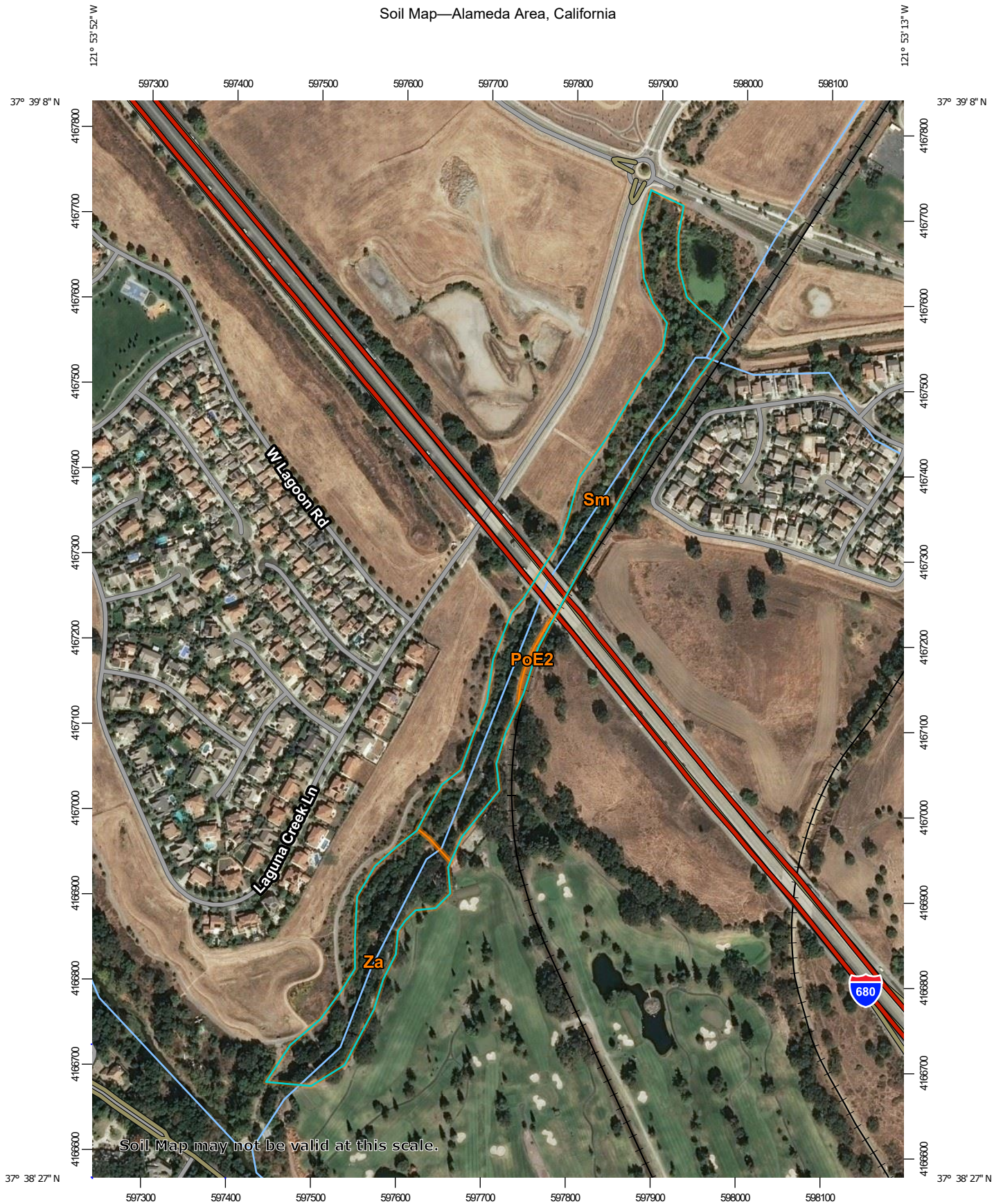
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	6.0	42.4%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	8.2	57.6%
Totals for Area of Interest		14.2	100.0%

Soil Map—Alameda Area, California



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

7/12/2019
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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

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

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoE2	Positas gravelly loam, 20 to 40 percent slopes, eroded	0.1	0.9%
Sm	Sunnyvale clay loam over clay	9.6	66.7%
Za	Zamora silt loam, 0 to 4 percent slopes	4.7	32.4%
Totals for Area of Interest		14.4	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 13, Sep 16, 2019

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

Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

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

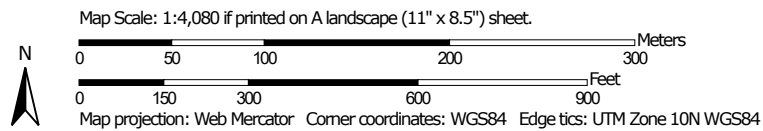
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.8	100.0%
Totals for Area of Interest		2.8	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

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National Cooperative Soil Survey

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 14, 2018

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

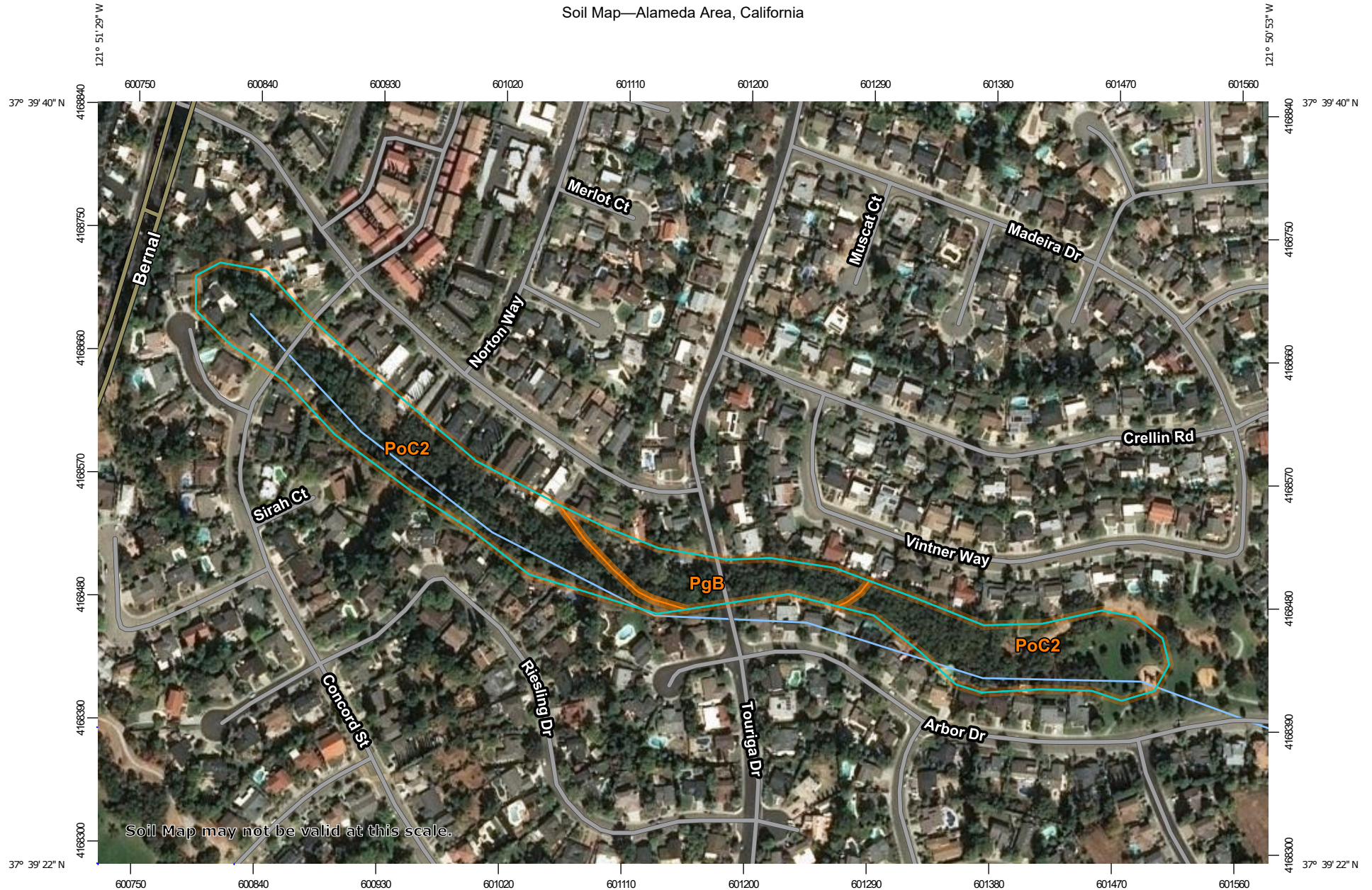
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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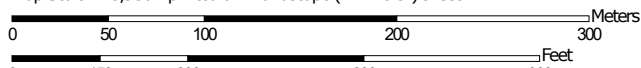
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	6.9	82.8%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	1.4	17.2%
Totals for Area of Interest		8.3	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:3,930 if printed on A landscape (11" x 8.5") sheet.



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




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey


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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

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

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.6	18.0%
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	7.1	82.0%
Totals for Area of Interest		8.7	100.0%

Soil Map—Alameda Area, California



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MAP LEGEND

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Blowout



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Clay Spot



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Gravel Pit



Gravelly Spot



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Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Water Features



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Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	3.8	100.0%
Totals for Area of Interest		3.8	100.0%

Soil Map—Alameda Area, California




MAP LEGEND

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Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.1	8.2%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.8	91.8%
Totals for Area of Interest		0.9	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:999 if printed on A landscape (11" x 8.5") sheet.

0 10 20 40 60 Meters

0 45 90 180 270 Feet

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



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MAP LEGEND

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Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Water Features



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Interstate Highways



US Routes



Major Roads



Local Roads

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Aerial Photography

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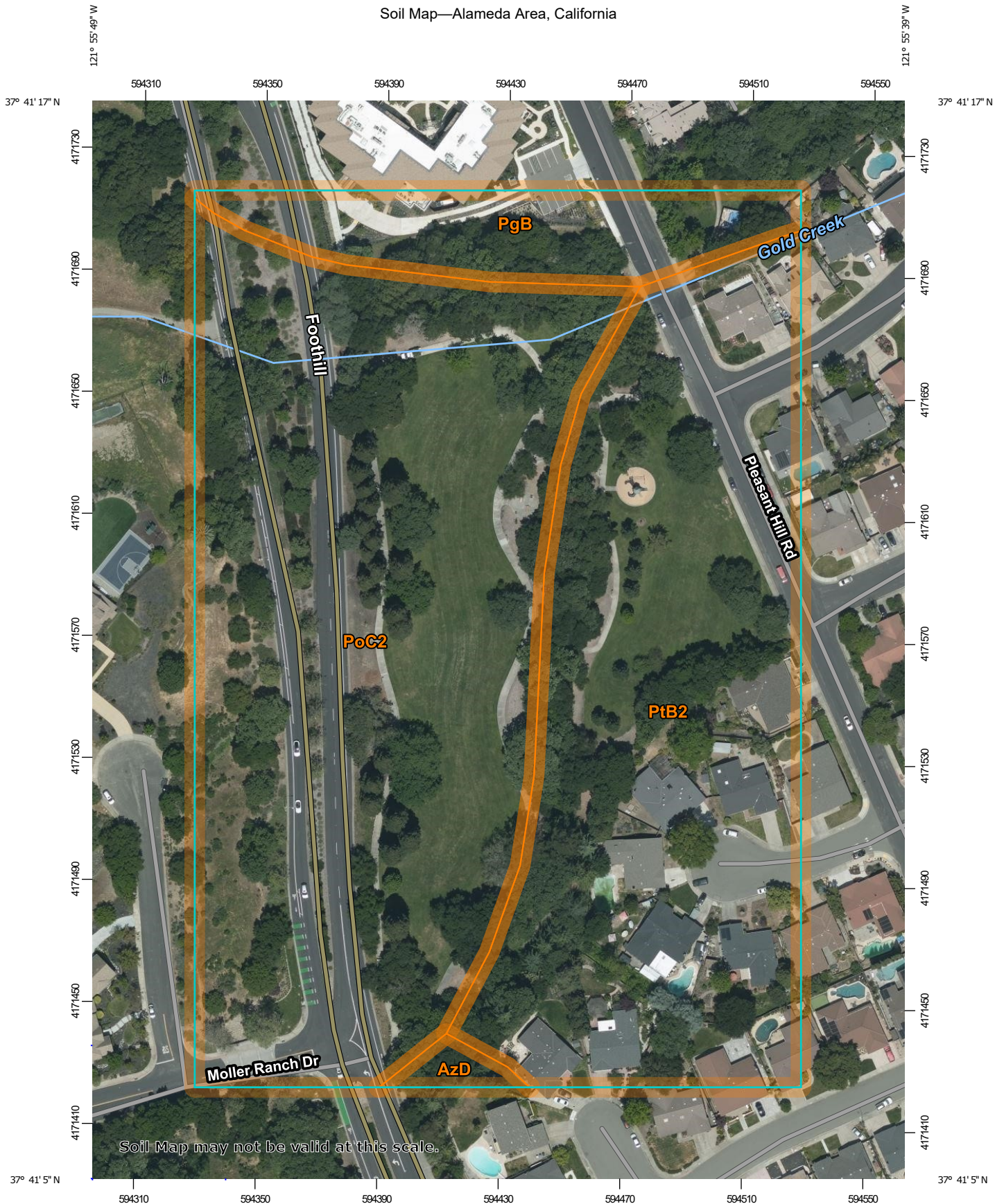
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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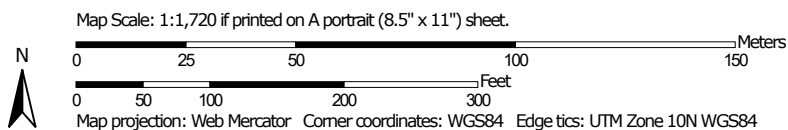
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	1.7	100.0%
Totals for Area of Interest		1.7	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



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MAP LEGEND

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Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Water Features



Streams and Canals

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Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Survey Area Data: Version 13, Sep 16, 2019

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Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AzD	Azule clay loam, 3 to 30 percent slopes	0.1	0.8%
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.2	8.1%
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	7.5	51.5%
PtB2	Positas gravelly loam, thick surface, 2 to 10 percent slopes, eroded	5.8	39.6%
Totals for Area of Interest		14.5	100.0%

Soil Map—Alameda Area, California



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Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Water Features



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Interstate Highways



US Routes



Major Roads



Local Roads

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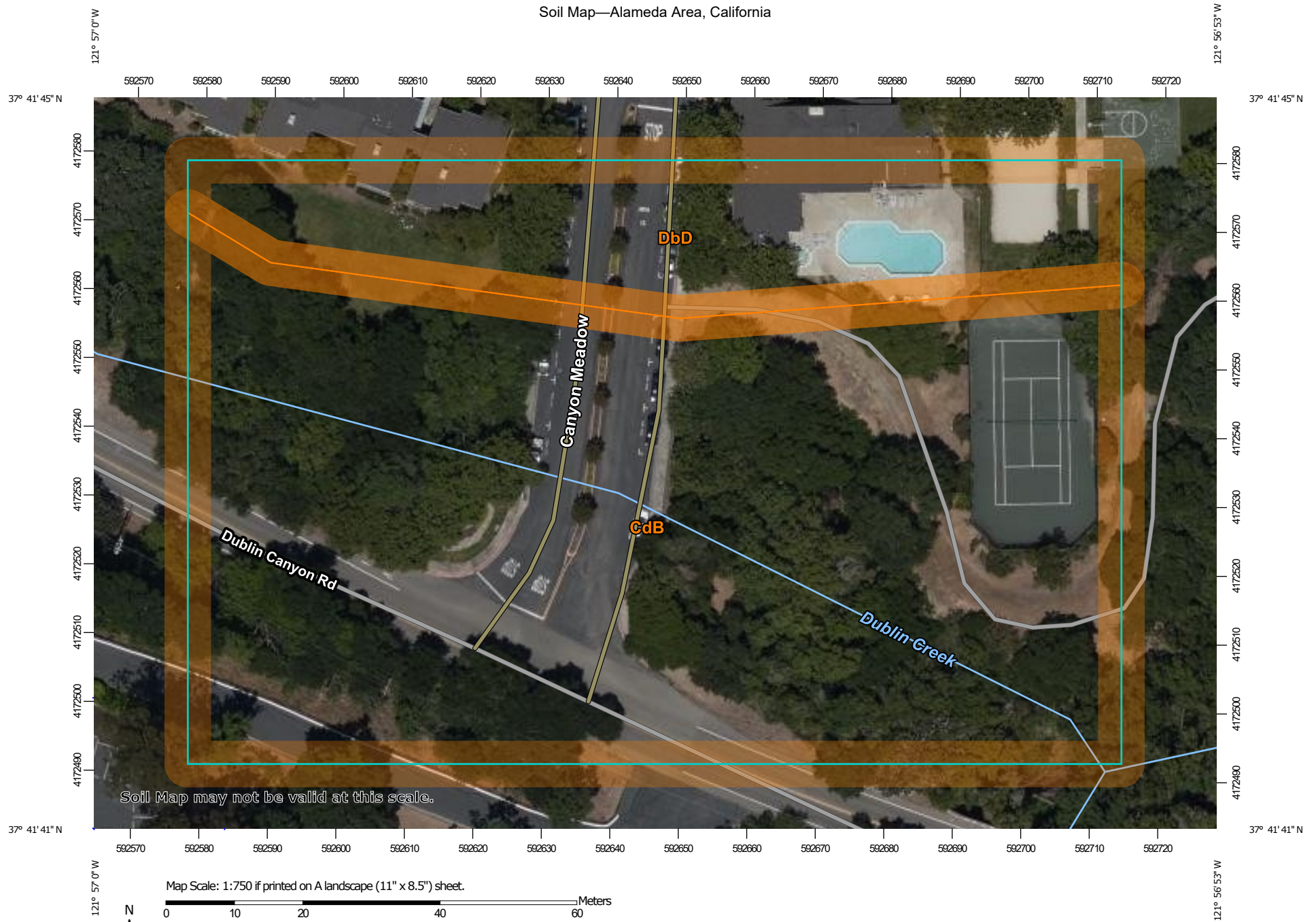
Date(s) aerial images were photographed: May 31, 2019—Jun 6, 2019

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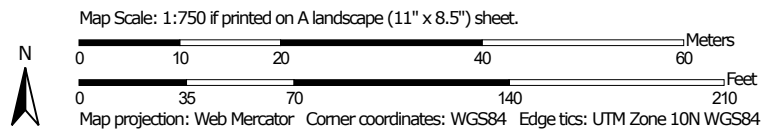
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdB	Clear Lake clay, drained, 3 to 7 percent slopes	2.4	60.7%
DbD	Diablo clay, 15 to 30 percent slopes, MLRA 15	0.0	0.7%
LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	1.5	38.7%
Totals for Area of Interest		4.0	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



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Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

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Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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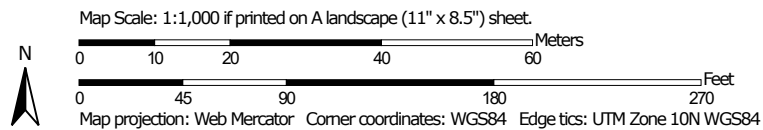
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdB	Clear Lake clay, drained, 3 to 7 percent slopes	2.3	78.3%
DbD	Diablo clay, 15 to 30 percent slopes, MLRA 15	0.6	21.7%
Totals for Area of Interest		3.0	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



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Borrow Pit



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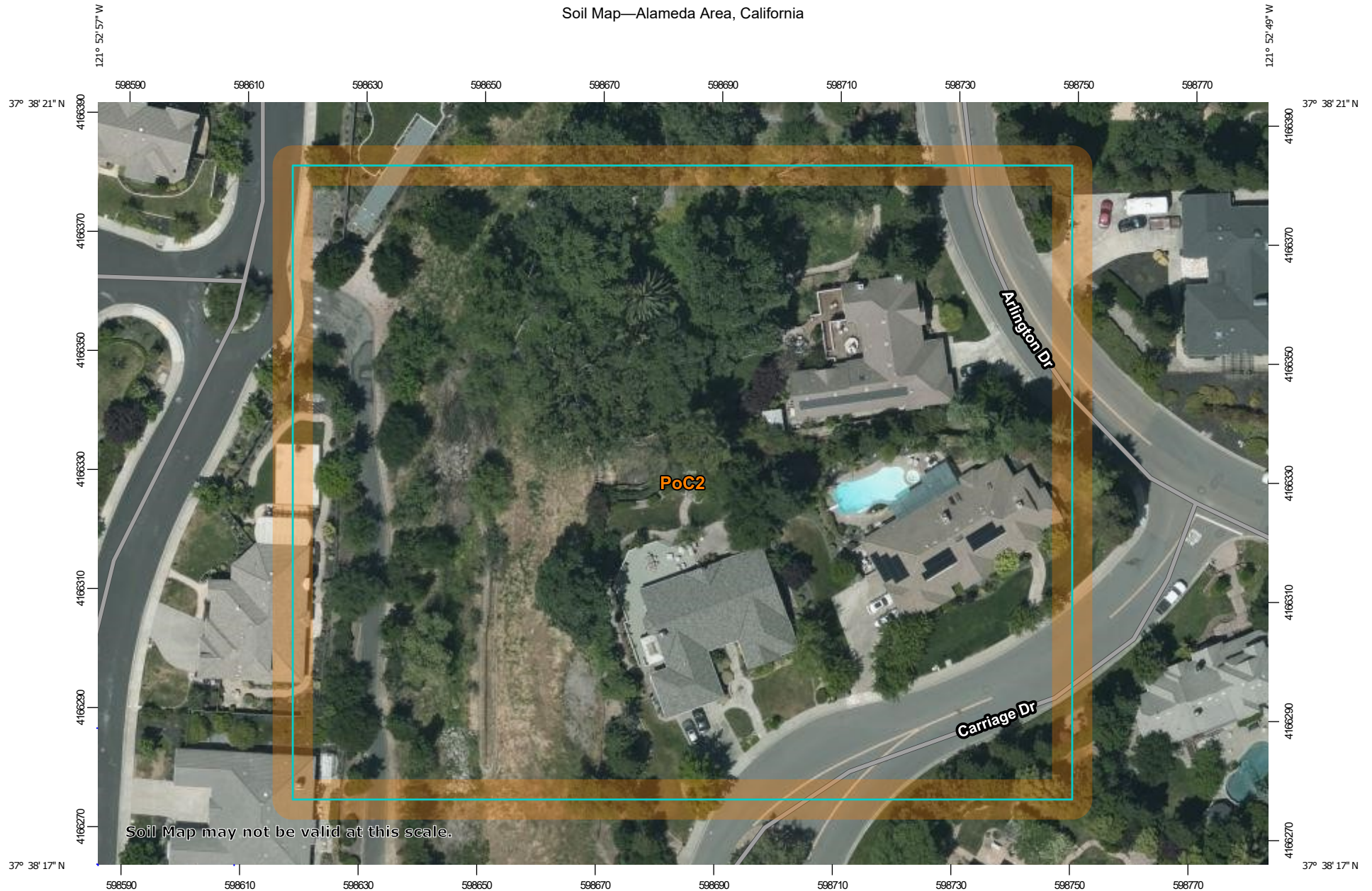
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.7	14.9%
PoE2	Positas gravelly loam, 20 to 40 percent slopes, eroded	1.3	28.5%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.6	56.6%
Totals for Area of Interest		4.6	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:903 if printed on A landscape (11" x 8.5") sheet.

0 10 20 40 60 Meters

0 40 80 160 240 Feet

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



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Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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US Routes



Major Roads



Local Roads

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Web Soil Survey URL:

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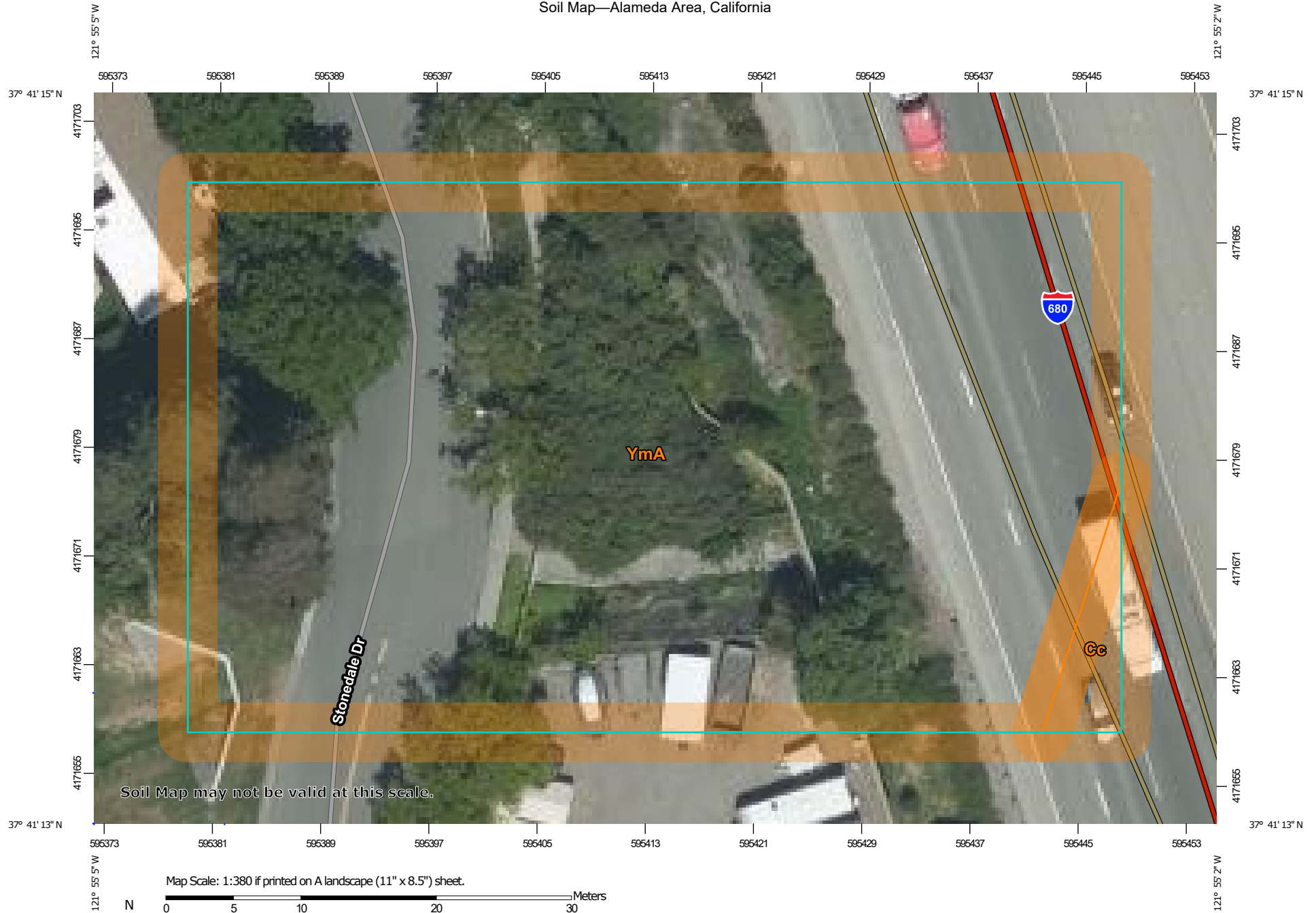
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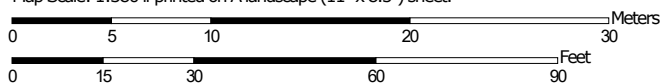
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	3.5	100.0%
Totals for Area of Interest		3.5	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:380 if printed on A landscape (11" x 8.5") sheet.



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



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MAP LEGEND

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Spoil Area



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Very Stony Spot



Wet Spot



Other



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Major Roads



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Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cc	Clear Lake clay, 0 to 3 percent slopes, MLRA 14	0.0	1.9%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.7	98.1%
Totals for Area of Interest		0.7	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

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

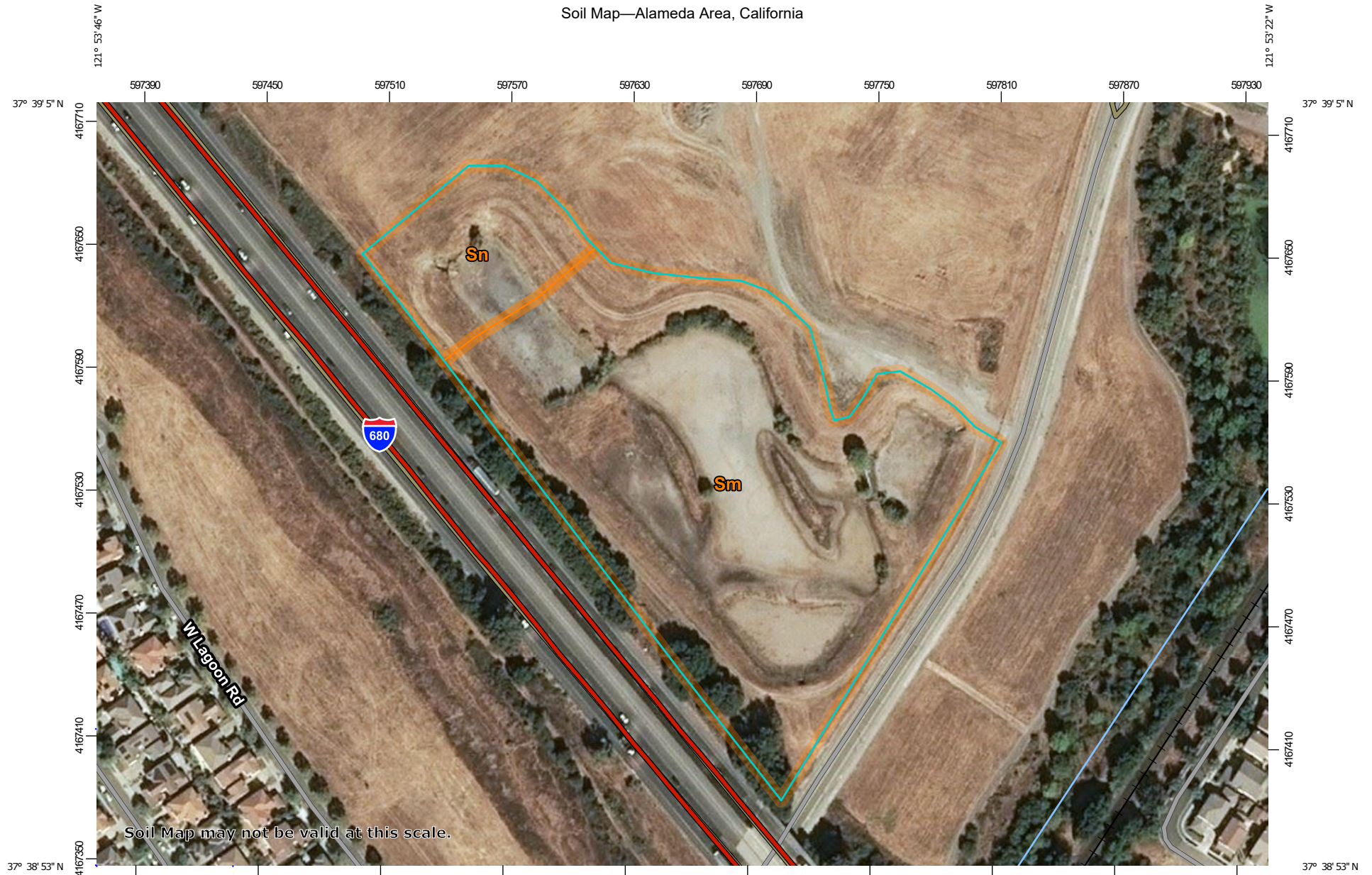
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

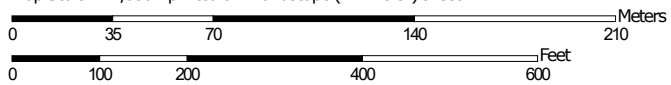
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	3.6	100.0%
Totals for Area of Interest		3.6	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:2,630 if printed on A landscape (11" x 8.5") sheet.



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



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend

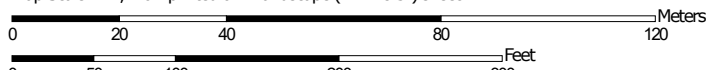
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	8.9	85.6%
Sn	Sunnyvale clay loam, drained	1.5	14.4%
Totals for Area of Interest		10.4	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:1,410 if printed on A landscape (11" x 8.5") sheet.



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



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	3.4	100.0%
Totals for Area of Interest		3.4	100.0%

Soil Map—Alameda Area, California



**Natural Resources
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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	5.6	88.1%
Za	Zamora silt loam, 0 to 4 percent slopes	0.8	11.9%
Totals for Area of Interest		6.3	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

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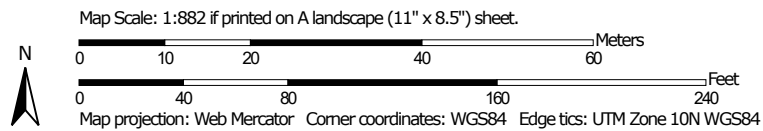
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	0.3	100.0%
Totals for Area of Interest		0.3	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

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 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

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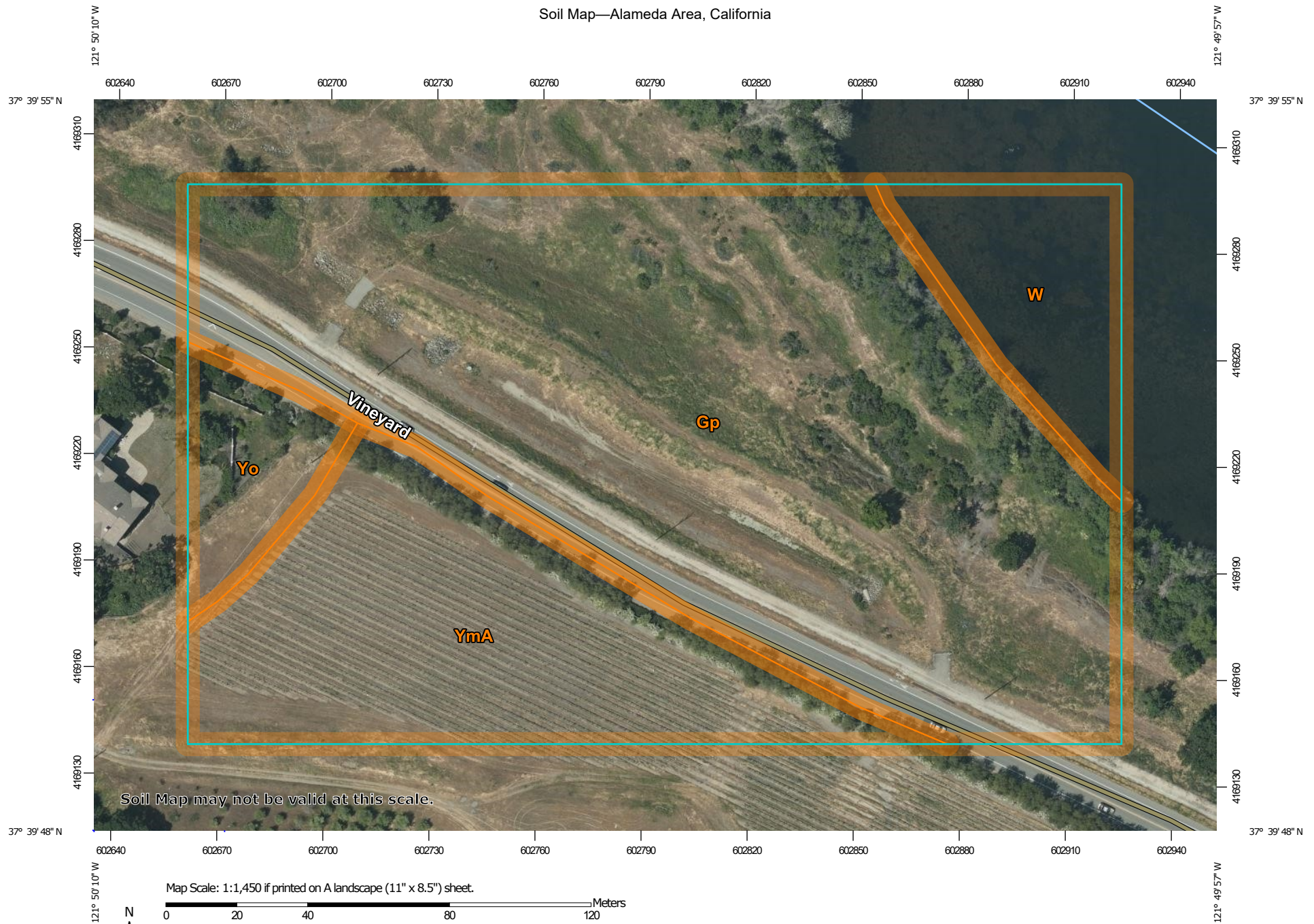
Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	1.7	54.6%
Za	Zamora silt loam, 0 to 4 percent slopes	1.4	45.4%
Totals for Area of Interest		3.2	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Gp	Gravel pits	6.5	62.6%
W	Water	0.8	8.2%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.5	24.1%
Yo	Yolo loam over gravel, 0 to 3 percent slopes	0.5	5.1%
Totals for Area of Interest		10.3	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:1,390 if printed on A landscape (11" x 8.5") sheet.

0 20 40 80 120 Meters

0 50 100 200 300 Feet

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



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MAP LEGEND

Area of Interest (AOI)

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Soils

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 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



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Gravelly Spot



Landfill



Lava Flow



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Rock Outcrop



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Severely Eroded Spot



Sinkhole



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Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Water Features



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Major Roads



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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Gp	Gravel pits	2.1	27.5%
Lm	Livermore very gravelly coarse sandy loam	0.3	3.8%
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	4.9	65.0%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.3	3.7%
Totals for Area of Interest		7.6	100.0%

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APPENDIX D
PROJECT AREA PHOTOGRAPHS

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Photo 1: Concrete channel of Pimlico canal (C-01)

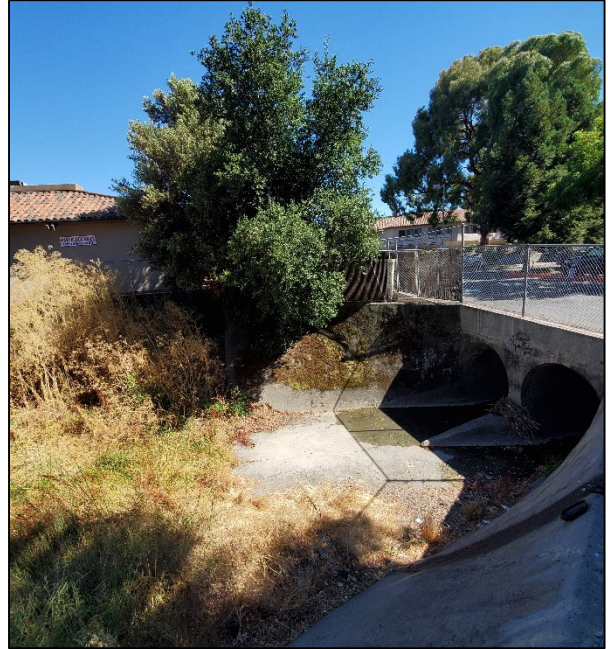


Photo 2: Concrete culvert at Pleasanton Canal (C-02)



Photo 3: Cattails in channel at C-02

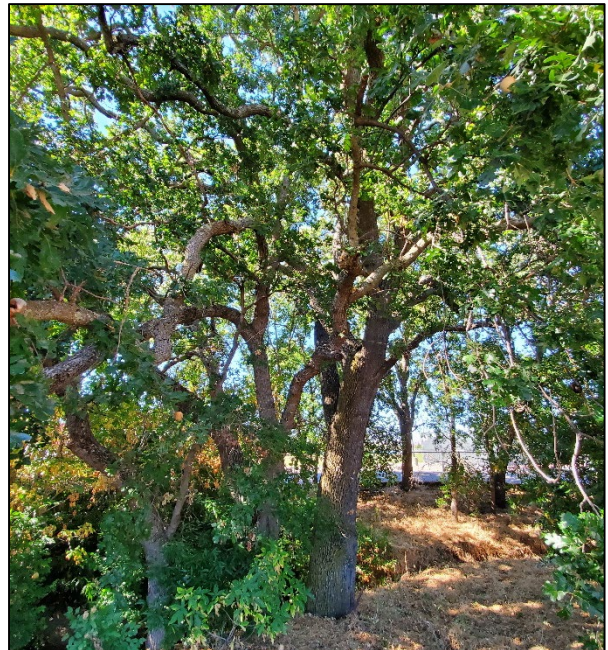


Photo 4: Riparian forest at Foothill High School Trash Rack (C-03)



Photo 5: Excavated channel at Bernal V-Ditch (C-04)



Photo 6: Culvert at C-04



Photo 7: Excavated channel at Bernal North/South Ditch (C-05)



Photo 8: Dry creekbed at C-05



Photo 9: Intermittent stream at Mission Creek Restoration Project (C-06)



Photo 10: Manmade drainage at southern end of C-06



Photo 11: Manmade drainage feature at C-06 next to Arroyo de la Laguna



Photo 12: C-06 flowing under underpass



Photo 13: St. Mary Creek (C-07)



Photo 14: Upper Kottinger Creek (C-08)



Photo 15: Streambed and riparian forest at C-08



Photo 16: Standing water near culvert at Touriga Creek (C-09)



Photo 17: Riparian forest at C-09



Photo 18: Bed and bank of C-09 lined with stones



Photo 19: Junipero Canal (C-10)

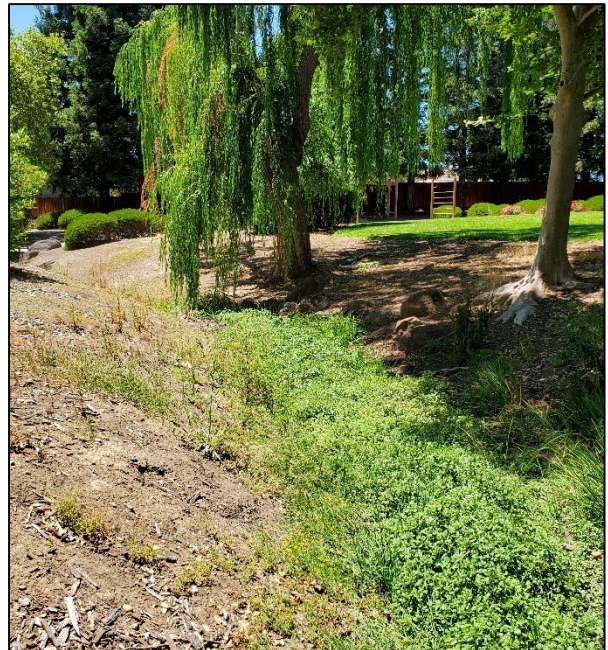


Photo 20: Mission Creek Park (C-11)



Photo 21: Cemetery Creek (C-12)



Photo 22: Gold Creek (C-13)



Photo 23: Dublin Canyon Creek (C-14)



Photo 24: Stonedale Channel (C-15)



Photo 25: Arlington Creek (C-16)



Photo 26: Rutledge Place Culvert (C-17)



Photo 27: Stoneridge Pond (P-01)



Photo 28: Bernal Detention Pond (P-02)



Photo 29: Bernal Central Detention Pond (P-02)



Photo 30: Canyon Oaks Detention Pond (P-03)



Photo 31: Bernal West Detention Pond (P-04)



Photo 32: Culvert at P-04

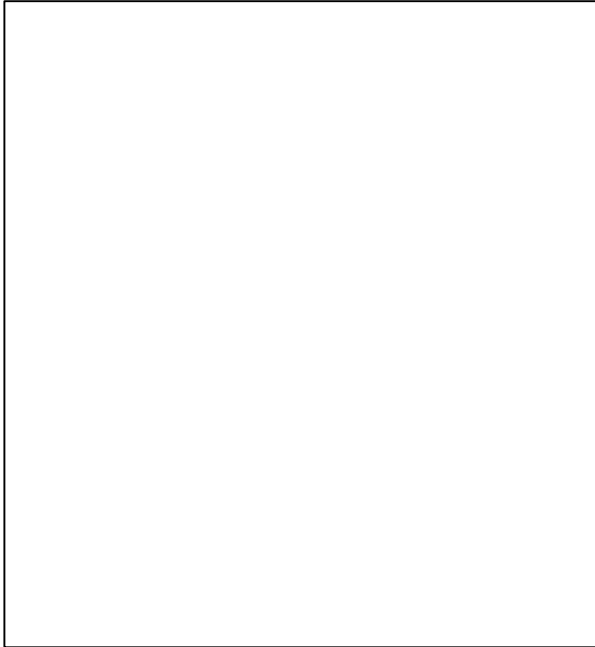


Photo 33: Callippe Detention Pond (P-05)



Photo 34: Oak Tree Farms Detention Pond (P-06)



Photo 35: Vineyard West Detention Pond (P-07)



Photo 36: Vineyard East Detention Pond (P-08)

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APPENDIX E

PLANT SPECIES OBSERVED WITHIN THE PROJECT AREA

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Appendix E. List of plant and wildlife species observed within the Study Area during the July and October, 2019 site visit.

Scientific Name	Common Name
Wildlife	
<i>Cathartes aura</i>	turkey vulture
<i>Aphelocoma californica</i>	California scrub jay
<i>Agelaius tricolor</i>	Tricolored blackbird
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Carpodacus mexicanus</i>	house finch
<i>Pipilo maculatus</i>	Spotted towhee
<i>Charadrius vociferus</i>	killdeer
<i>Sayornis nigricans</i>	black phoebe
<i>Zenaida macroura</i>	mourning dove
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Melospiza crissalis</i>	California towhee
<i>Corvus brachyrhynchos</i>	American crow
<i>Hirundo rustica</i>	Barn swallow
<i>Thryomanes bewickii</i>	Bewicke's wren
<i>Psaltiriparus minimus</i>	bushtit
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Leuconotopicus villosus</i>	Hairy woodpecker
<i>Otospermophilus beecheyi</i>	California ground squirrel
Plants	
<i>Aesculus californica</i>	buckeye
<i>Avena barbata</i>	slender oat
<i>Avena sativa</i>	wild oat
<i>Baccharis pilularis</i> ssp. <i>pilularis</i>	coyote brush
<i>Baccharis salicina</i>	willow baccharis
<i>Brassica nigra</i>	black mustard
<i>Bromus diandrus</i>	ripgut brome
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Catalpa bignonioides</i>	southern catalpa
<i>Centaurea solstitialis</i>	yellow star thistle
<i>Chenopodium</i> sp.	goosefoot
<i>Cirsium vulgare</i>	spear thistle
<i>Convolvulus arvensis</i>	field bindweed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus eragrostis</i>	tall cyperus
<i>Epilobium brachycarpum</i>	tall annual willowherb
<i>Eschscholzia californica</i>	California poppy

<i>Eucalyptus globulus</i>	Blue gum
<i>Festuca myuros</i>	rattail fescue
<i>Festuca perennis</i>	Italian rye grass
<i>Foeniculum vulgare</i>	fennel
<i>Hedera canariensis</i>	canary ivy
<i>Helminthotheca echinoides</i>	bristly ox-tongue
<i>Heteromeles arbutifolia</i>	toyon
<i>Hordeum marinum</i>	seaside barley
<i>Juglans nigra</i>	black walnut
<i>Lactuca canadensis</i>	Canada wild lettuce
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Liquidambar styraciflua</i>	sweetgum
<i>Lolium rigidum</i>	rigid Italian rye grass
<i>Lotus corniculatus</i>	bird's foot trefoil
<i>Mentha pulegium</i>	pennyroyal
<i>Nasturtium officinale</i>	watercress
<i>Nerium oleander</i>	Oleander
<i>Persicaria hydropiper</i>	common smartweed
<i>Phalaris aquatica</i>	harding grass
<i>Plantago arenaria</i>	Indian plantain
<i>Polypogon monspeliensis</i>	rabbitsfoot grass
<i>Populus fremontii</i>	Fremont cottonwood
<i>Pseudognaphalium californicum</i>	ladies' tobacco
<i>Quercus agrifolia</i>	coast live oak
<i>Quercus lobata</i>	valley oak
<i>Raphanus sativus</i>	jointed charlock
<i>Rosa sp.</i>	Rose
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rumex crispus</i>	curly dock
<i>Sequoia sempervirens</i>	coast redwood
<i>Schoenoplectus californicus.</i>	California bulrush
<i>Salix babylonica</i>	Weeping willow
<i>Tribulus terrestris</i>	puncture vine
<i>Trifolium hirtum</i>	rose clover
<i>Typha angustifolia</i>	narrow leaf cattail
<i>Typha latifolia</i>	broadleaf cattail
<i>Ulmus americana</i>	American elm
<i>Vicia sativa</i>	spring vetch
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Xanthium strumarium</i>	cocklebur

APPENDIX B: BIOLOGICAL RESOURCES ASSESSMENT REPORT
WRA, INC.

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City of Pleasanton Stream and Pond Maintenance Biological Resources Assessment

Pleasanton and Unincorporated areas, Alameda County, California

Prepared for:

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Date: June 2020

WRA Project #: 29118



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LIST OF ACRONYMS AND ABBREVIATIONS

BGEPA	Bald and Golden Eagle Protection Act
BIOS	CDFW Biogeographic Information and Observation System
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife (formerly California Department of Fish and Game [CDFG])
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
City	City of Pleasanton
CNDDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CRLF	California red-legged frog
CSRL	California Soils Resources Lab
CTS	California tiger salamander
CWA	Clean Water Act
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
Inventory	CNPS Inventory of Rare and Endangered Plants
MBTA	Migratory Bird Treaty Act
NWI	National Wetlands Inventory
OWHM	Ordinary High Water Mark
Rank	California Rare Plant Rank
RWQCB	Regional Water Quality Control Board
SAA	Lake and Streambed Alteration Agreement
SJKF	San Joaquin kit fox
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WBWG	Western Bat Working Group
WRA	WRA, Inc.

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1.0 INTRODUCTION

1.1 Purpose of Assessment

In July and October of 2019, WRA, Inc. conducted site visits as part of an assessment of biological resources at twenty-five (25) sites with channels and detention ponds, collectively totaling approximately 95-acres of land owned and/or maintained by the City of Pleasanton (City) in Alameda County, California (Figure 1). The collective Project Area assessed under this report includes all 25 individual Study Area locations. Twenty-four of the Study Area locations are within the City of Pleasanton, and one, the Vineyard East Detention Pond Study Area, is located in unincorporated Alameda County. The Project Area is located in developed portions of Pleasanton, with many Study Areas occurring near public parks or in residential developments.

The City is proposing to conduct routine maintenance activities at several streams and stormwater detention ponds either on City-owned properties or privately owned properties with easements. The City seeks to periodically remove debris, sediment, and/or vegetation from approximately seventeen (17) stream section Study Areas and eight (8) stormwater detention pond Study Areas (Table 1) to maintain their flood control and stormwater treatment capacity. The maintenance is proposed at the following channel Study Areas (designated by C-#) and detention pond Study Areas (designated by P-#):

Table 1. Study Area Numbers/ Names

Study Area Number	Study Area Name
Creeks	
C-01	Pimlico Canal
C-02	Pleasanton Canal
C-03	Foothill High School Trash Rack
C-04	Bernal V-ditch
C-05	Bernal North/South V-ditch
C-06	Mission Creek Restoration Project
C-07	Lower Kottinger Creek
C-08	Upper Kottinger Creek
C-09	Touriga Creek
C-10	Junipero Canal
C-11	Mission Park Creek
C-12	Cemetery Creek
C-13	Gold Creek
C-14	Dublin Canyon Creek
C-15	Stonedale Channel
C-16	Arlington Creek
C-17	Rutledge Place Culvert

Study Area Number	Study Area Name
Detention Ponds	
P-01	Stoneridge Pond
P-02	Bernal Detention Pond Central
P-03	Canyon Oaks Detention Pond
P-04	Bernal West Detention Pond
P-05	Callippe Detention Pond
P-06	Oak Tree Farms Detention Pond
P-07	Vineyard West Detention Pond
P-08	Vineyard East Detention Pond

The purpose of the assessment was to gather information necessary to complete a review of biological resources at each of the 25 Study Areas. This report is based on an evaluation of various online data and site visits of the Project Area and its vicinity. This report evaluates this information in order to determine the (1) potential to support special-status species; and (2) presence of other sensitive biological resources protected by local, state, and federal laws and regulations. If special-status species were observed during the site visits, they were recorded. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that protocol-level surveys be conducted. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources that may occur as a result of future maintenance work at the Project Area as well as potential mitigation measures to compensate for those impacts.

A biological resources assessment provides general information on the potential presence of sensitive species and habitats. This biological assessment is not an official protocol-level survey for listed species that may be required for approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and onsite conditions that were observed during the site visits.

1.2 Project Summary

The City conducts periodic maintenance in its stream corridors and detention basins to improve stormwater conveyance and quality (Project). The proposed Projects may occur as necessary on any of the 17 stream sections and 8 stormwater detention ponds located throughout the City. These features occur in a myriad of settings, ranging from a concrete drainage between Pimlico Drive and Interstate 580, to a naturalized stream running through Mission Park, to a detention basin in the Bernal Community Park. Routine maintenance locations are anticipated to occur to City-owned lands of facilities located within or adjacent to stream channels, stormwater conveyance corridors, excavated upland detention basins and adjacent access roads and infrastructure as well as similarly situated locations on private property that have City access easements for storm related activity.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of

potential Project impacts. Table 2 provides a regulatory crosswalk between sensitive resources and jurisdictional agencies and regulations, as well as which specific question in the Environmental Checklist Form (Appendix G) of the CEQA guidelines relates to the sensitive resource.

Table 2. Regulatory Crosswalk

Feature	Laws and Regulations	Regulatory Agency	CEQA Assessment Category ¹ IV. Biological Resources	Examples
Natural Communities				
Sensitive Terrestrial Communities	Oak Woodland Conservation Act Local plans and ordinances	California Department of Fish and Wildlife (CDFW) Local agencies	Question B. Sensitive Natural Communities Question F. Conservation Plans	Vegetation Alliances Ranked G1-G3, S1-S3
Waters of the U.S.	Clean Water Act (CWA) Section 404 Rivers and Harbors Act Section 10	US Army Corps of Engineers (Corps) / Environmental Protection Agency (EPA)	Question C. Section 404 of CWA	Wetlands Open Waters ²
Waters of the State	Porter-Cologne Act CWA Section 401	Regional Water Quality Control Board (RWQCB)	Not directly addressed under CEQA	Wetlands Open Waters Riparian Areas
Streams, Lakes, and Riparian Habitat	California Fish and Game Code (CFG) Section 1602	CDFW / RWQCB	Question B. Riparian Habitat	Open Waters Riparian Areas

¹ Descriptions have been summarized; see Section 6.2 for details.

² Includes, but not limited to: streams, creeks, rivers, ponds, lakes

Special-Status Species				
Special-Status Plants	Endangered Species Act (ESA) California Endangered Species Act (CESA) California Native Plant Protection Act (CNPPA) Local plans and ordinances	U.S. Fish and Wildlife Service (USFWS) CDFW Local agencies	Question A. Special-status Species Question E. Local Policies	ESA Listed Plants CESA Listed Plants CNPPA Listed Plants California Native Plant Society (CNPS) Rank 1, 2, & 3 Plants CNPS Rank 4 Plants (sometimes, analysis required) Locally listed Plants (sometimes, analysis required) Locally Listed Trees (local ordinance)
Special-status Wildlife	ESA CESA CFGC Bald and Golden Eagle Protection Act (BGEPA) Local plans and ordinances	USFWS National Marine Fisheries (NMFS) CDFW Local agencies	Question A. Special-status Species Question E. Local Policies	ESA Listed Wildlife CESA Listed Wildlife CDFW Fully Protected Species CDFW Species of Special Concern Native Nesting birds Bald and Golden Eagles
Critical Habitat	ESA	USFWS	Question A. Special-status Species Question F. Conservation Plans	Critical Habitat is only designated for ESA listed species such as: California red-legged frog, marbled murrelet etc.

2.1 Sensitive Natural Communities

Sensitive natural communities include vegetation alliances and associations on the CDFW Natural Communities List with a rarity ranking of S1, S2 or S3. Sensitive natural communities include habitats that fulfill special functions, have limited distribution or are dominated by special-status plant species (Special Stands). Special Stands are protected under federal regulations such as the ESA; state regulations such as the California Endangered Species Act (CESA), the CFGC, and CEQA; or local ordinances or policies such as the County General Plan and Zoning Ordinances.

Non-sensitive natural communities include vegetation alliances and associations on the CDFW Natural Communities List with a rarity ranking of S4 or S5, as well as other semi-natural (non-native species dominated) stands and non-sensitive land use designations such as agriculture,

developed areas, etc. These communities and land uses are not protected by federal, state, or local laws and are not considered sensitive under CEQA.

Impacts to natural communities considered sensitive by the CDFW must be evaluated for significance under CEQA. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or USFWS must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G).

2.1.1 Sensitive Aquatic Resources

Waters of U.S.

The U.S. Army Corps of Engineers (Corps) regulates “Waters of the United States” under Section 404 of the Clean Water Act. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as “other waters” and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

Waters of the State

The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes “isolated” wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Lakes, Streams, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of CFGC. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement (SAA). The term “stream”, which includes creeks and rivers, is defined in the CCR as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or

other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 SAA from CDFW.

2.2 Special-status Species

2.2.1 Special-status Plants

Special-status species include those plant species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the ESA or CESA. These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are also protected under CEQA, and are included in this analysis for completeness. A description of the CNPS Ranks is provided below in Table 3.

Table 3. CNPS Ranking List

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

CNPPA

The California Native Plant Protection Act (CNPPA) affords protection to plant species designated rare or endangered by the Fish and Game Commission through prohibition of “take,” with some exceptions. Plants designated as rare or endangered through CNPPA are subject to review through CEQA.

Locally Rare

Locally rare species are those species that are considered sensitive or unique or that occur at the limits of their natural range within a specific region. Locally rare plant species can include species which are not formally listed nor have a CNPS Rank. Locally rare plant lists have been created for several regions within the state, including Ventura County, Santa Barbara County, Alameda County, and Contra Costa County. Plants on the locally rare lists are subject to review through CEQA.

Rare, Unusual, and Significant Plants of Alameda and Contra Costa Counties, Eighth Edition (Lake 2018) is a document produced by the East Bay Chapter of the CNPS that lists 706 plant taxa which are considered locally rare, unusual, or significant in Alameda and Contra Costa counties. Of these 706 species, 444 occur in two or fewer regions in Alameda and Contra Costa counties (ranked A1 in the East Bay), 262 occur in five or fewer regions in the two counties or are otherwise threatened (ranked A2 in the East Bay), and 83 are only known from the area historically and are presumed to have been extirpated from the East Bay during the last 100 years (A1x) [see Table 4 below]. A-ranked species receive consideration under sections 15380 and 15125(a) of CEQA and are considered “locally rare” for the purposes of this report. Any locally rare species observed in the Study Area are discussed in this report.

Table 4. Description of East Bay CNPS Rare Plant Rankings

Rank	Description
A1	Locally Rare Species. Species occurring in two or fewer regions in Alameda and Contra Costa counties
A1x	Locally Rare Species. Species presumed extirpated from Alameda and Contra Costa counties
A1?	Locally Rare Species. Species possibly occurring in Alameda and Contra Costa counties. Identification or location is uncertain
A2	Locally Rare Species. Plants occurring in three to five regions or are otherwise threatened in Alameda and Contra Costa counties.
B	High Priority Watch List. Plants occurring in six to nine regions in Alameda and Contra Costa counties.
C	Second Priority Watch List. Plants occurring in ten to fifteen regions in Alameda and Contra Costa counties.

*Ranks preceded by an asterisk (e.g. “*A1”) also have a statewide rarity ranking

2.2.2 Special-status Wildlife

Special-status wildlife species include those species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the ESA or CESA. These acts afford protection to both listed species and those that are formal candidates for listing. The federal BGEPA also provides broad protections to both eagle species that in some regards are similar to those provided by ESA. Additionally, CDFW Species of Special Concern (SSC) and California Fully Protected Species (CFP) are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA. Bat species are evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity. Bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status under CEQA.

In addition to regulations for species that carry a special designation, most native birds in California (including non-status species) are protected under the CFGC, specifically sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific and designated geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

Wildlife Corridors

Wildlife movement between suitable habitat areas typically occurs via wildlife movement corridors. The primary function of wildlife corridors is to connect two larger habitat blocks, also referred to as core habitat areas (Beier 1992, Soulé and Terbough. 1999). Core habitat areas are important for wildlife that may travel between different types of habitat in order to complete various stages of their lifecycle. Wildlife corridors must be considered under CEQA.

2.3 Local Ordinances

2.3.1. *City of Pleasanton General Plan*

The Project Area is regulated by the City of Pleasanton General Plan (City of Pleasanton 2009) which outlines conservation goals and policies for the City of Pleasanton. These policies outline land use, zoning, housing and conservation among additional policies. All 25 Study Areas are either zoned as agriculture (City of Pleasanton, 2014) or as low density residential land use (City of Pleasanton 2012, 2015). The Project Area also lies within the East Alameda County Conservation Strategy (EACCS) boundaries (ICF International 2010). These policies provide a framework to protect natural resources while improving and streamlining the environmental permitting process. Relevant sections include 3.2 (Project-level Use of the Strategy), 3.5 (Conservation Goals and Objectives) 4.8 (Conservation Zone 8) and 5.5 (Project by Project Regulatory Compliance).

2.3.2. *City of Pleasanton Tree Ordinance*

The City of Pleasanton Municipal Code contains the City's tree ordinance (Chapter 17.16) which outlines the requirements to protect and replace trees within the city limits. Section 17.16.006 protects "Heritage Trees" which are:

- any single-trunked tree, regardless of species, with circumference of 55 inches (17-inch diameter) or more at 4.5 feet above ground level,
- any multi-trunked tree of which the two largest trunks have a circumference of 55 inches (17-inch diameter) or more at 4.5 feet above ground level,

- any tree 35 feet or more in height,
- a tree of historical significance or
- a stand of trees, the nature of which makes each dependent upon the other for survival.

Removal of any heritage trees requires an application which will be reviewed by the director. Section 17.16.050 requires new property development in which any trees are to be removed or affected to include an application to the City for review. If any trees are removed without review the developer shall pay a fine. Prior to issuance of any permit, the applicant shall post money in the sum of \$5,000 for each tree required to be preserved or \$25,000, whichever is less. The money shall be retained for one year and be forfeited in an amount equal to \$5,000 per tree in the event that a tree or trees required to be preserved are removed, destroyed or disfigured.

2.3.3. *Alameda County Regulation of Trees in County Right-Of-Way*

Alameda County Municipal Code contains its own tree regulations (Chapter 12.11) which outlines the requirements for protecting trees that occur in a right-of-way. Section 12.11.110 details prohibited activities which includes anything that could injure or damage a tree such as:

- top, head back, stub, pollard
- use of mechanical weeding devices
- lighting on fire
- poisoning
- attaching material (posters, stakes, staples, etc.)

The director has the authority to approve the removal of a tree from the right-of-way as a part of a scheduled tree removal and replacement program or in conjunction with an approved roadway improvement project.

3.0 ENVIRONMENTAL SETTING

3.1 Soils and Topography

3.1.1 Soils

The U.S. Department of Agriculture (USDA) *Soil Survey of Alameda County* (USDA 1974) and California Soils Resources Lab (CSRL) SoilWeb (CSRL 2019) indicates the Project Area is composed of twelve soil series: *Azule, Clear Lake, Danville, Diablo, Gravel Pits, Los Osos, Pleasanton, Positas, Sunnyvale, Sycamore, Yolo and Zamora*. These soil series are described below (Appendix A, Figure 2).

Azule Series: The Azule series consists of moderately deep, well drained soils on hills with slopes of 9 to 75 percent. They formed in material weathered from consolidated alluvium and from soft shale and fine grained sandstone and have medium to rapid runoff and slow permeability. In a typical profile, the surface layer is very dark grayish brown (2.5Y 3/2) slightly acid clay loam, 6 inches thick. This is underlain by very dark grayish brown to light yellowish brown (2.5Y 6/4) slightly acid clay to 25 inches. From 25 to 40 inches, the soil consists of light olive brown (2.5Y 5/4) consolidated sediment. Within the Project Area, this series occurs in Study Area C-13.

Clear Lake Series: The Clear Lake series consists of clays that formed under poorly drained conditions. These soils are underlain by alluvium from basic and sedimentary rock. They are on plains and flat basin areas. In a typical profile, the surface layer is black (N 4/0) or very dark gray (10YR 3/1) clay, about 39 inches thick. This is underlain by a dark-gray moderately alkaline clay that has light gray mottles, black (10YR 2/1) when moist. At a depth of about 46 inches, it is gray and light brownish-gray, moderately alkaline clay. At a depth of about 60 inches, it is light gray to white, mildly alkaline sandy clay loam. Within the Project Area, this series occurs in Study Area C-14.

Danville Series: The Danville series consists of very deep, well drained soils that formed in alluvium. Danville soils are on fans and terraces and have slopes of 0 to 9 percent. Within the Project Area, this series occurs in Study Area C-03.

Diablo Series: The Diablo series consists of moderately deep, well drained soils on hillslopes and mountain slopes. They formed from residuum weathered from calcareous shale. These soils are well drained and have very high runoff. The soil ecological setting is considered clayey hills and they are not considered to be hydric. Within the Project Area, this series occurs in Study Area C-14.

Gravel Pits: The gravel pits soil map unit consists of extremely gravelly sand up to 60 inches deep occurs. Runoff is very low. Gravel pits make up 95 percent of the composition and are non-hydric soils. The remaining 5 percent are other minor components including stream terraces, which are hydric soils. No landform positions are provided for this soil type. Within the Project Area, this series occurs in Study Area P-07.

Los Osos Series: The Los Osos series consists of moderately deep, well drained soils on uplands with slopes of 5 to 75 percent. They formed in material weathered from firm to hard sandstone and shale. These soils have very high runoff and slow permeability. A typical profile includes five soil horizons: A, Btss1, Btss2, C, and Cr.

The A horizon is a very dark grayish brown (10YR 3/2) moderately acid (pH 6.0) loam from 0 to 14 inches. Beneath this, from 14 to 24 inches, is the Btss1 layer, a dark yellowish brown (10YR 4/4), moderately acid clay. This is underlain, from 24 to 32 inches, by the Btss2 horizon, a dark yellowish brown, slightly acid (pH 6.5) clay loam. Beneath this is the C horizon, a light olive brown (2.5Y 5/4), neutral (pH 7.0) sandy loam. The deepest horizon, from 39 to 43 inches, is the Cr horizon, a brown (10YR 4/3) sandstone. Within the Project Area, this series occurs in Study Areas C-14 and P-06.

Pleasanton Series: The Pleasanton map unit consists very deep, well drained and fine-loamy soils. They are located on nearly level to gently sloping alluvial fans and terraces. A typical profile includes five soil horizons: Ap, A, B2t, B3, and C.

The Ap horizon is a very dark grayish brown (10YR 3/2), slightly acid (pH 6.3) and gravelly fine sandy loam from 0-9 inches. Beneath this is an A horizon from 9-21 inches containing very dark grayish brown (10YR 3/2), neutral (pH 6.8) and gravelly fine sandy loam. This is underlain by a Bt horizon from 21-48 inches containing a 10YR 3/3), neutral (pH 7.3) and gravelly sandy clay loam. This is underlain by a B horizon from 48-64 inches containing a dark brown (10YR 3/3), neutral (pH 7.3), gravelly loam. The final horizon in the soil profile is a C horizon from 64-72 and contains a slightly alkaline (pH 7.4), dark yellowish brown (10YR 4/4) and gravelly fine sandy loam near gravelly loam.

Within the Project Area, this series occurs in Study Areas C-03, C-09, C-13, P-05, and P-08.

Positas Series: The Positas series soils consist of well drained to excessively drained, shallow to moderately deep gravelly loam soils on nearly level to very steep high terraces south of the Livermore Valley. These soils formed in poorly sorted clay, sand, and gravel that are weakly consolidated in places. This well-drained soil has a very slowly permeable subsoil. Runoff is slow to medium, and the available water holding capacity is low.

Positas soils sloped at 2 to 20 percent and 20 to 40 percent series occur in the Study Area. Within the Project Area, this series occurs in Study Areas C-06, C-08, C-09, C-11, C-12, C-13, and C-16.

Sunnyvale Series: The Sunnyvale series consists of poorly drained, calcareous soils on nearly level valley floors north of Pleasanton. The surface soil is gray, granular, slightly calcareous, heavy clay loam. Sunnyvale soils are often used for irrigated row crops, for pasture, and for dry-farmed grain. A representative profile for the Sunnyvale series consists of an Ap horizon from 0 to 6 inches with dark gray to very dark grey (N4/ - N3/) silty clay. Similar colors are seen in an Alc2 horizon of silty clay from 6 to 14 inches. A Clca horizon extends from 14 to 34 inches, with light grey to dark grey (N7/ - N3/) silty clay.

Sunnyvale clay loam over clay: Is found on nearly level valley floors. The texture of surface soil ranges from silt loam to heavy clay loam or heavy silty clay loam. In some small areas the surface soil is strongly calcareous. This soil is poorly drained, the permeability of the subsoil is moderately slow, and runoff is slow. This soil type is listed as hydric in the National List of Hydric Soils (USDA 2012). Within the Project Area, this series occurs in Study Areas C-01, C-02, C-05, C-06, C-10, P-02, P-03, and P-04.

Sunnyvale clay loam, drained: The Sunnyvale series consists of poorly drained silty clays that are underlain by alluvium from material derived from sedimentary rock. These soils are in low positions on the alluvial plains and have slopes of less than 2 percent. Sunnyvale silty clay, drained, as it occurs on alluvial flats and in depressions, is listed as hydric on the US national hydric soils list (USDA 2012). The drained subtype of this series is typically used for agriculture such as row crops, sugar beets, prunes, and pears. Within the Project Area, this series occurs in Study Areas C-04 and P-02.

Sycamore Series: This soil unit consists of very deep, poorly drained soil that formed in alluvium derived from sedimentary rock. It is located on floodplains and has slopes of 0 to 2 percent, with elevations ranging from 10 to 50 feet. These soils have been artificially drained, runoff is slow, and permeability is moderate. The surface layer is a moderately alkaline silt loam about 18 inches thick that typically has a matrix chroma of 2. The water table is at a depth of 72 inches in most areas (USDA 1981). This soil series is included on the national hydric soils list, where it is listed as occurring on floodplain landforms (USDA 2015). Within the Project Area, this series occurs in Study Areas C-04, C-06, P-01 and P-04.

Yolo series: The Yolo series consists of very deep, well drained soils that formed in alluvium from mixed rocks. Yolo soils are on alluvial fans and flood plains. Slopes range from 0 to 20 percent, but are typically 0 to 2 percent. The soil is well drained with slow to medium runoff and moderate permeability. Tillage pans have developed over

broad areas and tend to restrict permeability. Within the Project Area, this series occurs in Study Areas C-04, C-05, C-06, C-07, C-08, C-11, C-15, and C-17.

Zamora series: The Zamora series consists of very deep, well drained soils that formed in alluvium from mixed rocks. Zamora soils are on nearly level to strongly sloping alluvial fans, stream terraces, and floodplains, usually with 0 to 9 percent slopes at elevations ranging from 30 to 1,300 feet. Mean annual precipitation ranges from 14 to 30 inches. Zamora soils exist in a dry, subhumid, mesothermal climate with hot dry summers and cool moist winters. Native vegetation typically consists of annual grasses, forbs, and widely spaced oaks. A typical profile includes five soil horizons: Ap, Bt1, Bt2, Bt3, and Bwk. Within the Project Area, this series occurs in Study Areas C-06, P-04, and P-06.

3.1.2 Topography

The Project Area consists of several detention ponds and stream channels located in highly disturbed or developed areas in a generally low elevation area. Elevations in the Project Area range from 300 to 440 feet. The excavated detention ponds range is approximately 15 feet below surrounding grades.

3.2 Climate and Hydrology

3.2.1 Climate

The Project Area is generally located in the southwest portion of Pleasanton with a majority of sites bound by the Arroyo de la Laguna to the west and Arroyo Valle to the north. The area has a Mediterranean climate with warm to hot, dry summers and mild to cool, wet winters. Average maximum temperatures range from 57 to 88 degrees Fahrenheit and average minimum temperatures range from 38 to 57 degrees Fahrenheit. Wind speeds are greatest in spring and summer, and least in the fall and winter (ICFI 2012). Precipitation typically occurs during the winter months, with little rainfall in the spring and summer. Average annual rainfall is 19 inches (NACSE 2019).

3.2.2 Hydrology

The Project Area consists of natural stream segments (Study Areas C-03, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14, C-16, C-17, and P-06) and excavated channels (Study Areas C-01, C-02, C-04, C-05, C-10, and C-15) that are connected to surrounding streams and regulatory floodways within the City or unincorporated portions of Alameda County. The Project Area detention ponds are used as flood control features which are connected to the Project Area channels, floodways and streams via culverts. Arroyo de la Laguna, a freshwater forested/shrub wetland (NWI 2019), bounds nearly all Study Areas to the west with Study Area C-06, which sits within a 100 year flood zone (FEMA 2019), functioning as a major artery that directs flow to Arroyo de la Laguna. Approximately 2,000 ft. south of Arroyo de la Laguna's connection to Arroyo Valle, which travels mainly east to west within the Project Area, the palustrine wetland feature transitions to a riverine feature. All channel parcels of the Project Area are connected to Arroyo de la Laguna, Arroyo Mocho, Alamo Canal, or Arroyo Valle, directly or indirectly. Other sources of hydrology to the Project Area are precipitation and surface run-off from adjacent lands. Precipitation typically occurs during the winter months, with little rainfall in the spring and summer. Average annual rainfall is 19 inches (NACSE 2019).

3.3 Vegetation and Land-use

3.3.1 Vegetation

The dominant vegetation types in the proposed Project's 25 Study Areas are ruderal grassland, riparian forest, landscaped areas, coast live oak woodland, perennial marsh and coyote brush scrub. Each of the locations typically support a mixed vegetation assemblage, representing a subset of vegetation types that occur across all Study Areas. Ruderal grassland includes areas that have been partially developed/ residential areas or have been used in the past for agriculture. Dominant plant species observed in ruderal herbaceous grassland in the Project Area include wild oat (*Avena sativa*), Italian rye grass (*Festuca perennis*), and Italian thistle (*Carduus pycnocephalus*). Dominant riparian forest tree layer includes coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and black walnut (*Juglans hindsii*), with lower densities of willow (*Salix* sp.) and sycamore (*Platanus racemosa*). Dominant plant species observed in perennial marsh in the Project Area include bulrush (*Schoenoplectus californicus*), smartweed (*Persicaria* sp.) and goosefoot (*Chenopodium* sp.). Landscaped areas contain lawn and ornamental trees. Coast live oak woodland is dominated by coast live oak trees that grow in various canopy density, from open to closed. The coyote brush scrubland is dominated by mature coyote brush (*Baccharis pilularis*). Vegetation types are described further in Section 4 and Appendix A, Figure 3.

3.3.2 Land-Use

The Project Area consists of portions of natural streams, drainage channels and detention ponds used and maintained by the city of Pleasanton. Nearly all Study Areas were historically used for various agricultural purposes such as row crops dating back to 1949 (NETR 2019). Study Areas C-01, P-01, and C-07 have been located within residential developments dating back to at least 1949. From 1949 up to 2005 the Project Area that historically supported various agricultural practices (NETR 2019) began to develop various public park space or residential areas around Project Area in 2005. Study Area C-05 was an engineered agricultural channel since at least 1949 which had portions near Valley Ave. and south re-naturalized around 2009, the northern portion of Study Area C-05 remains as an excavated feature. The City of Pleasanton excavated the detention ponds sometime prior to 2002 with Study Area P-01 remaining as an undeveloped field until approximately 2012. All Study Areas are surrounded by a mix of residential and commercial developments with Arroyo Valle in the northern portion of the Project Area and bound by Interstate 580. To the west is Arroyo de la Laguna and Interstate 680. Study Areas C-02, C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-11, and C-13 occur either immediately adjacent to or directly inside of public park space.

4.0 ASSESSMENT METHODOLOGY

Prior to the site visit, WRA biologists reviewed the following literature and performed database searches to assess the potential for sensitive natural communities (e.g., wetlands) and special-status species (e.g., endangered plants):

- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- Aerial photographs (Google 2019)
- Breeding Bird Atlas of Santa Clara County (Bousman 2007)

- California Native Plant Society Rare Plant Electronic Inventory (CNPS 2019a)
- California Natural Diversity Database (CNDDDB, CDFW 2019a)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- CDFW Publication, *California Bird Species of Special Concern in California* (Shuford and Gardali 2008)
- Consortium of California Herbaria (CCH 2019)
- eBird: a citizen-based bird observation network in the biological sciences (Sullivan et al 2019)
- NWI (USFWS 2019a)
- Santa Clara Valley Habitat Plan (ICFI 2012)
- *Soil Survey of Eastern Santa Clara County* (USDA 1974)
- USFWS Information for Planning and Consultation (IPac) (USFWS 2019b)
- WBWG, Species Accounts Region 5 (WBWG 2019)

Database searches (i.e., CNDDDB, CNPS) focused on the Altamont, Byron Hot Springs, Diablo, Dublin, Niles, Livermore, Tassajara, La Costa Valley, and Milpitas USGS 7.5-minute quadrangles. Appendix A, Figures 4 and 5 contain observations of special-status plant species and wildlife species documented within a five-mile radius of the Project Area.

Following the remote assessment, a wildlife biologist and a botanist traversed the entire Project Area on foot to document: (1) plant communities present within the Project Area, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present.

4.1 Natural Communities

4.1.1 Terrestrial Natural Communities

Each Study Area was evaluated for terrestrial natural communities to determine if such areas have the potential to support special-status plants or wildlife. In most instances, communities are delineated based on distinct shifts in plant assemblage (vegetation), and follow the *California Natural Community List* (CDFW 2018) and *A Manual of California Vegetation, Online Edition* (CNPS 2019b). In some cases it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature; should an undescribed variant be used, it will be noted in the description.

Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled (S1/G1), imperiled (S2/G2), or vulnerable (S3/G3), were considered as part of this evaluation³

³ Ranking of CDFW List of Vegetation Alliances is based on NatureServe Rankings (NatureServe 2019)

4.1.2 *Aquatic Natural Communities*

Each Study Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils (WRA 2019).

4.2 **Special-status Species**

4.2.1 *General Assessment*

Potential occurrence of special-status species in the Study Areas was evaluated by first determining which special-status species occur in the vicinity of the Study Areas through a literature and database review. Database searches for known occurrences of special-status species focused on the 7.5-minute USGS quadrangles mentioned above.

A site visit was made to the Study Areas to search for suitable habitats for special-status species. Habitat conditions observed at the Study Areas were used to evaluate the potential for presence of special-status wildlife based on these searches and the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Areas was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site in the recent past.

The site assessments are intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in each Study Area. Methods for these assessments are described below. If a special-status species was observed during the site visit, its presence was recorded and discussed.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats. If necessary, recognized experts in individual species biology were contacted to obtain the most up-to-date information regarding species biology and ecology.

If a special-status species was observed during a site visit, its presence was recorded and is discussed below in Section 4.2.2. or 4.2.3. For some species, a site assessment visit at the

level conducted for this report may not be sufficient to determine presence or absence to the degree required by regulatory agencies. In these cases, a species may be assumed to be present or protocol-level surveys may be necessary to prove absence. Special-status species for which protocol-level surveys may be necessary are discussed in Section 5.0.

4.2.2 Special-status Plants

Focused Survey

No focused surveys or targeted assessments have been completed within the Study Areas.

Protocol-level Survey

No protocol-level surveys were conducted in the Study Areas.

4.2.3 Special-status Wildlife

Targeted Assessment

No previous protocol-level surveys, or targeted assessments have been completed within the Study Areas.

Critical Habitat

During the search of background literature, prior to the site visit the USFWS Critical Habitat Mapper was referenced to determine if critical habitat for any species occurs within the Study Areas (USFWS 2019c).

Wildlife Corridors

Prior to the site assessment, biologists reviewed maps from the California Essential Connectivity Project and associated habitat connectivity or mapping data available through the CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2019b). In addition, aerial imagery (Google 2019) for the local area was referenced to determine if core habitat areas were present within, or connected to the Study Areas.

5.0 ASSESSMENT RESULTS

The Project Area covers 95.04 acres and is situated throughout the City of Pleasanton and the county of Alameda, mostly occurring in developed areas adjacent to park space or residential developments. The Project Area has 25 Study Area locations and is bounded to the north by Interstate 580; all creek segments and almost all detention ponds occur within the City. One detention pond, Vineyard East Detention Pond, is located in unincorporated Alameda County.

5.1 Natural Communities

Overall, the Project Area has seven sensitive natural communities and five non-sensitive natural communities represented within the Study Areas. The non-sensitive communities include: landscaped, developed, ruderal grassland, coyote brush scrub, and coast live oak woodland.

The sensitive communities observed in the Study Areas include: riparian, detention pond, drainage ditch, ephemeral stream, intermittent stream, perennial marsh, and perennial stream.

Table 5 summarizes the natural community types observed in the Study Areas. Natural communities and other land use designations mapped in the Study Areas are shown in Appendix A, Figure 3. A description of the natural community is contained in the following section. Appendix B lists all plant species observed within and around the Study Areas. Appendix C contains representative photographs of the Study Areas.

Table 5. Natural Communities

Vegetation Structure/ Land Use	Community	Vegetation Alliance/Association (CNPS 2019b)	Sensitive Status	Rarity Ranking	Present at Study Area Locations	Acres within Project Area
Terrestrial Communities						
Tree-Dominated	Coast Live Oak Woodland	Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland Alliance)	Non-sensitive	G5S4	C-06, C-08, C-09, C-14, C-16	3.95
Herb-Dominated	Coyote Brush Scrub	Coyote Brush Scrub (<i>Baccharis pilularis</i> Shrubland Alliance)	Non-sensitive	G5S5	C-06	1.28
Tree-Dominated	Riparian	Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland Alliance)	Sensitive	G5S4	C-03 through C-09, C-11 through C-14, C-16, C-17 P-01, P-02, P-06, P-08	21.67
Herb-Dominated	Ruderal Grassland	Wild Oat Grassland (<i>Avena sativa</i> Herbaceous Stand)	Non-sensitive	N/A	C-02, C-04 through C-06, C-10, C-12, C-14 through C-17 P-01 through P-08	39.04
Developed	N/A	N/A	Non-sensitive	N/A	C-01 through C-04, C-06, through C-10, C-13 through C-17 P-01, P-02, P-05 through P-08	6.92
Landscaped	N/A	N/A	Non-sensitive	N/A	C-07, through C-11, C-13 through C-17 P-01, P-06	5.62
Aquatic Communities						

Vegetation Structure/ Land Use	Community	Vegetation Alliance/Association (CNPS 2019b)	Sensitive Status	Rarity Ranking	Present at Study Area Locations	Acres within Project Area
Detention Basin	N/A	Open Water / Bare	Sensitive	N/A	C-11 P-01 through P-08	9.71
Intermittent Stream	N/A	Open Water/ Bare	Sensitive	N/A	C-07 through C-09, C-11, C-16	1.08
Ephemeral Stream	N/A	Open Water/ Bare	Sensitive	N/A	C-03, C-06, C-07, C-12, C-13, C-17 P-06	0.93
Wetland	Perennial Marsh	California Bulrush (<i>Schoenoplectus californicus</i> Herbaceous Alliance)	Sensitive	GNRS3	C-16	0.04
Perennial Stream	N/A	Open Water	Sensitive	N/A	C-06, C-14	2.37
Drainage Ditch	N/A	N/A	Sensitive	N/A	C-01, C-02, C-04, C-05, C-10, C-15	2.45

5.1.1 Terrestrial Natural Communities

Non-Sensitive

Ruderal Grassland; No Rank. Overall, the Study Areas are dominated by ruderal grassland. Although not described in the literature, ruderal grassland includes areas that have been partially developed or have been used in the past for agriculture. However, these areas are not currently used for agricultural activities, and have been allowed to revert to a semi-natural condition. Based on soil conditions, vegetation composition, and review of historical imagery, the Study Areas have historically consisted of agricultural land. Dominant plant species observed in ruderal herbaceous grassland in the Study Areas include wild oat, Harding grass (*Phalaris aquatica*), Italian rye grass, Italian thistle, yellow star thistle (*Centaurea solstitialis*) and additional ruderal species.

Developed; No Rank. The Study Areas contain developed land. There is no described Holland alliance for Developed Areas. All developed land within the Study Areas consists of paved roads or trails (Figure 3).

Landscaped; No Rank. The Study Areas contain landscaped land. There is no described Holland alliance for landscaped vegetation. These areas are comprised of native or non-native plants which are planted and maintained through irrigation, pruning and/ or fertilizing. In the Study Areas, a majority of the landscaped areas can be found within the stream segments running through public parks.

Coyote Brush Scrub; G5S5. There is coyote brush scrub habitat located within the Study Areas. Coyote brush scrub is known from the outer Coast Ranges and Sierra Nevada Foothills from Del Norte County south to San Diego County. This vegetation community is typically located on river mouths, riparian areas, terraces, stabilized dunes, coastal bluffs, open hillsides, and ridgelines on all aspects underlain by variable substrate of sand to clay (Sawyer et al., 2009). Plant species associated with coyote brush scrub in the Study Areas consists of coyote brush and ruderal grassland.

Coast Live Oak Woodland; G5S4. The Study Areas contain coast live oak woodland. This vegetation community is typically located on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained sandy or loam substrates with high organic content (Sawyer et al., 2009). A majority of this community can be found within the riparian corridor areas of the channel segments, along the riparian corridor of detention ponds with some woodland occurring just outside of the riparian corridor. Dominant species in the tree layer include coast live oak, valley oak, and black walnut. A majority of tree stands within the Study Areas lack density which allows for a denser than average shrub and herb layer which was dominated by coyote brush, Himalayan blackberry (*Rubus armeniacus*), and canary ivy (*Hedera canariensis*).

Sensitive

Riparian (Coast Live Oak Woodland); G5S4.

Riparian woodland is a sensitive natural community that occurs in the Study Areas. Riparian woodland is not classified as sensitive biological community existing in *A Manual of California Vegetation, Online Edition* (CNPS 2019b). However, this community does contain elements of the communities described as coast live oak woodland (*Quercus agrifolia* Woodland Alliance; Rarity ranking G5, S4; CNPS 2019b). The overstory is generally open to dense and the understory is generally open. Dominant riparian forest tree layer includes coast live oak, valley

oak, and black walnut, with lower densities of willow and sycamore. The understory shrub species include Himalayan blackberry, willow, and toyon (*Heteromeles arbutifolia*). The understory herbaceous species include wild oat, soft brome (*Bromus hordeaceus*), and fennel (*Foeniculum vulgare*).

5.1.2 Aquatic Natural Communities

Non-Sensitive

No non-sensitive aquatic natural communities occur in the Study Areas.

Sensitive

Streams, channels, drainage ditches, and some detention ponds are considered to be potential waters of the U.S./State. All detention ponds are also considered to be potential CDFW jurisdiction as habitat.

Detention Basin; No Rank. The Study Areas consist of eight (8) manmade detention basins that are used as flood control features. These ponds receive stormwater flow through a series of culverts that connect to various other City channels and natural streams. No open water was observed within any of the ponds during the site assessments except for P-02, which had standing water within the northernmost basin that was diked by a rip-rap dam preventing water from flowing into other portions of the pond. Vegetation on the banks of the basin was dominated by Harding grass, wild oat, and curly dock (*Rumex crispus*). Vegetation within the basin was dominated by cattail (*Typha latifolia*), seaside barley (*Hordeum marinum*), and rabbitsfoot grass (*Polypogon monspeliensis*).

Drainage Ditch; No Rank. The Study Areas consist of six (6) manmade channelized drainage ditches (C-01, C-02, C-04, C-05, C-10, and C-15). These drainage ditches vary from concrete lined to engineered earthen channels that are used as flood control conveyance. Dominant vegetation within the earthen channels/ ditches composed largely of weedy upland species including Harding grass, wild oat, bristly ox-tongue (*Helminthotheca echioides*), and Italian rye grass.

Ephemeral Stream. No Rank. The Study Areas contain ephemeral stream segments. Ephemeral streams are linear features within which water flows only during or immediately after a significant rain event. These streams are dry for the majority of the year. Streams and their riparian corridors are considered sensitive under CEQA and are protected by other federal and state laws.

Intermittent Stream. No Rank. The Study Areas contain intermittent stream segments. Intermittent streams are linear features within which water flows for a portion of the year, generally drying out during the driest time of the year. Intermittent streams generally have a well-developed riparian corridor dominated by coast live oak, coyote brush, valley oak, and black walnut. Streams and their riparian corridors are considered sensitive under CEQA and are protected by other federal and state laws.

Perennial Marsh. GNR3. The Study Areas contain perennial marsh habitat. This community can be found at Arlington Creek (C-16). This determination was given for the perennial bulrush

vegetation that is dominant in the feature. C-16 is located directly in a residential development to the east of Riddell Street and to the west of Arlington Drive. An intermittent stream feature runs east to west within C-16 which opens into an intervening section of perennial marsh as the stream feature turns south. Vegetation observed within the marsh includes California bulrush and smartweed. The perennial marsh then thins and returns to an intermittent stream feature with a defined bed and bank running south out of the Study Areas.

Perennial Stream. No Rank. There were two perennial streams (Study Areas C-06 and C-14) delineated within the Study Areas. Perennial streams are linear features with a distinct bed and banks that have a continuous flow of water all year during years of normal rainfall. Flowing water was observed at both of these features. C-06 spans from Bernal Avenue to Arroyo de la Laguna and travels south. Valley Avenue bisects C-06 which continues flowing under the road via culverts; it also travels under an Interstate 680 bridge. Habitat along this creek varies from coast live oak, coyote brush scrub, and riparian. Water was observed throughout much of the channel with the northernmost portion of the creek being dry. C-06 conveys water through a natural channel with its southern tip ending in a concrete channel that drains into Arroyo de la Laguna.

C-14 consists of four short segments of Dublin Canyon Creek and is located near the entrance of two residential developments, just south of I-580. Each segment has a distinct, steep bed and bank with mature riparian vegetation consisting of coast live oak, willow and sycamore.

5.3 Special-status Species

Appendix B lists all plant and wildlife species observed within and in the immediate vicinity of the Study Areas. Appendix C contains representative photographs of the Study Areas. Appendix D lists all special-status plant and wildlife species with potential to occur within and around the Project Area.

5.3.1 Special-status Plants

Potential for Occurrence

A five-mile radius search resulted in sixty-two (62) species being identified as known from around the Project Area (CDFW 2019, CNPS 2019). Appendix D summarizes the potential occurrence for each special-status plant species documented in the vicinity of the Project Area to occur. Special-status plants which have been recorded within 5-miles of the Project Area are shown in Figure 4. There are two (2) special-status plant species that were determined to have a moderate potential to occur within specific Study Area locations because of the presence of relatively suitable habitat with alkaline soils and recent documented proximity (Table 5).

Additionally, two plant species on the East Bay Locally Rare Plant list were observed within the Project Area, coast live oak, which is present in all mapped coast live oak woodland and riparian communities and black walnut only in the mapped riparian community. Black walnut trees were considered to be only native to three sites (Jepson Flora Project 2020) in the state and is thus not considered to be a locally rare individual tree in this location.

Table 5. Potential Special-Status Plants

SCIENTIFIC NAME	COMMON NAME	Conservation Status	Potential	Study Area Locations
CNPS Listed Plants				

<i>Centromadia parryi</i> <i>ssp. congdonii</i>	Congdon's Tarplant	1B.1	Moderate	C-05, C-06 P-01, P-02, P-03, P-04, P-06
<i>Extriplex joaquiniana</i>	San Joaquin Spearscale	1B.2	Moderate	C-05, C-06 P-01, P-02, P-03, P-04
Other Special-status Plants (CEQA, other)				
<i>Quercus agrifolia</i>	Coast live oak	Locally Rare A2	Present	C-06, C-08, C-09, C-11, C-12, C-13, C-14, C-16

The two CNPS ranked special-status plants with a high potential to occur within the Project Area which are listed and detailed below.

Congdon's tarplant (*Centromadia parryi* *ssp. congdonii*). CNPS List 1B.1.

Congdon's tarplant is an annual herb in the aster family (Asteraceae). It blooms from May through October and its nearest and most recent occurrence was documented in 2011, 1.7 miles northwest of Pimlico Canal (C-01) (CNDDDB, 2019). Congdon's tarplant habitat varies from valley and foothill grassland in elevations ranging from 0 to 755 feet (CDFW 2019, CNPS 2019a). This species can be associated with alkaline or saline soils. Study Areas C-05, C-06, P-01, P-02, P-03, P-04, and P-06 support some potential grassland habitat on alkaline soils for Congdon's tarplant which can tolerate disturbed areas therefore it has a moderate potential to occur onsite, but was not observed during the July or October 2019 site assessments.

San Joaquin spearscale (*Extriplex joaquiniana*). CNPS List 1B.2.

San Joaquin spearscale is an annual herb in the goosefoot family (Chenopodiaceae) that blooms from April to October. It typically occurs in seasonal alkali sink scrub and wetlands in chenopod scrub, alkali meadow, and valley and foothill grassland habitat at elevations ranging from 0 to 2,740 feet (CDFW 2019, CNPS 2019). San Joaquin spearscale is known from Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Solano, Tulare, and Yolo counties. The nearest and most recent CNDDDB occurrence was documented in 2002, 0.6 miles north of Stoneridge Pond (P-01). The species occurs in alkaline soils. Study Areas C-05, C-06, P-01, P-02, P-03, and P-04 support some disturbed foothill grassland habitat on alkaline soils and due to the proximity of the nearest and most recent occurrence there is a moderate potential this species could occur within the Project Area, but was not observed during the July or October 2019 site assessments.

Coast live oak (*Quercus agrifolia*). East Bay Locally Rare A.2

Coast live oak is an evergreen tree in the oak family (Fagaceae) that blooms from February to April. It occurs in valleys and slopes of mixed evergreen forest, foothill woodland, and oak woodland at elevations below 4,725 feet (Jepson 2020). Coast live oak is known from 33 counties in California. The species is relatively common and was observed in Study Areas C-06, C-08, C-09, C-11, C-12, C-13, C-14 and C-16 in riparian and coast live oak communities.

5.3.2 Special-status Wildlife

Thirty-nine (39) special-status wildlife species have been documented in the vicinity of the Project Area. Appendix D summarizes the potential for each of these species to occur in the

Project Area. One (1) special status wildlife species was observed in Study Area C-10 during the site assessment: tricolored blackbird. Eight (8) special status wildlife species were determined to have a moderate or higher potential to occur in the Project Area. Special-status wildlife species that have a moderate or high potential to occur in the Project Area are discussed below in Table 6.

Table 6. Potential Special-Status Wildlife

SCIENTIFIC NAME	COMMON NAME	CONSERVATION STATUS	POTENTIAL
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC	Moderate
<i>Elanus leucurus</i>	white tailed Kite	CFP	Moderate
<i>Athene cunicularia</i>	burrowing owl	SSC	High
<i>Rana draytonii</i>	California red-legged frog	FT	Moderate
<i>Ambystoma californiense</i>	California tiger salamander	FT, ST	Moderate
<i>Masticophis lateralis euryxanthus</i>	Alameda whipsnake	FT, ST	Moderate
<i>Circus hudsonius</i>	northern harrier	SSC	High
<i>Agelaius tricolor</i>	tricolored blackbird	ST	High

Species with a Moderate or higher potential to occur are discussed below.

Tricolored blackbird (*Agelaius tricolor*). State Threatened. High Potential. Tricolored blackbird is a locally common resident in the Central Valley and along coastal California. Most tricolored blackbirds reside in the Central Valley March through August, then moving into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter (Meese et al. 2014). This species breeds adjacent to fresh water, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used (Shuford and Gardali 2008). This species is highly colonial; nesting habitat must be large enough to support a minimum of 30 pairs, and colonies are commonly substantially larger (up to thousands of pairs). Tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage up to 5.6-miles (9-kilometers) from their colonies although in most cases only a small part of the area within this range provides suitable foraging (Hamilton and Meese 2006).

This species was identified during field assessments in Study Area C-10 (Junipero Canal). While it was not clear whether an established breeding colony currently exists at this location, several individuals were seen moving as a group through tall aquatic vegetation. Several Study Areas, chiefly C-10, P-02, and P-03, possess dense stands of cattails or tules that may provide a suitable location for a breeding colony. Due to the presence of potentially suitable nesting and foraging habitat, combined with field observations, this species has a high potential to occur within the Project Area in Study Areas C-10, P-02, and P-03.

Loggerhead shrike (*Lanius ludovicianus*). CDFW Species of Special Concern. Moderate Potential. Loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short

vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Shrikes nest in trees and large shrubs; nests are usually placed three to ten feet off the ground (Shuford and Gardali 2008).

This species prefers open grasslands with scattered trees or shrubs, which is present throughout the Project Area. Additionally, this species is known to occur in the vicinity of the Project Area (CDFW 2019). However, nesting substrates in areas with potential for this species to occur would likely not be impacted by project work unless tree removal was scheduled as part of maintenance.

Because the species is known to occur in the vicinity, typical foraging habitat is present, but nesting habitat is unlikely to be directly impacted by the proposed Project, the species has a moderate potential to occur within the Project Area.

Northern harrier (*Circus hudsonius [cyaneus]*). CDFW Species of Special Concern. High Potential. Northern harrier occurs as a resident and winter visitor in open habitats throughout most of California, including freshwater and brackish marshes, grasslands and fields, agricultural areas, and deserts. Harriers typically nest in treeless areas within patches of dense, relatively tall, vegetation, the composition of which is highly variable; nests are placed on the ground and often located near water or within wetlands (Shuford and Gardali 2008). Harriers are birds of prey and subsist on a variety of small mammals and other vertebrates.

Multiple Study Areas (specifically P-02, P-03, P-04, and C-10) provide suitable nesting habitat for this species amid emergent vegetation or otherwise slightly sheltered areas near wetlands. Study Areas with the greatest potential to support this species are those without adjacent dense urban/residential matrix. Foraging opportunities are present across the Project Area in open grassland areas and in wetlands. Given the availability of both nesting and foraging habitat on the Project Area, this species has high potential to occur.

White-tailed Kite (*Elanus leucurus*). CDFG Fully Protected. High Potential. White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

Nearby riparian habitats and open spaces are likely to provide suitable foraging habitat for kites. Small mammal burrows are present within several Study Areas, and open spaces directly adjacent to the City limits likely provide increased foraging opportunity. Suitable nest trees are present throughout the Project Area, though sites located within dense residential areas are unlikely to support nesting for this species. Because nesting substrates are scattered throughout the Project Area and foraging habitat is widely available, there is a high potential for this species to occur within the Project Area.

Burrowing Owl (*Athene cunicularia*), CDFG Species of Special Concern. High Potential. Burrowing owl typically favors flat, open grassland or gentle slopes and sparse shrub land

ecosystems. These owls prefer annual or perennial grasslands, typically with sparse or nonexistent tree or shrub canopies; however, they also colonize debris piles and old pipes. In California, burrowing owls are found in close association with California ground squirrels (*Otospermophilus beecheyi*). Burrowing owl exhibits high site fidelity and usually use the abandoned burrows of ground squirrels for shelter and nesting (Poulin et al 2011).

Ground squirrel burrows were observed during the site visit, mainly at Study Areas in the western portion of the Project Area (i.e. C-04, C-05, P-02, and P-03). In several cases, burrows were observed on excavated banks of detention ponds, or in other locations where owls, if confirmed present, could be adversely affected by the proposed Project. At the creek Study Areas, ground squirrel activity was chiefly present on open, level areas adjacent to drainages, where vegetation height and other conditions were highly suitable for burrowing owl occupation in both wintering and breeding. This species has been documented to nest throughout the region, including within the Project Area. Due to the presence of active ground squirrels in close proximity to Study Areas and a nearby breeding populations, there is high potential for this species to occur in the Project Area within or adjacent to Study Areas C-04, C-05, P-02, and P-03.

California Tiger Salamander (*Ambystoma californiense*), Federal Threatened, State Threatened. Moderate Potential. California tiger salamander (CTS) is restricted to grasslands and low-elevation foothill regions in California (generally under 1,500-feet) where it uses seasonal aquatic habitats for breeding. CTS breed in natural ephemeral pools, or ponds that mimic ephemeral pools (stock ponds that go dry), and occupy substantial areas surrounding the breeding pool as adults. CTS spend most of their time in the grasslands surrounding breeding pools. They survive hot, dry summers by estivating (going through a dormant period) in refugia (such as burrows created by ground squirrels and other mammals and deep cracks or holes in the ground) where the soil atmosphere remains near the water saturation point. During wet periods, CTS may emerge from refugia and feed in the surrounding grasslands.

CTS occurrences are generally documented in the vicinity of C-17, P-05, P-07, and P-08 (CDFW 2019). Other Study Areas are surround by complete barriers to dispersal (e.g. large arterial roads) and thus are unlikely to support event transient individuals of this species. All three of the aforementioned Study Areas are ephemeral in nature, and likely do not hold water for a sufficient period of time for CTS larvae to attain metamorphosis. However, ground squirrel burrows exist near P-05, P-07, and P-08 to provide potential upland or estivation habitat. C-17 is located in a developed residential area where hardscaping precludes burrowing mammal activity. Generally, these areas are separated from known occurrences to some degree by significant barriers to dispersal, such as roads or highly maintained landscaped areas. The Callippe Detention Pond Study Area (Site P-05) is the most accessible by source populations of CTS. However, it is not suitable breeding habitat due to its design-function to quickly draw down and disperse storm water. The nearest occurrence of this species is located in the open space adjacent to the Callippe golf course, and is approximately 0.5 mile to the southeast. This occurrence is within potential dispersal distance, although habitat present within Study Area P-05 is marginal and barriers to dispersal exist between this Study Area and known occurrences in the form of roads and highly maintained golf course areas.

The Project Area is also partially surrounded by development which may be a complete barrier to CTS, preventing colonization from known extant populations. No apparent upland or aquatic movement corridors exist between the Study Areas and extant populations within the known dispersal distance of the species, or approximately 1-mile. Without viable corridors between a

source population and the Project Area, there is no potential for CTS to use the Project Area as upland habitat.

Although barriers to dispersal exist between the Study Areas and regional extant CTS populations, nearby Study Areas that support intermittent or ephemeral streams or detention basins may be used in some years as aquatic dispersal habitat by individuals that occur incidentally during movements in precipitation events. Additionally, several of the Study Areas are within the known dispersal distance of CTS from extant populations. Therefore, CTS has moderate potential to occur on portions of the Project Area, specifically Study Areas C-17, P-05, P-07, and P-08.

California Red-legged Frog (*Rana draytonii*), Federal Threatened, CDFW Species of Special Concern. Moderate Potential. California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, CRLF disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat are characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. CRLF estivates during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds.

Potential aquatic habitat is limited to Study Areas C-06, C-14, and P-02, all of which appear to hold water for sufficient duration for CRLF to complete their aquatic life-history. C-14 is particularly close to documented CRLF occurrences, although the documented occurrences are chiefly on the opposite (north) side of Interstate 680. The many detention ponds and intermittent/ephemeral streams in the Project Area do not constitute aquatic breeding or aquatic non-breeding habitat due to the rapid draw-down of standing water, and function as they were designed to capture and or rapidly dissipate storm flow. By design as flood-control infrastructure, they also lack aquatic and upland vegetation and neither effectively function as upland or dispersal habitat due to the lack of cover from predation.

The nearest documented occurrences of this species to most of the Study Areas is more than two miles away, which is beyond CRLF's longest known dispersal distance. Sites closer to extant populations are largely surrounded by barriers, such as residential development and paved roads that prevent dispersal and immigration to, and colonization of, the Study Areas. Perennial aquatic habitat is present in Upper Kottinger Creek (C-08), though this location is surrounded on all sides by residential development and believes to be completely isolated. Due to the presence of potential aquatic habitat with proximal extant populations in Study Areas C-06 and P-02, this species has moderate potential to occur in the Project Area.

Alameda whipsnake (*Masticophis lateralis euryxanthus*). Federal Threatened, State Threatened. Moderate Potential. The range of the Alameda whipsnake (AWS) is restricted to the inner Coast Range in western and central Contra Costa and Alameda Counties (USFWS 2000). Alameda whipsnake is associated with scrub communities, including mixed chaparral, chamise-redshank chaparral, coastal scrub, and annual grassland and oak woodlands that lie adjacent to scrub habitats that contain areas of rock outcroppings. Rock outcroppings are important as they are a favored location for lizard prey. Whipsnakes frequently venture into adjacent habitats, including grassland, oak savanna, and occasionally oak-bay woodland.

The physical and biological features required for habitation by AWS include: scrub/shrub communities with a mosaic of open and closed canopy; woodland or annual grassland plant communities contiguous to lands containing scrub communities; lands containing rock outcrops, talus, and small mammal burrows within or in proximity to scrub communities; and accessible

dispersal habitat (USFWS 2006). Use of habitats other than scrub by AWS is now known to be more common, especially for corridor movement. Thus, habitats, including grassland and riparian communities, adjacent to scrub habitat are considered essential to AWS conservation (USFWS 2006).

Most of the Study Areas assessed for this proposed Project are located outside of the known range of AWS. Study Areas located east of Interstate 680 are unlikely to provide habitat for AWS due to complete barriers to dispersal including Interstate Highways and residential/commercial development. Additionally, most sites do not provide the physical and biological features necessary to support this species. Specifically, they are located in developed areas without scrub communities, and lack the following: known extant contiguous population, rock outcroppings, and burrowing mammal activity.

Unlike other areas assessed, Study Area P-06 is located adjacent to a large swath of suitable habitat, is characterized by oak scrub and ruderal open spaces, and overlaps with AWS critical habitat (see below). However despite potentially suitable habitat in the immediate vicinity, the portions of P-06 that will be impacted by proposed stream maintenance activities provide very little habitat value for resident AWS. Study Area P-06 may potentially be used as a movement corridor for dispersing individuals. Due to the proximity of the Study Area to suitable habitat and location within the boundaries of designated Critical Habitat for this species, AWS has moderate potential to occur in Study Area P-06.

Critical Habitat

Study Area P-06 is located at the most extreme eastern edge of Unit 3 of the designated critical habitat of AWS. However, Critical Habitat mapping in general is not fine-tuned and suitable habitat must still be evaluated. Within the Project Area, no rocky outcrops were observed which is considered a critical habitat element for this species. Woodland/scrub mosaic is not present in any areas that would be disturbed as a result of the proposed Project. Small mammal burrows were absent or lacking around the Oak Tree Farms Detention Pond, suggesting the prey base is poor. Although Study Area P-06 falls within designated Critical Habitat, this Study Area lacks the physical and biological features required to support AWS. The proposed Project therefore neither removes nor modifies designated Critical Habitat in a way that would affect AWS either positively or negatively.

Essential Fish Habitat (EFH)

No EFH is present within the Project Area.

Wildlife Corridors

A review of the California essential connectivity project (CDFW 2019b) showed that the westernmost edge of the Project Area is located within an essential connectivity area, core reserve or corridor, landscape block, or general wildlife corridor identified in the BIOS system. While some overlap exists between the Project Area and an essential connectivity area, these areas are defined as “less permeable”, indicating that impacts to that portion of the Study Area should not have a significant impact on habitat connectivity, particularly given the proposed timing, short duration, limited scope, and fundamentally low impact of the proposed Project on wildlife species to utilize this area as a corridor at the time Project activities occur, or in the future.

The Project Area is various in land cover types, but is generally surrounded by suburban residential development or ruderal/landscaped open spaces that are intended and used for human recreation. The presence of anthropogenic features such as roads and contiguous housing tracts, and lack of intact natural communities or other areas that would provide necessary elements for wildlife to persist, mean that the Project Area does not likely function as a wildlife corridor. It does not provide any logical connection between two or more core habitats, or provide a linkage between areas commonly used by wildlife for daily, or annual activities. Furthermore, given the extensive open space surrounding the City of Pleasanton, wildlife movement is much more likely to occur across natural landscapes than the portions of the Project Area subject to the proposed Project.

6.0 PROJECT ANALYSIS AND RECOMMENDATIONS

6.1 Project Description

Overview

The City of Pleasanton proposes to conduct periodic routine maintenance, including weed abatement, silt and rock removal, tule removal, and riparian tree maintenance over a 10-year period (2020-2030) in its stream corridors and detention basins to improve stormwater conveyance and quality. The proposed Project includes routine maintenance slated for 18 stream sections and 7 stormwater detention ponds located throughout the City in a myriad of settings, ranging from a concrete drainage between Pimlico Drive and the Interstate 580 freeway, to a naturalized stream running through Mission Park or a detention basin in the Bernal Community Park.

Maintenance Actions

Maintenance actions include sediment/rock removal and vegetation removal (in and adjacent to stream corridors and detention basins). All activities are scheduled to begin on or after April 15 and will be completed by end of October, unless otherwise allowed by environmental regulatory agencies. All materials will be off-hauled to the City's existing soil disposal (Laguna Creek) site, located in the southwestern portion of Pleasanton.

In order to minimize impacts to the local residents, maintenance actions will generally occur only during normal working hours, or 8 a.m. to 5 p.m., Monday through Friday, or as allowed by City noise ordinance. Each location will likely have between one and four pieces of equipment working at any given time, and two to four crew members plus a supervisor, and may include the following actions.

Weed Abatement in Detention Basins: An agriculture tractor equipped with a fail or rotary type mower is used to abate weeds along and in the maintenance road, along the top of the banks of the basin, the basin floor and the internal and external bank slopes of the basin. Time required for this maintenance action ranges from one to two days depending on the size of the basin.

Silt and Rock Removal in Detention Basins: Dump trucks, backhoe or excavator are used to scrape and off-haul the silt or washed in rock materials layer from floor of the basin. Time required for maintenance actions varies from one to four days.

Weed Abatement in Streams: An enclosed cab, tracked Bobcat with a mowing attachment is used along the maintenance road, along stream bank tops and within the channel itself. Weed abatement along steeper banks or areas unreachable by the Bobcat occurs with gas powered string trimmers. For small sites the time required for this maintenance action varies from two to three hours. Larger sites for which a Bobcat is required take four to 12 hours. This work may occur at most stream sites.

Silt and Rock Removal in Stream: While less likely to be required as a stream maintenance activity, infrequent silt and rock removal may occasionally be needed within stream areas. If necessary, sand bags and plastic sheeting are used to temporarily dewater during the dry season. Dump trucks, backhoe or excavator are used to remove and haul off silt or washed in rock materials from the streams. Time required for maintenance actions varies from one to three days.

Tule Removal from Streams: Dump trucks and an excavator are utilized to dig out tules and their roots from streambeds in order to allow flow through existing channels and infrastructure, such as culverts. Removed tules are loaded into the dump trucks and hauled to Laguna Creek soil disposal site. Tule removal in locations with potential for CTS to occur, such as P-08, may use herbicide treatment during the dry season when no water is present instead of mechanical control in order to avoid and minimize the potential to disturb moist soils. Only EPA registered herbicides will be use in channels or basins for tule control. Herbicide application will conform to all applicable County, State, and Federal Regulations and licenses. Streets sweepers are scheduled to sweep the haul route mid-day and after the last load of the day. Time required for these maintenance actions varies from one to five days at Study Area C-10 (Junipero Canal).

Riparian Tree Maintenance: Hand-powered mechanical methods will be used to prune and trim riparian trees along the tops of stream banks as found to be necessary. Trimming may take place in designated sites after storm damage to reduce public health and safety risk from damaged or injured tree limbs.

6.2 CEQA Analysis Methodology

Pursuant to Appendix G, Section IV of the State CEQA Guidelines, a project would have a significant impact on biological resources if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or,

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

This report utilizes these thresholds in the analysis of impacts and determination of the significance of those impacts. The assessment of impacts under CEQA is based on the changes caused by the proposed Project's routine maintenance actions across the 25 Study Area locations relative to the existing conditions in the individual Study Areas. The existing conditions in the Study Areas are described above, based on surveys conducted in 2019. In applying CEQA Appendix G, the terms "substantial" and "substantially" are used as the basis for significance determinations in many of the thresholds, but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, such as direct impacts to special-status species listed under the CESA or ESA, the determination of a substantial impact may be relatively straightforward. In other cases, the determination is less clear, and requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area. Determinations of whether or not the proposed Project will result in a substantial adverse effect to biological resources are discussed in the following sections for sensitive biological communities, special-status plant species, special-status wildlife species, and local policies.

6.3 Impacts Assessment and Mitigation Measures

Using the CEQA analysis methodology outlined in Section 6.2 above, the following section describes potential significant impacts to sensitive biological resources within the Study Areas as well as suggested mitigation measures which are expected to reduce impacts to less than significant.

The following impact analysis is focused on potential effect of the proposed Project. Generally, any adverse effects would occur during and immediately after the maintenance actions. Potential impacts are expected to include adverse effects to sensitive biological communities, including riparian, detention ponds, wetlands, and waters, special-status plant and wildlife species, and local policies. In addition, potential impacts are expected to include adverse effects to water quality by way of sediment release. However, potential impacts may occur in a repetitive manner over the 10-year duration of the proposed Project with several short term actions occurring at a Study Area over the period. A specific Study Area may be subject to several maintenance actions simultaneously or in succession, such as weed abatement in one year, followed by sediment removal and riparian vegetation trimming in another year.

Based on these maintenance actions or combinations of maintenance actions over the Project duration, WRA has assessed potential impacts in a programmatic manner. A detailed quantification of impacts on biological resources is complicated by the nature of maintenance actions to be performed in that the specific locations, and dimensions for actions are not known beforehand. Therefore, a more general assessment is outlined. Table 7 shows the anticipated impact to occur at each Study Area based on prior maintenance actions conducted between 2009 and 2019.

Table 7. Anticipated Impacts in the Study Areas

Study Area Number	Study Area Name	Study Area Size (acre)	Maintenance Action
Creeks			
C-01	Pimlico Canal	0.35	Removal of debris and vegetation (Apr 15 - Oct 31)
C-02	Pleasanton Canal	3.42	Removal of debris and vegetation (May 1 - Oct 31)
C-03	Foothill High School Trash Rack	0.30	Removal of debris and vegetation in front of trash rack (May 1 - Oct 31)
C-04	Bernal V-ditch	1.17	Removal of debris and vegetation (May 1 - Oct 31)
C-05	Bernal North/South V-ditch	3.35	
C-06	Mission Creek Restoration Project	31.29	
C-07	Lower Kottinger Creek	0.92	
C-08	Upper Kottinger Creek	8.01	
C-09	Touriga Creek	6.63	
C-10	Junipero Canal	5.18	
C-11	Mission Park Creek	0.96	
C-12	Cemetery Creek	0.81	
C-13	Gold Creek	2.82	
C-14	Dublin Canyon Creek	1.66	
C-15	Stonedale Channel	0.08	Removal of debris and vegetation (Apr 15 - Oct 31)
C-16	Arlington Creek	1.02	Removal of debris and vegetation (May 1 - Oct 31)
C-17	Rutledge Place Culvert	0.09	
Detention Ponds			
P-01	Stoneridge Pond	3.75	Removal of debris and vegetation in detention pond, vegetation control on banks (Aug 15 - Oct 31)
P-02	Bernal Detention Pond Central	9.86	
P-03	Canyon Oaks Detention Pond	3.43	
P-04	Bernal West Detention Pond	6.26	
P-05	Callippe Detention Pond	0.18	
P-06	Oak Tree Farms Detention Pond	0.35	
P-07	Vineyard West Detention Pond	1.83	
P-08	Vineyard East Detention Pond	1.33	
Total		95.04	

6.3.1 Sensitive Terrestrial Natural Community

BIO IMPACT 1.0: Sensitive Terrestrial Resources

The majority of the Study Areas within the overall Project Area contain non-sensitive community types, including coast live oak woodland, coyote brush scrub, ruderal grassland, developed, and landscaped. Overall, the Project Area contains approximately 22-acres of sensitive riparian woodland. Riparian habitats may fall under the jurisdiction of the RWQCB and CDFW. This sensitive terrestrial biological community may potentially be temporarily impacted by proposed Project activities and is described below.

Use of mechanized equipment for silt or rock removal in the creek, channel, or basin would present an opportunity for accidental release of hazardous materials to the environment. Spills or leaks of fuel or lubricants could temporarily or permanently contaminate riparian habitat and water quality. Use of mechanized equipment for vegetation removal in the creek, channel, or basin would present an opportunity for accidental release of hazardous materials to the environment. Spills or leaks of fuel or lubricants could contaminate riparian habitat.

Potential Impacts from Vegetation Management (Weed Abatement, Riparian Tree Trimming)

Weed abatement consists of mechanical mowing vegetation with tractors or tracked Bobcats and, in steeper areas, with handheld gas powered string mowers and is considered a temporary impact from vegetation reduction. This type of vegetation control will occur in Study Areas with both channels and stormwater detention basins, including in non-sensitive locations like maintenance roads and above top of bank, as well as in sensitive areas like inside top of bank along channels, in-channel, and in basin floors.

Maintenance actions are focused on clearing over-grown vegetation, fallen trees, or other debris that is inhibiting flow capacity, increasing fire risk, impairing infrastructure, or reducing success of native vegetation through weed competition. These activities are temporary impacts from mowing, weed removal, small tree (less than 4-inch diameter at breast height) thinning or removal, or minor tree trimming (trimming less than one-quarter of a tree's canopy) that are targeted and generally small scale in nature and limited in duration, such as one or two days. Potential impacts associated with weed abatement actions include temporary loss of vegetation, as well as temporary water quality degradation if soil is destabilized from the ground disturbance, such as removing plants to denude soils or if root wads are removed. Any vegetation removal work in the creek or channel that involves ground disturbance, such as root wad removal, may result in temporarily increased sediment loading to the creek, particularly if heavy equipment is used. The physical removal of invasive plants could result in the spread of invasive plants, including seeds, stems, or rooting structures, into adjacent habitats or downstream areas resulting in habitat degradation. Potential temporary impacts associated with minor tree trimming may occur from selective pruning and removal activities resulting in the short term reduction of canopy.

Avoidance and minimization measures will be required for any mechanized vegetation removal activities. Hand removal activities, such as tree pruning and invasive species removal, will minimally impact water quality and biological resources. To prevent potential impacts, invasive plant species control measures would be implemented. These include requirements to import only certified weed-free materials, focus invasive species removal before flowering and seed set, and containment of invasive plant parts being removed to prevent their spread.

Potential Impacts from Silt and Rock Removal Activities

Silt and rock removal activities may temporarily impact habitat for sensitive wildlife and plant species. Impacts on sensitive species habitat from silt and rock removal activities would potentially result from direct disturbance to the creek or channel bed, banks, or basins in-channel vegetation removal, and creek or channel dewatering. These actions may occur over a period brief period of one to four days, depending on the location, and may cause sediment loading, erosion, or accumulation of debris.

Silt removal in creeks/channels or basins would also remove vegetation established in the accumulated materials. However, silt movement in the creeks and channels often results with in-channel vegetation quickly reestablishing on an annual basis. Thus, it is expected that in-channel vegetation will likely reestablish and therefore the disruption to habitat is temporary.

The temporary impacts to sensitive natural communities would have the potential to occur during maintenance activities and would be potentially significant without mitigation. To mitigate these impacts to a less than significant level, implementation of mitigation measures BIO MM-1.1 to BIO MM-1.4, described below, is required.

BIO MM-1.1: Implement BMPs

The following BMPs were developed to ensure that maintenance activities would be conducted to protect and enhance existing habitat. When heavy equipment must access sensitive areas such as the creek bed and riparian banks, measures will be taken to avoid harm to trees and compaction of soil and the area will be stabilized and restored after maintenance is complete.

1. Dry season work window for in-stream, in-channel, and in-basin work. The City may request work be authorized by the regulatory agencies to begin earlier than the start of the dry season and extend past the end of the dry season, subject to agency approval.
 - i. Work in concrete lined channels between April 15 and October 31
 - ii. Work in earthen channels between May 1 and October 31
 - iii. Work in detention basins between August 15 and October 31
2. Access to channels and ponds for the purposes of maintenance will be minimized to the amount necessary. Access points should avoid large mature trees and native vegetation to the extent feasible. Temporary access locations shall be sited to minimize tree removal.
3. No heavy equipment will be operated in streambeds.
4. Control of weeds and grasses on channel access roads or shoulders by mowing will take place between April 1 and October 31.
5. Before the first significant rainfall (defined as 0.5 inch of rain in a 24 hour period) occurs, all in-channel equipment shall be removed.
6. Exposed soils in upland areas will be stabilized via hydroseeding or with erosion control fabric/ blankets.
7. Staging will occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation to the extent feasible. To the extent practical, all maintenance equipment and materials will be contained within the existing service roads, paved roads, or other pre-determined staging areas.
8. Stockpiling of material will occur on disturbed, barren, or ruderal surfaces that do not support habitat for sensitive species.

9. Maintenance-related materials, including sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains or where they will cover aquatic or riparian vegetation.
10. No runoff from the staging areas may be allowed to enter water of the U.S./ State, including the creek channel or storm drains, without being subject to adequate filtration (e.g., vegetated buffer, wattles, silt screens). Runoff from the Study Areas to other waters of the U.S./ State is prohibited.
11. All maintenance-related items including equipment, stockpiled material, temporary erosion control treatments and trash will be removed within 72 hours of maintenance action completion. All residual soils and/ or materials will be cleared from the project site.
12. All spoils will be disposed of in an approved location.
13. No vehicles or equipment will be refueled within 100 feet of jurisdictional waters or non-wetland waters unless a bermed and lined refueling area is constructed. Spill kits will be maintained on site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or basins will be checked and maintained daily to prevent leaks of materials.

BIO MM-1.2: Vegetation Management Mitigation Measures

1. Herbaceous layers that provide erosion protection and habitat value will be left in place.
2. Vegetation along the boundary of the Study Areas will be preserved to the extent feasible to maintain temporary soil stabilization.
3. Removal of mature trees will be avoided whenever possible.
4. Vegetation removed from the Study Areas shall be handled in a manner to prevent spread of seed and shall be contained so that stray plant parts do not leave the site or contaminate adjacent areas.

BIO MM-1.3: Silt and Rock Removal Mitigation Measures

1. Upland soils or areas above ordinary high water mark exposed from maintenance activities will be stabilized using erosion control fabric or hydroseeding.
2. Erosion control fabric will consist of natural fibers that will biodegrade over time.
3. Other erosion control measures shall be implemented as necessary to ensure that sediment or other contaminants do not reach surface water bodies for stockpiled or reused/ disposed sediments.
4. After sediment removal, the creek shall be graded so that the transition between the existing creek/ channel both upstream and downstream is smooth and continuous between the maintained and non-maintained areas and does not present a barrier of sediment or other blockages that could erode once flows are restored to the creek or channel.
5. BMPs including silt fencing, fiber rolls, and/or wattles, will be implemented throughout the duration of Project activities to minimize the potential for sediment movement offsite.

BIO MM-1.4: Riparian Woodland Mitigation Measure

Project activities resulting in the maintenance actions in riparian communities may require a 401 permit from RWQCB and an SAA from the CDFW under Section 1602 of the CDFG. The City would apply for permits from the appropriate regulatory agencies and comply with terms. Terms

of these permits would likely include, but not necessarily be limited to, the mitigation measures listed below:

1. To the extent feasible, maintenance to riparian trees will be avoided unless they are directly affecting stream flow or are considered a flood hazard.
2. If riparian vegetation requires removal for access to Study Areas, non-native species and/ or quick growing species shall be targeted first for removal. Removal of native, mature trees will be avoided whenever possible.
3. If any Project activity results in the permanent impact of sensitive riparian habitat it shall be replaced at a replacement-to-loss ratio of 3:1 (three acres of riparian habitat created for each acre disturbed). Mitigation would occur either through the purchase of mitigation credits from a local riparian mitigation bank or pursuant to a site-specific mitigation plan. At a minimum, this plan shall identify mitigation areas, a planting plan, and success criteria, along with remedial measures to compensate for lack of success.

6.3.2 *Sensitive Aquatic Resources*

BIO IMPACT 2.0: Sensitive Aquatic Resources

The Project Area contains sensitive aquatic community types, including detention basins, drainage ditches, ephemeral stream, intermittent stream, perennial stream, and perennial marsh that may fall under the jurisdiction of the CDFW under the 1600 program or as waters of the U.S./State. These detention ponds are used as flood control features and are generally dry during the dry summer months. The stream and drainage ditches vary from ephemeral to perennial flow regimes and thus some may be dry in the summer months while others may be flowing. These sensitive aquatic resources may potentially be temporarily impacted by Project activities and is described below.

Temporary dewatering for vegetation management or silt and rock removal activities may temporarily impact water quality and biological resources. Installation, operation, and removal of dewatering systems will involve disturbance to the streambed and bank or basin. These actions can temporarily increase turbidity and increase sedimentation downstream. Temporary dewatering may require temporary placement of fill to dewater an area to conduct repairs over a few days. This may result in isolation of the work site and could harm aquatic species, such as fish and frogs. Once maintenance activities are complete, creek or channel flow would be restored as would water quality and biological resources.

Use of mechanized equipment such as Bobcats and back hoe excavators for vegetation or sediment removal in the aquatic resources may result in accidental release of hazardous materials. Potential temporary impacts could include erosion from stockpiled sediments or pollutants from work equipment entering the creek. Spills or leaks of fuel or lubricants could contaminate water quality and habitat. This impact would have the potential to occur only during maintenance activities and would be mitigated by implementation of BIO MM-1.1 (Implement BMPs) as described above. To prevent such impacts, all maintenance activities shall occur during the dry season when rain and flows are minimized. The staging and stockpiling of maintenance equipment and materials will be restricted, monitored, and maintained to prevent transport of wash water containing sediment or hazardous chemicals to storm drains, creeks, or surrounding properties.

Potential Impacts from Vegetation Management (Weed Abatement, Tule Removal)

Weed abatement and tule removal consists of mechanical mowing vegetation with tractors or tracked Bobcats and, in steeper areas, with handheld gas powered string mowers and is considered a temporary impact from vegetation reduction. This type of vegetation control will occur in both channels and stormwater detention basin Study Areas, including sensitive areas like inside top of bank along channels, in-channel, and in basin floors. Potential impacts associated with weed abatement actions include temporary loss of vegetation, as well as temporary water quality degradation.

Maintenance actions are focused on clearing over-grown vegetation, fallen trees, or other debris that is inhibiting flow capacity or impairing infrastructure. These activities are temporary impacts that are targeted and generally small scale in nature and limited in duration, such as a few hours or up to five days. Tule removal may require dump trucks and excavators to dig out tules and their roots from streambeds. Any vegetation removal work in the creek or channel that involves ground disturbance, such as root wad removal, may result in temporarily increased sediment loading to the creek, particularly if heavy equipment is used. Potential impacts associated with weed abatement and tule removal actions include temporary loss of vegetation, as well as temporary water quality degradation if soil is destabilized or if heavy equipment is used. The physical removal of invasive plants could result in the spread of invasive plants, including seeds, stems, or rooting structures, into adjacent habitats or downstream areas resulting in habitat degradation.

In select locations where CTS may be present, herbicide use may be used as alternative tule removal treatment to prevent potential disturbance of moist soils by Bobcats. Herbicides used to prevent growth of tules, could impact non-target vegetation or water quality if improperly used. Additionally, accidental herbicide spills could adversely impact water quality and biological resources. To prevent these impacts, herbicide use will be restricted to hand application to vegetation in the channel or basin. All herbicide use will be consistent with all label instructions. Herbicide use will be restricted to the minimum amount needed to ensure adequate control of vegetation. Application of herbicides will not be made within 72 hours of predicted rainfall. Herbicides will not be directly applied to waters of the U.S.

Avoidance and minimization measures will be required for any mechanized vegetation removal activities. Hand removal activities, such as invasive species removal, will minimally impact water quality and biological resources. To prevent potential impacts, invasive plant species control measures would be implemented. These include requirements to import only certified weed-free materials, focus invasive species removal before flowering and seed set, and containment of invasive plant parts being removed to prevent their spread.

Potential Impacts from Silt and Rock Removal Activities

Silt and rock removal activities may temporarily impact habitat for sensitive wildlife, fish, and plant species. Impacts on sensitive species from silt and rock removal activities would potentially result from direct disturbance to the creek or channel bed, banks, or basins in-channel vegetation removal, and dewatering. Silt removal in creeks/channels or basins would also remove vegetation established in the accumulated materials. As a result of the nature of silt movement in the creeks and channels, in-channel vegetation can quickly reestablish, largely on an annual basis. Thus, in-channel vegetation will reestablish and the disruption to habitat is temporary.

Project activities requiring the maintenance of streams and ditches that would introduce fill or create impacts to jurisdictional wetlands and other waters of the U.S. would require a Section 404 permit approval from the USACE, and the proposed Project would likely be authorized under a Regional General Permit for Maintenance. In addition, a Section 401 Water Quality Certification would be required from the San Francisco Bay RWQCB. CDFW has jurisdiction in the Proposed Project Area over riparian habitat, including stream bed and banks and work in these areas would require an SAA.

Disturbance may include but is not limited to removal of vegetation, placement of fill, excavation, or the alteration of the bed-and-bank. Avoidance and minimization measures will be required for any mechanized vegetation removal activities. Hand removal activities will minimally impact water quality and biological resources.

The temporary impacts to sensitive natural communities would have the potential to occur during maintenance activities and would be potentially significant without mitigation. To mitigate these impacts to a less than significant level, implementation of mitigation measures BIO MM-1.1 through BIO MM-1.4, above, and BIO MM-2.1, described below.

BIO MM-2.1: Aquatic Resources

Project activities resulting in the maintenance actions in aquatic resources may require a Section 404 permit from the USACE, Section 401 permit from RWQCB, and/or an SAA from the CDFW under Section 1602 of the CDFG. The City would apply for permits from the appropriate regulatory agencies and comply with terms prior to initiating maintenance actions in streams or detention basins. The City and contractors shall comply with the conditions of these regulatory permits. If repair activities affect the active channel, the work area will be isolated from flowing stream segments using silt fences, wattles, and/or cofferdams.

The following dewatering BMPs will be used to help minimize impacts to sensitive aquatic resources and species during Project implementation:

1. A water diversion plan will be prepared and approved by the agencies prior to implementation.
2. A qualified biologist will be present to monitor coffer dam installation, dewatering, and removal.
3. To the extent feasible, work will occur during the dry season.
4. Cofferdams or diversion structures will be constructed from materials that are fully contained and can be completely removed from the aquatic resources, such as clean, bagged gravel, sandbags, or rubber bladders. Once maintenance is complete, the diversion structures will be fully removed as soon as possible.

Project specific mitigation for impacts to features jurisdictional to state and federal agencies will be determined during the wetland permitting process with a minimum of 1:1 required. Mitigation could include land conservation and management in perpetuity, on-site habitat enhancement and restoration, payment of in-lieu fees to authorized conservation organizations, or a combination of these measures. Habitat enhancement and restoration would require a mitigation and monitoring plan to ensure environmental impacts are mitigated and the sensitive habitats are returned to a natural state after the project is complete.

6.3.3 Special-status Plants

BIO IMPACT 3.0 Special-status Plant Species

Of the 62 special-status plant species known to occur in the vicinity of the Project Area, two have a moderate potential to occur in specific Study Areas with alkaline soils in grassland, San Joaquin spearscale and Congdon's tarplant (Table 8). These potentials are based on recent and nearby occurrences. The Project Area does not contain prime habitat for sensitive status plants and much of it is highly disturbed by development and landscaping, however these two species are known to be tolerant to disturbance.

Table 8. Potential Special-Status Plants Impacted by Project

SCIENTIFIC NAME	COMMON NAME	Study Area Locations
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's Tarplant	C-05, C-06 P-01, P-02, P-03, P-04, P-06
<i>Extriplex joaquiniana</i>	San Joaquin Spearscale	C-05, C-06 P-01, P-02, P-03, P-04

If these species are present in the proposed maintenance action locations, Project work could cause direct mortality to individuals or changes in site conditions could alter microhabitat or hydrology and indirectly affect individuals. Individual plants or habitat may be directly impacted by vehicular access, weed abatement actions, vegetation removal, and debris removal if these actions occur during the growing seasons when the plant is not dormant. Debris removal may remove habitat if ground is disturbed. Additionally, indirect impacts may occur from introduction of invasive species. If direct or indirect loss of a special-status plant species population would occur, this may be considered a significant impact. However, weed abatement activities may benefit these species because of improved habitat conditions.

If found on-site during future surveys, and if impacts cannot be avoided, direct impacts to 10% or more of the occupied area or individuals of Congdon's tarplant or San Joaquin spearscale would be significant. Implementing MM BIO 3.1 would avoid or minimize impacts to these special-status plant species to a less-than-significant level.

One plant species on the East Bay Locally Rare Plant list, coast live oak, was observed within the Study Areas C-06, C-08, C-09, C-11, C-12, C-13, C-14 and C-16 which is present in the coast live oak woodland and riparian communities listed and may occur occasionally at other Study Areas as well. However, because of the relatively common extent of these trees in the region, that tree removal is not anticipated, and the avoidance and minimization measures that will be implemented for riparian habitat (see sensitive terrestrial communities above) or individual trees (see local policies below), no loss of these trees are expected to occur. With the implementation of the mitigation measures described for the riparian habitat and the Local Tree Ordinance, impacts to the locally-listed species will be less than significant.

BIO MM 3.1: Special Status Plants Mitigation Measures

For maintenance actions in Study areas where San Joaquin spearscale or Congdon's tarplant may occur, a focused botanical survey is recommended within the grassland habitat underlain with alkaline soils prior to proposed maintenance work to avoid impacts.

1. Each year, prior to any vegetation removal or ground-disturbing activities, a focused special-status plant survey is recommended for suitable habitat (grassland on alkaline soils) for Congdon's tarplant and San Joaquin spearscale in Study Areas C-05, C-06, and P-01 through P-04 as well as suitable habitat for Congdon's tarplant at Study Area P-06 prior to the start of the Project. These plant surveys will be required to confirm the presence or absence of these species.
2. Surveys shall be conducted in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018). These guidelines require special-status plant surveys to be conducted at the proper time of year when special status species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern.
 - a. If no special-status plant species are found, then the Project activities that year will not have any impacts to the species and no additional mitigation measures are necessary.
 - b. If the survey determines that one or more special-status plant species are present within the Project Area, direct and indirect impacts of the Project on the species shall be avoided where feasible through the establishment of activity exclusion zones, where no ground-disturbing activities shall take place, including the staging or other temporary work areas. Activity exclusion zones for special-status plant species shall be established prior to maintenance activities around each occupied habitat site, the boundaries of which shall be clearly marked with standard orange plastic exclusion fencing or its equivalent. The establishment of activity exclusion zones shall not be required if no maintenance action-related disturbances would occur within 50 feet of the occupied habitat site. The size of activity exclusion zones may be reduced through consultation with a qualified biologist.
3. If exclusion zones and avoidance of impacts to special-status species within the Project Area are not feasible, vegetation management activities such as mowing will be conducted under the guidance of the qualified biologists to reduce potential impacts. The activities should be timed to avoid the blooming period of the species, after the month of August.
4. If exclusion zones and full avoidance is not feasible, then the loss of individuals or occupied habitat of special-status plants shall be enumerated and compensated for through either the restoration by seed collection, planting, and subsequent management of propagules from on-site or preservation by acquisition, protection, and subsequent management of other existing off-site occurrences. Before the implementation of compensation measures, the Project's applicant shall provide detailed information to the lead agency on the quality of restored or preserved habitat, location of the restored or preserved occurrences, provisions for protecting and managing the areas, the responsible parties involved, and other pertinent information that demonstrates the feasibility of the compensation. A mitigation plan identifying appropriate mitigation ratios at a minimum ratio of 1:1 shall be developed in consultation with, and approved by, the lead agency prior to the commencement of any activities that would impact special-status plant species that occur within the Project Area. A mitigation plan may include but is not limited to the following: plant collection, planting, maintenance, and monitoring

plans with success criteria for a restoration site, the acquisition of off-site mitigation areas presently supporting the special-status species within the Project Area, purchase of credits in a mitigation bank that is approved to sell credits for special-status plants, or payment of in-lieu fees to a public agency or conservation organization (e.g. a local land trust) for the preservation and management of existing populations of special-status plants.

6.3.4 *Special-status Wildlife*

Of the 39 special-status wildlife species known to occur in the vicinity of the Project Area, most are excluded from the Study Areas based on a lack of appropriate habitats. Features lacking from the Study Areas and required to support special-status wildlife species include:

- vernal pools
- perennial aquatic features
- old growth redwood or fir forest
- coastal marsh
- sandy beaches or alkaline flats
- caves, mine shafts or abandoned buildings
- wildlife movement corridors

These habitat features are necessary for the survival or movement of many special-status species found in the vicinity. The absence of these features categorically precludes habitation by most of the species included in Appendix D. Any special-status wildlife species discussed in this report and that have the potential to be impacted by the proposed Project may fall under the jurisdiction of USFWS under the ESA and BGEPA and/or the CDFW under the CFGC, CESA, and CEQA.

Table 9 outlines the special-status wildlife that may be directly or indirectly impacted by the proposed Project. No other special-status wildlife species were determined to have a reasonable potential to occur and therefore impacts to special-status wildlife are limited to those included below.

Table 9. Special-status wildlife species potential, by Study Area.

Study Area Number	Scientific Name/ Common Name <i>Special-status Wildlife (CEQA, other)</i>								
	<i>Lanius ludovicianus</i>	<i>Elanus leucurus</i>	<i>Athene cunicularia</i>	<i>Rana draytonii</i>	<i>Ambystoma californiense</i>	<i>Masticophis lateralis</i>	<i>Circus hudsonius</i>	<i>Agelaius tricolor</i>	Various
	logger-head shrike	white tailed Kite	burrowing owl	California red-legged frog	California tiger salamander	Alameda whipsnake	northern harrier	tricolored blackbird	nesting birds
Creeks									
C-01									X
C-02		X						X	X
C-03		X							X
C-04	X	X	X						X
C-05	X	X	X				X		X
C-06	X	X		X			X		X
C-07									X
C-08									X
C-09									X
C-10								X	X
C-11									X
C-12									X
C-13		X				X			X
C-14				X					X
C-15									X
C-16	X								X
C-17					X				X
Detention Ponds									
P-01		X					X	X	X
P-02	X	X	X					X	X
P-03	X	X	X					X	X

Study Area Number	Scientific Name/ Common Name <i>Special-status Wildlife (CEQA, other)</i>								
	<i>Lanius ludovicianus</i>	<i>Elanus leucurus</i>	<i>Athene cunicularia</i>	<i>Rana draytonii</i>	<i>Ambystoma californiense</i>	<i>Masticophis lateralis</i>	<i>Circus hudsonius</i>	<i>Agelaius tricolor</i>	Various
	logger-head shrike	white tailed Kite	burrowing owl	California red-legged frog	California tiger salamander	Alameda whipsnake	northern harrier	tricolored blackbird	nesting birds
P-04									X
P-05	X	X			X				X
P-06	X	X				X			X
P-07					X				X
P-08					X				X

BIO IMPACT 4.0: Nesting Birds

This assessment determined that five species of special-status birds may use the Project Area for breeding and foraging including white-tailed kite, loggerhead shrike, and northern harrier. These species may forage in the ruderal and agricultural portions of the Study areas, and may nest in trees and shrubs within the Project Area. Proposed maintenance actions within the Project Area may impact special-status and common bird species by causing direct mortality of eggs or young, or may impact these species through visual and auditory disturbance sufficient to cause nest abandonment. Such impacts would be considered significant under CEQA.

In addition to special-status nesting birds, common avian species may also nest within the Project Area and may be similarly affected by the proposed Project. Due to the protected status of nesting birds under CFGC, impacts to nests of common native birds would also be considered a significant impact under CEQA.

BIO MM 4.1: Nesting Birds Mitigation Measure

Work on the proposed Project shall be conducted outside of the bird nesting season (generally February 1 – August 31) to the extent practicable. It is also recommended that any trees and shrubs in or adjacent to a Study Area, that are proposed for removal, be removed during the non-breeding season (September 1 through February 1), if possible. In the event that work must occur during the bird nesting season, pre-action nesting bird surveys shall be conducted within 14-days of ground disturbance on a Study Area basis to determine whether active nests are present that may be disturbed, and to avoid disturbance to active nests, eggs, and/or young of nesting birds.

In the event that an active nest (defined as containing live eggs, chicks, or young) is located, a no disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g. due to predation). Exclusion buffer sizes differ depending on species, location, and placement of nest and will be determined and implemented in the field by the surveying ornithologist.

Minimization measures for both special-status species and common nesting birds are the same and implementation of BIO MM-4.1 would reduce impacts to nesting birds to less than significant levels.

BIO IMPACT 5.0: Tricolored blackbird

Several of the Study Areas associated with this Project have the potential to support nesting colonies of tricolored blackbird during the nesting season, generally March – July near the coast. However, the Study Area is regularly maintained and there is no documented use of the Study Areas for nesting. Removal of vegetation containing an active nesting colony (or any active nests) of tricolored blackbird could result in the early termination of nests or individual mortality, which would be considered take. Impacts to this species' short-term nesting success or individual mortality through direct mortality of eggs or young, or visual and auditory disturbance would be considered significant under CEQA, and take as defined by CESA of any individuals would require a Section 2081 Incidental Take Permit from CDFW. Removal of tules from the regularly maintained Study Areas is not anticipated to result in a loss of nesting or foraging habitat. The Study Areas would still provide foraging habitat for this species, and no nesting is known to occur at these Study Areas. No significant impacts under CEQA to nesting or foraging habitat are anticipated from the Project.

BIO MM 5.1: Tricolored Blackbird Mitigation Measure

Removal of wetland vegetation within Study Area where tricolored blackbird has the potential to occur (see Table 9) should be limited to the non-nesting season, generally August 16 – March 14 for this species. If working outside of the nesting season is not possible, pre-construction nesting bird surveys (BIO MM 4.1) should also include an assessment for the presence of tricolored blackbird. If nesting tricolored blackbird are found within a Study Area, avoidance 250-foot buffer should be implemented around the vegetation that contains the nesting colony until such time as nests within the colony are no longer active. With the implementation of this measure, the Project's impact to nesting tricolored blackbird will be reduced to a less than significant level.

BIO IMPACT 6.0: Burrowing Owl

Ground squirrel burrows are present at varying degrees throughout the Project Area. Within some Study Areas, ground squirrel activity is localized around features that will be impacted as a result of the proposed Project. Burrowing owls may use ground squirrel burrows within the Project Area for both overwintering and breeding, though the timing of the proposed Project would coincide chiefly with the breeding season. Although the proposed Project would likely not directly impact a burrow occupied by a burrowing owl, visual and auditory disturbance associated with maintenance actions could potentially result in nest abandonment or disturbance or abandonment of winter burrows. Burrowing owl is protected by CFGC and is an SSC, and is thus afforded specific protections. Any impacts to this species, including injury or mortality to individuals, or active nests, indirect disturbance that results in nest abandonment, or exclusion from suitable habitat including foraging habitat would be considered a significant impact under CEQA. Burrowing owl is not known to be present in the Project Area; therefore, no loss of occupied habitat is anticipated to occur as a result of this Project, and no significant impacts to habitat are anticipated to occur, and a measure to reduce impacts from disturbance is below.

BIO MM 6.1: Burrowing Owl

Maintenance actions performed at any Study Area with potential burrowing owl habitat (see Table 9) within 500-feet shall be preceded by a pre-activity survey focused on detecting burrowing owl. Burrowing owl take avoidance surveys should be conducted using similar methods as outlined within the *CDFW Staff Report on Burrowing Owl Mitigation* (2012). These surveys often consist of a minimum of two (2) surveys that are conducted 14 days and within 48 hours prior to the start of work to determine whether burrowing owls occur in an area where they may be adversely affected by the proposed Project. Level of survey effort will be determined in consultation with CDFW. Pre-activity surveys for burrowing owl are not restricted to the nesting season.

If determined to be present, exclusion buffers of up to 500 feet during the nesting season (March 15 through August 31) and 250 feet in the non-nesting season shall be established and maintained around occupied burrows until such time as the burrow becomes unoccupied through natural processes. If avoidance is not feasible, a minimization and monitoring plan shall be prepared for burrows following CDFW guidance (CDFW 2012). The plan shall outline methods to reduce disturbance of Project activities, and may include monitoring of owls during work, installation of visual barriers, or other methods as appropriate for the owl locations and Project activities proposed. Avoidance of occupied burrows as determined through pre-activity

surveys and, under certain circumstances, minimization and monitoring plan implementation, will reduce the impacts to burrowing owl to a less than significant level.

BIO IMPACT 7.0: California Tiger Salamander

The proposed Project has the potential to impact CTS which is listed as threatened under the ESA and CESA. Though most of the Study Areas were determined to be unlikely to support CTS, certain Study Areas (C-06 and P-02) may provide upland habitat given their proximity or connectivity to areas with extant populations of CTS. Work is not anticipated to impact any known or likely breeding habitats of this species, but may encounter adults or juveniles in upland habitats or non-breeding aquatic habitats. Take of this species is prohibited without permits from the jurisdictional agencies that administer ESA and CESA. The proposed Project is not anticipated to result in changes to CTS breeding or upland habitat and no significant impacts to CTS habitat would occur as a result of the proposed Project.

Maintenance activities, such as mowing, at Study Areas P-05, P-07, or P-08 may impact CTS and consultation with USFWS and CDFW may be required. It is anticipated that consultation with the USFWS would occur through consultation between the Corps and USFWS pursuant to Section 7 of the ESA.

CTS is also a threatened species under CESA. Maintenance actions that may result in injury or mortality of CTS would require an incidental take permit (ITP) to be authorized pursuant to Section 2081 of the CFGC. A 2081 ITP would be issued to an applicant following receipt of an application for take and consultation with CDFW.

BIO MM 7.1: California Tiger Salamander

The mitigation measures listed below have been obtained from the Programmatic Biological Opinion for CTS for small projects within the San Francisco Bay Area (USFWS 2014a) and are similar to those that would likely be required by the USFWS and CDFW following consultation. If consultation with USFWS and/or CDFW is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to CTS:

- Work at Study Areas where potential exists for CTS to be present shall be conducted during the dry season and when aquatic features are dry. This is generally considered to be May 1 – October 31.
- The qualifications of qualified biologist(s) shall be submitted to the USFWS for review at least thirty (30) calendar days prior to the start of work.
- A qualified biological monitor should be onsite during all activities at C-06 and P-02 that may result in take of CTS including vegetation removal, silt removal, and ground disturbance.
- A qualified biologist should conduct an education training for employees working on the Project. Personnel would be required to attend the training that would cover topics such as identification and legal protection of the species, as well as project specific avoidance and minimization measures.

- Plastic monofilament netting (erosion control matting, or wrapping around wattles), or similar material in any form should not be used on the Project in order to avoid entangling, strangling, or trapping CTS.
- To minimize temporary habitat disturbances, Project-related vehicle traffic should be restricted to established roads, and maintenance activity areas. Project-related vehicles shall observe a 15-mile per hour speed limit within maintenance activity areas.
- All maintenance equipment should be maintained to prevent leaks of fuels, lubricants, or other potentially toxic fluids.
- In order to avoid attracting predators of CTS, all trash shall be deposited in covered or closed trash containers that are removed from the Project site regularly.
- Initial ground disturbance activities shall cease no less than 30 minutes before sunset and shall not begin again prior to no less than 30 minutes after sunrise.
- No work in wet weather or within 48 hours of a rain event defined as 0.25 inch of rain within a 24-hour period.
- Removal of vegetation and any soil disturbance in Study Areas where CTS has potential to occur shall be conducted with hand tools. Soil manipulations at locations with potential for CTS to occur shall further not disturb the soil subsurface to avoid take of individuals in underground refugia.
- If herbicide applications are anticipated as part of vegetation management at any Study Area with potential for CTS to occur, applications should be made outside of the wet season (i.e. applied May 1 – October 31) to avoid runoff events into downstream waters and when the Study Area is dry.

BIO IMPACT 8.0: California Red-legged Frog

The proposed Project has the potential to impact individual CRLF and/or their habitat, which is listed as threatened under the ESA and is a CDFW SSC. Though most of the Study Areas were determined to be unlikely to support CRLF, Study Areas C-06 and C-14 may provide aquatic non-breeding habitat. Individual CRLF may also use portions of other Study Areas as migration corridors during the wet season. Work is not anticipated to impact any known or likely breeding habitats of this species, and no conversion of CRLF habitat would occur. However, take of this species is prohibited without permits from the jurisdictional agency that administers ESA.

Maintenance activities may impact CRLF, and consultation with USFWS may be required. It is anticipated that consultation with the USFWS would occur through consultation between the Corps and USFWS pursuant to Section 7 of the ESA.

BIO MM 8.1: California Red-legged Frog

The mitigation measures listed below have been obtained from the Programmatic Biological Opinion for CRLF for small projects within the San Francisco Bay Area (USFWS 2014b) and are similar to those that would likely be required by the USFWS following consultation. If consultation with USFWS is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to CRLF:

- To the extent practicable, ground-disturbing activities will be avoided between November 1 and March 31 because that is the time period when CRLF are most likely to be moving through upland areas.

- A qualified biologist(s) will be onsite during all activities that may result in take of CRLF at Study Areas C-06 and C-14.
- The qualifications of the qualified biologist(s) will be submitted to the Service for review at least thirty (30) calendar days prior to the date earthmoving is initiated at the project site.
- The qualified biologist will conduct employee education training for employees working on earthmoving and/or maintenance activities. Personnel will be required to attend the presentation which will describe the CRLF, avoidance, minimization, and conservation measures, legal protection of the animal, and other related issues.
- To minimize temporary habitat disturbances, project-related vehicle traffic should be restricted to established roads, and maintenance activity areas. Project-related vehicles shall observe a 15-mile per hour speed limit within maintenance activity areas.
- All maintenance equipment should be maintained to prevent leaks of fuels, lubricants, or other potentially toxic fluids.
- Plastic monofilament netting (erosion control matting, or wrapping around wattles), or similar material in any form should not be used on the Project in order to avoid entangling, strangling, or trapping CRLF.
- In order to avoid attracting predators of CRLF, all trash shall be deposited in covered or closed trash containers that are removed from the Project site regularly.
- No work in wet weather or within 48 hours of a rain event defined as 0.25 inch of rain within a 24-hour period.

Work in Study Areas with potential for CRLF to occur shall be conducted only after the Study Areas have naturally dried.

BIO IMPACT 9.0: Impacts to Alameda Whipsnake

The proposed Project has the potential to impact AWS which is listed as threatened under the ESA and CESA. All Study Areas except P-06 were determined to be unlikely to support AWS. The proximity of Study Area P-06 to suitable and occupied habitat indicates that AWS could be transiently present within Study Area P-06. Study Area P-06 does not contain foraging or refugia habitat; therefore, presence of AWS within Study Area P-06 would be associated with dispersal movements. Although encounters are anticipated to be rare, there is potential for impacts to dispersing AWS individuals during the course of the proposed Project. Study Area P-06 is also within designated critical habitat for AWS, and impacts to critical habitat may require consultation with USFWS. If consultation with the USFWS is necessary for impacts to AWS and critical habitat, consultation is anticipated to be between the Corps and USFWS pursuant to Section 7 of the ESA. However, the proposed Project is not anticipated to result in changes to AWS habitat and no significant impacts to AWS habitat would occur as a result of the proposed Project.

AWS is also a threatened species under CESA. Maintenance actions that may result in injury or mortality of AWS would require an ITP to be authorized pursuant to Section 2081 of the CFGC. A 2081 ITP would be issued to an applicant following receipt of an application for take and consultation with CDFW.

BIO MM 9.1: Alameda Whipsnake

If consultation with USFWS and/or CDFW is required, additional measures for proposed maintenance work and required timing of implementation of measures would be determined

during consultation and implemented by the proposed Project. In addition to any measures required by Project permits, the following would be implemented to avoid and minimize impacts to AWS:

- The qualifications of qualified biologist(s) shall be submitted to the USFWS for review at least thirty (30) calendar days prior to the start of work.
- A qualified biologist should conduct an education training for employees working on the Project. Personnel would be required to attend the training that would cover topics such as identification and legal protection of the species, as well as project specific avoidance and minimization measures.
- Maintenance activities performed within Study Area P-06, where potential for take of individual AWS exists, shall be overseen by a qualified biological monitor. The qualified biological monitor will be present during all ground disturbing activities.
- Prior to start of work each day, the qualified biological monitor will inspect the work area and should AWS be discovered on any portion of the Study Area work will be postponed and the snake will be allowed to leave of its own volition. Work would not resume until the qualified biologist has determined the AWS has left the work area and is out of harm's way.

BIO IMPACT 10.0: Roosting Bats

Though presence of bat roosts is unlikely on most portions of the Project Area, certain proposed maintenance actions have the potential to disturb bat roosts should they be present. The largest risk of bat roost disturbance exists on the Mission Creek Restoration Project Study Area (C-06), due to the presence of an underpass of Interstate 680 and extensive riparian habitat. Other Study Areas also possess riparian habitat including mature trees that could play host to maternity or day roosts. There is no potential for hibernation roosts, and no impacts to hibernating bats or hibernation roosts are anticipated as a result of the proposed Project. Disturbance to roosting bats or the loss of roost habitat would be a significant impact.

BIO MM 10.1: Roosting Bats

The following measures will be implemented to avoid and minimize impacts to roosting bats:

- To the extent practicable, work that involves disturbance of potential bat roost habitat should be scheduled to occur between October and March to avoid the bat maternity season.
- If limiting work to this window is not feasible and noise disturbances are anticipated to exceed the baseline level of disturbance at the Study Area, or in the event that trees greater than 12" DBH are slated for removal, a bat roost habitat assessment shall be performed at least 30 days prior to the commencement of maintenance actions. The bat roost assessment shall be performed by a qualified bat biologist and will assess whether potential bat roost habitat is present, and whether maintenance actions within any given Study Area will result in direct or indirect impacts to roosts that may be present.
 - The assessment shall consist of visual examination of trees (greater than 12" dbh), buildings, bridges, or other structures in the immediate vicinity, or along access routes of each Study Area. The assessment would address conditions that may be favorable or unfavorable for bat use such as maintenance materials used, thermal conditions, frequency of disturbance, and evidence of potential

predators. If maternity roosts are detected during the assessment, additional avoidance measures may be required.

- Any larger trees or branches (>6 inches in diameter) that are downed in the course of maintenance actions should be left on the ground for a minimum of 24-hours before being chipped, off-hauled, or otherwise processed, to ensure any roosting bats therein have the opportunity to leave the vicinity of their own volition.

Summary of Special-status Wildlife Work Windows by Study Area

Below, Table 10 summarizes and combines the various work windows described in Section 3.4 for special-status wildlife species with potential to occur in each Study Area.

Table 10. Study Area combined special-status wildlife species work window

Study Area Number	Individual Species Work Windows ¹		Combined Species Work Window ¹ (Period of No Constraint)	Relevant Special-Status Species
	Nesting Birds ² (constraint only if nests present)	Special-status Species		
Creeks				
C-01	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-02	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	TCB
C-03	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-04	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-05	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-06	Aug. 15-Jan. 31	Apr. 1 – Oct. 31	Aug. 15-Oct. 31	CRLF
C-07	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-08	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-09	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-10	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	TCB
C-11	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-12	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-13	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-14	Aug. 15-Jan. 31	Apr. 1 – Oct. 31	Aug. 15-Oct. 31	CRLF
C-15	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-16	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
C-17	Aug. 15-Jan. 31	May 1 – Oct. 31	Aug. 15-Oct. 31	CTS
Detention Ponds				
P-01	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	TCB
P-02	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	TCB
P-03	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	TCB

Study Area Number	Individual Species Work Windows ¹		Combined Species Work Window ¹ (Period of No Constraint)	Relevant Special-Status Species
	Nesting Birds ² (constraint only if nests present)	Special-status Species		
P-04	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
P-05	Aug. 15-Jan. 31	May 1 – Oct. 31	Aug. 15-Oct. 31	CTS
P-06	Aug. 15-Jan. 31	N/A	Aug. 15-Jan. 31	N/A
P-07	Aug. 15-Jan. 31	May 1 – Oct. 31	Aug. 15-Oct. 31	CTS
P-08	Aug. 15-Jan. 31	May 1 – Oct. 31	Aug. 15-Oct. 31	CTS

¹ Work may proceed during this time without requiring pre-construction wildlife surveys. The exception is at Study Areas where burrowing owl has potential presence, where pre-activity surveys for this species are required year-round.

² Nesting bird work window covers all special-status birds with the exception of burrowing owl. Burrowing owl should be surveyed for and may be a constraint at all times of year at Study Areas where potential is moderate or higher.

6.3.5 Local Policies or Ordinances

BIO IMPACT 11.0: Local Tree Ordinance

Within the overall Project Area, there are numerous protected/ ordinance sized trees, as defined by the City and Alameda County. Activities that compact soil, trench through roots, or pile soil up around the base of trees may adversely affect the health of protected trees. The removal or injury of protected trees, would require permits or mitigation measures under the City Municipal Code (Chapter 17.16).

Disturbance or removal of trees in natural channels shall not exceed the minimum necessary to complete maintenance activities. Precautions shall be taken to avoid other damage to vegetation by people or equipment. Branches and/or limbs overhanging the channel and impacting water flows shall be properly pruned. Trees may be removed from natural channels if and only if they are below ordinary high water mark and they are restricting the capacity of the channel and they are causing erosion or flooding. Any trees which must be cut are to be cut at ground level and the root mass left in place to maintain bank stability.

The following measures shall be implemented to assure that impacts to protected trees are less than significantly impacted. Implementation of the following measures will reduce potential impacts on protected trees to a less-than-significant level by bringing the project into compliance with all local ordinances.

BIO MM 11.1: Avoid Trees

To the extent feasible, activities will avoid impacts to protected trees. Avoidance is considered to be the exclusion of any maintenance work on protected trees. If complete avoidance is not feasible, BIO MM 11.2 will be implemented.

BIO MM 11.2: Comply with Tree Ordinances

The Project proponent will comply with the local ordinances, including replacement ratios, and submit permit applications for removal, trimming, damage, or relocation of all protected trees covered by the applicable City or County ordinance listed in Section 2.3.2 and 2.3.3.

7.0 REFERENCES

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Appendix A

Figures

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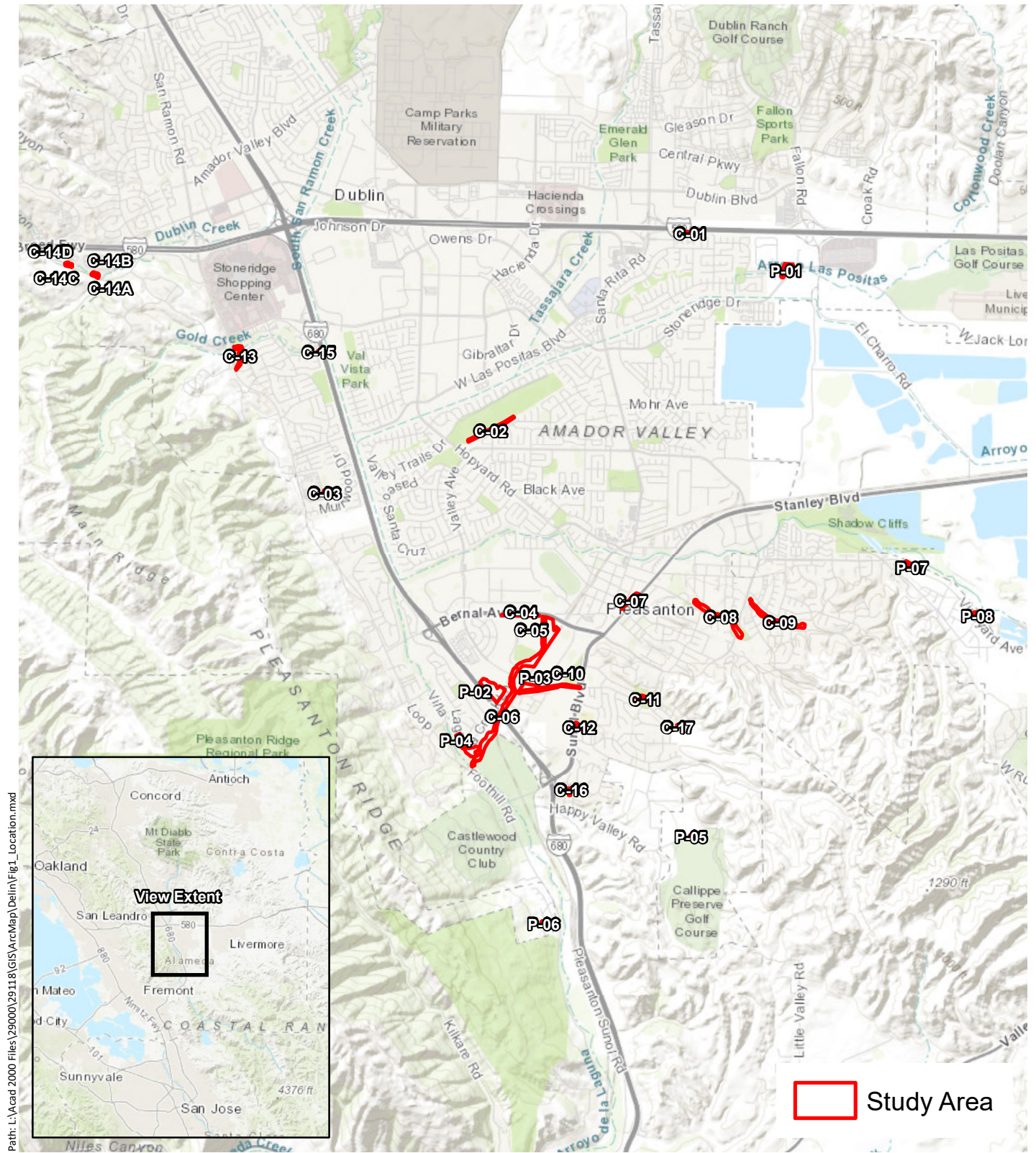
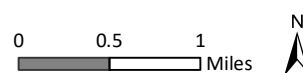


Figure 1. Study Area Location Map

City of Pleasanton
Stream Maintenance Program
Alameda County, California

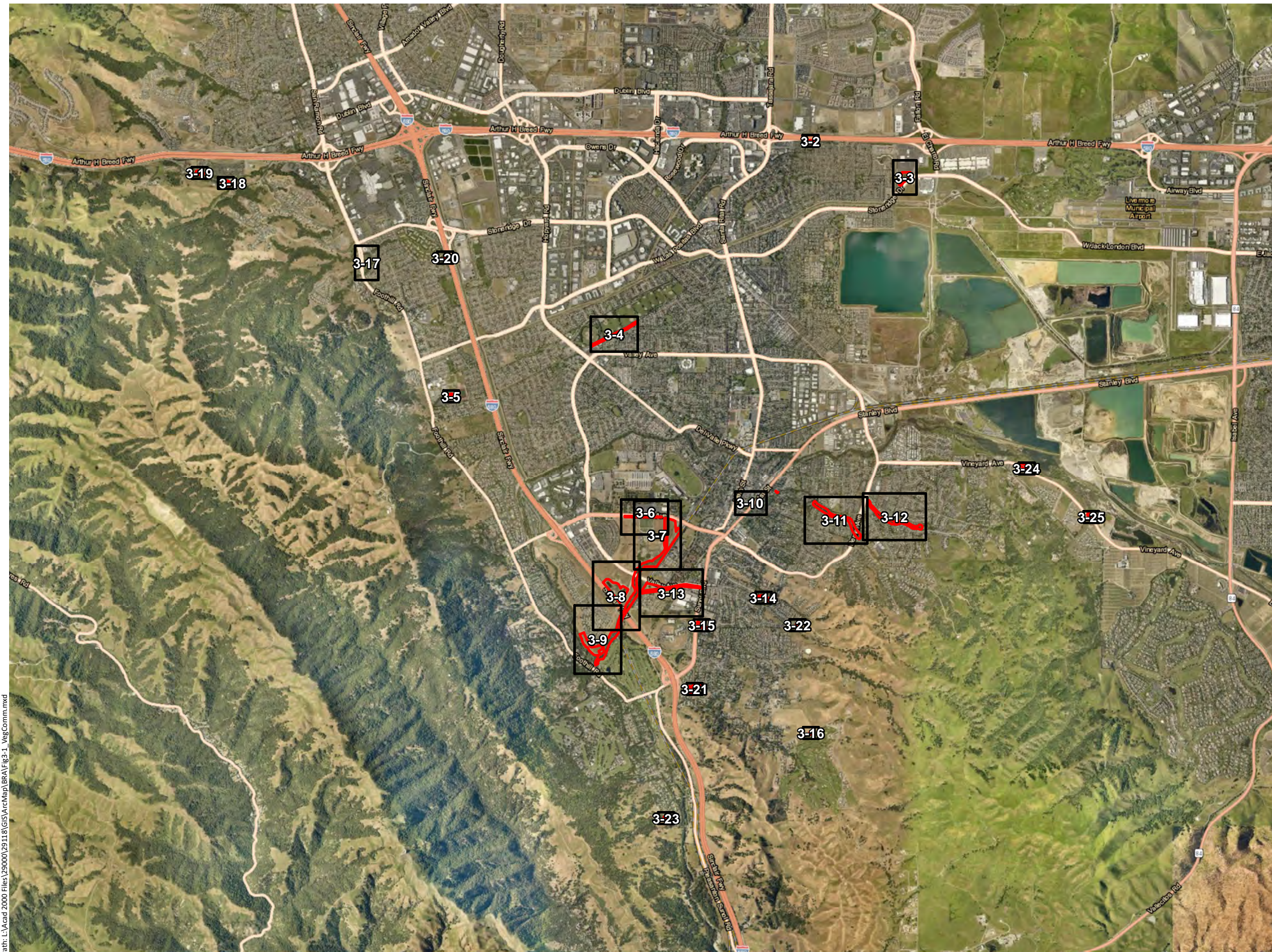


Study Area	Name	Mapunit Symbol	Mapunit Name	Acres
C-01	Pimlico Canal	Sm	Sunnyvale clay loam over clay	0.352233
C-02	Pleasanton Canal	Sm	Sunnyvale clay loam over clay	3.415609
C-03	Foothill High School Trash Rack	PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	0.007496
C-03	Foothill High School Trash Rack	DaB	Danville silty clay loam, 3 to 10 percent slopes	0.291867
C-04	Bernal V-ditch	Sn	Sunnyvale clay loam, drained	0.168243
C-04	Bernal V-ditch	So	Sycamore silt loam	0.048659
C-04	Bernal V-ditch	YmA	Yolo loam, 0 to 3 percent slopes	0.229393
C-04	Bernal V-ditch	YmA	Yolo loam, 0 to 3 percent slopes	0.726659
C-05	Bernal North/South V-ditch	Sm	Sunnyvale clay loam over clay	0.302884
C-05	Bernal North/South V-ditch	YmA	Yolo loam, 0 to 3 percent slopes	3.047726
C-06	Mission Creek Restoration Project	So	Sycamore silt loam	0.002174
C-06	Mission Creek Restoration Project	Za	Zamora silt loam, 0 to 4 percent slopes	5.261105
C-06	Mission Creek Restoration Project	Sm	Sunnyvale clay loam over clay	16.93082
C-06	Mission Creek Restoration Project	PoE2	Positas gravelly loam, 20 to 40 percent slopes, eroded	0.000205
C-06	Mission Creek Restoration Project	YmA	Yolo loam, 0 to 3 percent slopes	9.094755
C-07	Lower Kottinger Creek	YmA	Yolo loam, 0 to 3 percent slopes	0.923921
C-08	Upper Kottinger Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	6.818884
C-08	Upper Kottinger Creek	YmA	Yolo loam, 0 to 3 percent slopes	1.192352
C-09	Touriga Creek	PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.419873
C-09	Touriga Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	5.208783
C-10	Junipero Canal	Sm	Sunnyvale clay loam over clay	5.181662
C-11	Mission Park Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.231582
C-11	Mission Park Creek	YmA	Yolo loam, 0 to 3 percent slopes	0.72632
C-12	Cemetery Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.80553
C-13	Gold Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	1.203053
C-13	Gold Creek	PtB2	Positas gravelly loam, thick surface, 2 to 10 percent slopes, eroded	1.153209
C-13	Gold Creek	AzD	Azule clay loam, 3 to 30 percent slopes	0.123006
C-13	Gold Creek	PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	0.345408
C-14A	Dublin Canyon Creek	DbD	Diablo clay, 15 to 30 percent slopes	0.00918
C-14A	Dublin Canyon Creek	CdB	Clear Lake clay, drained, 3 to 7 percent slopes	0.507591
C-14B	Dublin Canyon Creek	DbD	Diablo clay, 15 to 30 percent slopes	0.037363
C-14B	Dublin Canyon Creek	CdB	Clear Lake clay, drained, 3 to 7 percent slopes	0.329303
C-14C	Dublin Canyon Creek	LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	0.158413
C-14C	Dublin Canyon Creek	CdB	Clear Lake clay, drained, 3 to 7 percent slopes	0.259869
C-14D	Dublin Canyon Creek	LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	0.102265
C-14D	Dublin Canyon Creek	CdB	Clear Lake clay, drained, 3 to 7 percent slopes	0.256712
C-15	Stonedale Channel	YmA	Yolo loam, 0 to 3 percent slopes	0.07666
C-16	Arlington Creek	PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	1.018006
C-17	Rutledge Place Culvert	YmA	Yolo loam, 0 to 3 percent slopes	0.092445
P-01	Stoneridge Pond	So	Sycamore silt loam	3.749115
P-02	Bernal Detention Pond Central	Sn	Sunnyvale clay loam, drained	1.409681
P-02	Bernal Detention Pond Central	Sm	Sunnyvale clay loam over clay	8.447849
P-03	Canyon Oaks Detention Pond	Sm	Sunnyvale clay loam over clay	3.431635
P-04	Bernal West Detention Pond	So	Sycamore silt loam	5.440545
P-04	Bernal West Detention Pond	Za	Zamora silt loam, 0 to 4 percent slopes	0.81048
P-04	Bernal West Detention Pond	Sm	Sunnyvale clay loam over clay	0.007974
P-05	Callippe Detention Pond	PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	0.176971
P-06	Oak Tree Farms Creek/Detention Pond	LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	0.107675
P-06	Oak Tree Farms Detention Pond	Za	Zamora silt loam, 0 to 4 percent slopes	0.24045
P-07	Vineyard West Detention Pond	Gp	Gravel pit	1.826506
P-08	Vineyard East Detention Pond	PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.331326

Figure 2. Project Area Soils Table

**Figure 3-1.
Vegetation Communities
(Overview)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Appendix Index

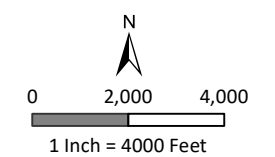




Figure 3-2.
Vegetation Communities
(C-01)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

 Study Area

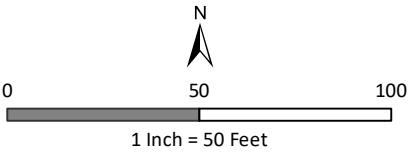
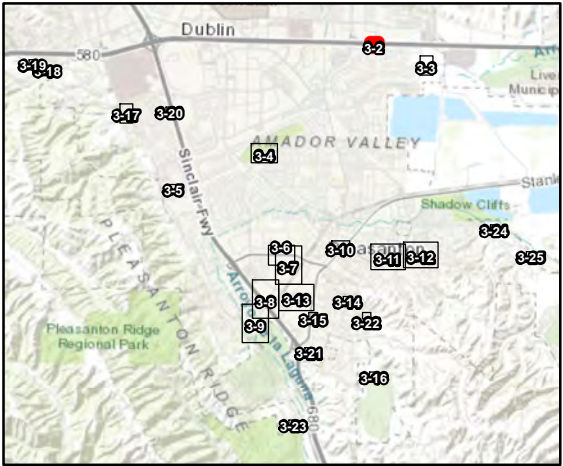
 Top of Bank

Sensitive

 Drainage Ditch

Non-sensitive

 Developed



Study Area	Study Area Name		Acres
C-01	Pimlico Canal		0.35
Study Area	Type	Sensitive	Acres
C-01	Drainage Ditch	Yes	0.11
C-01	Developed	No	0.24

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019



Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

Figure 3-3. Vegetation Communities (P-01)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

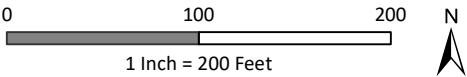
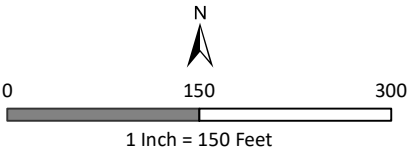
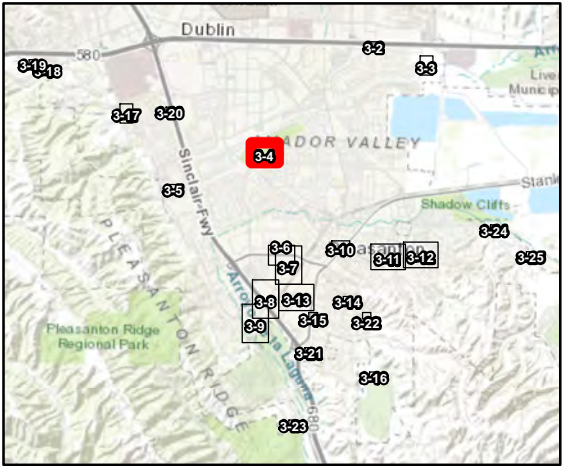




Figure 3-4.
Vegetation Communities
(C-02)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



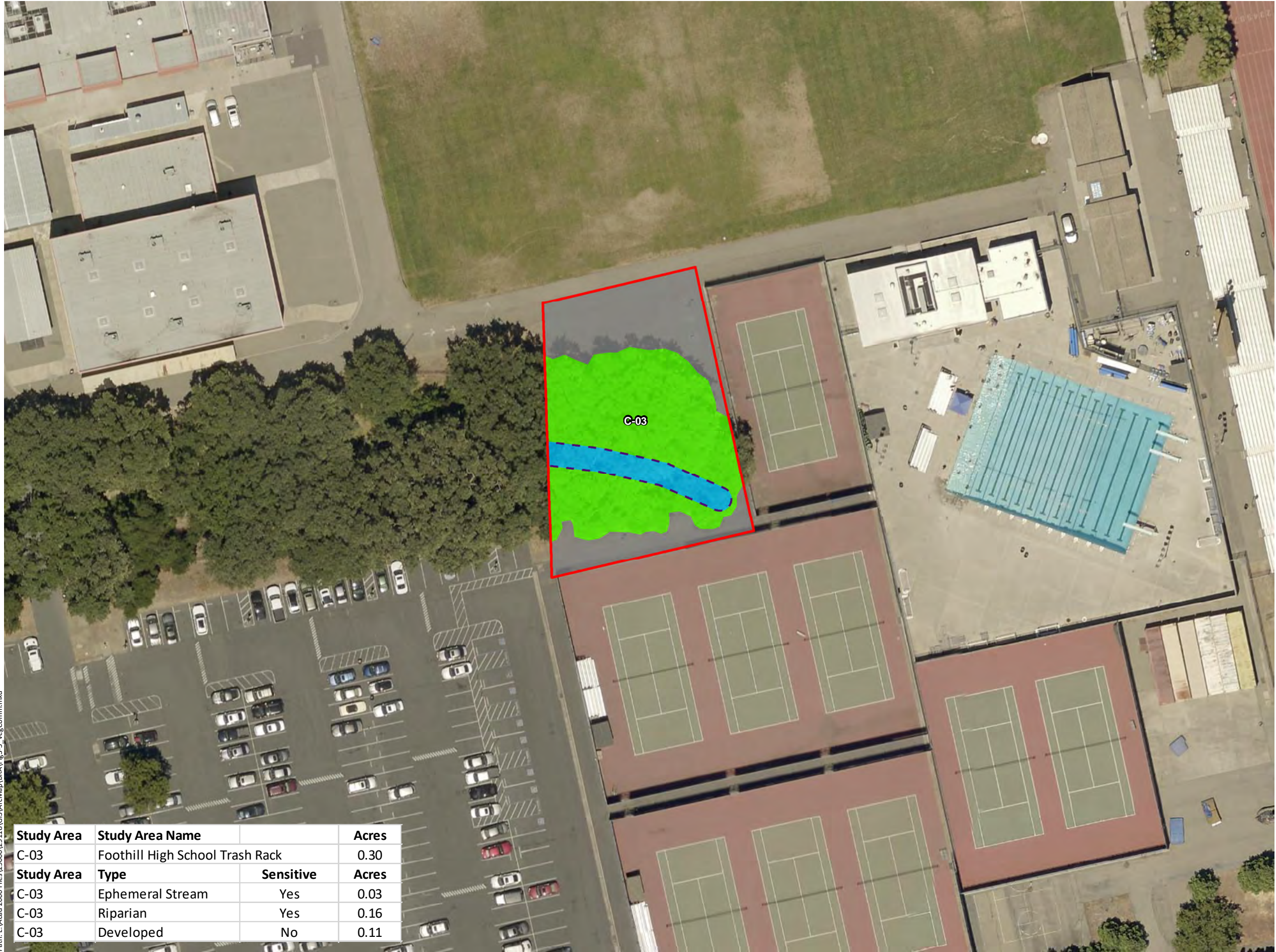


Figure 3-5.
Vegetation Communities
(C-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

Study Area

Top of Bank

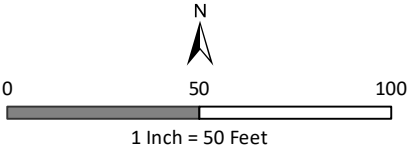
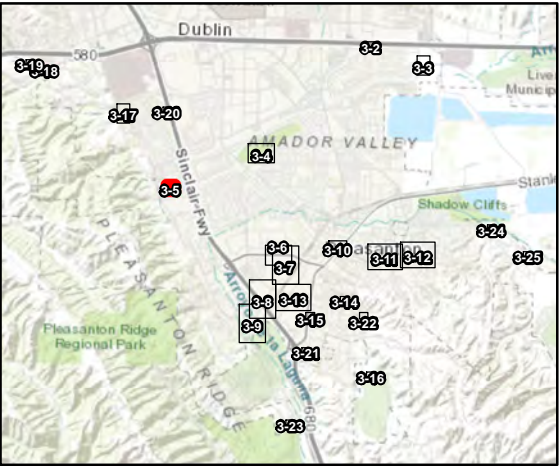
Sensitive

Ephemeral Stream

Riparian

Non-sensitive

Developed



Study Area	Study Area Name		Acres
C-03	Foothill High School Trash Rack		0.30
Study Area	Type	Sensitive	Acres
C-03	Ephemeral Stream	Yes	0.03
C-03	Riparian	Yes	0.16
C-03	Developed	No	0.11

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019



Figure 3-6.
Vegetation Communities
(C-04, C-05)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

Study Area

Top of Bank

Sensitive

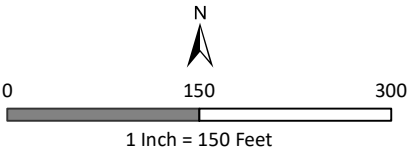
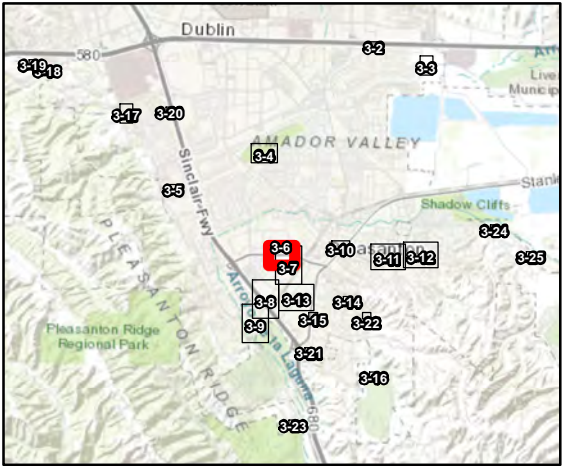
Drainage Ditch

Riparian

Non-sensitive

Ruderal Grassland

Developed



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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

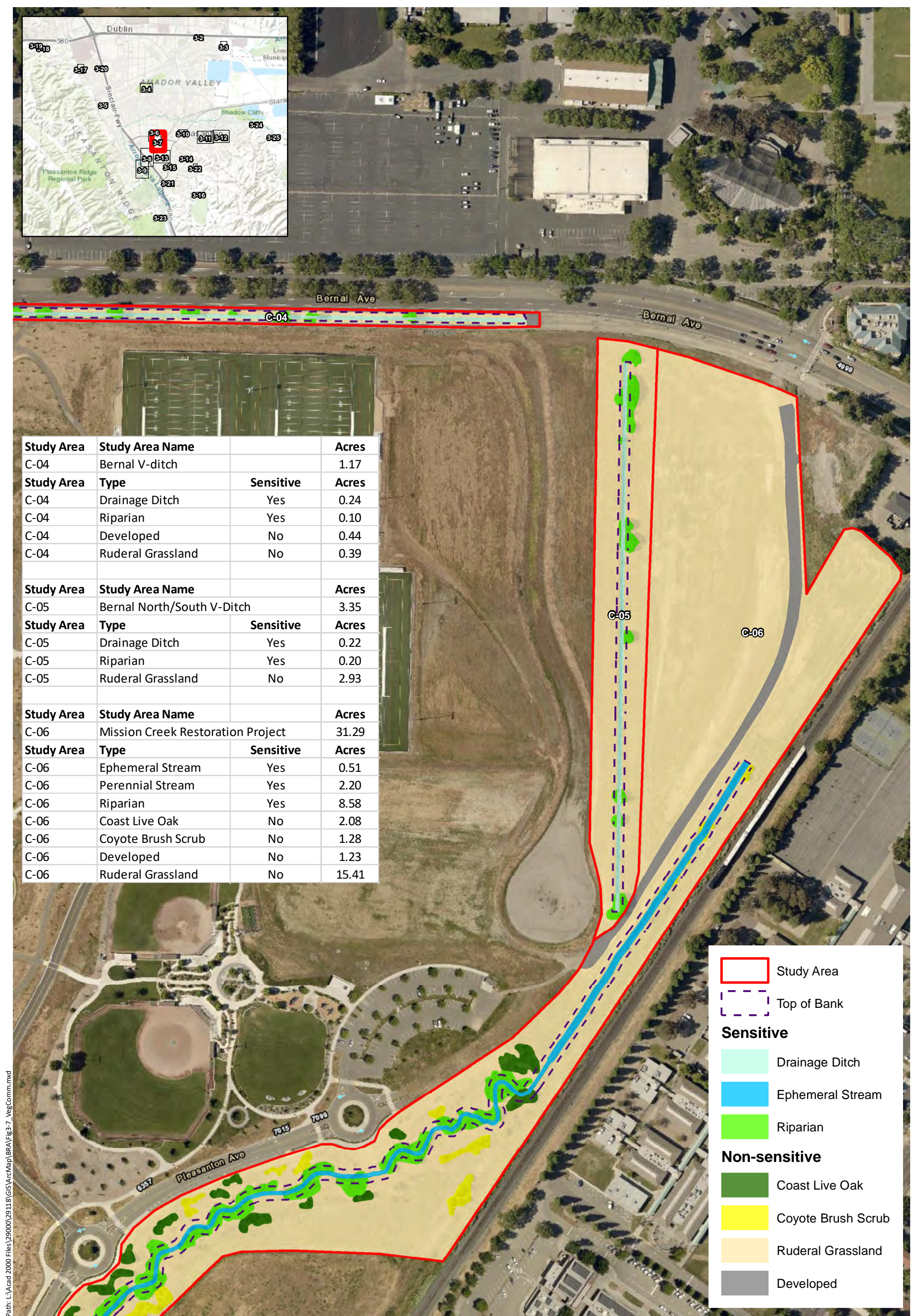
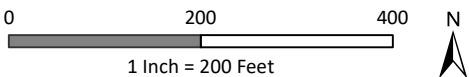
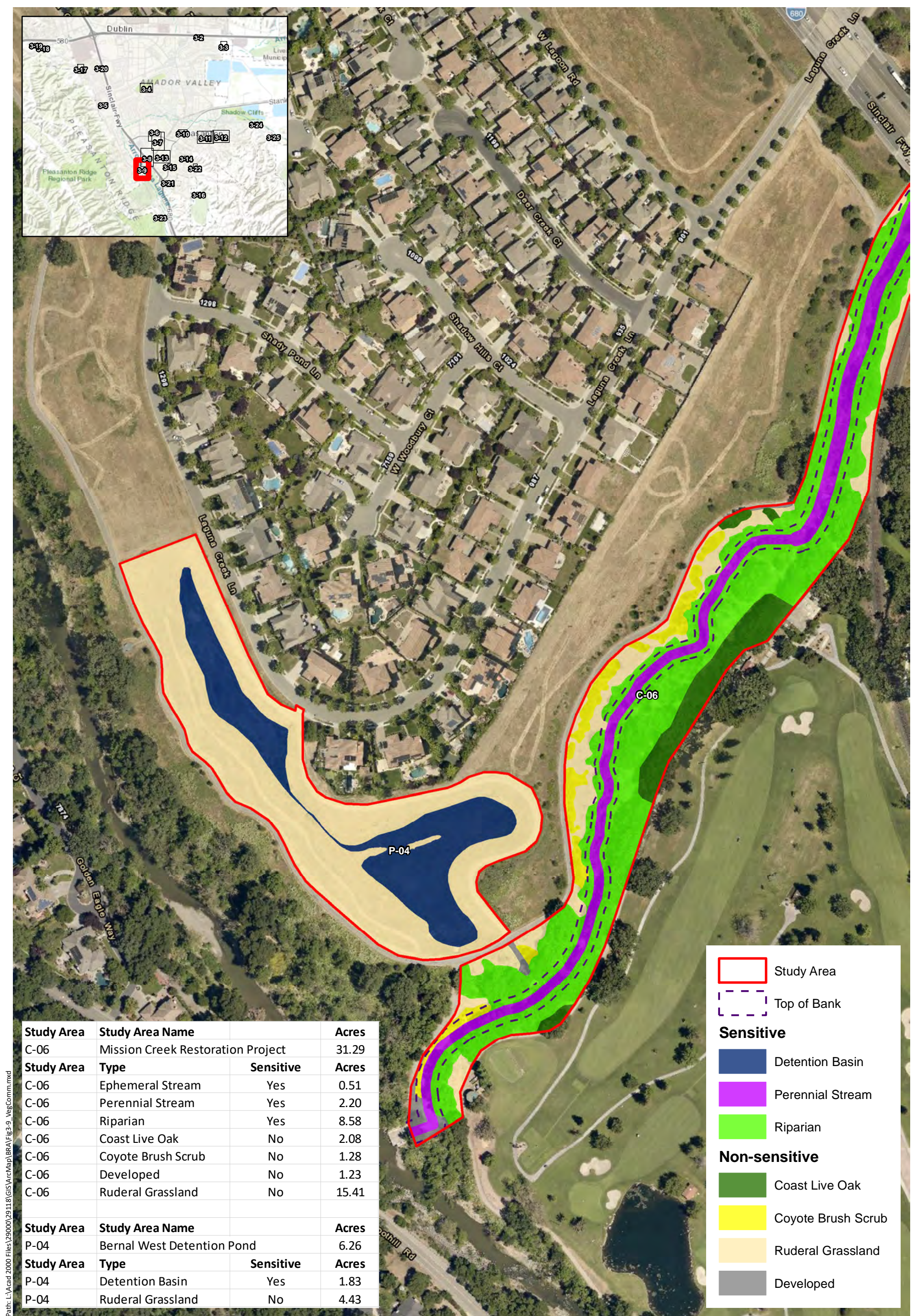


Figure 3-7. Vegetation Communities (C-04, C-05, C-06)





Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/26/2019

Figure 3-9. Vegetation Communities (C-06, P-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

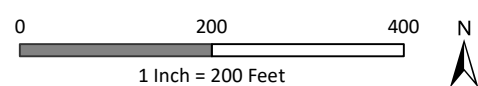
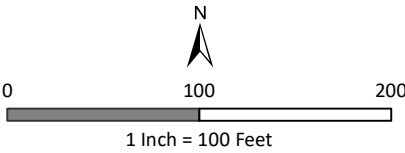
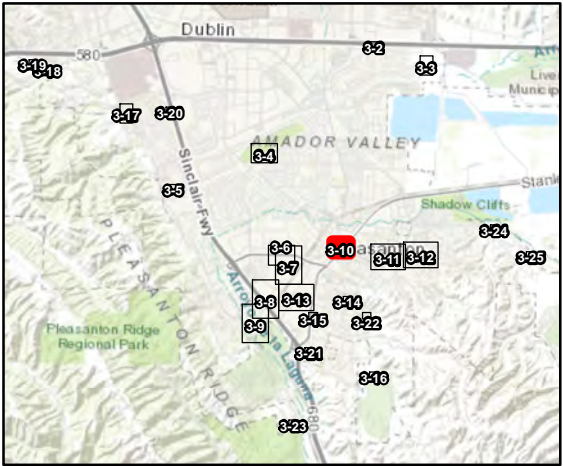




Figure 3-10.
Vegetation Communities
(C-07)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

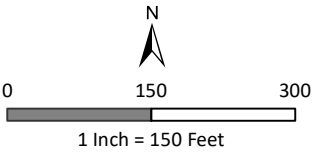
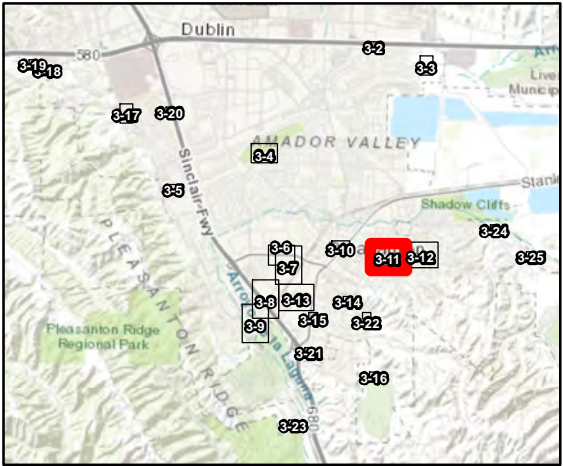
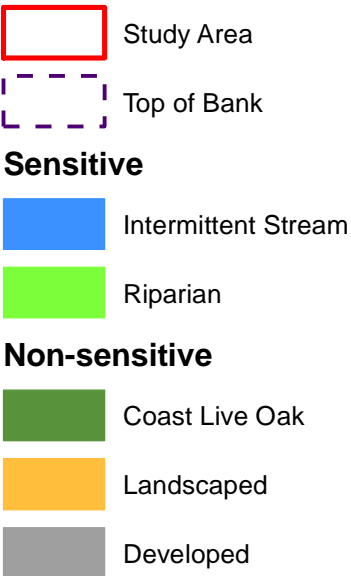
- Study Area
- Top of Bank
- Sensitive**
- Ephemeral Stream
- Intermittent Stream
- Riparian
- Non-sensitive**
- Landscaped
- Developed



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Figure 3-11.
Vegetation Communities
(C-08)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

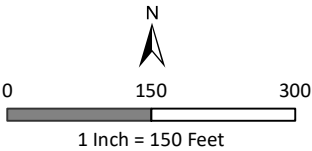
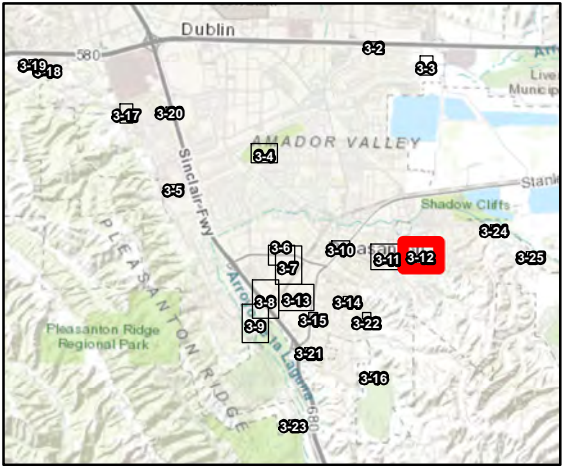
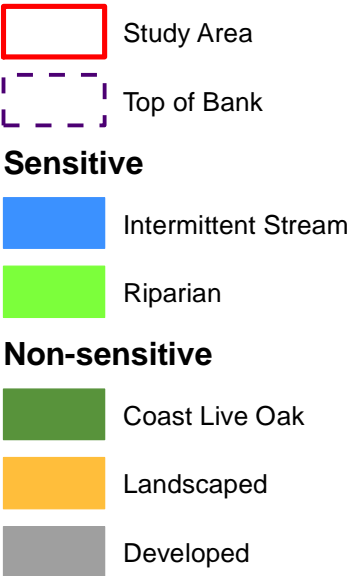


Study Area	Study Area Name		Acres
C-08	Upper Kottinger Creek		8.01
Study Area	Type	Sensitive	Acres
C-08	Intermittent Stream	Yes	0.34
C-08	Riparian	Yes	3.97
C-08	Coast Live Oak	No	1.48
C-08	Developed	No	1.12
C-08	Landscaped	No	1.10

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

Figure 3-12.
Vegetation Communities
(C-09)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

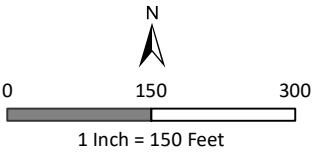
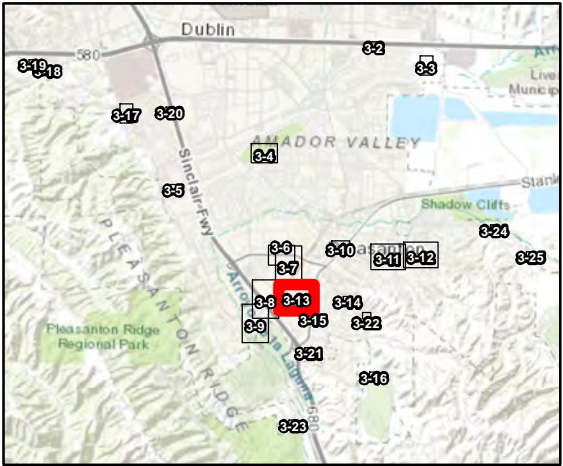
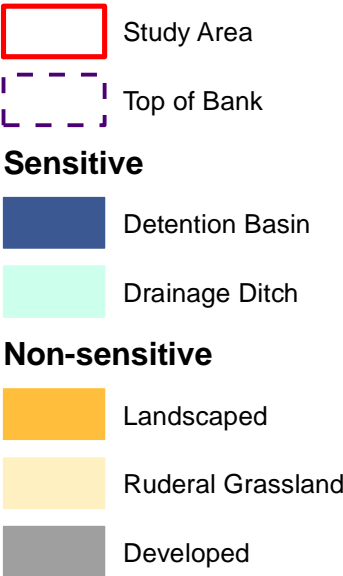
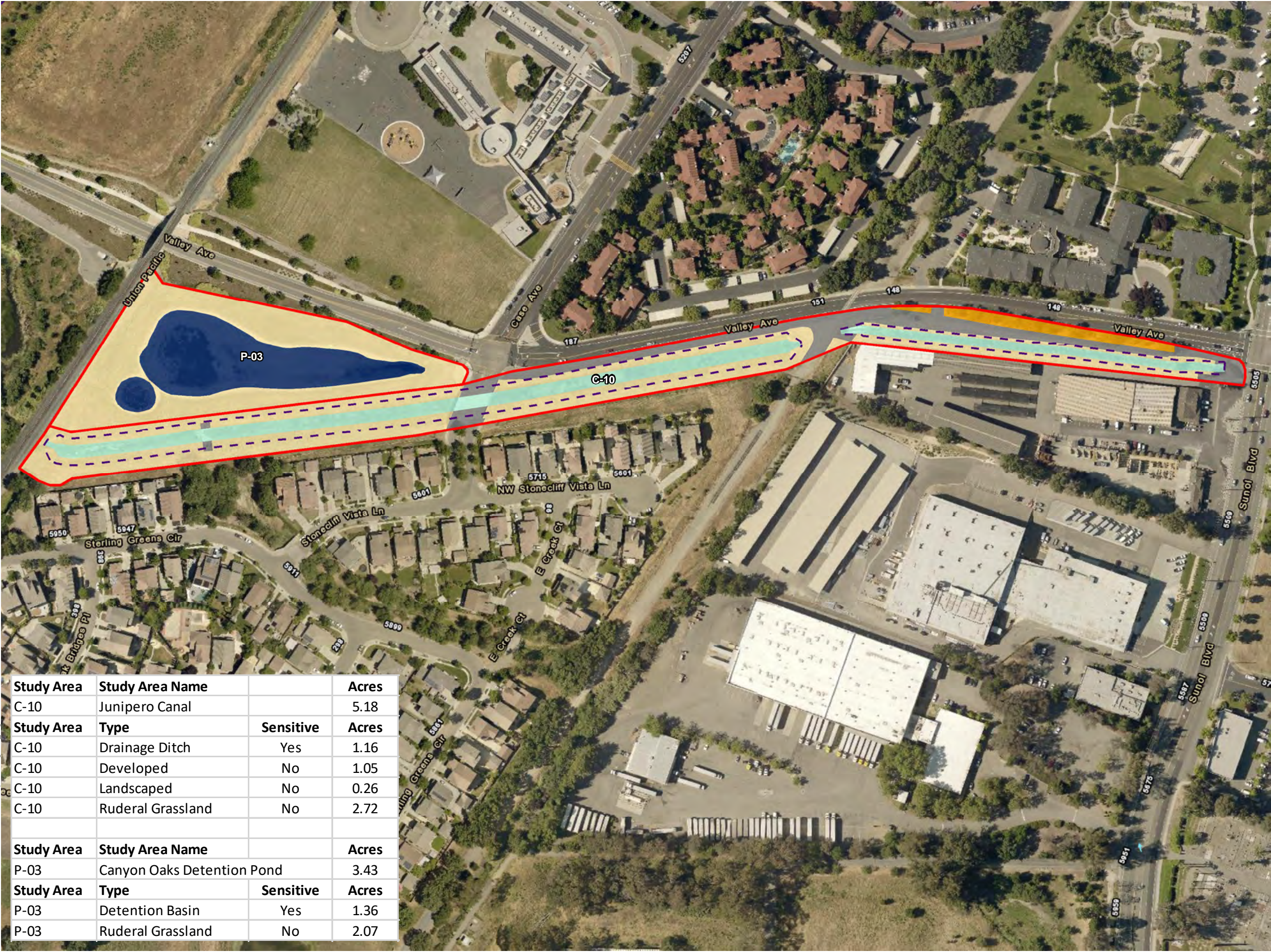


Study Area	Study Area Name		Acres
C-09	Touriga Creek		6.63
Study Area	Type	Sensitive	Acres
C-09	Intermittent Stream	Yes	0.58
C-09	Riparian	Yes	4.44
C-09	Coast Live Oak	No	0.11
C-09	Developed	No	0.29
C-09	Landscaped	No	1.22

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

Figure 3-13.
Vegetation Communities
(C-10, P-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

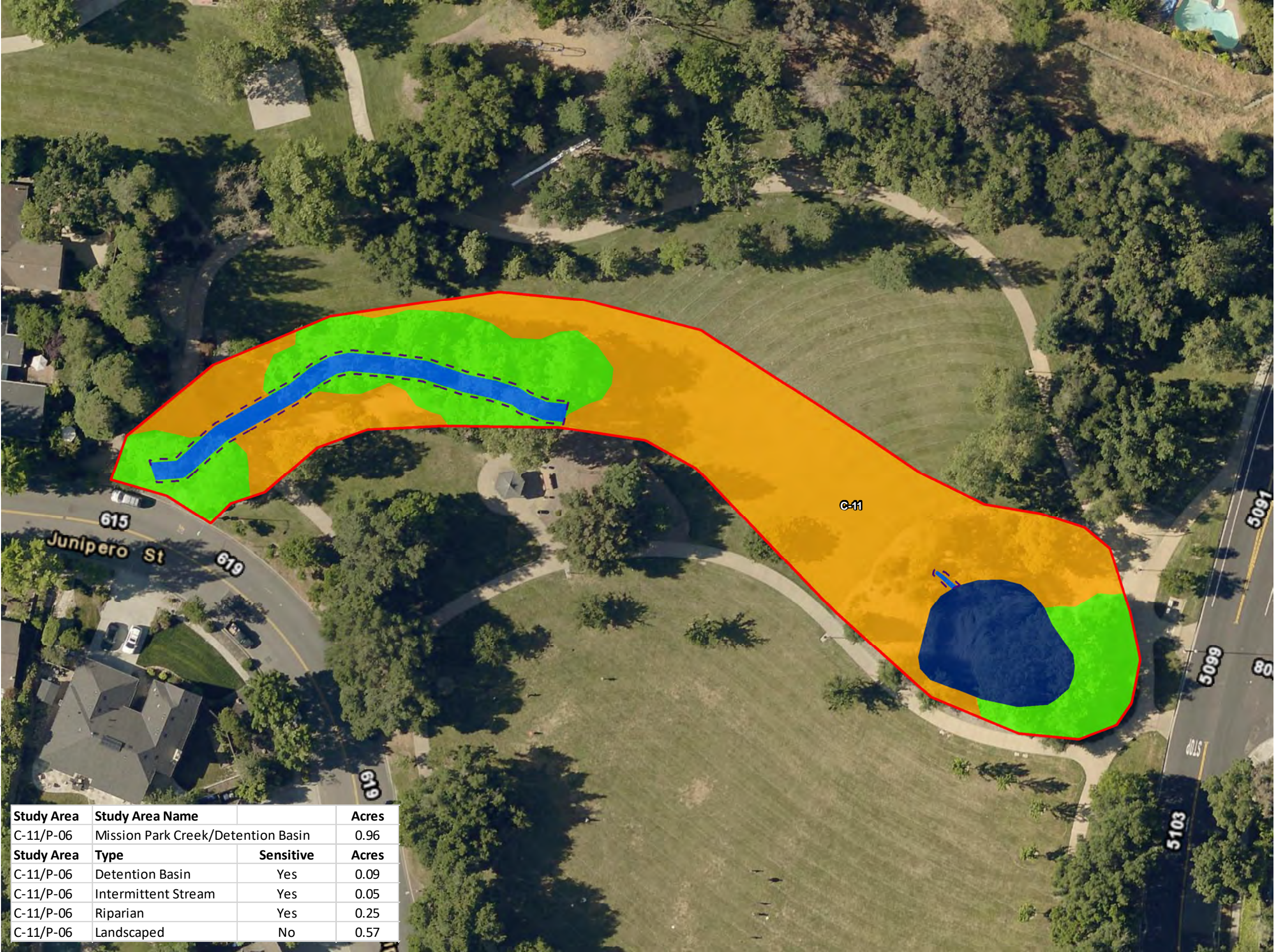
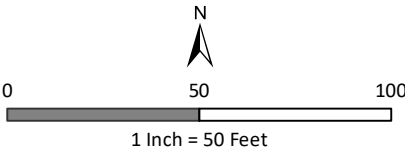
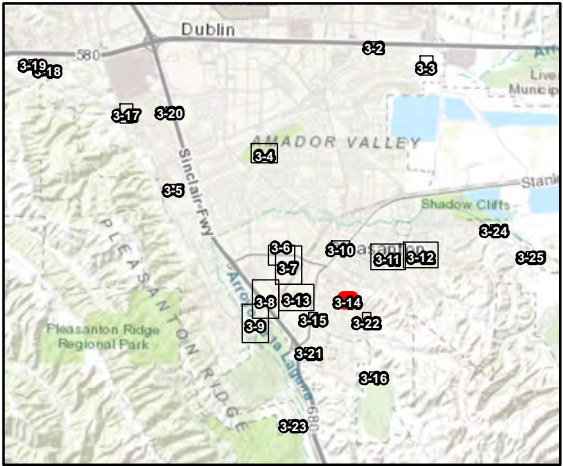
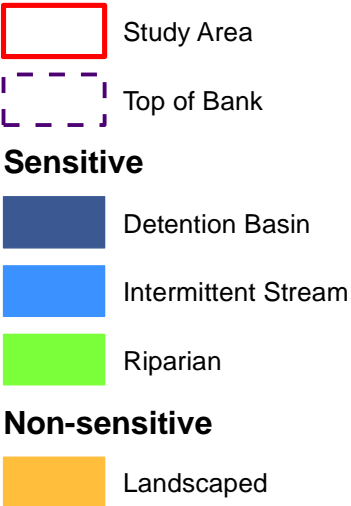


Study Area	Study Area Name		Acres
C-10	Junipero Canal		5.18
Study Area	Type	Sensitive	Acres
C-10	Drainage Ditch	Yes	1.16
C-10	Developed	No	1.05
C-10	Landscaped	No	0.26
C-10	Ruderal Grassland	No	2.72
Study Area	Study Area Name		Acres
P-03	Canyon Oaks Detention Pond		3.43
Study Area	Type	Sensitive	Acres
P-03	Detention Basin	Yes	1.36
P-03	Ruderal Grassland	No	2.07

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

Figure 3-14.
Vegetation Communities
(C-11)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area	Study Area Name		Acres
C-11/P-06	Mission Park Creek/Detention Basin		0.96
Study Area	Type	Sensitive	Acres
C-11/P-06	Detention Basin	Yes	0.09
C-11/P-06	Intermittent Stream	Yes	0.05
C-11/P-06	Riparian	Yes	0.25
C-11/P-06	Landscaped	No	0.57

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

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Figure 3-15.
Vegetation Communities
(C-12)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

- Study Area
- Top of Bank
- Sensitive**
- Ephemeral Stream
- Riparian
- Non-sensitive**
- Ruderal Grassland
- Developed

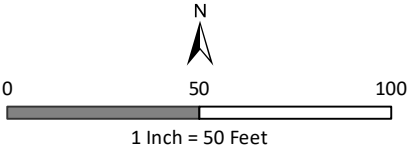
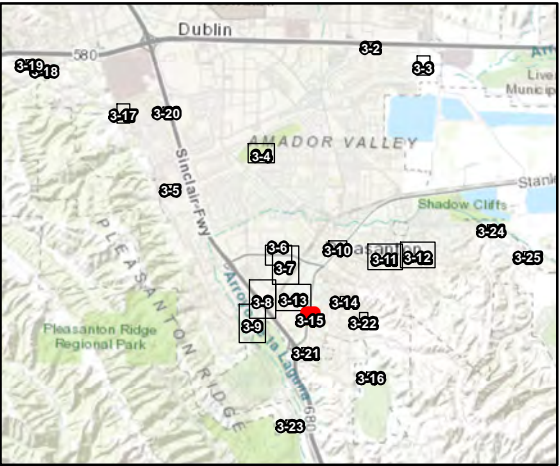




Figure 3-16.
Vegetation Communities
(P-05)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area



Top of Bank

Sensitive



Detention Basin

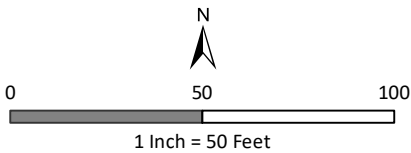
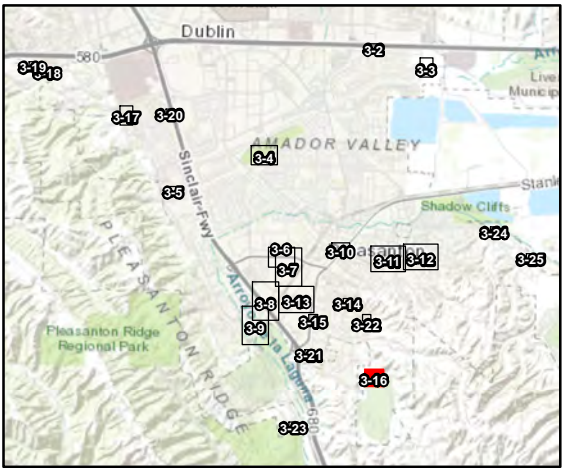
Non-sensitive



Ruderal Grassland



Developed



Study Area	Study Area Name		Acres
P-05	Callippe Detention Pond		0.18
Study Area	Type	Sensitive	Acres
P-05	Detention Basin	Yes	0.08
P-05	Developed	No	0.03
P-05	Ruderal Grassland	No	0.06



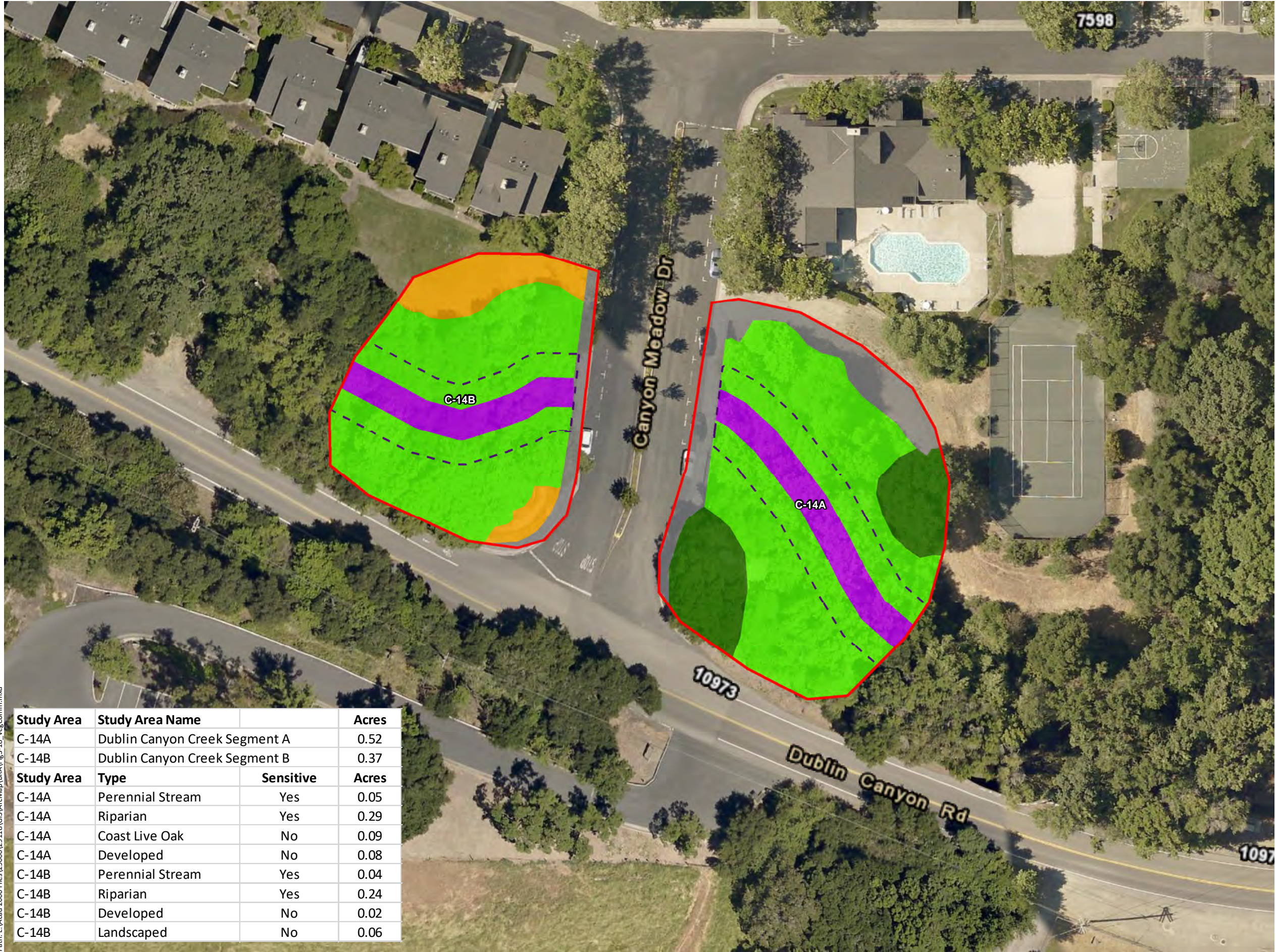
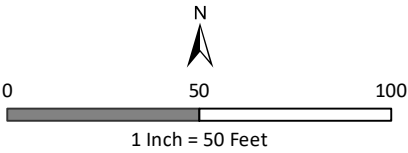
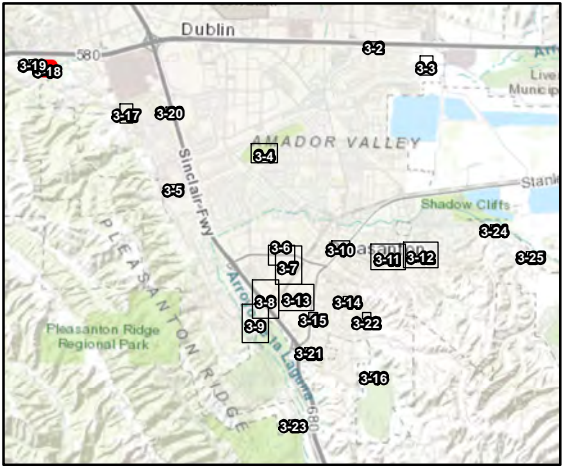


Figure 3-18.
Vegetation Communities
(C-14A, C-14B)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

- Study Area
- Top of Bank
- Sensitive**
- Perennial Stream
- Riparian
- Non-sensitive**
- Coast Live Oak
- Landscaped
- Developed



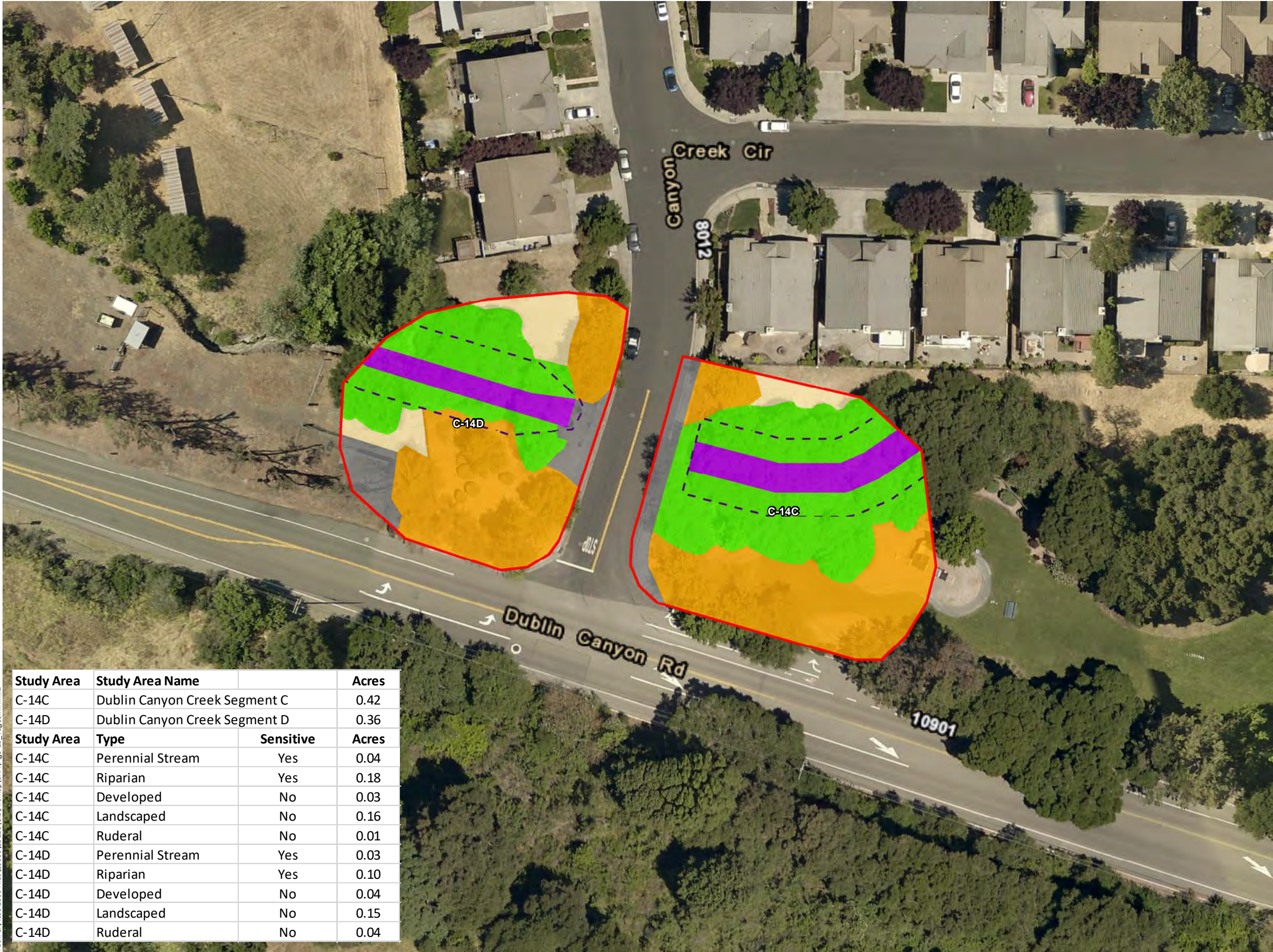
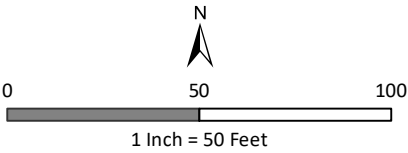
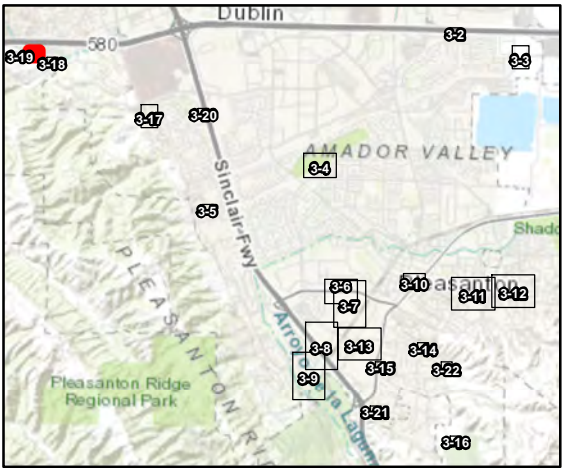
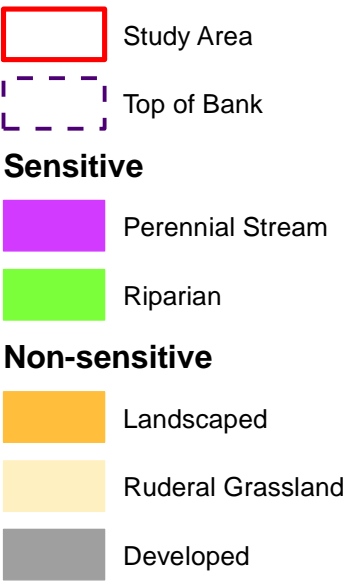
Study Area	Study Area Name		Acres
C-14A	Dublin Canyon Creek Segment A		0.52
C-14B	Dublin Canyon Creek Segment B		0.37
Study Area	Type	Sensitive	Acres
C-14A	Perennial Stream	Yes	0.05
C-14A	Riparian	Yes	0.29
C-14A	Coast Live Oak	No	0.09
C-14A	Developed	No	0.08
C-14B	Perennial Stream	Yes	0.04
C-14B	Riparian	Yes	0.24
C-14B	Developed	No	0.02
C-14B	Landscaped	No	0.06

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

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Figure 3-19.
Vegetation Communities
(C-14C, C-14D)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area	Study Area Name		Acres
C-14C	Dublin Canyon Creek Segment C		0.42
C-14D	Dublin Canyon Creek Segment D		0.36
Study Area	Type	Sensitive	Acres
C-14C	Perennial Stream	Yes	0.04
C-14C	Riparian	Yes	0.18
C-14C	Developed	No	0.03
C-14C	Landscaped	No	0.16
C-14C	Ruderal	No	0.01
C-14D	Perennial Stream	Yes	0.03
C-14D	Riparian	Yes	0.10
C-14D	Developed	No	0.04
C-14D	Landscaped	No	0.15
C-14D	Ruderal	No	0.04

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 1/2/2020

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Figure 3-20.
Vegetation Communities
(C-15)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

Study Area

Top of Bank

Sensitive

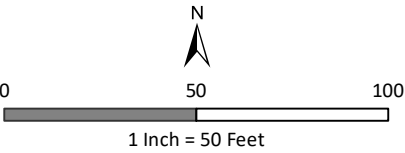
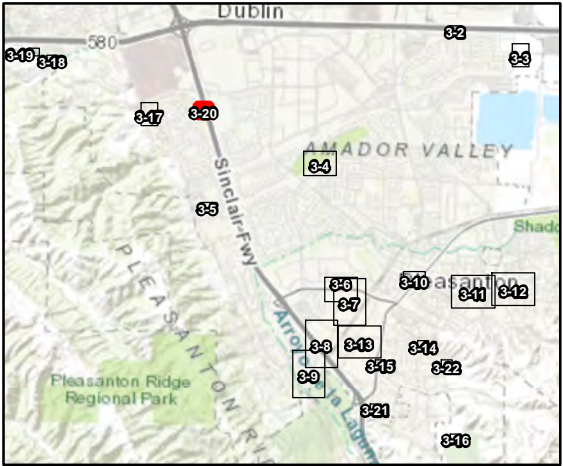
Drainage Ditch

Non-sensitive

Landscaped

Ruderal Grassland

Developed



Study Area	Study Area Name		Acres
C-15	Stonedale Channel		0.08
Study Area	Type	Sensitive	Acres
C-15	Drainage Ditch	Yes	0.01
C-15	Developed	No	0.04
C-15	Landscaped	No	0.03
C-15	Ruderal	No	<0.01

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

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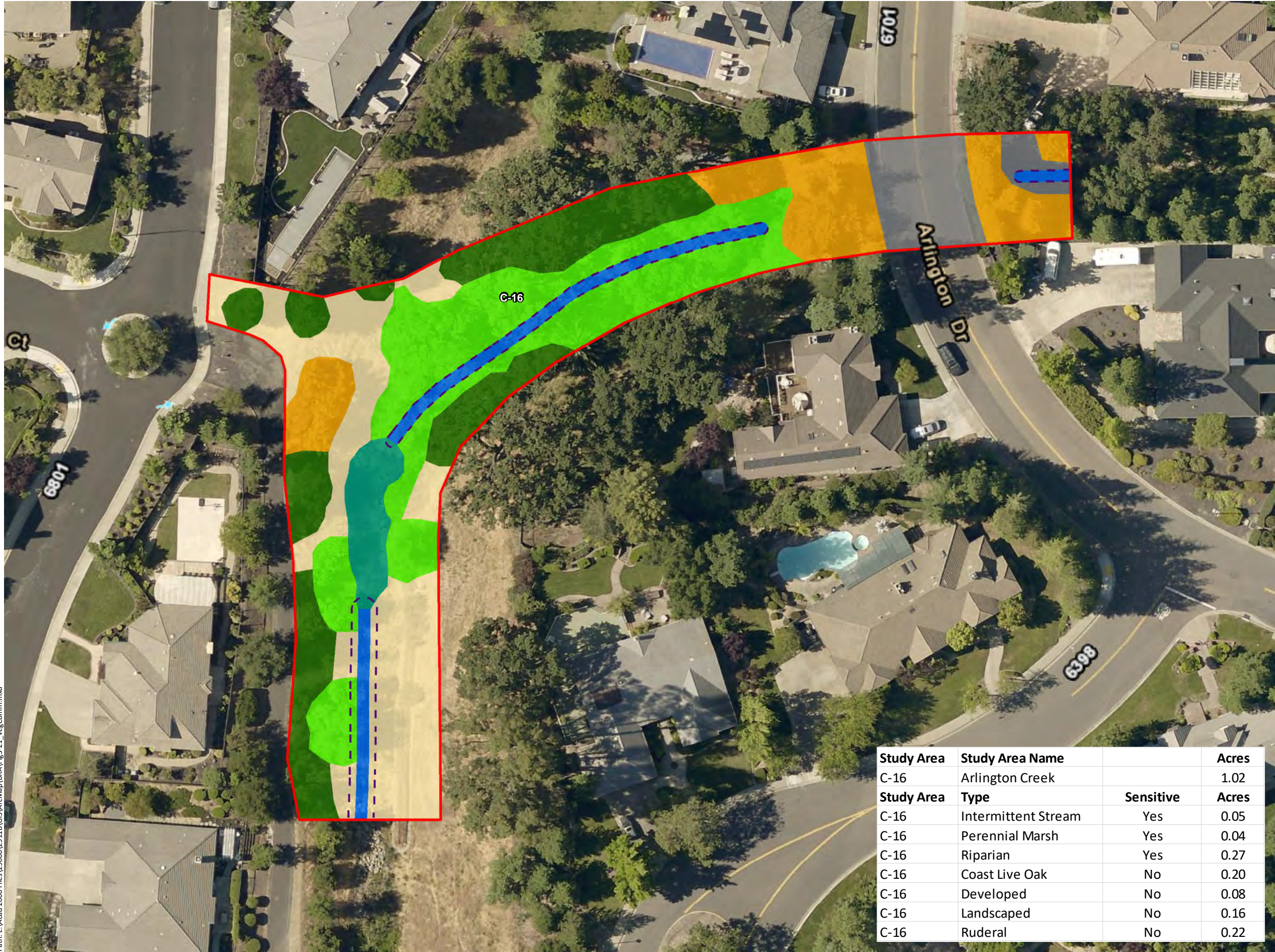


Figure 3-21.
Vegetation Communities
(C-16)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

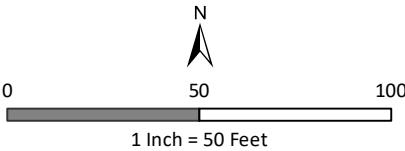
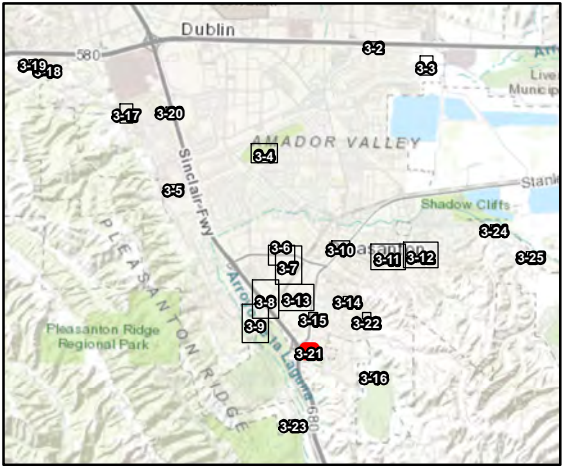
- Study Area
- Top of Bank

Sensitive

- Intermittent Stream
- Perennial Marsh
- Riparian

Non-sensitive

- Coast Live Oak
- Landscaped
- Ruderal Grassland
- Developed



Study Area	Study Area Name		Acres
C-16	Arlington Creek		1.02
Study Area	Type	Sensitive	Acres
C-16	Intermittent Stream	Yes	0.05
C-16	Perennial Marsh	Yes	0.04
C-16	Riparian	Yes	0.27
C-16	Coast Live Oak	No	0.20
C-16	Developed	No	0.08
C-16	Landscaped	No	0.16
C-16	Ruderal	No	0.22

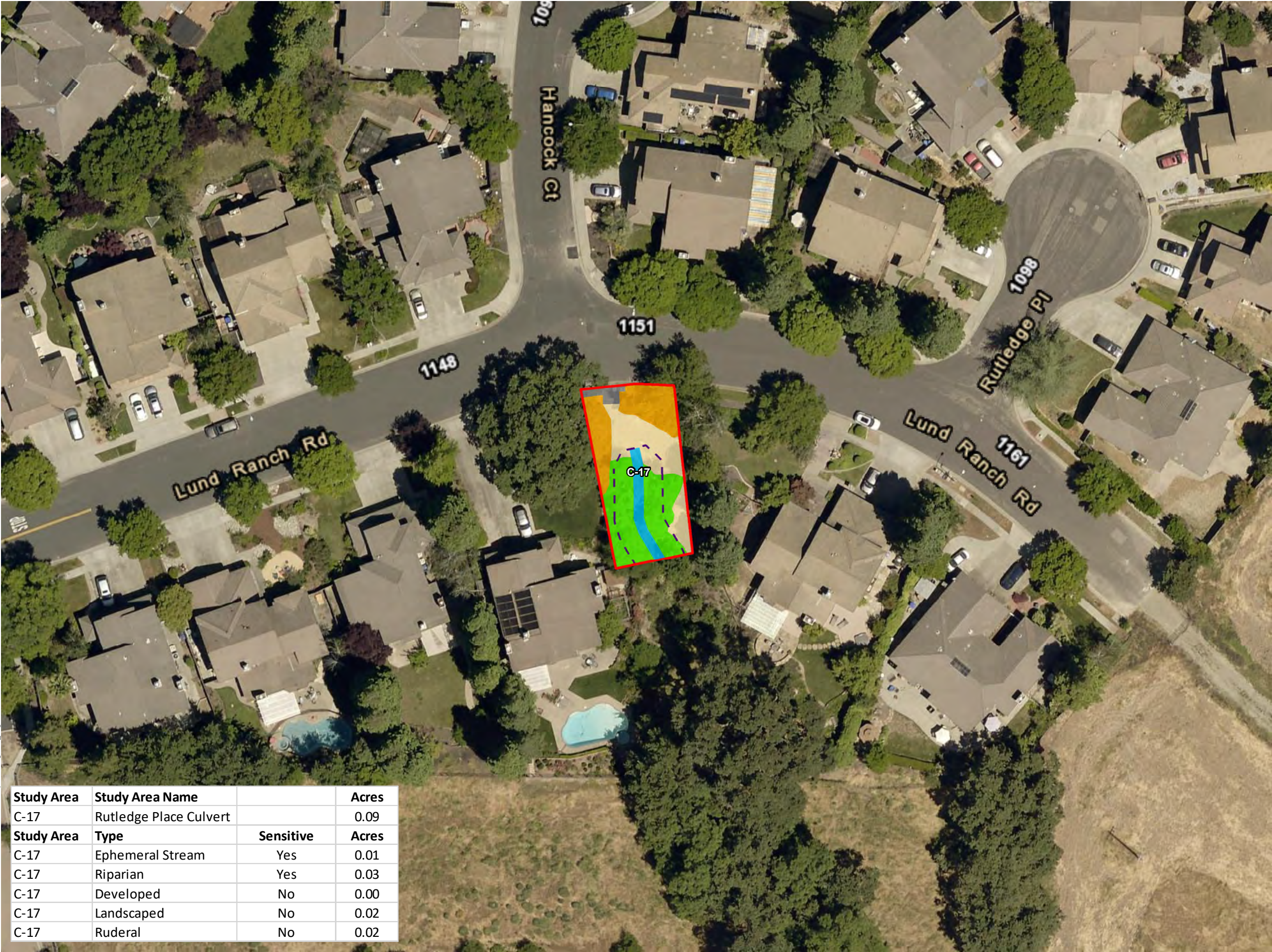


Figure 3-22.
Vegetation Communities
(C-17)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

Study Area

Top of Bank

Sensitive

Ephemeral Stream

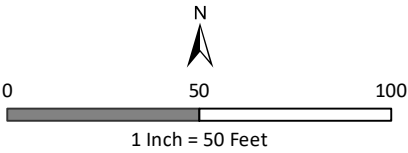
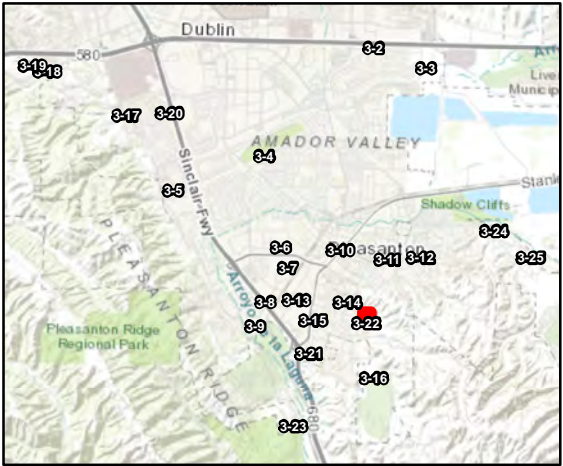
Riparian

Non-sensitive

Landscaped

Ruderal Grassland

Developed



Study Area	Study Area Name		Acres
C-17	Rutledge Place Culvert		0.09
Study Area	Type	Sensitive	Acres
C-17	Ephemeral Stream	Yes	0.01
C-17	Riparian	Yes	0.03
C-17	Developed	No	0.00
C-17	Landscaped	No	0.02
C-17	Ruderal	No	0.02

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019



Figure 3-23.
Vegetation Communities
(P-06)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

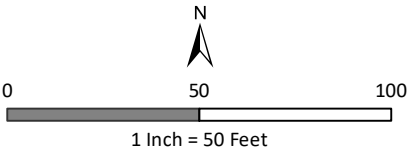
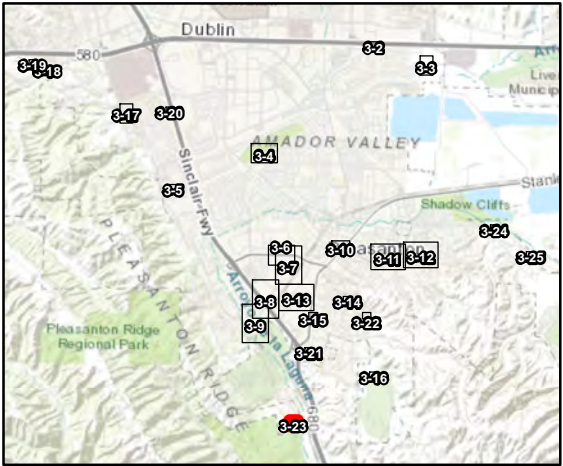
- Study Area
- Top of Bank

Sensitive

- Detention Basin
- Ephemeral Stream
- Riparian

Non-sensitive

- Landscaped
- Ruderal Grassland
- Developed

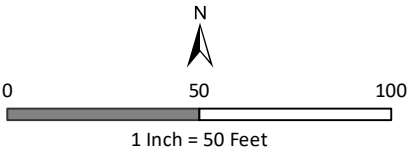
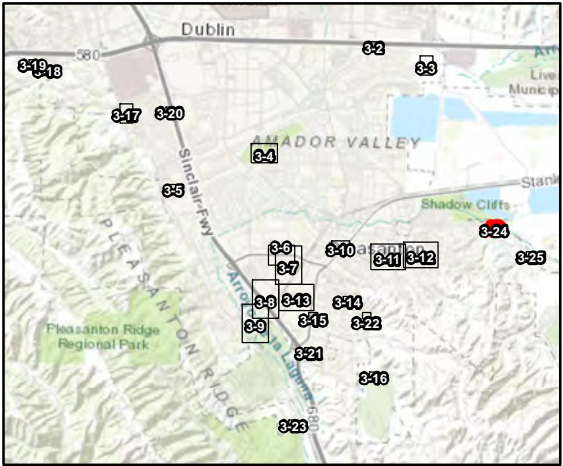
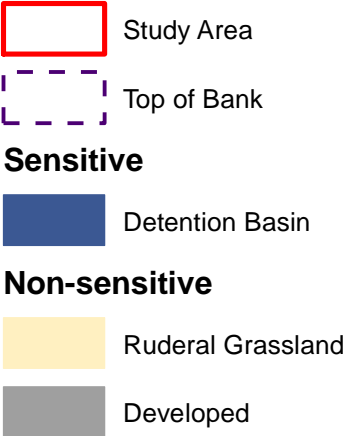


Study Area	Study Area Name		Acres
P-06	Oak Tree Farms Creek/Detention Pond		0.35
Study Area	Type	Sensitive	Acres
P-06	Detention Basin	Yes	0.02
P-06	Ephemeral Stream	Yes	0.01
P-06	Riparian	Yes	0.01
P-06	Developed	No	0.02
P-06	Landscaped	No	0.01
P-06	Ruderal	No	0.27

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/20/2019

Figure 3-24.
Vegetation Communities
(P-07)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area	Study Area Name		Acres
P-07	Vineyard West Detention Pond		1.83
Study Area	Type	Sensitive	Acres
P-07	Detention Basin	Yes	0.19
P-07	Developed	No	0.48
P-07	Ruderal	No	1.16

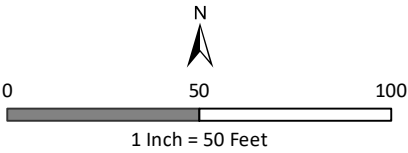
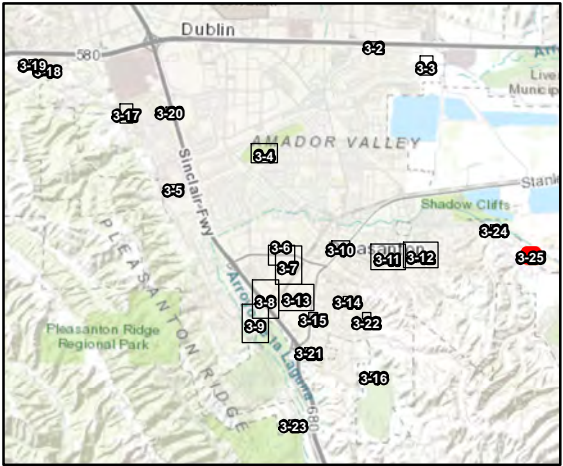
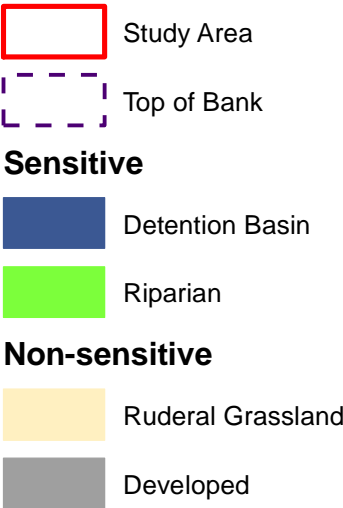
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 1/2/2020





Figure 3-25.
Vegetation Communities
(P-08)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

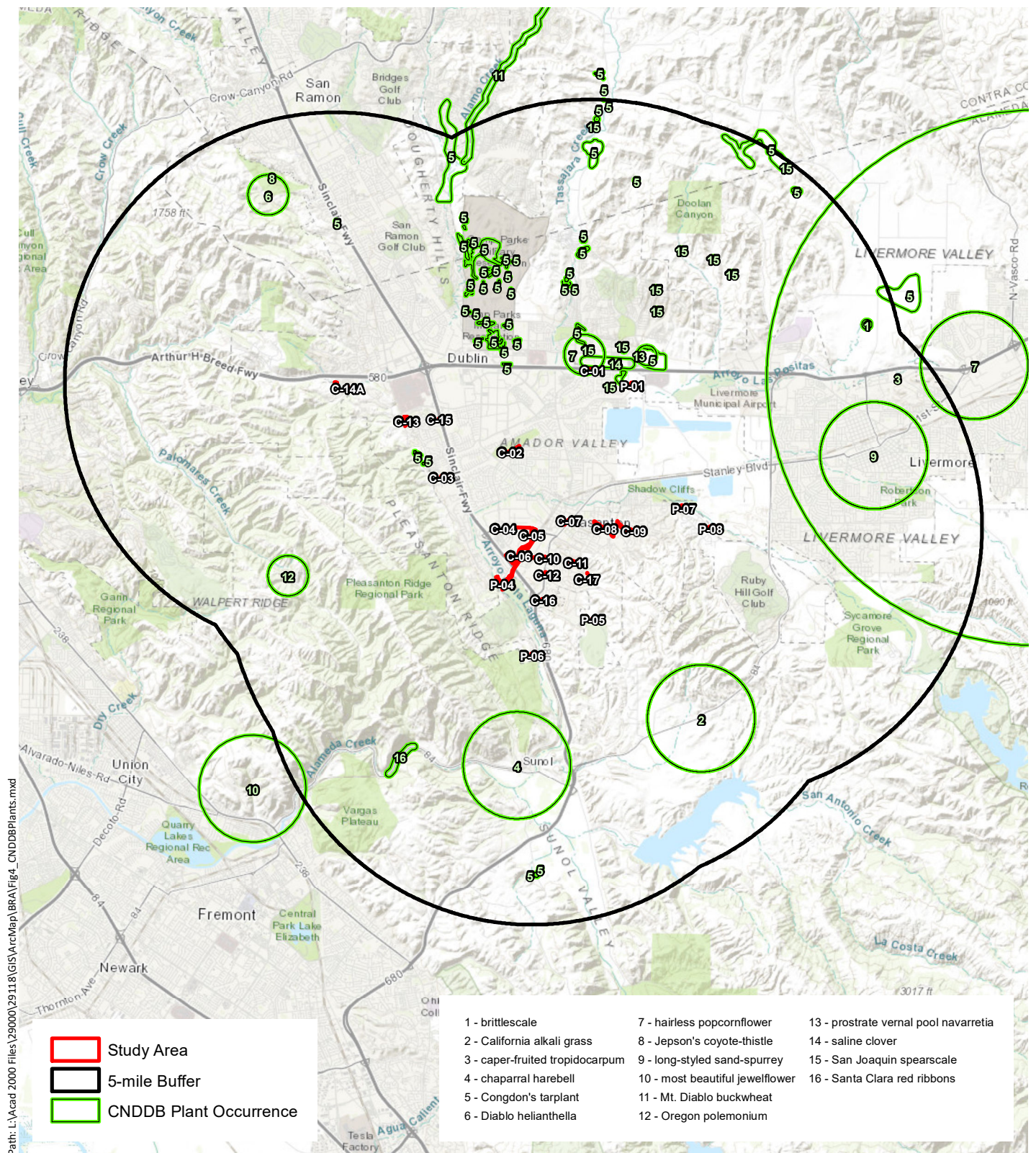


Study Area	Study Area Name		Acres
P-08	Vineyard East Detention Pond		1.33
Study Area	Type	Sensitive	Acres
P-08	Detention Basin	Yes	0.23
P-08	Riparian	Yes	0.01
P-08	Developed	No	0.33
P-08	Ruderal	No	0.76

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 1/2/2020



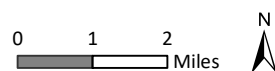
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Sources: ESRI World Topo, CNDDDB September 2019, WRA | Prepared By: SGillespie, 1/21/2020

Figure 4. Special-status Plant Species within 5-mile Radius of Study Area

City of Pleasanton
Stream Maintenance Program
Alameda County, California



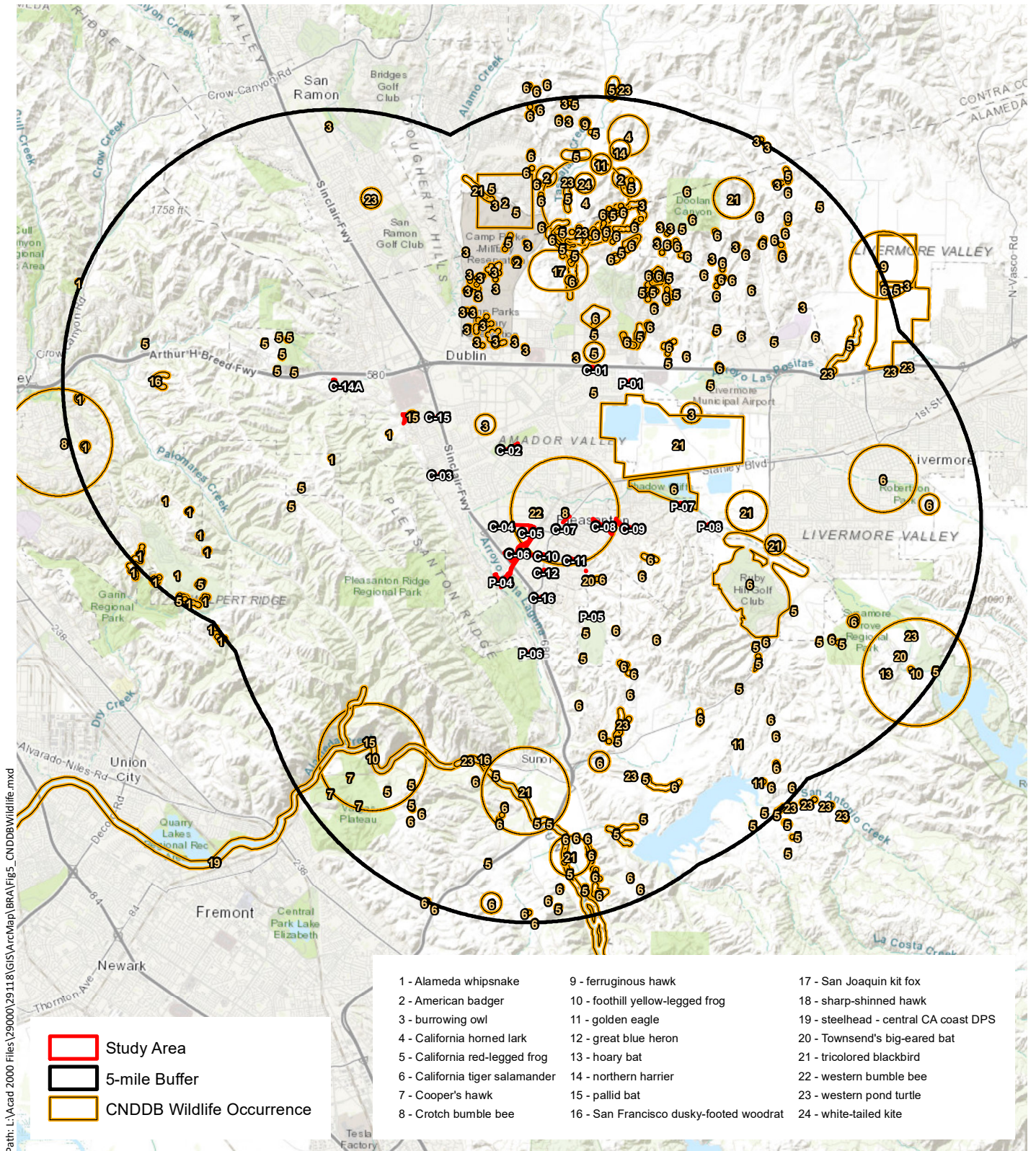
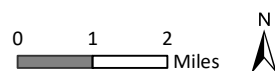


Figure 5. Special-status Wildlife Species within 5-mile Radius of Study Area

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Appendix B

Species Observed in and around the Project Area

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Appendix B. List of plant and wildlife species observed within the Study Area during the July and October, 2019 site visits.

Scientific Name	Common Name
Wildlife	
<i>Cathartes aura</i>	turkey vulture
<i>Aphelocoma californica</i>	California scrub jay
<i>Agelaius tricolor</i>	Tricolored blackbird
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Carpodacus mexicanus</i>	house finch
<i>Pipilo maculatus</i>	Spotted towhee
<i>Charadrius vociferus</i>	killdeer
<i>Sayornis nigricans</i>	black phoebe
<i>Zenaida macroura</i>	mourning dove
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Melospiza crissalis</i>	California towhee
<i>Corvus brachyrhynchos</i>	American crow
<i>Hirundo rustica</i>	Barn swallow
<i>Thryomanes bewickii</i>	Bewicke's wren
<i>Psaltiriparus minimus</i>	bushtit
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Leuconotopicus villosus</i>	Hairy woodpecker
<i>Otospermophilus beecheyi</i>	California ground squirrel
Plants	
<i>Aesculus californica</i>	buckeye
<i>Avena barbata</i>	slender oat
<i>Avena sativa</i>	wild oat
<i>Baccharis pilularis</i> ssp. <i>pilularis</i>	coyote brush
<i>Baccharis salicina</i>	willow baccharis
<i>Brassica nigra</i>	black mustard
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	Soft chess
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Catalpa bignonioides</i>	southern catalpa
<i>Centaurea solstitialis</i>	yellow star thistle
<i>Chenopodium</i> sp.	goosefoot
<i>Cirsium vulgare</i>	spear thistle
<i>Convolvulus arvensis</i>	field bindweed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus eragrostis</i>	tall cyperus
<i>Epilobium brachycarpum</i>	tall annual willowherb

<i>Eschscholzia californica</i>	California poppy
<i>Festuca myuros</i>	rattail fescue
<i>Festuca perennis</i>	Italian rye grass
<i>Foeniculum vulgare</i>	fennel
<i>Hedera canariensis</i>	canary ivy
<i>Helminthotheca echinoides</i>	bristly ox-tongue
<i>Heteromeles arbutifolia</i>	toyon
<i>Hordeum marinum</i>	seaside barley
<i>Hordeum murinum</i>	Foxtail barley
<i>Juglans hindsii</i>	black walnut
<i>Lactuca serriola</i>	prickly lettuce
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Liquidambar styraciflua</i>	sweetgum
<i>Lotus corniculatus</i>	bird's foot trefoil
<i>Mentha pulegium</i>	pennyroyal
<i>Nerium oleander</i>	Oleander
<i>Persicaria hydropiper</i>	common smartweed
<i>Phalaris aquatica</i>	harding grass
<i>Plantago lanceolata</i>	English plantain
<i>Polypogon monspeliensis</i>	rabbitsfoot grass
<i>Populus fremontii</i>	Fremont cottonwood
<i>Pseudognaphalium californicum</i>	ladies' tobacco
<i>Quercus agrifolia</i>	coast live oak
<i>Raphanus sativus</i>	jointed charlock
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rumex crispus</i>	curly dock
<i>Sequoia sempervirens</i>	coast redwood
<i>Schoenoplectus californicus</i>	California bulrush
<i>Tribulus terrestris</i>	puncture vine
<i>Trifolium hirtum</i>	rose clover
<i>Typha angustifolia</i>	narrow leaf cattail
<i>Typha latifolia</i>	broadleaf cattail
<i>Ulmus americana</i>	American elm
<i>Vicia sativa</i>	spring vetch
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Xanthium strumarium</i>	cocklebur

Appendix C

Representative Photographs of the Project Area

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Photo 1: Concrete channel of Pimlico canal (C-01)

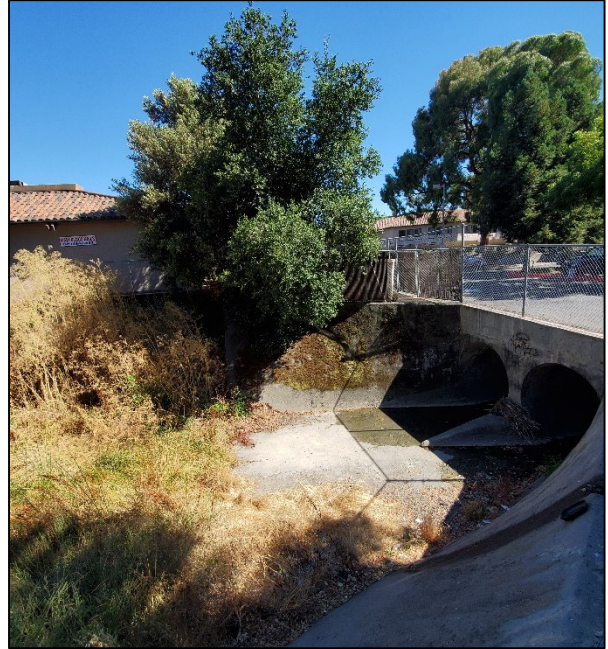


Photo 2: Concrete culvert at Pleasanton Canal (C-02)

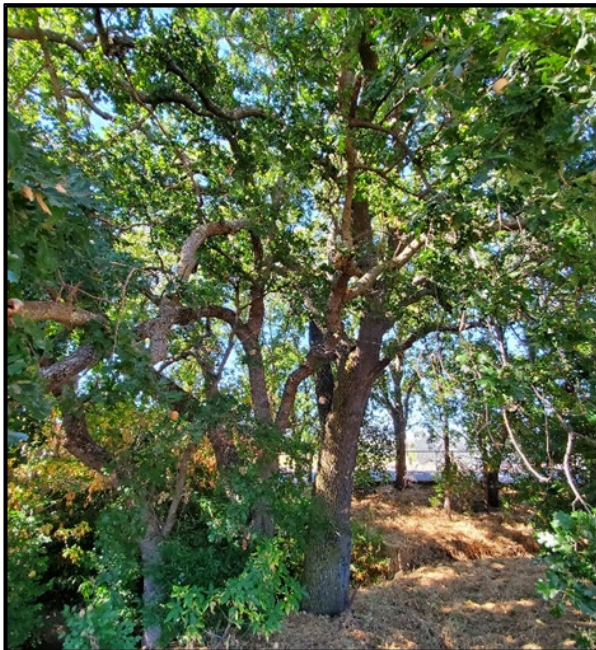


Photo 3: Riparian forest at Foothill High School Trash Rack (C-03)



Photo 4: Excavated channel at Bernal V-Ditch (C-04)



Photo 5: Excavated channel at Bernal North/
South Ditch (C-05)



Photo 6: Intermittent stream at Mission Creek
Restoration Project (C-06)



Photo 7: Lower Kottinger Creek (C-07)



Photo 8: Upper Kottinger Creek (C-08)



Photo 9: Streambed and riparian forest at Touriga Creek (C-09)



Photo 10: Junipero Canal (C-10)



Photo 11: Mission Creek Park (C-11)



Photo 12: Cemetery Creek (C-12)



Photo 13: Gold Creek (C-13).



Photo 14: Dublin Canyon Creek (C-14).



Photo 15: Stonedale Channel (C-15).



Photo 16: Arlington Creek (C-16).



Photo 17: Rutledge Place Culvert (C-17).



Photo 18: Stoneridge Pond (P-01)



Photo 19: Bernal Central Detention Pond (P-02)



Photo 20: Canyon Oaks Detention Pond (P-03)



Photo 21: Bernal West Detention Pond (P-04)



Photo 22. Callippe Detention Pond (P-05).



Photo 23: Oak Tree Farms Detention Pond (P-06).



Photo 24: Vineyard West Detention Pond (P-07).



Photo 25: Vineyard East Detention Pond (P-08).

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Appendix D

Special-Status Species Potential Table

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SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Plants				
Santa Clara thorn-mint <i>Acanthomintha lanceolata</i>	Rank 4.2	Chaparral (often serpentine), cismontane woodland, coastal scrub. Elevation ranges from 260 to 3935 feet (80 to 1200 meters). Blooms Mar-Jun.	No Potential. The Project Area does not contain chaparral, cismontane woodland or coastal scrub. Therefore there is no potential for this species to occur within the Project Area.	No further actions are recommended for this species.
large-flowered fiddleneck <i>Amsinckia grandiflora</i>	FE, SE, Rank 1B.1	Cismontane woodland, valley and foothill grassland. Elevation ranges from 885 to 1805 feet (270 to 550 meters). Blooms (Mar)Apr-May.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	Rank 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 5 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
California androsace <i>Androsace elongata ssp. acuta</i>	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 490 to 4280 feet (150 to 1305 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
slender silver moss <i>Anomobryum julaceum</i>	Rank 4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 325 to 3280 feet (100 to 1000 meters).	Unlikely. Although the Project Area contains broadleafed upland forest, it is too developed and disturbed to support this species. There there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Mt. Diablo manzanita <i>Arctostaphylos auriculata</i>	Rank 1B.3	Chaparral (sandstone), cismontane woodland. Elevation ranges from 440 to 2135 feet (135 to 650 meters). Blooms Jan-Mar.	No Potential. The Project Area does not contain chaparral or cismontane woodland therefore there is no potential for this species to occur.	No further actions are recommended for this species.
Contra Costa manzanita <i>Arctostaphylos manzanita ssp. laevigata</i>	Rank 1B.2	Chaparral (rocky). Elevation ranges from 1410 to 3610 feet (430 to 1100 meters). Blooms Jan-Mar(Apr).	No Potential. The Project Area does not contain chaparral habitat therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
alkali milk-vetch <i>Astragalus tener var. tener</i>	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 0 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	No Potential. The Project Area does not contain playas, clay grasslands or vernal pool habitat therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
heartscale <i>Atriplex cordulata var. cordulata</i>	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland (sandy). Elevation ranges from 0 to 1835 feet (0 to 560 meters). Blooms Apr-Oct.	Unlikely. The Project Area does not contain microhabitat conditions that supports this species, although there are recent occurrences within a close proximity to the Project Area.	No further actions are recommended for this species.
crownscale <i>Atriplex coronata var. coronata</i>	Rank 4.2	Chenopod scrub, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1935 feet (1 to 590 meters). Blooms Mar-Oct.	Unlikely. The Project Area does contain disturbed valley and foothill grassland but has no open, alkaline areas. There is a low potential for it to occur onsite because of poor habitat conditions.	No further actions are recommended for this species.
brittlescale <i>Atriplex depressa</i>	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1050 feet (1 to 320 meters). Blooms Apr-Oct.	Unlikely. The Project Area does contain disturbed valley and foothill grassland but has no open, alkaline areas. There is a low potential for it to occur onsite because of poor habitat conditions.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
lesser saltscale <i>Atriplex minuscule</i>	Rank 1B.1	Chenopod scrub, playas, valley and foothill grassland. Elevation ranges from 45 to 655 feet (15 to 200 meters). Blooms May-Oct.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
big-scale balsamroot <i>Balsamorhiza macrolepis</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 5100 feet (45 to 1555 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
big tarplant <i>Blepharizonia plumosa</i>	Rank 1B.1	Valley and foothill grassland. Elevation ranges from 95 to 1655 feet (30 to 505 meters). Blooms Jul-Oct.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Mt. Diablo fairy-lantern <i>Calochortus pulchellus</i>	Rank 1B.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Elevation ranges from 95 to 2755 feet (30 to 840 meters). Blooms Apr-Jun.	Unlikely. Although the Project Area contains riparian woodland, it is highly developed with riparian woodland occurring adjacent to roadways that are maintained by the city of Pleasanton. Therefore there is an unlikely potential for this species to occur onsite.	No further actions are recommended for this species.
Oakland star-tulip <i>Calochortus umbellatus</i>	Rank 4.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 325 to 2295 feet (100 to 700 meters). Blooms Mar-May.	Unlikely. Although the Project Area contains broadleafed upland forest and valley/ foothill grassland, it is too developed and disturbed to support this species. There there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
chaparral harebell <i>Campanula exigua</i>	Rank 1B.2	Chaparral (rocky, usually serpentine). Elevation ranges from 900 to 4100 feet (275 to 1250 meters). Blooms May-Jun.	No Potential. The Project Area does not contain chaparral therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	Rank 1B.1	Valley and foothill grassland (alkaline). Elevation ranges from 0 to 755 feet (0 to 230 meters). Blooms May-Oct(Nov).	Moderate Potential. Although the valley and foothill grassland habitat found within the Project Area is highly disturbed, the species tolerates disturbance and there are many nearby occurrences of this species. Although this species is threatened by development, there is a moderate potential it could occur onsite.	Rare plant surveys and appropriate mitigation measures are recommended.
hispid bird's-beak <i>Chloropyron molle</i> ssp. <i>hispidum</i>	Rank 1B.1	Meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 510 feet (1 to 155 meters). Blooms Jun-Sep.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
palmate-bracted bird's-beak <i>Chloropyron palmatum</i>	FE, SE, Rank 1B.1	Chenopod scrub, valley and foothill grassland. Elevation ranges from 15 to 510 feet (5 to 155 meters). Blooms May-Oct.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Santa Clara red ribbons <i>Clarkia concinna</i> ssp. <i>automixa</i>	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 295 to 4920 feet (90 to 1500 meters). Blooms (Apr)May-Jun(Jul).	No Potential. The Project Area does not contain chaparral or cismontane woodland therefore there is no potential for this species to occur.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
small-flowered morning-glory <i>Convolvulus simulans</i>	Rank 4.2	Chaparral (openings), coastal scrub, valley and foothill grassland. Elevation ranges from 95 to 2430 feet (30 to 740 meters). Blooms Mar-Jul.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Livermore tarplant <i>Deinandra bacigalupii</i>	SE, Rank 1B.1	Meadows and seeps (alkaline). Elevation ranges from 490 to 605 feet (150 to 185 meters). Blooms Jun-Oct.	No Potential. The Project Area does not contain meadows or seeps therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
Hospital Canyon larkspur <i>Delphinium californicum ssp. interius</i>	Rank 1B.2	Chaparral (openings), cismontane woodland (mesic), coastal scrub. Elevation ranges from 635 to 3595 feet (195 to 1095 meters). Blooms Apr-Jun.	No Potential. The Project Area does not contain chaparral, cismontane woodland or coastal scrub. Therefore there is no potential for this species to occur within the Project Area.	No further actions are recommended for this species.
recurved larkspur <i>Delphinium recurvatum</i>	Rank 1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 5 to 2590 feet (3 to 790 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
western leatherwood <i>Dirca occidentalis</i>	Rank 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. Elevation ranges from 80 to 1395 feet (25 to 425 meters). Blooms Jan-Mar(Apr).	Unlikely. Although the Project Area contains riparian forest/ woodland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	Rank 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Elevation ranges from 5 to 1150 feet (3 to 350 meters). Blooms Apr-Sep(Nov-Dec).	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	Rank 4.3	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 655 to 3365 feet (200 to 1025 meters). Blooms Apr-Jun.	No Potential. The Project Area does not contain chaparral, cismontane woodland or coastal scrub. Therefore there is no potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Jepson's coyote thistle <i>Eryngium jepsonii</i>	Rank 1B.2	Valley and foothill grassland, vernal pools. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Aug.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	Rank 1B.1	Valley and foothill grassland (alkaline, clay). Elevation ranges from 0 to 3200 feet (0 to 975 meters). Blooms Mar-Apr.	No Potential. Although the Project Area contains valley and foothill grassland, it is heavily disturbed and is not alkaline or clay. Therefore there is no potential for this species to occur within the Project Area.	No further actions are recommended for this species.
San Joaquin spearscale <i>Extriplex joaquinana</i>	Rank 1B.2	Alkaline areas in chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 2740 feet (1 to 835 meters). Blooms Apr-Oct.	Moderate Potential. Although the valley and foothill grassland habitat found within the Project Area is highly disturbed, the species tolerates disturbance and there are many nearby occurrences of this species. Therefore there is a moderate potential for this species to occur within the Project Area.	Rare plant surveys and appropriate mitigation measures are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
stinkbells <i>Fritillaria agrestis</i>	Rank 4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 30 to 5100 feet (10 to 1555 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
fragrant fritillary <i>Fritillaria liliacea</i>	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 5 to 1345 feet (3 to 410 meters). Blooms Feb-Apr.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Diablo helianthella <i>Helianthella castanea</i>	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation ranges from 195 to 4265 feet (60 to 1300 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains broadleaf upland forest, riparian woodland and grassland, each of these habitats is heavily disturbed and urbanized by the City of Pleasanton. Due to this, it is unlikely that this species will occur onsite.	No further actions are recommended for this species.
hogwallow starfish <i>Hesperervax caulescens</i>	Rank 4.2	Valley and foothill grassland (mesic, clay), vernal pools (shallow). Elevation ranges from 0 to 1655 feet (0 to 505 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Brewer's western flax <i>Hesperolinon breweri</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 95 to 3100 feet (30 to 945 meters). Blooms May-Jul.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE, Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
legenere <i>Legenere limosa</i>	Rank 1B.1	Vernal pools. Elevation ranges from 0 to 2885 feet (1 to 880 meters). Blooms Apr-Jun.	No Potential. There is no vernal pool habitat within the Project Area therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.
bristly leptosiphon <i>Leptosiphon acicularis</i>	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
serpentine leptosiphon <i>Leptosiphon ambiguus</i>	Rank 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 390 to 3705 feet (120 to 1130 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Mt. Hamilton coreopsis <i>Leptosyne hamiltonii</i>	Rank 1B.2	Cismontane woodland (rocky). Elevation ranges from 1800 to 4265 feet (550 to 1300 meters). Blooms Mar-May.	No Potential. There is no cismontane woodland habitat within the Project Area therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.
Hall's bush-mallow <i>Malacothamnus hallii</i>	Rank 1B.2	Chaparral, coastal scrub. Elevation ranges from 30 to 2495 feet (10 to 760 meters). Blooms (Apr)May-Sep(Oct).	No Potential. There is no chaparral or coastal scrub habitat within the Project Area therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Antonio Hills monardella <i>Monardella antonina ssp. antonina</i>	Rank 3	Chaparral, cismontane woodland. Elevation ranges from 1045 to 3280 feet (320 to 1000 meters). Blooms Jun-Aug.	No Potential. There is no chaparral or coastal scrub habitat within the Project Area therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.
woodland woollythreads <i>Monolopia gracilens</i>	Rank 1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland. Elevation ranges from 325 to 3935 feet (100 to 1200 meters). Blooms (Feb)Mar-Jul.	Unlikely. Although the Project Area contains broadleaf upland forest and valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
little mouseltail <i>Myosurus minimus ssp. apus</i>	Rank 3.1	Valley and foothill grassland, vernal pools (alkaline). Elevation ranges from 65 to 2100 feet (20 to 640 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
adobe navarretia <i>Navarretia nigelliformis ssp. nigelliformis</i>	Rank 4.2	Valley and foothill grassland vernally mesic, vernal pools sometimes. Elevation ranges from 325 to 3280 feet (100 to 1000 meters). Blooms Apr-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
shining navarretia <i>Navarretia nigelliformis ssp. radians</i>	Rank 1B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Elevation ranges from 210 to 3280 feet (65 to 1000 meters). Blooms (Mar)Apr-Jul.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Rank 1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Elevation ranges from 5 to 3970 feet (3 to 1210 meters). Blooms Apr-Jul.	Unlikely Potential. There is no vernal pool habitat in the Project Area and alkaline grassland is generally disturbed, therefore there is an unlikely potential for this species to occur.	No further actions are recommended for this species.
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 1640 to 4495 feet (500 to 1370 meters). Blooms Apr-May.	No Potential. There is no chaparral or cismontane woodland habitat within the Project Area therefore there is no potential for it to occur onsite.	No further actions are recommended for this species.
hairless popcornflower <i>Plagiobothrys glaber</i>	Rank 1A	Meadows and seeps (alkaline), marshes and swamps (coastal salt). Elevation ranges from 45 to 590 feet (15 to 180 meters). Blooms Mar-May.	No Potential. There is no alkaline meadow, seep or coastal salt marsh/ swamp within the Project Area therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
Oregon polemonium <i>Polemonium carneum</i>	Rank 2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation ranges from 0 to 6005 feet (0 to 1830 meters). Blooms Apr-Sep.	No Potential. There is no coastal prairie, coastal scrub or lower montane coniferous forest habitat within the Project Area therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
California alkali grass <i>Puccinellia simplex</i>	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 3050 feet (2 to 930 meters). Blooms Mar-May.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
rock sanicle <i>Sanicula saxatilis</i>	SR, Rank 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Elevation ranges from 2030 to 3855 feet (620 to 1175 meters). Blooms Apr-May.	Unlikely. Although there is broadleafed upland forest and valley and foothill grassland, it is disturbed and heavily developed, therefore there is an unlikely potential for this species to occur onsite.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
chaparral ragwort <i>Senecio aphanactis</i>	Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 45 to 2625 feet (15 to 800 meters). Blooms Jan-Apr(May).	No Potential. There is no chaparral, cismontane woodland or coastal scrub located within the Project Area therefore there is no potential for this species to occur in the Project Area.	No further actions are recommended for this species.
long-styled sand-spurrey <i>Spergularia macrotheca var. longistyla</i>	Rank 1B.2	Meadows and seeps, marshes and swamps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May(Jun).	Unlikely. The Project Area does not contain open, alkaline marsh areas. There is a low potential for it to occur onsite because of poor habitat conditions.	No further actions are recommended for this species.
most beautiful jewelflower <i>Streptanthus albidus ssp. peramoenus</i>	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 310 to 3280 feet (95 to 1000 meters). Blooms (Mar)Apr-Sep(Oct).	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
Mt. Diablo jewelflower <i>Streptanthus hispidus</i>	Rank 1B.3	Chaparral, valley and foothill grassland. Elevation ranges from 1195 to 3935 feet (365 to 1200 meters). Blooms Mar-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
slender-leaved pondweed <i>Stuckenia filiformis ssp. alpina</i>	Rank 2B.2	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7055 feet (300 to 2150 meters). Blooms May-Jul.	Unlikely. Although the Project Area contains some marsh/ swamp habitat, it is heavily disturbed and maintained. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
saline clover <i>Trifolium hydrophilum</i>	Rank 1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
coastal triquetrella <i>Triquetrella californica</i>	Rank 1B.2	Coastal bluff scrub, coastal scrub. Elevation ranges from 30 to 330 feet (10 to 100 meters).	No Potential. There is no coastal bluff or coastal scrub habitat within the Project Area therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.
caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	Rank 1B.1	Valley and foothill grassland (alkaline hills). Elevation ranges from 0 to 1495 feet (1 to 455 meters). Blooms Mar-Apr.	Unlikely. Although the Project Area contains valley and foothill grassland, the habitat is heavily disturbed and developed. Therefore there is an unlikely potential for this species to occur within the Project Area.	No further actions are recommended for this species.
oval-leaved viburnum <i>Viburnum ellipticum</i>	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 705 to 4595 feet (215 to 1400 meters). Blooms May-Jun.	No Potential. There is no chaparral, cismontane woodland or lower montane coniferous forest habitat within the Project Area therefore there is no potential for this species to occur onsite.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
MAMMALS				
pallid bat <i>Antrozous pallidus</i>	SSC, WBWG High	Found in a variety of habitats ranging from grasslands to mixed forests, favoring open and dry, rocky areas. Roost sites include crevices in rock outcrops and cliffs, caves, mines, and also hollow trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Unlikely. Although a bridge underpass occurs on the Mission Creek Restoration Project site, it is unlikely to provide the necessary thermoregulation for a roost site.	No further actions are recommended for this species.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC, WBWG High	Associated with a wide variety of habitats from deserts to higher-elevation mixed and coniferous forests. Females form maternity colonies in buildings, caves and mines, and males roost singly or in small groups. Foraging typically occurs at edge habitats near wooded areas, e.g. along streams.	Unlikely. Though portions of the Project Area contain foraging habitat for this species, areas that are typical of roosting habitat are not anticipated to be disturbed.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
hoary bat <i>Lasiurus cinereus</i>	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	Unlikely. Few forested habitats exist on the Project Area to support roosting habitat for this species. Forested habitats that do exist are mostly directly bordered by residential development that would not provide good foraging habitat for this species.	No further actions are recommended for this species.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	Unlikely. Though habitat that may be suitable for this species is available, CNDDDB occurrences are not known from the immediate vicinity of any of the Project locations.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE, ST, RP	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE, SE, CFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	No Potential. No salt-marsh habitat exists on the Survey Area to support this species.	No further actions are recommended for this species.
American badger <i>Taxidea taxus</i>	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	Unlikely. Though burrowing rodent activity is present in some of the Project locations, most of the locations are surrounded by development and are unlikely to provide connectivity to typical habitats for this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
BIRDS				
great blue heron <i>Ardea herodias</i>	none (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and on cliffs, also sequestered terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	Unlikely. No breeding colonies are currently known from the area, and larger bodies of water typical of breeding colony locations for this species are not present near Project locations.	No further actions are recommended for this species.
golden eagle <i>Aquila chrysaetos</i>	CFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	No Potential. No cliffs or deep canyons exist in close proximity to any portion of the Survey Area.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Swainson's hawk <i>Buteo swainsoni</i>	ST	Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	Unlikely. The Project Area is outside the known breeding range of this species.	No further actions are recommended for this species.
northern harrier <i>Circus hudsonius</i> (<i>cyaneus</i>)	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	High Potential. Nesting habitat for this species exists near portions of the Project Area that contain portions of grassland near wetland areas.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
white-tailed kite <i>Elanus leucurus</i>	CFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	High Potential. Trees suitable for nesting by this species are present on all portions of the Project Area.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
bald eagle <i>Haliaeetus leucocephalus</i>	FD, SE, CFP	Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	No Potential. No large bodies of water with adjacent suitable nesting habitat exist on any portion of the Survey Area.	No further actions are recommended for this species.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD, SD, CFP	Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely.	No Potential. No nesting habitat for this species is present on or in the vicinity of any portion of the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California Ridgway's (clapper) rail <i>Rallus obsoletus obsoletus</i>	FE, SE, CFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on molluscs and crustaceans.	No Potential. The Survey Area is outside the known breeding range of this species. Additionally, no salt marsh habitat exists on any portion of the Survey Area.	No further actions are recommended for this species.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST, CFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California least tern <i>Sternula antillarum browni</i>	FE, SE, CFP	Summer resident along the coast from San Francisco Bay south to northern Baja California; inland breeding also very rarely occurs. Nests colonially on barren or sparsely vegetated areas with sandy or gravelly substrates near water, including beaches, islands, and gravel bars. In San Francisco Bay, has also nested on salt pond margins.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.
burrowing owl <i>Athene cunicularia</i>	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	High Potential. Burrowing mammal activity is high on certain portions of the Project Area, which may provide suitable nesting habitat for this species. CNDDDB occurrences for this species are plentiful in the region.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
loggerhead shrike <i>Lanius ludovicianus</i>	SSC	Year-round resident in open woodland, grassland, savannah and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely-foliaged shrubs or trees.	High Potential. Open areas with scattered vegetation are plentiful on several portions of the Project Area, that could provide suitable nesting habitat for this species.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
Alameda song sparrow <i>Melospiza melodia pusillula</i>	SSC	Year-round resident of salt marshes bordering the south arm of San Francisco Bay. Inhabits primarily pickleweed marshes; nests placed in marsh vegetation, typically shrubs such as gumplant.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.
tricolored blackbird <i>Agelaius tricolor</i>	SSC, RP	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	High Potential. Several portions of the survey area contain dense wetland/riparian vegetation that could support breeding by this species.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
AMPHIBIANS				

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California tiger salamander <i>Ambystoma californiense</i>	FE/FT, ST, RP	Populations in Santa Barbara and Sonoma counties currently listed as endangered; threatened in remainder of range. Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs primarily in vernal pools and other seasonal water features.	Moderate Potential. Though most locations within the Project Area are isolated from known populations of CTS by extensive suburban development, certain sites may provide upland or movement habitat for this species.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
western spadefoot <i>Spea (=Scaphiopus) hammondi</i>	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Shallow temporary pools formed by winter rains are essential for breeding and egg-laying.	No Potential. The Project Area is outside the known breeding range of this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California red-legged frog <i>Rana draytonii</i>	FT, SSC, RP	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	Moderate Potential. Though most locations within the Project Area are isolated from known populations of CTS by extensive suburban development, certain sites may provide upland or movement habitat for this species.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
foothill yellow-legged frog <i>Rana boylei</i>	SC, SSC	Found in or adjacent to rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.
REPTILES				

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
western pond turtle <i>Actinemys marmorata</i>	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	Unlikely. Though CNDDB occurrences exist within approximately 5 miles of the Project Area, this species is not known to breed in aquatic features on the Project Area.	No further actions are recommended for this species.
Blainville's (Coast) horned lizard <i>Phrynosoma blainvillii (coronatum)</i>	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Prefers friable, rocky, or shallow sandy soils for burial; open areas for sunning; bushes for cover; and an abundant supply of ants and other insects.	No Potential. The Project Area is outside the known breeding range of this species.	No further actions are recommended for this species.
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>	SSC	Found in valley grassland and saltbush scrub in the San Joaquin Valley in open, dry habitats with little or no tree cover. Requires mammal burrows for refuge and breeding sites.	No Potential. The Project Area is outside the known breeding range for this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	FT, ST	Inhabits chaparral and foothill-hardwood habitats in the eastern Bay Area. Prefers south-facing slopes and ravines with rock outcroppings where shrubs form a vegetative mosaic with oak trees and grasses and small mammal burrows provide basking and refuge.	Moderate Potential. Though the Project Area is chiefly composed of small temporal wetland and surrounding riparian areas that would not support this species, one of the Study Areas overlaps with Unit 3 of AWS critical habitat. Additionally, the CNDDB does document this species in the vicinity. Given the proximity of suitable habitat to portions of the Project Area, this species has moderate potential to translocate through work areas.	Please see section 5.3.2 for a discussion of this species, and section 6.3.9 for appropriate mitigation measures.
FISHES				

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
steelhead - central CA coast DPS <i>Oncorhynchus mykiss irideus</i>	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	No Potential. No suitable spawning streams exist to support steelhead within the Survey Area.	No further actions are recommended for this species.
Delta smelt <i>Hypomesus transpacificus</i>	FT, SE, RP	Lives in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	No Potential. The Survey Area is outside the known breeding range of this species, and no estuarine habitat exists to support this species.	No further actions are recommended for this species.
INVERTEBRATES				
conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE, RP	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	No Potential. No vernal pool habitat exists at any potential work area to support this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE, RP	Endemic to the eastern margin of the central coast mountains in seasonally astatic grassland vernal pools. Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay/grass-bottomed pools in shallow swales.	No Potential. No vernal pool habitat exists at any potential work area to support this species.	No further actions are recommended for this species.
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT, RP	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	No Potential. No vernal pool habitat exists at any potential work area to support this species.	No further actions are recommended for this species.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE	Endemic to San Diego and Orange county mesas. Vernal pools.	No Potential. No vernal pool habitat exists at any potential work area to support this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE, RP	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	No Potential. No vernal pool habitat exists at any potential work area to support this species.	No further actions are recommended for this species.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT, RP	Occurs only in the central valley of California, in association with blue elderberry (<i>Sambucus</i> spp.). Prefers to lay eggs in elderberry 2 to 8 inches in diameter; some preference shown for "stressed" elderberry.	No Potential. No elderberry bushes were identified within any portion of the Survey Area to support this species.	No further actions are recommended for this species.
San Bruno elfin butterfly <i>Callophrys mossii bayensis</i>	FE	Limited to the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on in rocky outcrops and cliffs in coastal scrub habitat on steep, north-facing slopes within the fog belt. Species range is tied to the distribution of the larval host plant, <i>Sedum spathulifolium</i> .	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.

SPECIES	STATUS *	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT, RP	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> and <i>O. purpurscens</i> are the secondary host plants.	No Potential. The Survey Area is outside the known breeding range of this species.	No further actions are recommended for this species.

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APPENDIX C: CULTURAL RESOURCES REPORT
BASIN RESEARCH ASSOCIATES

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Archaeological Screening Review – Stream Corridor and Detention Maintenance Project, 25 Locations, City of Pleasanton, Alameda County

TO:	Liz Allen Regulatory Permitting Specialist (510.239.5233) WRA, Inc. (Emeryville Office)
RE:	Archaeological Screening Review – Stream Corridor and Detention Maintenance Projects, 25 Locations, City of Pleasanton, Alameda County
FROM:	Colin I. Busby, Project Principal (510.430.8441 x101)
DATE:	24 January, 2020 (Revised 6 February, 2020)

INTRODUCTION

The City of Pleasanton conducts periodic maintenance in its stream corridors and detention basins to improve stormwater conveyance and quality. Proposed routine maintenance is slated for 17 stream sections and eight stormwater detention ponds located throughout the City and includes concrete drainages, a naturalized stream channel passing through Mission Park and various detention basins. All of the proposed maintenance sites are owned by the City including channel corridors, detention basins, and adjacent roads, with the exception of four channels and three detention basins, which are located on private property and accessible via City easements.

This memo provides the results of an initial archaeological screening review of the 25 locations proposed Area of Potential Effects (APE) to identify potential cultural resources issues in accordance with the California Environmental Quality Act (CEQA). The APE for Archaeology includes the area within which an undertaking may directly or indirectly cause changes in the character or use of archaeological resources. The horizontal and vertical APE consists of ground disturbing construction within and adjacent to each work location. Ground disturbance will be limited to weed abatement and removal of washed-in silt and rock to return the channel or basin to its design configuration. The proposed actions will not involve modifications or impacts to the existing built environment aside from transitory effects from dust and intermittent vibration.

PROJECT ELEMENTS

The project includes six routine maintenance actions for 17 stream sections and eight stormwater detention ponds: The maintenance procedures include:

Weed Abatement in Detention Basins: An agriculture tractor equipped with a fail or rotary type mower is used to abate weeds along and in the maintenance road, along the top of the banks of the basin, the basin floor and the internal and external bank slopes of the basin. Time required for this maintenance action ranges from one to two days depending on the size of the basin.

Silt and Rock Removal in Detention Basins: Dump trucks, backhoe or excavator are used to scrape and off haul the silt or washed in rock materials layer from floor of the basin. Time required for maintenance actions varies from one to four days.

Weed Abatement in Streams: An enclosed cab, tracked Bobcat with a mowing attachment is used along the maintenance road, along stream bank tops and within the channel itself. Weed abatement along steeper banks or areas unreachable by the Bobcat occurs with gas powered string trimmers. For small sites the time required for this maintenance action varies from two to three hours. Larger sites for which a Bobcat is required take four to 12 hours.

Silt and Rock Removal in Stream: Dump trucks, backhoe or excavator are used to remove and haul off silt or washed in rock materials from the streams. This work activity is infrequent and the time required for each maintenance actions varies from one to three days.

Tule Removal from Streams: Dump trucks and an Excavator are utilized to dig out tules and their roots from streambeds. Removed tules are loaded into the dump trucks and hauled to Laguna Creek soil disposal site. Streets sweepers are scheduled to sweep the haul route mid-day and after the last load of the day. Time required for these maintenance actions varies from one to five days (Junipero Canal).

Tree Trimming in Riparian Corridor: Mechanized machinery will be used to prune and trim trees along riparian corridors of the Project Area, mostly at Touriga Creek. There are potential needs for further tree maintenance.

RESEARCH PROTOCOLS

A prehistoric and historic site records and literature search for each alignment with a 0.25 mile radius was completed by the California Historical Resources Information System, Northwest Information Center, Sonoma State University (CHRIS/NWIC File Nos. 19-0189 and 19-0817 dated 8/29/19 and 12/4/19 by Hagel). Reference material available on the web, the Bancroft Library at the University of California, Berkeley, and Basin Research Associates, San Leandro was also consulted where appropriate. Sources included:

Historic Properties Directory for Alameda County (CAL/OHP 2012a);

National Register of Historic Places listings for Alameda County, California (USNPS 2015, 2017, 2019);

Listed California Historical Resources (CAL/OHP 2019) with the most recent updates of the National Register of Historic Places; California Historical Landmarks; and, California Points of Historical Interest as well as other evaluations of properties reviewed by the State of California Office of Historic Preservation;

California History Plan (CAL/OHP 1973);

California Inventory of Historic Resources (CAL/OHP 1976);

Five Views: An Ethnic Sites Survey for California (CAL/OHP 1988);

Archaeological Determinations of Eligibility (CAL/OHP 2012b); and,

other regional/local lists and maps (see References Cited and Consulted).

The Native American Heritage Commission (NAHC) was contacted for a review of the Sacred Lands Inventory for the proposed Stream Maintenance Project locations in August and December 2019 (Busby 2019a, i). Both reviews were negative (Totton 2019, Gonzales-Lopez

2019). Contact was initiated with seven knowledgeable Native American individuals/organizations identified by the NAHC.

No other agencies, departments or local historical societies were contacted regarding landmarks, potential historic sites or structures.

RECORDS SEARCH RESULTS

The two record searches identified 26 recorded cultural resources. Four resources are within or adjacent to three project locations (C-02, C-10, and C-14). Six of the 25 project locations are not within or adjacent to or within 0.25 miles of any recorded cultural resources (C-01, C-03, C-09, C-11, C-13 and P-04). The remaining 16 project sites are not within or adjacent to any recorded resource, but are within 0.25 miles of one or more recorded cultural resources (see Tables 1-2).

TABLE 1
Cultural Resources Summary

Project Location	In or Adjacent	Within 0.25 miles
C-01: Pimlico Canal	0	0
C-02: Pleasanton Canal	1 (historic)	1
C-03: Foothill High School Trash Rack	0	0
C-04: Bernal V-ditch	0	2
C-05: Bernal North-South V-ditch	0	2
C-06: Mission Creek Restoration Project	0	5
C-07: Lower Kottinger Creek	0	2
C-08: Upper Kottinger Creek	0	1
C-09: Touriga Creek	0	0
C-10: Junipero Canal	2 (prehistoric and historic)	3
C-11: Mission Park Creek	0	0
C-12: Cemetery Creek	0	1
C-13: Gold Creek	0	0
C-14: Dublin Canyon – East Section	1 (prehistoric)	0
C-14: Dublin Canyon – West Section	0	1
C-15: Stonedale Channel	0	1
C-16: Arlington Creek	0	1
C-17: Rutledge Place Culvert	0	4
P-01: Stoneridge Pond	0	5
P-02: Bernal Central Detention Pond	0	3
P-03: Canyon Oaks Detention Pond	0	4
P-04: Bernal West Detention Pond	0	0
P-05: Callippe Detention Pond	0	1
P-06: Oak Tree Farms Detention Pond	0	1
P-07: Vineyard West Detention Pond	0	1
P-08: Vineyard East Detention Pond	0	1

TABLE 2
Cultural Resources Within or Adjacent to or Within 0.25 Mile of Location

Resource	Type	Recorded by	Eligibility NRHP/CRHR	Comment
C-01: Pimlico Canal – In or Adjacent				
None				
C-01: Pimlico Canal – Within 0.25 miles				
None				
C-02: Pleasanton Canal – In or Adjacent				
P-01-001775	Historic; Structure; Pleasanton Canal	1994 (Woodward-Clyde Consultants)	Not eligible for NRHP under criteria a, b, or c	Constructed in mid-1960s.
C-02: Pleasanton Canal – Within 0.25 miles				
P-01-010616 (ALA-000705)	Prehistoric; Site; C-280; Exxon Reburial	1987 (Rick Hicks) 2000 (R. Thompson) 2018 (D. DiGiuseppe, D. Grant)		ca. 475 feet south of the south end of C-02
C-03: Foothill High School Trash Rack – In or Adjacent				
None				
C-03: Foothill High School Trash Rack – Within 0.25 miles				
None				
C-04: Bernal V-ditch – In or Adjacent				
None				
C-04: Bernal V-ditch – Within 0.25 miles				
P-01-003618	Historic; Building; Heathcote/Mackenzie House; OHP PRN - NPS-91001538;	1988, 1991 (Betty Croly)		ca. 730 feet northeast of the east end of C-04
P-01-011389	Historic; Structure; Alameda County Fairgrounds/Grandstand	2010 (K.A. Crawford)		ca. 1050 feet northeast of the east end of C-04
C-05: Bernal North-South V-ditch – In or Adjacent				
None				
C-05: Bernal North-South V-ditch – Within 0.25 miles				
P-01-003618	Historic; Building; Heathcote/Mackenzie House; OHP PRN - NPS-91001538;	1988, 1991 (Betty Croly)		ca. 700 feet north of the north end of C-05
P-01-011389	Historic; Structure; Alameda County Fairgrounds/Grandstand	2010 (K.A. Crawford)		ca. 1000 feet northeast of the north end of C-05
C-06: Mission Creek Restoration Project – In or Adjacent				
None				
C-06: Mission Creek Restoration Project – Within 0.25 miles				
P-01-003618	Historic; Building; Heathcote/Mackenzie House; OHP PRN - NPS-91001538;	1988, 1991 (Betty Croly)		ca. 700 feet north of the north end of C-06
P-01-010610 (ALA-000613/H)	Prehistoric, Historic; Site; Canyon Oaks	2003 (Heather Price, Kyle S. Brown)		ca. 660 feet to the east
P-01-010707	Prehistoric; Site; Bernal Reburial Site	2004 (Heather Price)		ca. 175 feet to the east
P-01-011389	Historic; Structure; Alameda County Fairgrounds/Grandstand	2010 (K.A. Crawford)		ca. 1000 feet north of the north end of C-06
P-01-011624	Historic; District, Structure; Niles Canyon Transcontinental Railroad Historic District NPS-10000843-9999; National Register - 01-0090	2009 (Al Minard)		ca. 1200 feet to the east

TABLE 2, con't
Cultural Resources Within or Adjacent to or Within 0.25 Mile of Location

Resource	Type	Recorded by	Eligibility NRHP/CRHR	Comment
C-07: Lower Kottinger Creek – In or Adjacent				
None				
C-07: Lower Kottinger Creek – Within 0.25 miles				
P-01-005724	Historic; Building; John W. Kottinger Adobe Barn; OHP PRN - NPS-85002305	1984 (B. Koopmann, E. Koopmann)		ca. 770 feet north of the north end of C-07
P-01-011619	Historic; Building	2014 (Aimee Arrigoni)		ca. 850 feet northeast of the north end of C-07
C-08: Upper Kottinger Creek – In or Adjacent				
None				
C-08: Upper Kottinger Creek – Within 0.25 miles				
P-01-010627	Historic; Structure Kottinger Tank & McCloud Pump Station	2003 (Collins, Losee, Supernowicz)	Not a historic resource under CEQA	ca. 120 feet southeast of the west end of C-08
C-09: Touriga Creek – In or Adjacent				
None				
C-09: Touriga Creek – Within 0.25 miles				
None				
C-10: Junipero Canal – In or Adjacent				
P-01-011624	Historic; District, Structure; Niles Canyon Transcontinental Railroad Historic District NPS-I0000843-9999; National Register - 01-0090	2009 (Al Minard)	Historic district eligible for NRHP under Criterion a	Canal intersects historic district – does not affect any of the criteria that contribute to the eligibility of the district for the NRHP
P-01-010610 (ALA-000613/H)	Prehistoric/Historic; Site; Canyon Oaks	2003 (Heather Price, Kyle S. Brown)	Native American burial salvage project – resource now under housing development	ca. 30 feet to the south
C-10: Junipero Canal – Within 0.25 miles				
P-01-000061 (ALA-000041)	Prehistoric; Site	1950 (Horner)		ca. 1100 feet to the south
P-01-010707	Prehistoric; Site; Bernal Reburial Site	2004 (Heather Price)		ca. 900 feet southeast of the west end of C-10
C-11: Mission Park Creek – In or Adjacent				
None				
C-11: Mission Park Creek – Within 0.25 miles				
None				
C-12: Cemetery Creek – In or Adjacent				
None				
C-12: Cemetery Creek – Within 0.25 miles				
P-01-000061 (ALA-000041)	Prehistoric; Site	1950 (Horner)		ca. 690 feet to the west
C-13: Gold Creek – In or Adjacent				
None				
C-13: Gold Creek – Within 0.25 miles				
None				

TABLE 2, con't
Cultural Resources Within or Adjacent to or Within 0.25 Mile of Location

Resource	Type	Recorded by	Eligibility NRHP/CRHR	Comment
C-14: Dublin Canyon – In or Adjacent				
P-01-000063 (ALA-000043)	Prehistoric; Site	1950 (Lathrap; Harner, 1987 (Paul Hampson)	Not evaluated; appears to have been destroyed by subdivision construction	Project has 4 components – resource is within two eastern components between Dublin Canyon Road and Canyon Meadows Circle and bisected by Canyon Meadows Drive
C-14: Dublin Canyon – Within 0.25 miles				
P-01-000063 (ALA-000043)	Prehistoric; Site	1950 (Lathrap; Harner, 1987 (Paul Hampson)		ca. 825 feet east of the western components of C-14
C-15: Stonedale Channel – In or Adjacent				
None				
C-15: Stonedale Channel – Within 0.25 miles				
P-01-011808	Historic; Building Dublin San Ramon Services District Regional Wastewater Treatment Facility	2016 (Tom Origer & Associates)		ca. 440 feet to the east (across I-580)
C-16: Arlington Creek – In or Adjacent				
None				
C-16: Arlington Creek – Within 0.25 miles				
P-01-011624	Historic; District, Structure; Niles Canyon Transcontinental Railroad Historic District NPS-10000843-9999; National Register - 01-0090	2009 (Al Minard)	Historic district eligible for NRHP under Criterion A	ca. 1150 feet to the west
C-17: Rutledge Place Culvert – In or Adjacent				
None				
C-17: Rutledge Place Culvert – Within 0.25 miles				
P-01-012043 ALA-000701H	Historic; District Lund Ranch	2018 (Jeremy Adams, Josh Adams, Megan Webb); 2018 (J. Adams, M. Webb, M. Meston)		ca. 380 feet to the east-southeast
P-01-012045	Historic; Structure, Element of district Large Barn	2018 (Jeremy Adams, Josh Adams, Megan Webb)		ca. 1250 feet to the southeast
P-01-012046	Historic; Structure, Element of district Quonset Hut	2018 (Jeremy Adams, Josh Adams, Megan Webb)		ca. 1150 feet to the southeast
P-01-012047	Historic; Structure, Element of district Stables	2018 (Jeremy Adams, Josh Adams, Megan Webb)		ca. 700 feet to the southeast
P-01: Stoneridge Pond – In or Adjacent				
None				
P-01: Stoneridge Pond – Within 0.25 miles				
P-01-001776	Historic; Structure, site; Arroyo Mocho	1994 (Woodward-Clyde Consultants); 2006 (Christopher Canzonieri)		ca. 850 feet to the south
P-01-012084 (ALA-000703)	Prehistoric; Site	2004 (R. Ambro, J. Quist)		ca. 850 feet to the south- southeast
P-01-012086	Prehistoric; Site	2004 (R. Ambro, J. Quist)		ca. 110 feet to the west
P-01-012087	Prehistoric; Site	2004 (R. Ambro, J. Quist)		ca. 495 feet to the east
4 'C' sites	Unrecorded sites, no information available	Listed in CHRIS/NWIC files – no further information available		C-737, -738, -1282, -1283 estimated locations

TABLE 2, con't
Cultural Resources Within or Adjacent to or Within 0.25 Mile of Location

Resource	Type	Recorded by	Eligibility NRHP/CRHR	Comment
P-02: Bernal Central Detention Pond – In or Adjacent				
None				
P-02: Bernal Central Detention Pond – Within 0.25 miles				
P-01-002246	Historic; Building, Structure; Kennedy Ranch	2000 (Leigh Martin, Kimberly Popetz)		ca. 700 feet to the west
P-01-010610 (ALA-000613/H)	Prehistoric, Historic; Site; Canyon Oaks	2003 (Heather Price, Kyle S. Brown)		ca. 1100 feet to the east
P-01-010707	Prehistoric; Site; Bernal Reburial Site	2004 (Heather Price)		ca. 600 feet to the southeast
P-03: Canyon Oaks Detention Pond – In or Adjacent				
None				
P-03: Canyon Oaks Detention Pond – Within 0.25 miles				
P-01-000061 (ALA-000041)	Prehistoric; Site	1950 (Horner)		ca. 1250 feet to the southeast
P-01-010610 (ALA-000613/H)	Prehistoric, Historic; Site; Canyon Oaks	2003 (Heather Price, Kyle S. Brown)		ca. 125 feet south of the east end of P-03
P-01-010707	Prehistoric; Site; Bernal Reburial Site	2004 (Heather Price)		ca. 1000 feet southwest of the west end of P-03
P-01-011624	Historic; District, Structure; Niles Canyon Transcontinental Railroad Historic District NPS-I0000843-9999; National Register - 01-0090	2009 (Al Minard)		ca. 550 feet to the east
P-04: Bernal West Detention Pond – In or Adjacent				
None				
P-04: Bernal West Detention Pond – Within 0.25 miles				
None				
P-05: Callippe Detention Pond – In or Adjacent				
None				
P-05: Callippe Detention Pond – Within 0.25 miles				
P-01-010573				ca. 1060 feet to the east
P-06: Oak Tree Farms Detention Pond – In or Adjacent				
None				
P-06: Oak Tree Farms Detention Pond – Within 0.25 miles				
P-01-002155	Historic; Structure Verona footbridge	1998 (S. Ashkar)		ca. 850 feet to the northeast
P-01-011624	Historic; District, Structure; Niles Canyon Transcontinental Railroad Historic District NPS-I0000843-9999; National Register - 01-0090	2009 (Al Minard)	Historic district eligible for NRHP under Criterion A	ca. 1000 feet to the east
P-07: Vineyard West Detention Pond – In or Adjacent				
None				
P-07: Vineyard West Detention Pond – Within 0.25 miles				
P-01-002178	Historic; Building	1998 (C.D. Wills, J. Reimers)		ca. 610 feet to the southwest
P-08: Vineyard East Detention Pond – In or Adjacent				
None				
P-08: Vineyard East Detention Pond – Within 0.25 miles				
P-01-002149	Historic; Building	1998 (C.D. Wills, J. Reimers)		ca. 900 feet to the south

LISTED HISTORIC PROPERTIES

With the exception of C-10 (Junipero Canal) no listed state or federal historically or architecturally significant structures, landmarks or points of interest have been identified within or adjacent to the project locations. For C-10, a portion of a NRHP historic district (P-01-011624, the Niles Canyon Transcontinental Railroad Historic District) crosses the canal.

NATIVE AMERICAN (see Attachments)

The Native American Heritage Commission (NAHC) was contacted for a search of the *Sacred Lands File* for the project locations in August 2019 (Busby 2019a). The review was negative (Totton 2019). Letters and emails soliciting additional information were sent to the seven knowledgeable Native American individuals/groups recommended by the NAHC (Busby 2019b-h).

The addition of two project locations required a second request to the NAHC in December (Busby 2019i). The review was also negative (Gonzales-Lopez 2019). As recommended by the NAHC seven knowledgeable Native American individuals/organizations were contacted (Busby 2019j-p). Valentin Lopez, Chairperson, Amah Mutsun Tribal Band was omitted from the NAHC December list while Tony Cerda, Chairperson, Costanoan Rumsen Carmel Tribe, was listed by the NAHC and contacted regarding the two additional locations. Monica Arellano replaced Charlene Nijmeh as the contact for the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area,

Valentin Lopez, Chairperson, Amah Mutsun Tribal Band;
Irene Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista;
Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan, Hollister;
Charlene Nijmeh, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Castro Valley;
Monica Arellano, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Castro Valley (2nd NAHC list);
Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe, Linden;
Corrina Gould, Chairperson, The Confederated Villages of Lisjan, Oakland;
Andrew Galvan, The Ohlone Indian Tribe, Fremont; and,
Tony Cerda, Chairperson, Costanoan Rumsen Carmel Tribe, Pomona.

Responses were received from two Native Americans:

Michelle Zimmer, Enrollment and Communications Officer of the Amah Mutsun Tribal Band of Mission San Juan Bautista, responded via email on August 28, 2019 in regard to the letter of inquiry sent to Irene Zwierlein, Chairperson of the Tribal Band. A follow up telephone conversation was initiated on August 30 with Christopher Canzonieri, Basin Research Associates. Ms. Zwierlein recommended that the construction crew receive cultural sensitivity training in areas that may yield potential prehistoric cultural material and that archaeologists on the project have experience in Northern and Central California

archaeology. The retention of a qualified and trained Native American Monitor is recommended if Native American cultural materials are discovered.

Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe, emailed “Mitigation Measures from our Native American perspective” on September 29, 2019. The attachments consisted of Tribal Cultural Resource Avoidance MM [Mitigation Measures], Tribal Cultural Resource-Awareness Training MM, N.A. [Native American] Monitoring MM, and Inadvertent Discoveries MM.

No other responses were received in regard to the inquiries.

ARCHAEOLOGICAL SURVEY

The 25 locations were screened for the presence/absence of cultural resource based on a literature and archive review. Potential project locations subject to future permitting by the U.S. Army Corps of Engineers (USACE) were subject to a field review. A field inventory of Locations C-01 to C-13 was completed by Christopher Canzonieri (MA, RPA) to meet future USACE permitting requirements on August 5-6 and December 17, 2019.

Field transects were spaced approximately 3-5 meters apart depending on project location. Transect orientation varied from east to west and north to south depending on the topography and location. In general an attempt was made to access the creek bed and banks and to walk the perimeter/banks of the detention ponds. An additional 25-foot buffer was also surveyed whenever possible at each project location. Concrete and/or corrugated steel pipe culverts were present throughout the canals, channels, and creeks surveyed, ranging in size from 24-72 inches in diameter.

No evidence of prehistoric and/or combined prehistoric/historic features, isolates or sites or cultural sediments was observed in or adjacent to the project locations during the field review of the 13 locations.

FINDINGS AND CONCLUSION

This *Initial Screening Memo* was prepared to identify potentially significant archaeological resources listed on or potentially eligible for the California Register of Historical Resources (CRHR)¹ within or adjacent to the proposed project locations. A review of the built environment was not completed as the proposed improvements will not result in any detrimental impacts to buildings and structures that could affect either their eligibility or potential eligibility for listing on the CRHR. The research identified three project locations (C-02, C-10 and C-14) with recorded resources:

-
1. A historical resource or archaeological resource may be listed in the California Register of Historical Resources if it meets one or more of the following criteria: "(1) it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; (2) it is associated with the lives of persons important to local, California or national history; (3) it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or, (4) it has yielded or has the potential to yield information important in the prehistory or history of the local area, California or the nation."

- C-02** *Pleasanton Canal* (P-01-01775) – Earth channelized flood control and drainage canal modified and constructed in the mid-1980s. Not eligible for the NRHP under any of the criteria.
- C-10** *Junipero Canal* – Earth flood control and drainage that intersect the Niles Canyon Transcontinental Railroad Historic District (P-01-011624) which is eligible for the NRHP under Criterion a. Canal does not affect any of the criteria that contribute to the eligibility of the district for the NRHP.
- CA-ALA-0631* (P-01-00610) – Native American burial site (Berkeley and Augustine Pattern) with possible minor non-permanent prehistoric occupation and some historic features dating between 1880-1920. Archaeological recovery of 469 burials prior to and during residential development in 2003 resulted in removal of approximately 95% of the resource which may have been previously truncated by railroad construction in the late 1860s. The Native American remains are reburied nearby within the development.
- C-14** *CA-ALA-0043* (P-01-00063) – The De Avillo Site, a prehistoric resource, is mapped as including part of Dublin Creek and crossing Dublin Canyon Road in the eastern portion of C-14. The site was recorded in 1950 along the north side of Dublin Canyon Road just north of “BM 442” on the USGS Dublin topographic quadrangle. The resource was described as a “large area of dark loose loam with large quantities of fire broken rock” along with two pestles, two shells, and “some dubious stone artifacts” observed in a 180 x 150? area. Mortars were also reported along with burials which had been washed out “50 years ago.” The site was mapped in 1976 as definitely north of Dublin Canyon Road closer to Interstate 580 (see Holman and Chavez 1976). Hampson (1986, 1987) observed a “. . . pestle fragment and a few scattered fragments of thermally altered rock.” auger tested and excavated the site resulting the recovery of a single obsidian fragment. Self and Wills (1999) combined the 1950 location with Hampson’s location (1986, 1987) placing the larger site configuration as extending to the north side of Dublin Canyon Road (see Busby 2018). The C-14 (east) location is within the “Area of Site Destroyed by Subdivision Development.”

The conclusion of this *Initial Screening Memo* is that the proposed maintenance actions do not appear to have a potential to significantly affect any recorded archaeological resources.

MANAGEMENT RECOMMENDATIONS

The proposed improvements will not affect any historic properties or unique archaeological resources. No subsurface testing for buried archaeological resources appears necessary at this time. The following protection measures are recommended.

- (a) The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried prehistoric or historic cultural resources including prehistoric Native American burials at:
 - (1) C-10 (CA-ALA-0631) - remnants of Native American burial site listed as 95% removed in 2003.

- (2) C-14 (East) (CA-ALA-0043) – possible prehistoric occupation site with potential for Native American burials. C-14 (East) location for improvements is within the “Area of Site Destroyed by Subdivision Development.”
- (b) The project proponent shall retain a Professional Archaeologist on an “on-call” basis during ground disturbing construction for other areas of the project site to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under the California Environmental Quality Act (CEQA).
- (c) If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource under CEQA, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommend mitigation measures to mitigate to a less-than significant impact in accordance with California Public Resources Code Section 15064.5. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery among other options. The completion of a formal *Archaeological Monitoring Plan* (AMP) and/or *Archaeological Treatment Plan* (ATP) that may include data recovery may be recommended by the Professional Archaeologist if significant archaeological deposits are exposed during ground disturbing construction. Development and implementation of the AMP and ATP and treatment of significant cultural resources will be determined by the project proponent in consultation with any regulatory agencies.
- (d) The treatment of human remains and any associated or unassociated funerary objects discovered during any soil-disturbing activity within the project site shall comply with applicable State laws. This shall include immediate notification of the appropriate county Coroner/Medical Examiner and the project proponent.
- (e) A *Monitoring Closure Report* shall be filed with the project proponent at the conclusion of ground disturbing construction if archaeological and Native American monitoring of excavation was undertaken.

REFERENCES

Busby, Colin I. (Basin Research Associates, San Leandro)

- 2018 Archaeological Resources Assessment Report for 11021 and 11033 Dublin Canyon Road, Lester Project, Pleasanton, Unincorporated Alameda County. City of Pleasanton Development Project P15-0027. MS on file, Basin Research Associates, San Leandro.
- 2019a Native American Heritage Commission Sacred Lands File & Native American Contacts List Request: City of Pleasanton Stream Maintenance Projects, Alameda County. Via email, August 6, 2019.
- 2019b-h Emails and letters to: (1) Valentin Lopez, Amah Mutsun Tribal Band, Galt; (2) Irenne Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista, Woodside; (3) Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan, Hollister; (4) Charlene Nijmeh, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Castro Valley; (5) Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe, Linden; (6) Corrina Gould, Chairperson, The Confederated Villages of Lisjan, Oakland; and, (7) Andrew Galvan, The Ohlone Indian Tribe, Fremont. Regarding: Request for Information: City of Pleasanton Stream Maintenance Projects, Alameda County. Dated August 21, 2019.
- 2019i Native American Heritage Commission Sacred Lands File & Native American Contacts List Request: City of Pleasanton Stream Maintenance Project –2 Locations, Alameda County [Gold Creek and Lower Kottinger Creek]. Via email, December 23, 2019.
- 2019j-p Emails and letters to: (1) Irenne Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista, Woodside; (2) Tony Cerda, Chairperson, Costanoan Rumsen Carmel Tribe, Pomona; (3) Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan, Hollister; (4) Monica Arellano, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Castro Valley; (5) Katherine Erolinda Perez, Chairperson, North Valley Yokuts Tribe, Linden; (6) Andrew Galvan, The Ohlone Indian Tribe, Fremont; and, (7) Corrina Gould, Chairperson, The Confederated Villages of Lisjan, Oakland. Regarding: Request for Information: City of Pleasanton Stream Maintenance Project, 2 Locations, Alameda County. Dated December 30, 2019.

California (State of), Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP)

- 1973 The California History Plan. Volume One - Comprehensive Preservation Program. Volume Two - Inventory of Historic Features.
- 1976 California Inventory of Historic Resources.
- 1988 Five Views: An Ethnic Sites Survey for California.
- 1990 California Historical Landmarks.

- 1992 California Points of Historical Interest [with updates]. May 1, 1992.
- 2012a [Historic Properties Directory] Directory of Properties in the Historic Property Data file for Alameda County (includes National Register of Historic Places status codes, California Historical Landmarks and California Points of Historical Interest listings, etc.). Dated 4/05/2012 [most recent as of 8/23/2019 and 12/04/2019].
- 2012b Archeological Determinations of Eligibility for Alameda County. Dated 4/05/2012 [most recent as of 8/23/2019 and 12/04/2019, viewed by CHRIS/NWIC staff].
- 2019 Listed California Historical Resources – Alameda County [including National Register, State Landmark, California Register, and Point of Interest].
<<http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=1>> accessed 12/30/2019.

California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC)

- 1987a Map. “Incorrect location for site CA-ALA-43 prior to 27 November 1987 replotting.”
 - 1987b Map. “Corrected location for site CA-ALA-43 as it is now plotted on NWIC base maps based on field check by Paul Hampson, November 1987.”
 - 1996 Map. “NWIC Note. Information Center has no information concerning Chavez location. Map comes from S-8785, Paul Hampson November 1987 [Hampson 1986/S-8785; Hampson 1987/S-8785a {former S-8885}. (11/1996).”
- Map attachments. P-01-000063 (CA-ALA-43; De Avillo site) Archaeological Site Survey Record form (Lathrap and Harner 1950/form).

Canzonieri, Christopher (Basin Research Associates)

- 2019 August 30, 2019. Telephone conversation with Irenne Zwierlein, Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista, Woodside.
Regarding: Colin I. Busby, Basin Research Associates August 21, 2019 email letter *Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, Alameda County* and Irenne Zwierlein response email request for known sites in project study area.

Gonzales-Lopez (Native American Heritage Commission) (NAHC)

- 2019 Response to Request for Review of Sacred Lands File, City of Pleasanton Stream Maintenance Project [2 additional locations], Alameda County [California]. Dated December 27, 2019.

Hagel, Lisa C. (CHRIS/NWIC staff)

- 2019a Records Search Results. Regarding: [City of] Pleasanton Flood [Stream Maintenance Project, Alameda County]. CHRIS/NWIC File No. 19-0189. Dated August 23, 2019. On file, Basin Research Associates, San Leandro.

- 2019b Records Search Results. Regarding: [City of] Pleasanton Flood [Stream Maintenance Project, Alameda County]. CHRIS/NWIC File No. 19-0817 dated December 4, 2019. Copy on file, Basin Research Associates, San Leandro.
- Hampson, R. Paul
- 1986 Cultural Resources Reconnaissance of Assessor's Parcel Number 941-1600-5-6, Near Dublin, Alameda County, California. MS on file, S-8785, CHRIS/NWIC, Sonoma State University, Rohnert Park.
- 1987 Archaeological Testing of that Portion of CA-ALA-43 within Assessor's Parcel Number 941-1600-5-6, Near Dublin, Alameda County, California. MS on file, S-8785a, CHRIS/NWIC, Sonoma State University, Rohnert Park.
- Holman, M.P. and D. Chavez
- 1976 An Archaeological Reconnaissance of the Proposed Pipeline Routing Changes along the Dublin Canyon to San Lorenzo Portion of the Livermore-Amador Valley Waste Water Treatment Project, Alameda County, California. MS on file, S-914, CHRIS/NWIC, Sonoma State University, Rohnert Park.
- Lathrap, Donald and Michael Harner
- 1950 Archaeological Site Survey Record form, CA-Ala-43 (P-01-000063; De Avillo). On file, CHRIS/NWIC, Sonoma State University, Rohnert Park.
- Perez, Katherine Erolinda (Chairperson, Notomne Cultural Preservation, North Valley Yokut / Ohlone /Bay Miwuk)
- 2019 Email to Canzonieri, Christopher, Basin Research Associates. Regarding: Colin I. Busby, Basin Research Associates August 21st, 2019 email letter *Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, Alameda County*. Brief message with “Mitigation Measures from our Native American perspective” Attachments on September 29th, 2019. The attachments consisted of Tribal Cultural Resource Avoidance MM [Mitigation Measures], Tribal Cultural Resource-Awareness Training MM, N.A. [Native American] Monitoring MM, and Inadvertent Discoveries MM (all dated July 2019).
- Pleasanton (City of)
- 1996 Table VII-2 Historic Buildings. In The City of Pleasanton General Plan. Adopted August 6, 1996 (as amended by the voters)
- 2009 Cultural Resources [including Table 7-3: Historic Neighborhoods and Structures Pages 7-15 - 7-16 And Figure 7-3]. In Section 7. Conservation and Open Space Element, Pleasanton General Plan 2005-2025: A Guide to Community Resources, Future Trends, and Long Range Plans. Adopted July 21, 2009, amended October 19, 2010; July 5, 2012; October 16, 2012. Web, accessed January 17, 2012 and September 4, 2019.

Quaternary Research Group

1976 Archaeology in Alameda County: A Handbook for Planners [written and designed by D.P. Miller]. Alameda County Planning Department, Hayward.

Self, William and Carrie D. Wills (William Self Associates)

1999 Cultural Resources Assessment Report, LAVWMA Export Pipeline and Facilities Study, Alameda County, California, MS on file, S-32780, CHRIS/NWIC, Sonoma State University, Rohnert Park.

Totton, Gayle (Native American Heritage Commission) (NAHC)

2019 Response to Request for Review of Sacred Lands File, City of Pleasanton Stream Maintenance Project, Alameda County, California. Dated August 16, 2019.

United States Geological Survey (USGS)

1980 Dublin, Calif. [Quadrangle]. Topographic, 7.5 minute series (1961 photorevised).
1980 Livermore, Calif. [Quadrangle]. Topographic, 7.5 minute series (1961 photorevised).
1980 Niles, Calif. [Quadrangle]. Topographic, 7.5 minute series (scale 1/24,000) (1961 photorevised).
1996 La Costa Valley, CA [Quadrangle]. Topographic, 7.5 minute series (1961, 1980 photorevised). United States Geological Survey, Menlo Park

United States Department of the Interior, National Register of Historical Places, National Park Service (USNPS)

2015, 2017, 2020 National Register of Historic Places Spreadsheet listings.
<https://www.nps.gov/subjects/nationalregister/database-research.htm> Multiple Property covers (current to 04/2019). National Historic Landmarks (NHLs; current to 12/2017). Listed properties (current to 1/8/2020). Web accessed 8/30/2019 and 1/22/2020.

Zimmer, Michelle (Enrollment and Communications Officer, Amah Mutsun Tribal Band of Mission San Juan Bautista)

2019 Email to Christopher Canzonieri, Basin Research Associates. Regarding: Request for Information: City of Pleasanton Stream Maintenance Project, 12 Locations, Alameda County. Requesting data regarding CHRIS/NWIC recorded sites. Dated August 28, 2019.

Abbreviations

n.d. no date v.d. various dates N.P. no publisher noted
n.p. no place of publisher noted

CHRIS/NWIC is used for material on file at the California Historical Resources Information System, Northwest Information Center, Sonoma State University, Rohnert Park.

ATTACHMENTS

FIGURES

- FIGURE 1 General Project Locations (ESRI World Street Map)
- FIGURE 2A Project Locations T3S R1W-1E (USGS Dublin, Calif. 1980)
- FIGURE 2B Project Locations T3S R1E (USGS Dublin, Calif. 1980 and
Livermore, Calif. 1980)
- FIGURE 2C Project Locations T3S R1E (USGS Livermore, Calif. 1980)
- FIGURE 2D Project Locations T3S R1E (USGS Dublin, Calif. 1980;
Livermore, Calif. 1980; Niles, Calif. 1980; La Costa Valley, CA
1996)

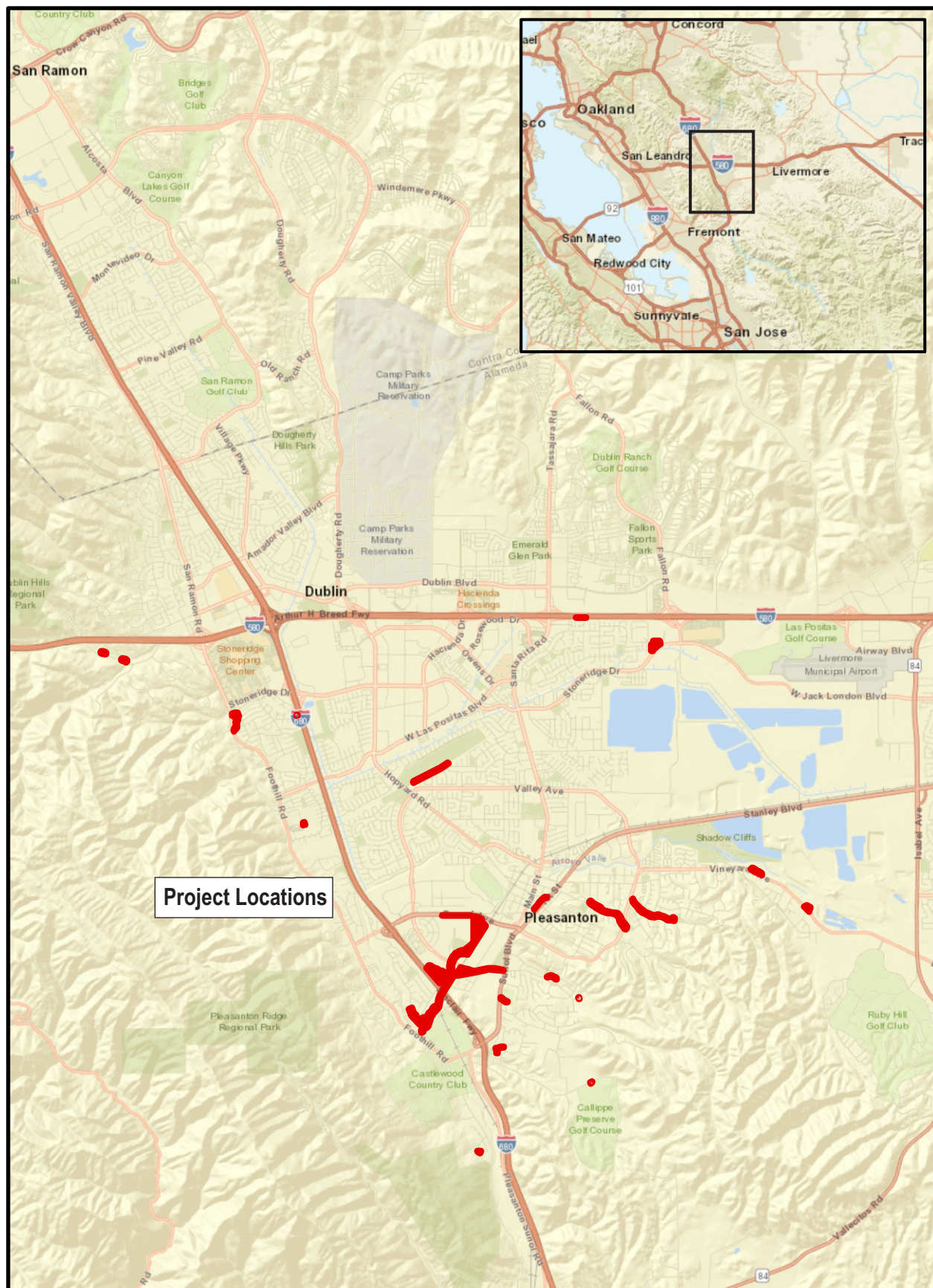


Figure 1: General Project Locations (ESRI World Street Map)

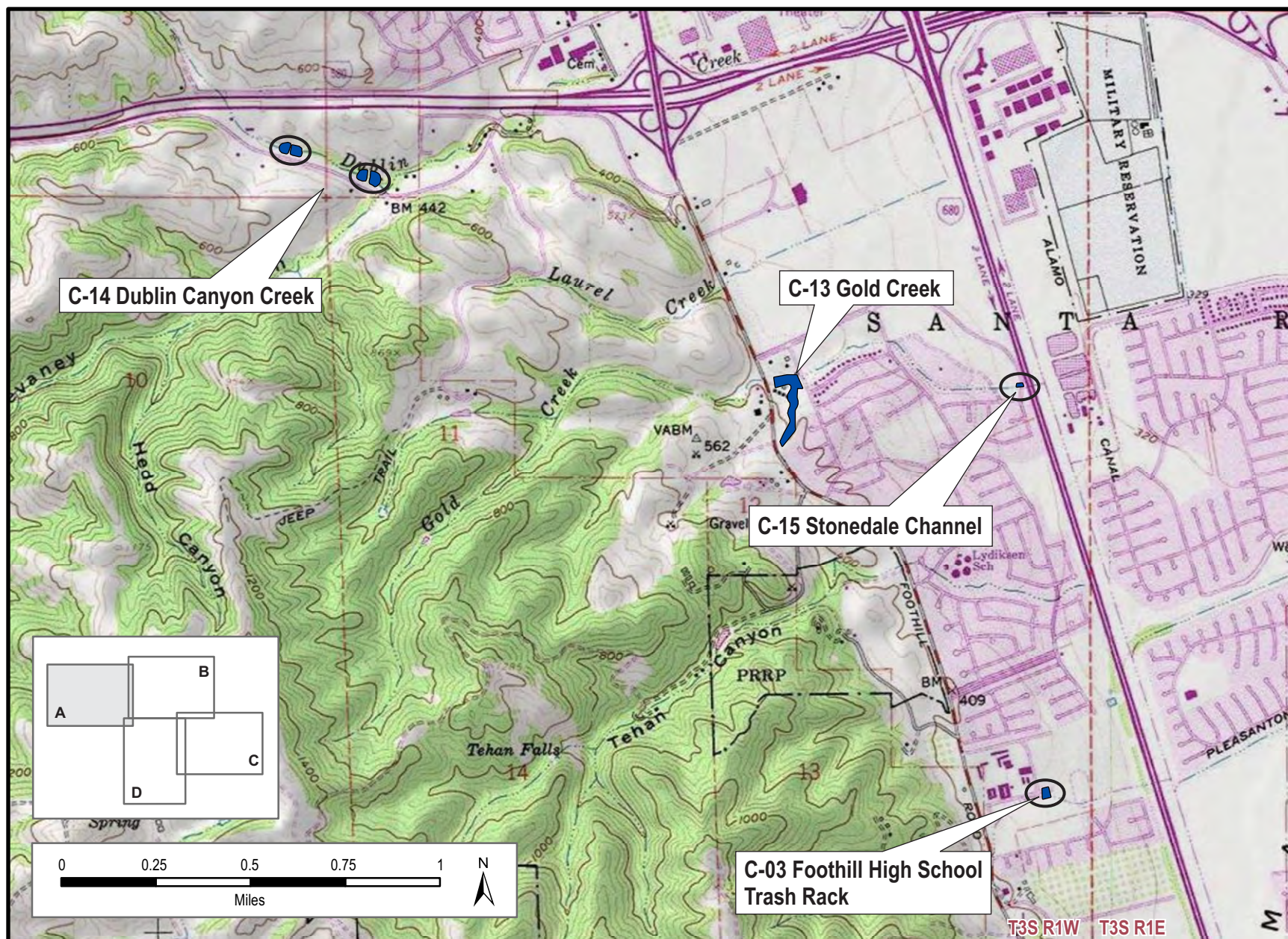


Figure 2A: Project Locations T3S R1W-1E (USGS Dublin, Calif. 1980)

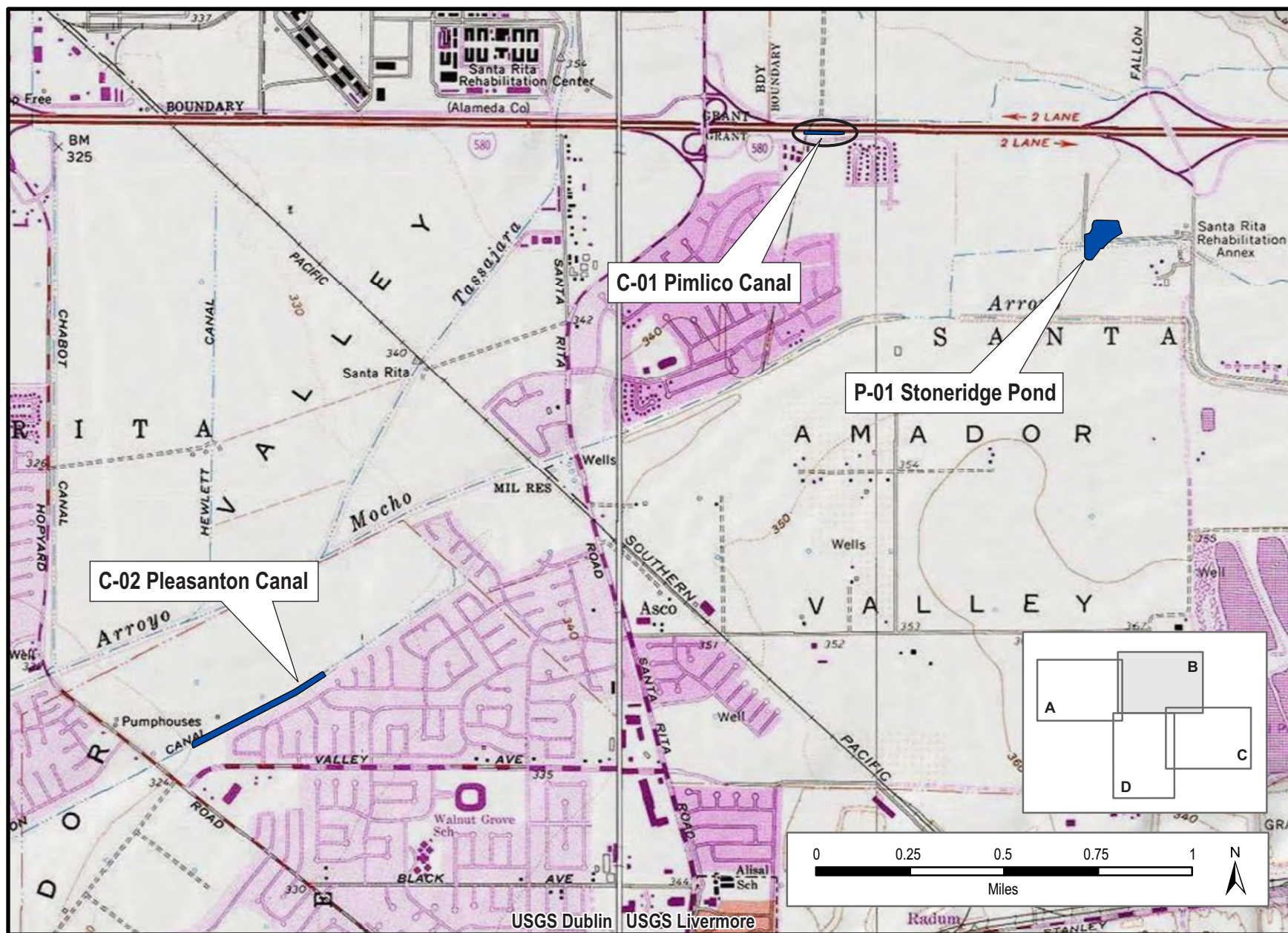


Figure 2B: Project Locations T3S R1E (USGS Dublin, Calif. 1980 and Livermore, Calif. 1980)

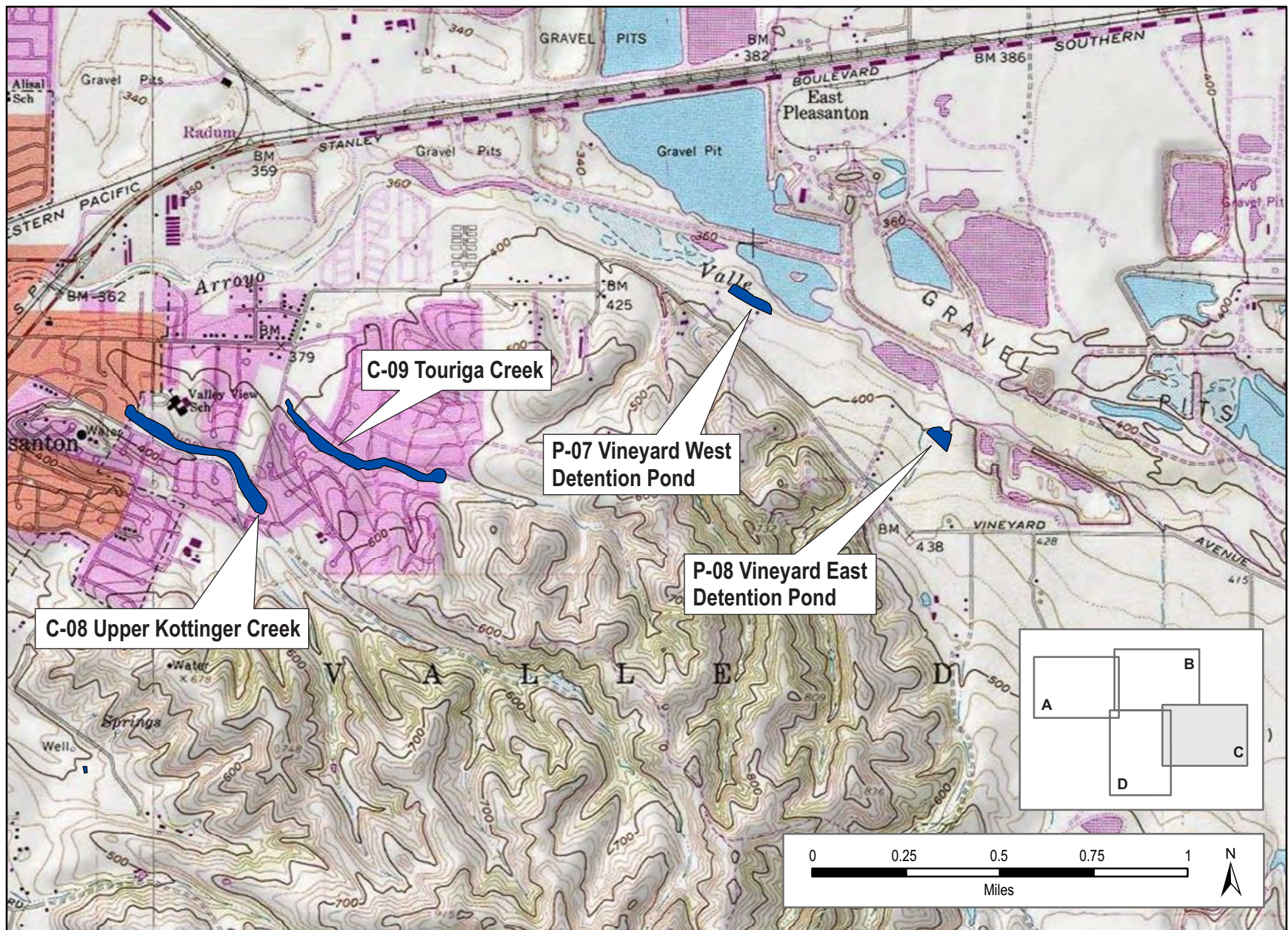


Figure 2C: Project Locations T3S R1E (USGS Livermore, Calif. 1980)

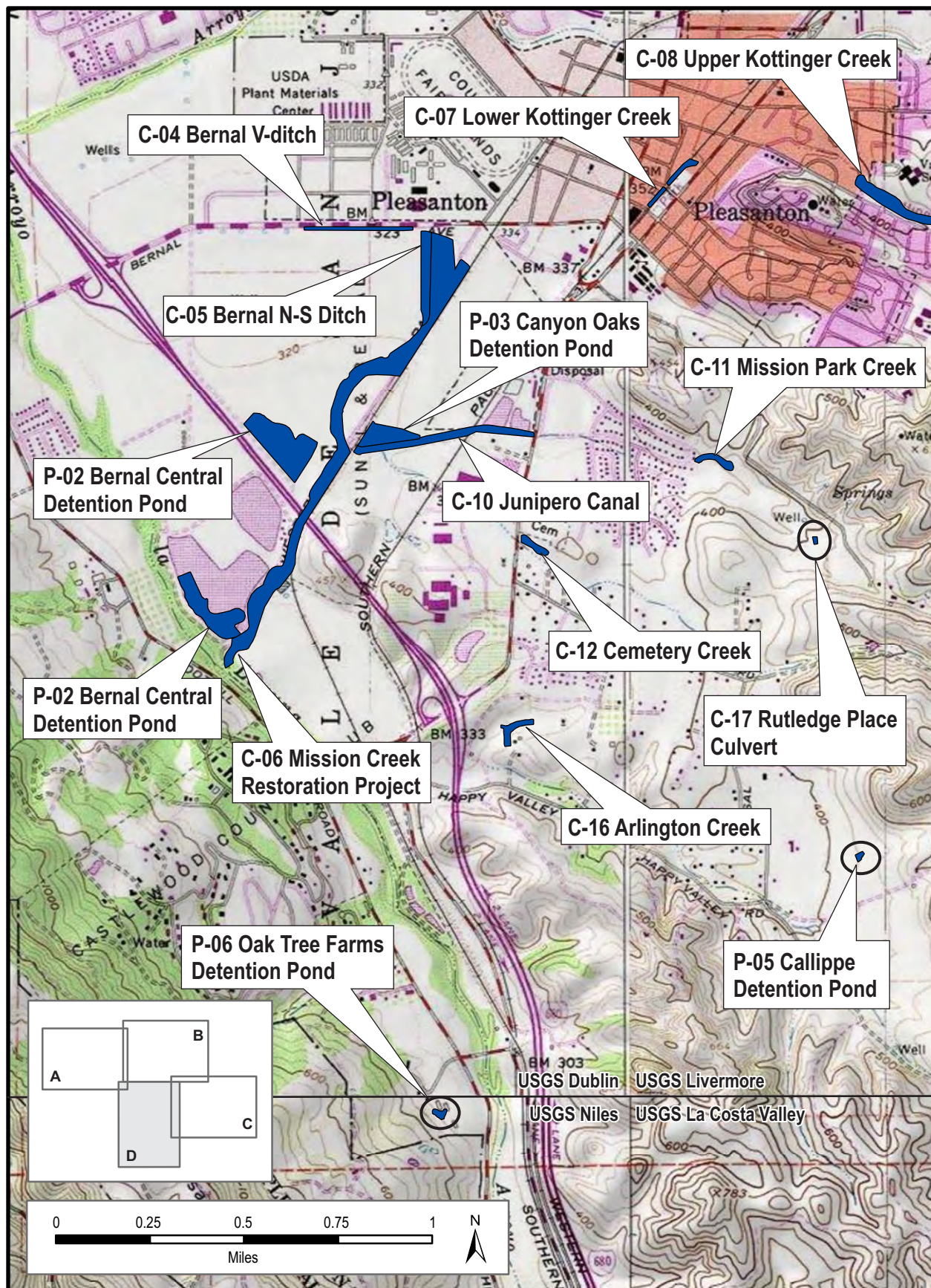


Figure 2D: Project Locations T3S R1E (USGS Dublin, Calif. 1980; Livermore, Calif. 1980; Niles, Calif. 1980; La Costa Valley, CA 1996)

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APPENDIX D: NATIVE AMERICAN CORRESPONDENCE
BASIN RESEARCH ASSOCIATES

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Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION

1556 Harbor Boulevard, STE 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: City of Pleasanton Stream Maintenance Project – 12 Locations

County: Alameda

USGS Quadrangle Name: USGS Dublin, Calif. 1980; Livermore, Calif. 1980; Niles, Calif. 1980 and LaCosta Valley, CA 1996

Address: 12 locations through out city – no addresses – part of various channels and detention basins, City of Pleasanton

Township: 3 South, **Ranges:** 1 West – 1 East, unsectioned

Company/Firm/Agency: Basin Research Associates

Contact Person: Colin I. Busby, PhD, RPA

Street Address: 1933 Davis Street, STE 215

City/Zip: San Leandro, CA 94577

Phone: (510) 430-8441 x101

Email: Please send response to basinres1@gmail.com

Project Description:

The City of Pleasanton is undertaking a stream maintenance program at 12 locations throughout the city. Maintenance will primarily involve vegetation management and other minor cleanup.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Date: 08/06/2019

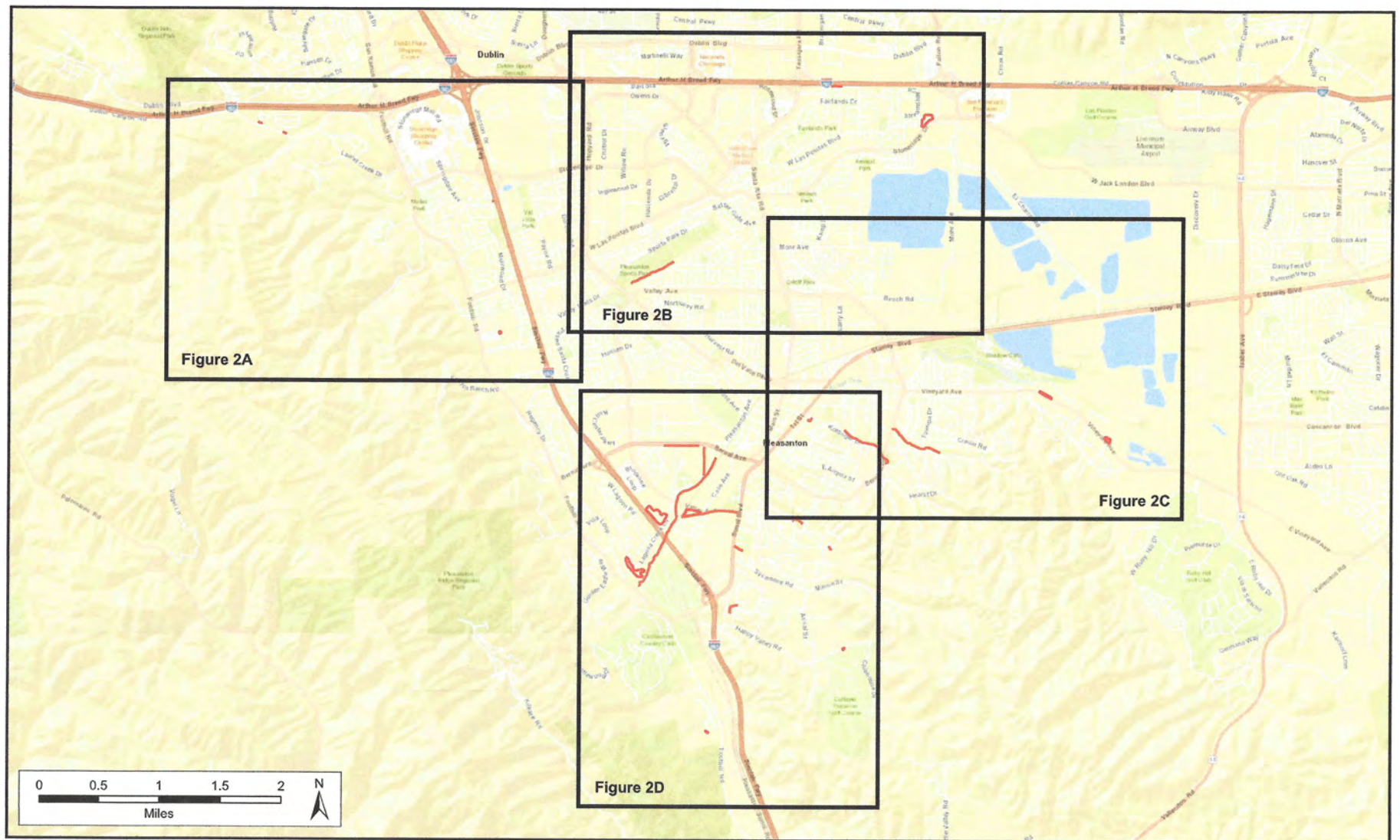


Figure 1: Project Locations - T3S R1W-1E (ESRI World Street Map)

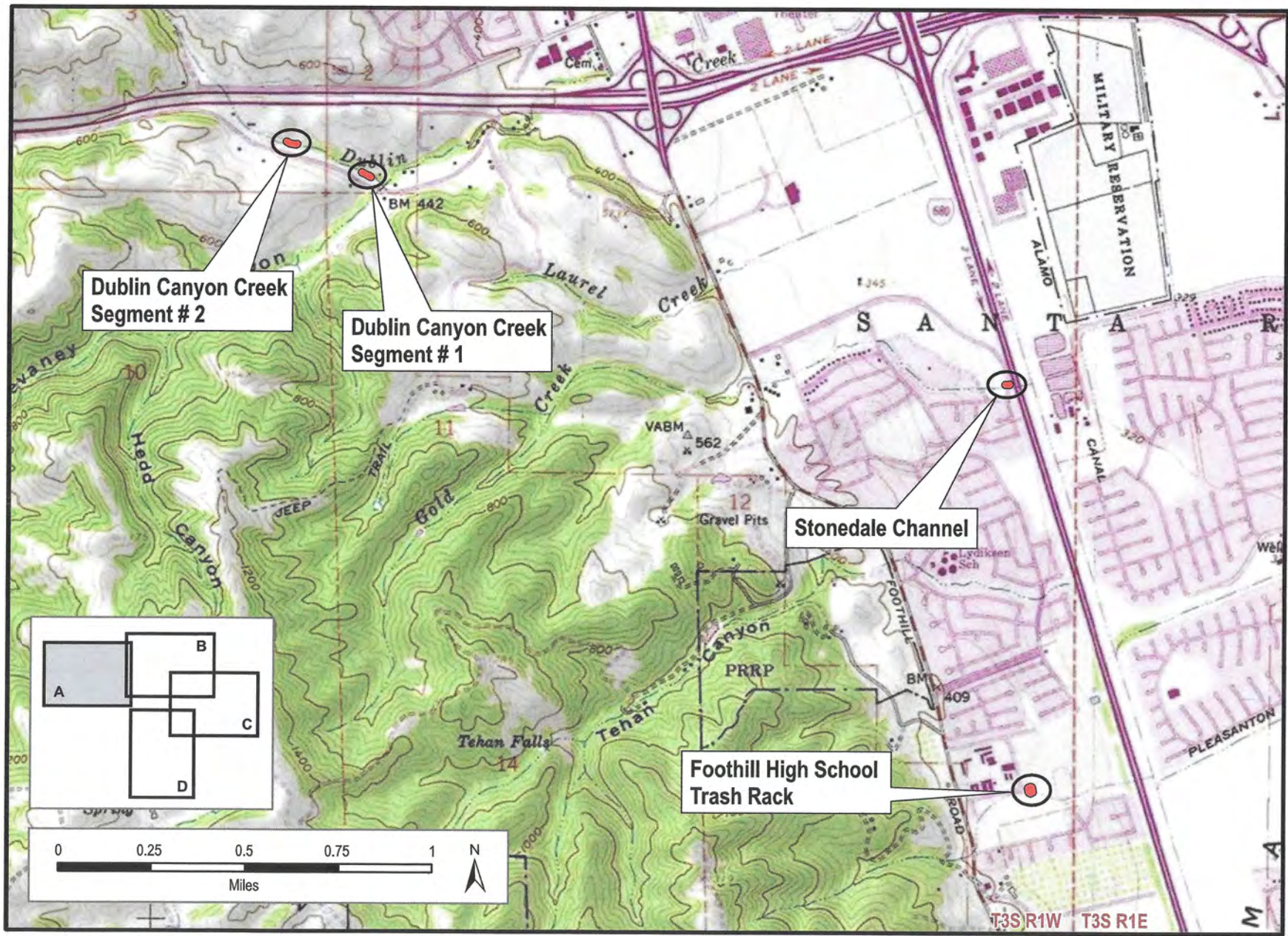


Figure 2A: Project Locations T3S R1W-1E (USGS Dublin, Calif. 1980)

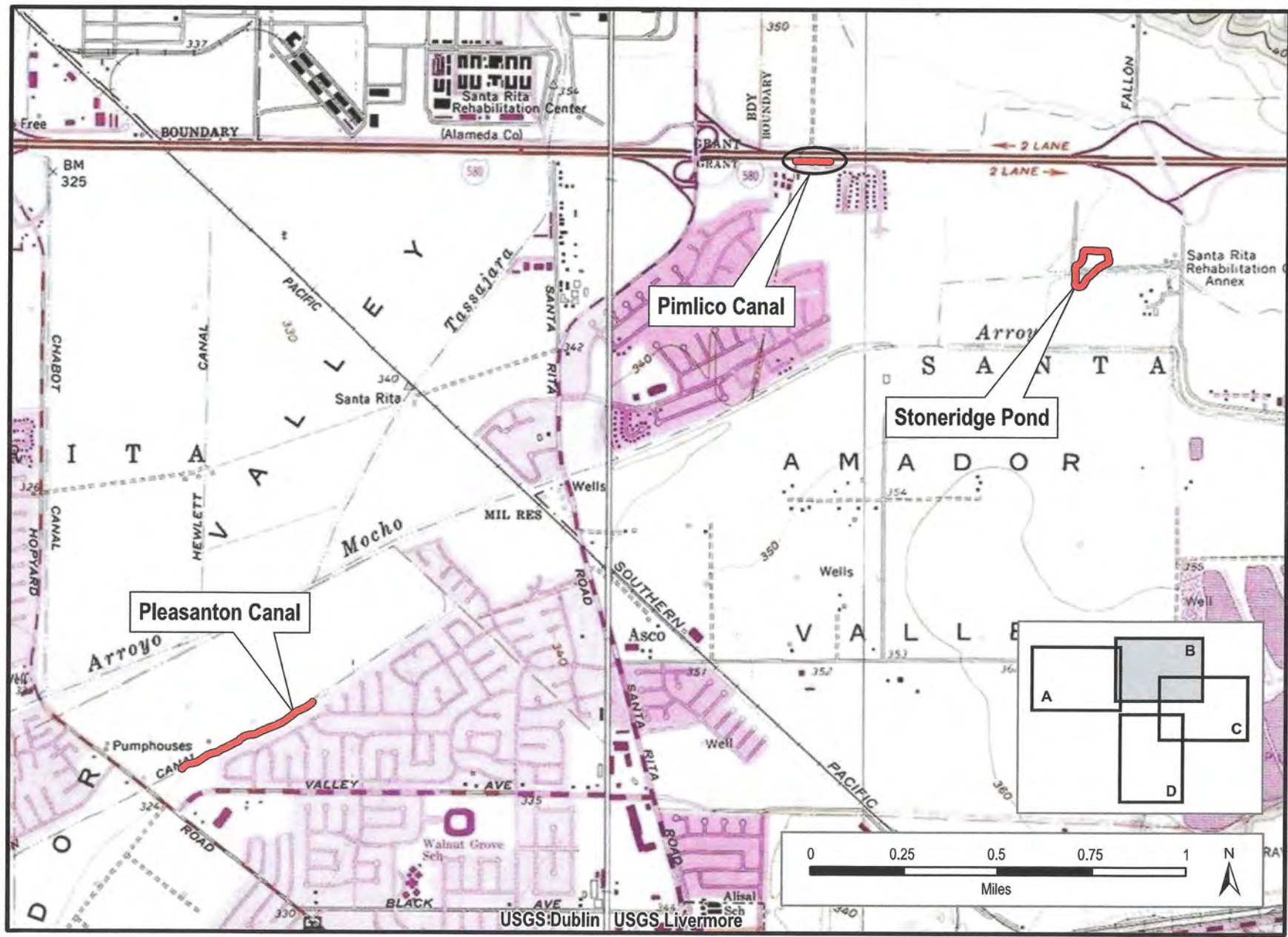


Figure 2B: Project Locations T3S R1E (USGS Dublin, Calif. 1980 and Livermore, Calif. 1980)

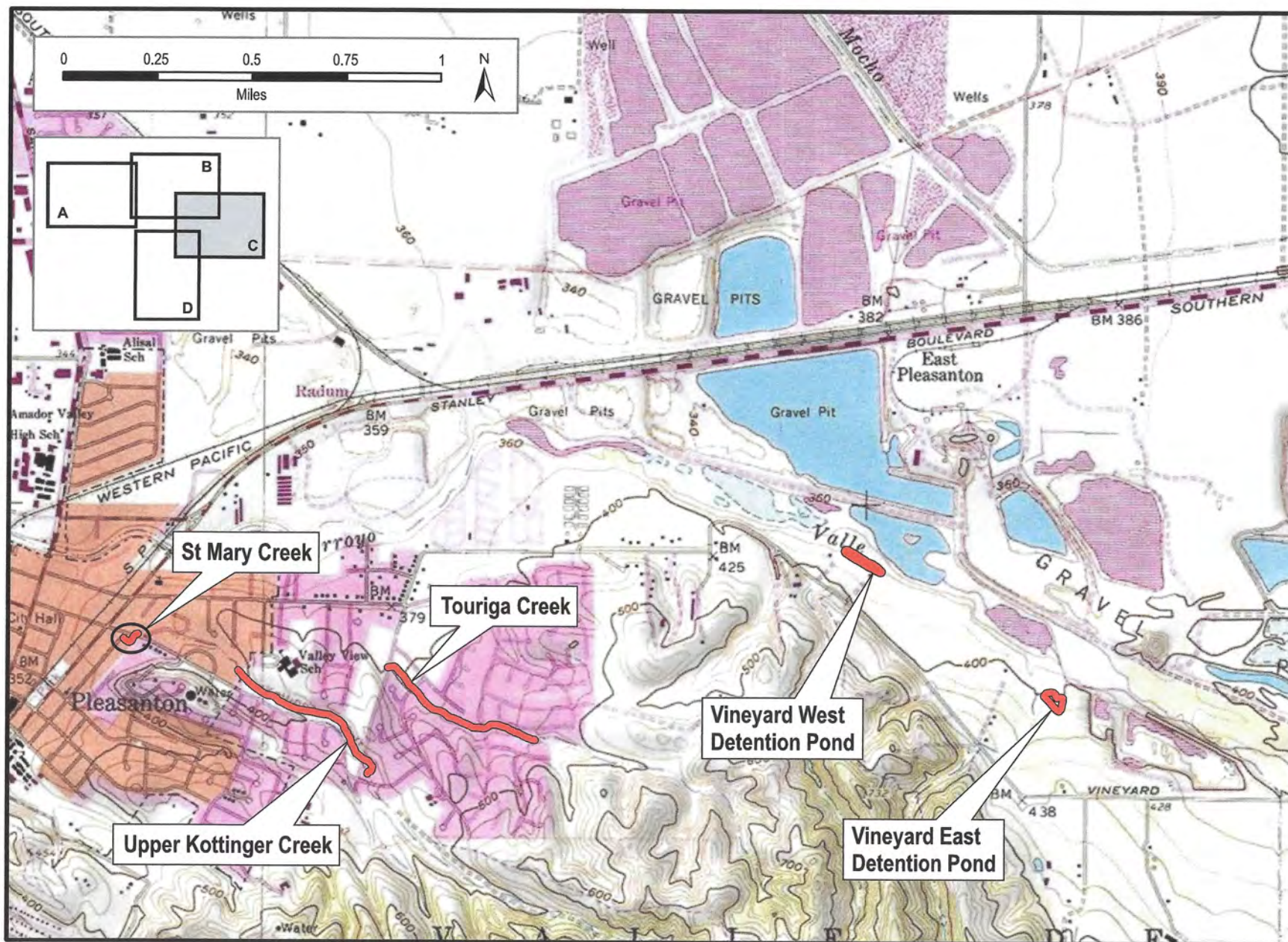


Figure 2C: Project Locations T3S R1E (USGS Livermore, Calif. 1980)

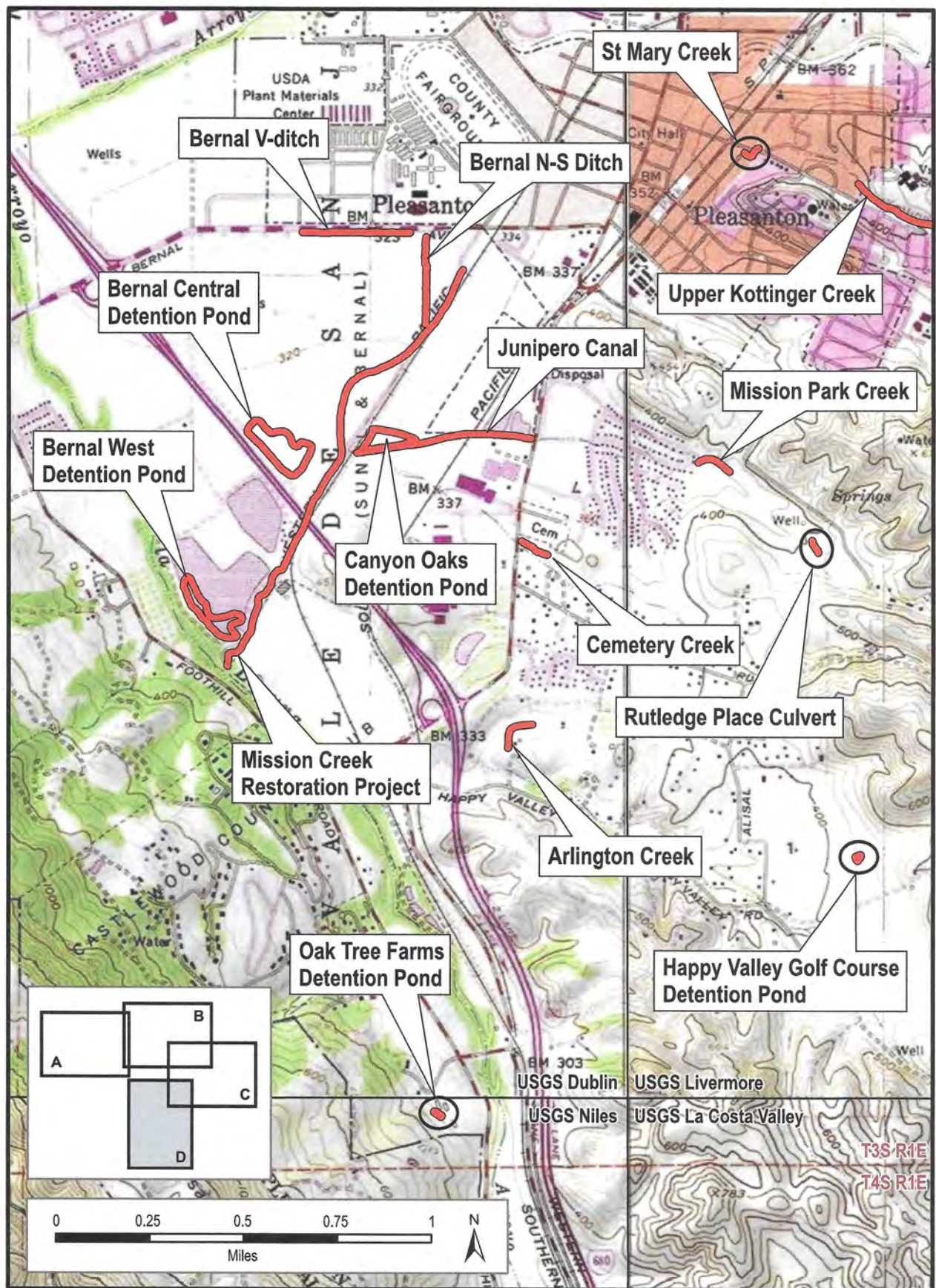


Figure 2D: Project Locations T3S R1E (USGS Dublin, Calif. 1980; Livermore, Calif. 1980; Niles, Calif. 1980; La Costa Valley, CA 1996)

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>



August 16, 2019

Dr. Colin Busby
Basin Research Associates

VIA Email to: basinres1@gmail.com

RE: **City of Pleasanton Stream Maintenance (12 locations) Project**, City of Pleasanton;
Dublin, Livermore, Niles, and LaCosta Valley USGS Quadrangles, Alameda County,
California.

Dear Dr. Busby:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. The absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton
Gayle Totton, B.S., M.A., Ph.D.
Associate Governmental Program Analyst

Attachment

**Native American Contact List
August 16, 2019
Alameda County**

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632
vlopez@amahmutsun.org
(916) 743-5833

Ohlone/Costanoan
Northern Valley Yokuts

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue
Oakland, CA 94603
corrinagould@gmail.com
(510) 575-8408

Amah Mutsun Tribal Band of Mission San Juan Bautista
Irene Zwieler, Chairperson
789 Canada Road
Woodside, CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office
(650) 332-1526 Fax

Ohlone/Costanoan

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3388
Fremont, CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell
(510) 687-9393 Fax

Ohlone
Bay Miwok
Plains Miwok
Patwin

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024
ams@indiancanyon.org
(831) 637-4238

Ohlone/Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA 94546
cnihmeh@muwekma.org
(408) 464-2892
(408) 205-9714

Ohlone / Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA 95236
canutes@verizon.net
(209) 887-3415

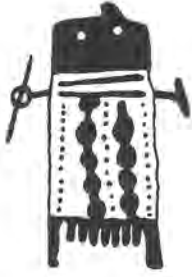
Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the City of Pleasanton Stream Maintenance (12 locations) Project, Alameda County, California

Native American letters were sent out via email on August 21, 2019 for WRA Pleasanton by Christopher Canzonieri.



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Amah Mutsun Tribal Band

Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Val,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

Any information that you can provide will be used to obtain a U.S. Army Corps of Engineers 404 Permit (San Francisco District) to complete the maintenance actions.

We look forward to hearing from you. I can be reached at (510) 430-8441 x101 or via email at basinres1@gmail.com. Thanking you in advance for any assistance.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Amah Mutsun Tribal Band of Mission San Juan Bautista

Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Irenne,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Indian Canyon Mutsun Band of Costanoan

Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Ann Marie,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019



Muwekma Ohlone Indian Tribe of the SF Bay Area

Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Ms. Nijmeh,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717
Linden, CA 95236

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Kathy,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

The Confederated Villages of Lisjan

Corina Gould, Chairperson
10926 Edes Avenue
Oakland, CA 94603

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Ms. Gould,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



August 21, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

The Ohlone Indian Tribe

Andrew Galvan,
P.O. Box 3388
Fremont, CA 94539

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations,
Alameda County

Dear Andy,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 12 scattered locations in the City of Pleasanton, Alameda County (see maps). Maintenance will primarily involve vegetation management and other minor cleanup. The majority of the 12 project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

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We look forward to hearing from you. I can be reached at (510) 430-8441 x101 or via email at basinres1@gmail.com. Thanking you in advance for any assistance,

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA

Subject: Read: RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, ,Alameda County
From: Charlene Nijmeh <cnijmeh@muwekma.org>
Date: 8/21/2019, 11:12 AM
To: Chris Canzonieri <canz@basinresearch.com>

Your message

To: Charlene Nijmeh
Subject: RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, ,Alameda County
Sent: Wednesday, August 21, 2019 11:11:53 AM (UTC-08:00) Pacific Time (US & Canada)

was read on Wednesday, August 21, 2019 11:12:16 AM (UTC-08:00) Pacific Time (US & Canada).

Final-recipient: RFC822; cnijmeh@muwekma.org
Disposition: automatic-action/MDN-sent-automatically; displayed
X-MSEch-Correlation-Key: fUx41nYhUEapDXJTDzFf1Q==
Original-Message-ID: <a37a44fd-c77e-f4e9-b1cb-d9ff8ec18abc@basinresearch.com>
X-Display-Name: Charlene Nijmeh



Christopher Canzonieri <canz1970@gmail.com>

Re: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, Alameda County

2 messages

Amah Mutsun <amahmutsuntribal@gmail.com>
To: Chris Canzonieri <canz@basinresearch.com>

Wed, Aug 28, 2019 at 6:52 AM

2nd
So what sacred sites are in the area?

On Wed, Aug 21, 2019 at 11:09 AM Chris Canzonieri <basinres1@gmail.com> wrote:

Dear Irenne,

1st
The Native American Heritage Commission has provided your name as a person who may have additional information on Native American resources for the 12 proposed projects located in the City of Pleasanton

Could you please let us know if you have any information or concerns regarding the proposed project. Please send an email to Christopher Canzonieri at Basin Research Associates (canz@basinresearch.com).

Thanking you in advance for your assistance.

Christopher Canzonieri

--

Christopher Canzonieri, M.A., RPA
Lead Physical Anthropologist and Project Archaeologist
Basin Research Associates, Inc.
1933 Davis Street, Suite 215
San Leandro, CA 94577-1258
Office: (510) 430-8441 ext 107
Fax: (510) 430-8443
Primary Cell: (925) 548-1002
Cell: (510) 220-1822
canz@basinresearch.com
www.basinresearch.com

Virus-free. www.avast.com

Michelle Zimmer

**Enrollment and Communications Officer of the
Amah Mutsun Tribal Band of Mission San Juan Bautista**

3rd
Chris Canzonieri <canz1970@gmail.com>
To: Amah Mutsun <amahmutsuntribal@gmail.com>

Wed, Aug 28, 2019 at 7:22 AM

I will have to look this up. To the best of my knowledge there are no sites that will be impacted. I think the search area was a 1/4 mile, so there are sites nearby. I completed the survey a few weeks back, most of the canal where constructed. If I will let you know if I find any documentation with sites in the project APE.

Chris
Sent from my iPhone

^{CRWZ}
Irenne Zwierlein – called at 1:21 PM on August 30, 2019, following up on email on communication from August 28, 2019. Ms. Zwierlein recommends that all construction crew receive cultural sensitivity training in areas with the potential of prehistoric cultural materials and any archaeologists on the project have experience with northern and central California archaeology. The retention of a qualified and trained Native American Monitor is recommended in the event of a discovery of Native American cultural materials.

Subject: Re: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, ,Alameda County
From: Kathrine Perez <canutes@verizon.net>
Date: 9/29/2019, 5:31 PM
To: canz@basinresearch.com

Hello Chris,

I am sending you some Mitigation Measures from our Native American perspective. It should work for all the locations.

Please let me know if this will help.

Nototomne Cultural Preservation
Northern Valley Yokut / Ohlone / Bay Miwuk
Katherine Perez
P. O Box 717
Linden, CA 9526
Cell: 209.649.8972
Email: canutes@verizon.net

-----Original Message-----

From: Chris Canzonieri <basinres1@gmail.com>
To: Katherine Perez <canutes@verizon.net>
Cc: Colin Busby <colinbusby@basinresearch.com>; Christopher Canzonieri <canz@basinresearch.com>
Sent: Wed, Aug 21, 2019 11:13 am
Subject: RE: Request for Information – City of Pleasanton Stream Maintenance Project, 12 Locations, ,Alameda County

Dear Kathy,
The Native American Heritage Commission has provided your name as a person who may have additional information on Native American resources for the 12 proposed projects located in the City of Pleasanton. Could you please let us know if you have any information or concerns regarding the proposed project. Please send an email to Christopher Canzonieri at Basin Research Associates (canz@basinresearch.com).

Thanking you in advance for your assistance.

Christopher Canzonieri

--
Christopher Canzonieri, M.A., RPA
Lead Physical Anthropologist and Project Archaeologist
Basin Research Associates, Inc.
1933 Davis Street, Suite 215
San Leandro, CA 94577-1258
Office: (510) 430-8441 ext 107
Fax: (510) 430-8443
Primary Cell: (925) 548-1002
Cell: (510) 220-1822
canz@basinresearch.com
www.basinresearch.com

Attachments:	
Tribal Culutral Resource Avoidance MM July 2019.pdf	643 KB
Tribal Cultural Resource-Awarness Training MM July 2019.pdf	274 KB
N.A Monitoring MM July 2019.pdf	461 KB
Inadverent Discoveries MM July 2019.pdf	329 KB

Native American Monitoring Mitigation Measure

To minimize the potential for destruction of or damage to existing or previously undiscovered archaeological and cultural resources and to identify any such resources at the earliest possible time during project-related earthmoving activities, **THE PROJECT PROPONENT** and its construction contractor(s) will implement the following measures:

- Paid Native American monitors from culturally affiliated Native American Tribes will be invited to monitor the vegetation grubbing, stripping, grading or other ground-disturbing activities in the project area to determine the presence or absence of any cultural resources. Native American representatives from cultural affiliated Native American Tribes act as a representative of their Tribal government and shall be consulted before any cultural studies or ground-disturbing activities begin.
- Native American representatives and Native American monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted or slowed if such sites or objects are identified within the direct impact area. Only a Native American representative can recommend appropriate treatment of such sites or objects.
- If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone, are discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a archaeologist who meets the Secretary of the Interior's qualification standards can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Caltrans, the SHPO, and other appropriate agencies. Appropriate treatment measures may include development of avoidance or protection methods, archaeological excavations to recover important information about the resource, research, or other actions determined during consultation.
- In accordance with the California Health and Safety Code, if human remains are uncovered during ground disturbing activities, the construction contractor or the County, or both, shall immediately halt potentially damaging excavation in the area of the burial and notify the County coroner and a qualified professional archaeologist to determine the nature of the remains. The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands, in accordance with Section 7050(b) of the Health and Safety Code. If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). After the coroner's findings are presented, the County, the archaeologist, and the NAHC-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed.

Tribal Cultural Resource – Awareness Training - Mitigation Measure

A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

Inadvertent Discoveries Mitigation Measures

Develop a standard operating procedure, points of contact, timeline and schedule for the project so all possible damages can be avoided or alternatives and cumulative impacts properly accessed.

If potential tribal cultural resources, archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from an interested Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations will be documented in the project record. For any recommendations made by interested Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with Northern Valley Yokuts Tribe and Nototomne Cultural Preservation regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

Tribal Cultural Resource Avoidance Mitigation Measure

Avoidance and preservation in place is the preferred manner of mitigating impacts to tribal cultural resources and will be accomplished by several means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/ or other resources; incorporating sites within parks, green-space or other open space; covering archaeological sites; deeding a site to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. Recommendations for avoidance of cultural resources will be reviewed by the CEQA lead agency representative, interested Native American Tribes and the appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project area to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or modification or realignment to avoid highly significant features within a cultural resource. Native American Representatives from interested Native American Tribes will be allowed to review and comment on these analyses and shall have the opportunity to meet with the CEQA lead agency representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.
- If the resource can be avoided, the construction contractor(s), with paid Native American monitors from culturally affiliated Native American Tribes present, will install protective fencing outside the site boundary, including a buffer area, before construction restarts. The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area". Native American representatives from interested Native American Tribes and the CEQA lead agency representative will also consult to develop measures for long term management of the resource and routine operation and maintenance within culturally sensitive areas that retain resource integrity, including tribal cultural integrity, and including archaeological material, Traditional Cultural Properties and cultural landscapes, in accordance with state and federal guidance including National Register Bulletin 30 (*Guidelines for Evaluating and Documenting Rural Historic Landscapes*), Bulletin 36 (*Guidelines for Evaluating and Registering Archaeological Properties*), and Bulletin 38 (*Guidelines for Evaluating and Documenting Traditional Cultural Properties*); National Park Service Preservation Brief 36 (*Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*) and using the Advisory Council on Historic Preservation (ACHP) *Native American Traditional Cultural Landscapes Action Plan* for further guidance. Use of temporary and

Tribal Cultural Resource Avoidance Mitigation Measure

permanent forms of protective fencing will be determined in consultation with Native American representatives from interested Native American Tribes.

2nd Request for Information

Sacred Lands File & Native American Contacts List Request NATIVE AMERICAN HERITAGE COMMISSION

1556 Harbor Boulevard, STE 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: City of Pleasanton Stream Maintenance Project – 2 Locations

County: Alameda

USGS Quadrangle Name: USGS Dublin, Calif. 1980; Livermore, Calif. 1980

Address: 2 locations in city – no addresses – part of various channels and detention basins, City of Pleasanton (Gold Creek and Lower Kottinger Creek)

Township: 3 South, **Ranges:** 1 West – 1 East (both locations - unsectioned)

Company/Firm/Agency: Basin Research Associates

Contact Person: Colin I. Busby, PhD, RPA

Street Address: 1933 Davis Street, STE 215

City/Zip: San Leandro, CA 94577

Phone: (510) 430-8441 x101

Email: Please send response to basinres1@gmail.com

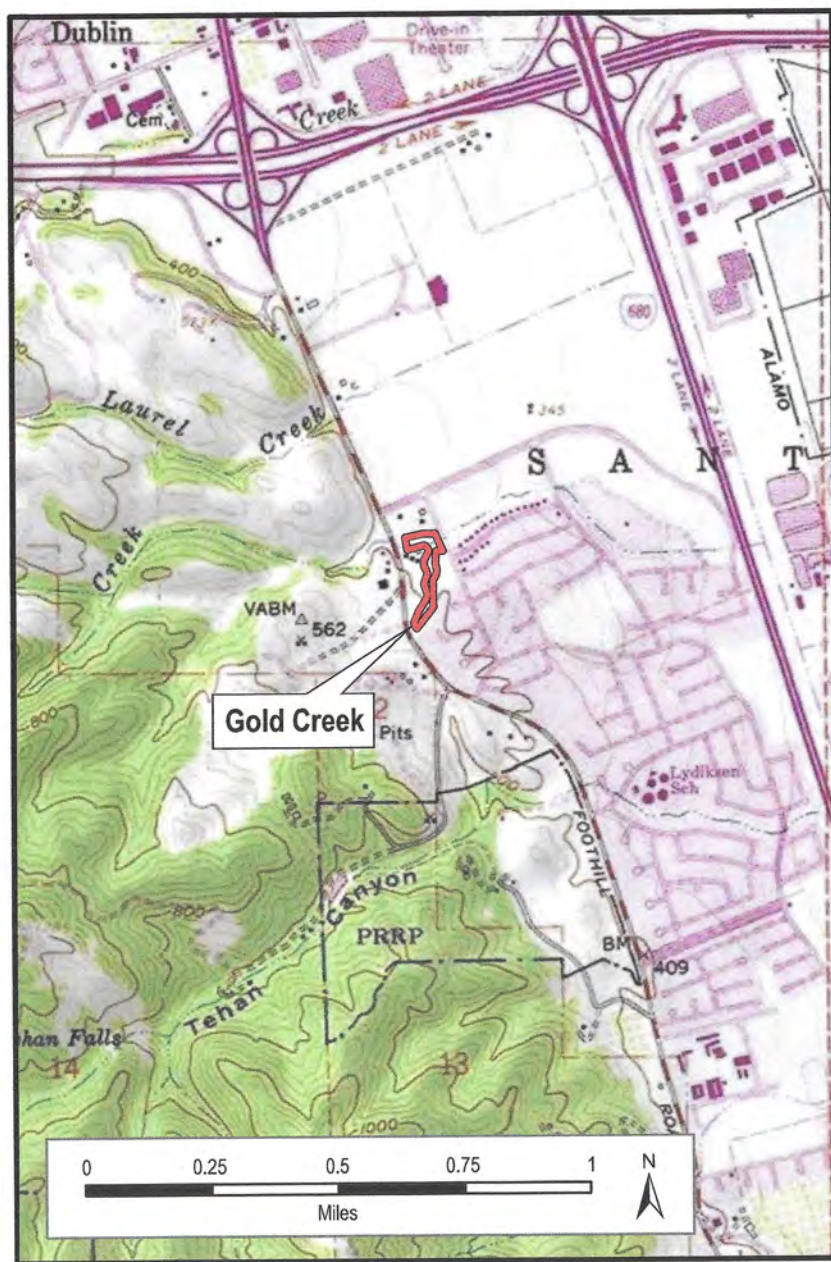
Project Description:

The City of Pleasanton is undertaking a stream maintenance program at 2 additional locations throughout the city in addition to 12 previous locations reviewed by the NAHC. Maintenance will primarily involve vegetation management and other minor cleanup.

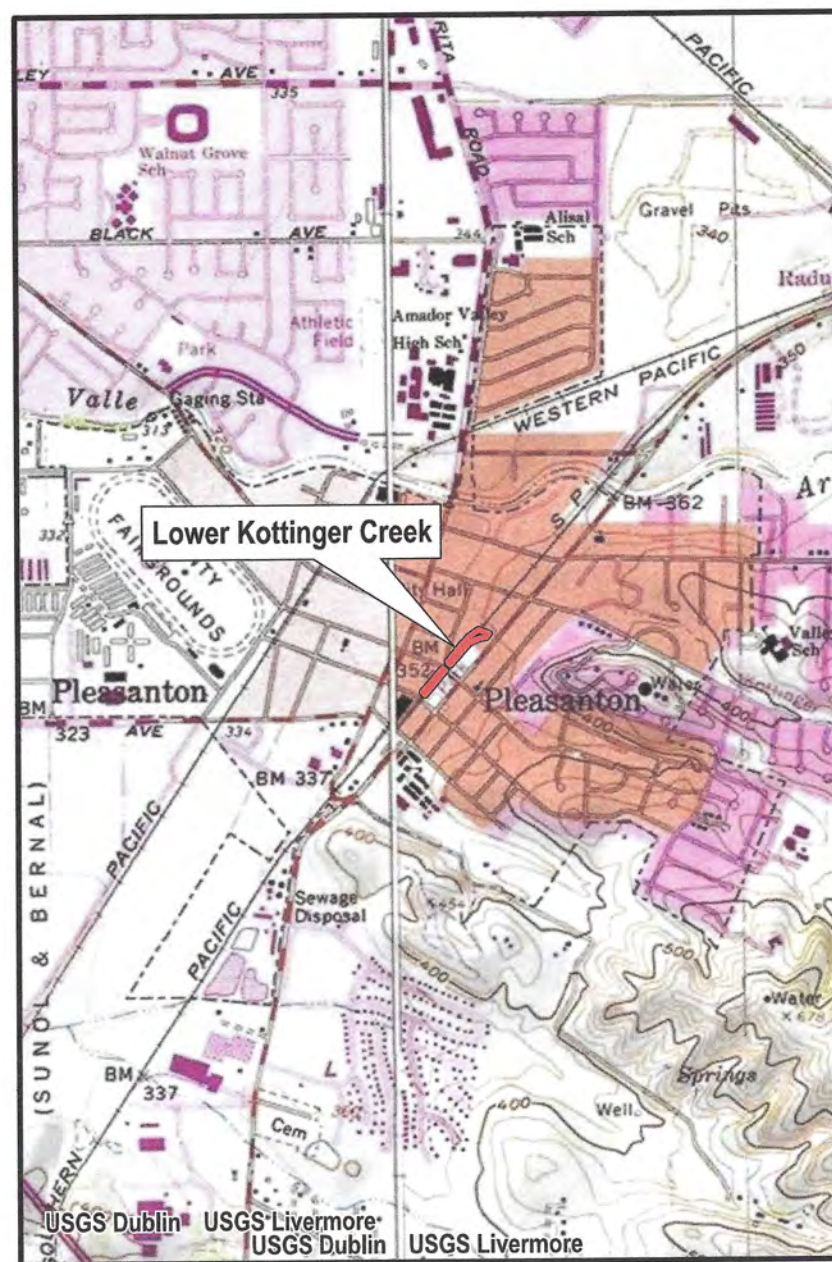
Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

The 2 project locations are within or adjacent to previously constructed flood control improvements.

Date: 12/23/2019



Project Location T3S R1W (USGS Dublin, Calif. 1980)



Project Location T3S R1E (USGS Livermore, Calif. 1980)

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



December 27, 2019

Colin I. Busby
Basin Research Associates

VIA Email to: basinres1@gmail.com

RE: City of Pleasanton Stream Maintenance Project, Alameda County

Dear Mr. Busby

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

A handwritten signature in black ink, reading "Nancy Gonzalez-Lopez". The signature is fluid and cursive, with the first name "Nancy" being more prominent.

Nancy Gonzalez-Lopez
Staff Services Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
Alameda County
12/27/2019**

***Amah Mutsun Tribal Band of
Mission San Juan Bautista***

Irenne Zwiertein, Chairperson
789 Canada Road
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan

***The Confederated Villages of
Lisjan***

Corrina Gould, Chairperson
10926 Edes Avenue
Oakland, CA, 94603
Phone: (510) 575 - 8408
corrinagould@gmail.com

Bay Miwok
Ohlone
Delta Yokut

***Costanoan Rumsen Carmel
Tribe***

Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com

Costanoan

***Indian Canyon Mutsun Band of
Costanoan***

Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org

Costanoan

***Muwekma Ohlone Indian Tribe
of the SF Bay Area***

Monica Arellano,
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546
Phone: (408) 205 - 9714
marellano@muwekma.org

Costanoan

North Valley Yokuts Tribe

Katherine Perez, Chairperson
P.O. Box 717
Linden, CA, 95236
Phone: (209) 887 - 3415
canutes@verizon.net

Costanoan
Northern Valley
Yokut

The Ohlone Indian Tribe

Andrew Galvan,
P.O. Box 3388
Fremont, CA, 94539
Phone: (510) 882 - 0527
Fax: (510) 687-9393
chochenyo@AOL.com

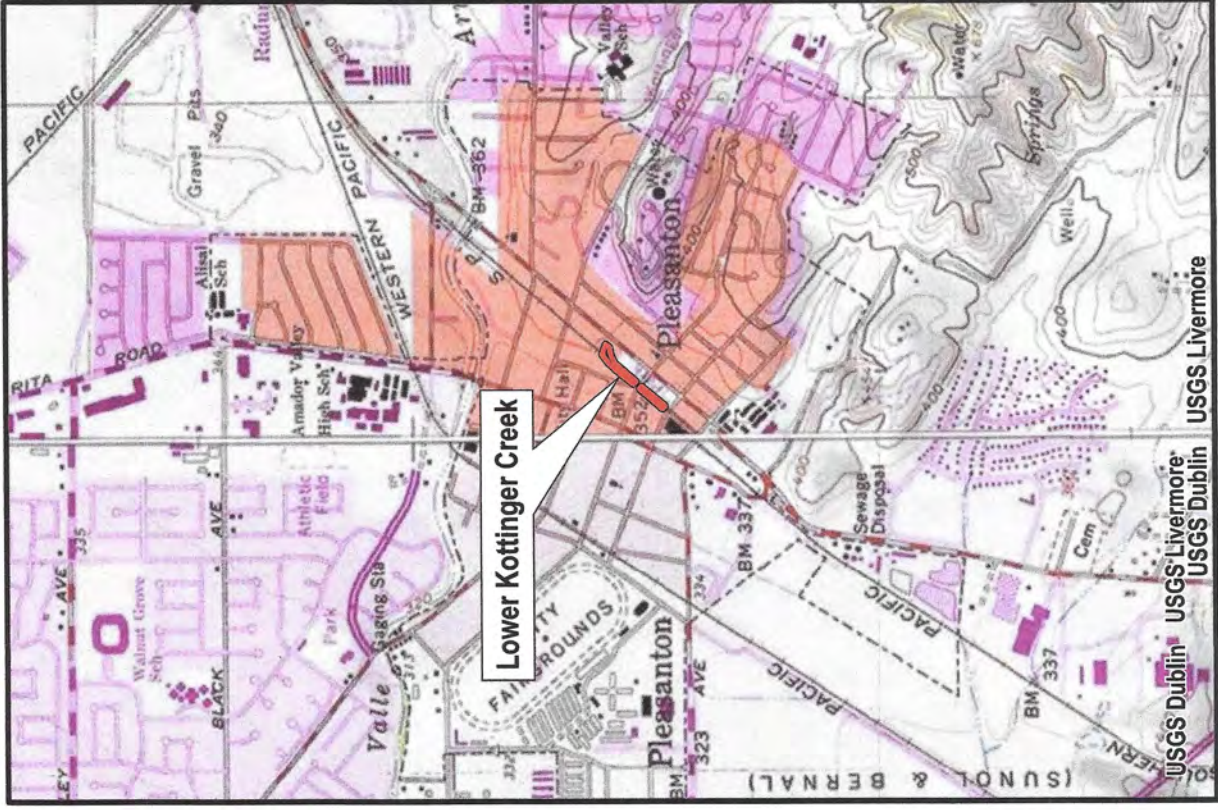
Bay Miwok
Ohlone
Patwin
Plains Miwok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed City of Pleasanton Stream Maintenance Project, Alameda County.



Project Location T3S R1W (USGS Dublin, Calif. 1980)



Project Location T3S R1E (USGS Livermore, Calif. 1980)

RE: Request for Information – City of Pleasanton Stream Maintenance Project, 2 Locations,
Alameda County

Mr. Canzonieri sent emails out on 12/30/19 to all Native American Contacts on the list provided
by NAHC, dated 12/27/19



December 30, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

Amah Mutsun Tribal Band of Mission San Juan Bautista

Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Irenne,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

Cultural resources studies are required to support compliance with the completion of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (IS/MND) and to meet the cultural resources requirements of a 404 Permit under the jurisdiction of the U.S. Army Corps of Engineers (Corps) as the proposed work will occur within or adjacent to a waterway.

Any information that you can provide will be used to obtain a U.S. Army Corps of Engineers 404 Permit (San Francisco District) to complete the maintenance actions.

We look forward to hearing from you. I can be reached at (510) 430-8441 x101 or via email at basinres1@gmail.com. Thanking you in advance for any assistance.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019



Costanoan Rumsen Carmel Tribe

Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA 91766

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Chairperson Cerda,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019



Indian Canyon Mutsun Band of Costanoan

Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Ann Marie,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019



Muwekma Ohlone Indian Tribe of the SF Bay Area

Monica Arellano
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Ms. Arellano,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019



North Valley Yokuts Tribe

Katherine Perez, Chairperson

P.O. Box 717

Linden, CA 95236

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Kathy,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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We look forward to hearing from you. I can be reached at (510) 430-8441 x101 or via email at basinres1@gmail.com. Thanking you in advance for any assistance.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019

BASIN
RESEARCH
ASSOCIATES

1933 DAVIS STREET
SUITE 215
SAN LEANDRO, CA 94577
VOICE (510) 430-8441
FAX (510) 430-8443

The Ohlone Indian Tribe

Andrew Galvan,
P.O. Box 3388
Fremont, CA 94539

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Andy,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA



December 30, 2019



The Confederated Villages of Lisjan

Corina Gould, Chairperson
10926 Edes Avenue
Oakland, CA 94603

RE: Request for Information – City of Pleasanton Stream Maintenance Project,
2 Locations, Alameda County

Dear Chairperson Gould,

The Native American Heritage Commission has provided your name as a person who may have further information on Native American resources at 2 locations within the City of Pleasanton, Alameda County (see Maps). Maintenance will primarily involve vegetation management and other minor cleanup. The two project locations are within or adjacent to previously constructed flood control improvements.

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We look forward to hearing from you. I can be reached at (510) 430-8441 x101 or via email at basinres1@gmail.com. Thanking you in advance for any assistance.

BASIN RESEARCH ASSOCIATES, INC.

Colin I. Busby, Ph.D., RPA

Subject: Read: RE: Request for Information – City of Pleasanton Stream Maintenance Project, 2 Locations, Alameda County

From: "Monica V. Arellano" <marellano@muwekma.org>

Date: 12/30/2019, 12:42 PM

To: Chris Canzonieri <canz@basinresearch.com>

Your message

To: Monica V. Arellano

Subject: RE: Request for Information – City of Pleasanton Stream Maintenance Project, 2 Locations, Alameda County

Sent: Monday, December 30, 2019 12:08:03 PM (UTC-08:00) Pacific Time (US & Canada)

was read on Monday, December 30, 2019 12:42:30 PM (UTC-08:00) Pacific Time (US & Canada).

Final-recipient: RFC822; marellano@muwekma.org

Disposition: automatic-action/MDN-sent-automatically; displayed

X-MSEch-Correlation-Key: o8V6vv9LSkKdkPbFJnqQFA==

Original-Message-ID: <2efedbb7-431f-ef5a-db12-7beb95cfec19@basinresearch.com>

X-Display-Name: Monica V. Arellano