Alamo Creek Bank Stabilization and Flood Management Pilot Project

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

Prepared for
Zone 7 Water Agency

January 2025

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

Term	Abbreviation
Alameda County Flood Control and Water Conservation District	Zone 7
Alamo Creek Bank Stabilization Project	Project
Assessor parcel number	APN
California Environmental Quality Act	CEQA
Cubic feet per second	cfs
Cubic yards	CY
Feet	ft
Rock slope protection	RSP
Water surface elevation	WSE

1 PROJECT DESCRIPTION

1.1 INTRODUCTION AND BACKGROUND

The Alamo Creek Bank Stabilization and Flood Management Pilot Project (Project) is located within the Zone 7 Water Agency's service area. Zone 7 is responsible for providing safe, reliable, efficient and sustainable water and flood protection services to residents, businesses, and other properties within the Livermore-Amador Valley. South San Ramon Creek and Alamo Creek converge slightly upstream of the Project extent, via a large concrete drop structure. Downstream of the structure, Alamo Creek, sometimes referred to as Alamo Canal, continues as an engineered trapezoidal channel; the creek was channelized in the early 1900s (San Francisco Estuary Institute 2013). The convergence of South San Ramon Creek and Alamo Creek creates high velocities, extreme turbulence and erosive forces as stream flows move downstream along the trapezoidal engineered section of Alamo Creek; these forces cause toe erosion and downcutting. Combined with the steep slopes (approximately 2:1), this entire section of engineered trapezoidal channel experiences recurring bank instability, erosion, downcutting, and associated sediment transport which are exacerbated during larger winter storms.

Historically, rock and structural improvements have failed to provide long-term bank stability, resulting in continued channel erosion. This project is an ecologically uplifting and sustainable solution designed to minimize ongoing maintenance needs. By holistically addressing structural issues, the project will lead to ecosystem uplift and improve water quality by providing a medium for plant establishment, which reduces sediment loss.

1.2 PROJECT OBJECTIVES

The main purpose of this Project is to implement an ecologically uplifting approach to flood management that will reduce erosion, restore aquatic and riparian habitat, and promote public recreation. This project will also serve as a pilot project for wider use throughout Zone 7's system. The Project includes combinations of habitat uplift and bank stabilization features, collectively referred to as 'modules.' Module designs will direct flows to the center of the channel and away from the banks and revegetate the banks with native plant species. The Project will reduce bank erosion caused by high turbulence and flows down Alamo Creek, thereby enhancing flood protection by maintaining the flood control channel. Reduced toe scour and bank erosion will also reduce fine sediment inputs to the creek and improve downstream water quality.

The Project goals are:

1. Erosion Reduction
    a. Decrease risk of catastrophic bank failure
    b. Reduce toe erosion and degrading water quality downstream
2. Aquatic & Riparian Habitat Restoration
    a. Restore native planting within channel
    b. Preserve channel grades for better migratory fish access
3. Public Recreation
    a. Uplift the aesthetics of the creek channel
    b. Promote public engagement with restored channel

1.3 PROJECT LOCATION AND SETTING

The Project is located in a residential and commercial part of the City of Dublin in Alameda County, California, and is immediately downstream of a large concrete drop structure that was designed to hold the grade where South San Ramon Creek joins Alamo Creek as shown on **Figure 1-1.**

The parcels associated with the Project are assessor parcel numbers (APN) 941-205-1-63 and 941-205-6-6, as shown on **Figure 1-2**. The Project area is zoned as R-1 Single Family Residential (Minimum Lot Area), and the area's land use designation is Open Space. The area to the west of the Project is zoned as R-1 Single Family Residential (Minimum Lot Area), the area east of the Project is zoned as M-1 Light Industrial, the area north of the Project is zoned as PD Planned Development, and the area south of the Project is zoned as C-2 General Commercial.

FIGURE 1-1 PROJECT LOCATION

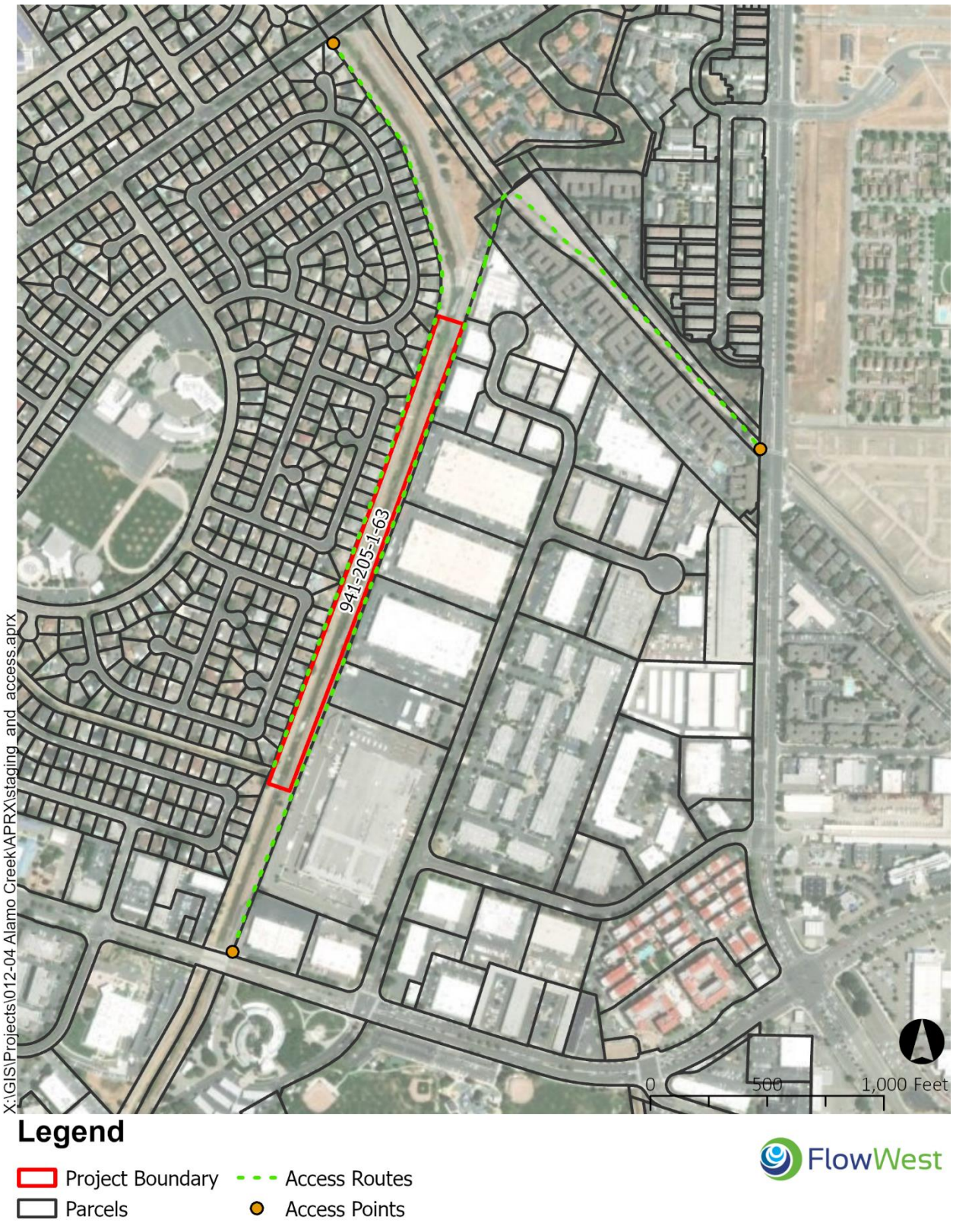


FIGURE 1-2 PROJECT ASSESSOR PARCEL NUMBERS

1.4 PROPOSED PROJECT

Within the Project boundary as shown in **Figure 1-3**, eight modules are sited. Each module consists of a combination of features, tuned to the conditions and constraints at each location in the Project reach. Features included in the modules are:

- **Rock cross-vane weirs** to redirect turbulent flows away from banks
- **Embedded rock below the weirs** to limit the depth of plunge pool scour
- **Toe rock & embedded rock in the banks** to prevent scour and increase bank stability
- **Vegetated soil lifts** to stabilize banks and provide medium for plant establishment
- **Live stake plantings** to reduce bank velocities and prevent erosion
- **Native grass seeding** to enhance bank stability and for habitat benefits
- **Native tree and shrub planting** to improve aesthetics and for habitat benefits

The modules are nearly contiguous for approximately 850 feet along the Project Reach (Modules 1-4). Modules 2b and 2c extend an additional 170 feet and 180 feet, respectively, along the channel; these modules span only one side of the creek bank. Module 5 extends for 100 feet along both banks, just upstream of the confluence of Alamo Creek with Line F4. Module 5 differs from other modules in that it focuses solely on habitat improvements, including the removal of non-native weeds and the planting of native seeds, without any earthmoving. In total, the modules provide approximately 1,270 linear feet of bank protection and habitat uplift along the channel, and total an area of approximately 2.14 acres**. Figure 1-3** presents the module locations within the Project boundary and **Table 1-1** outlines the various features within each module.

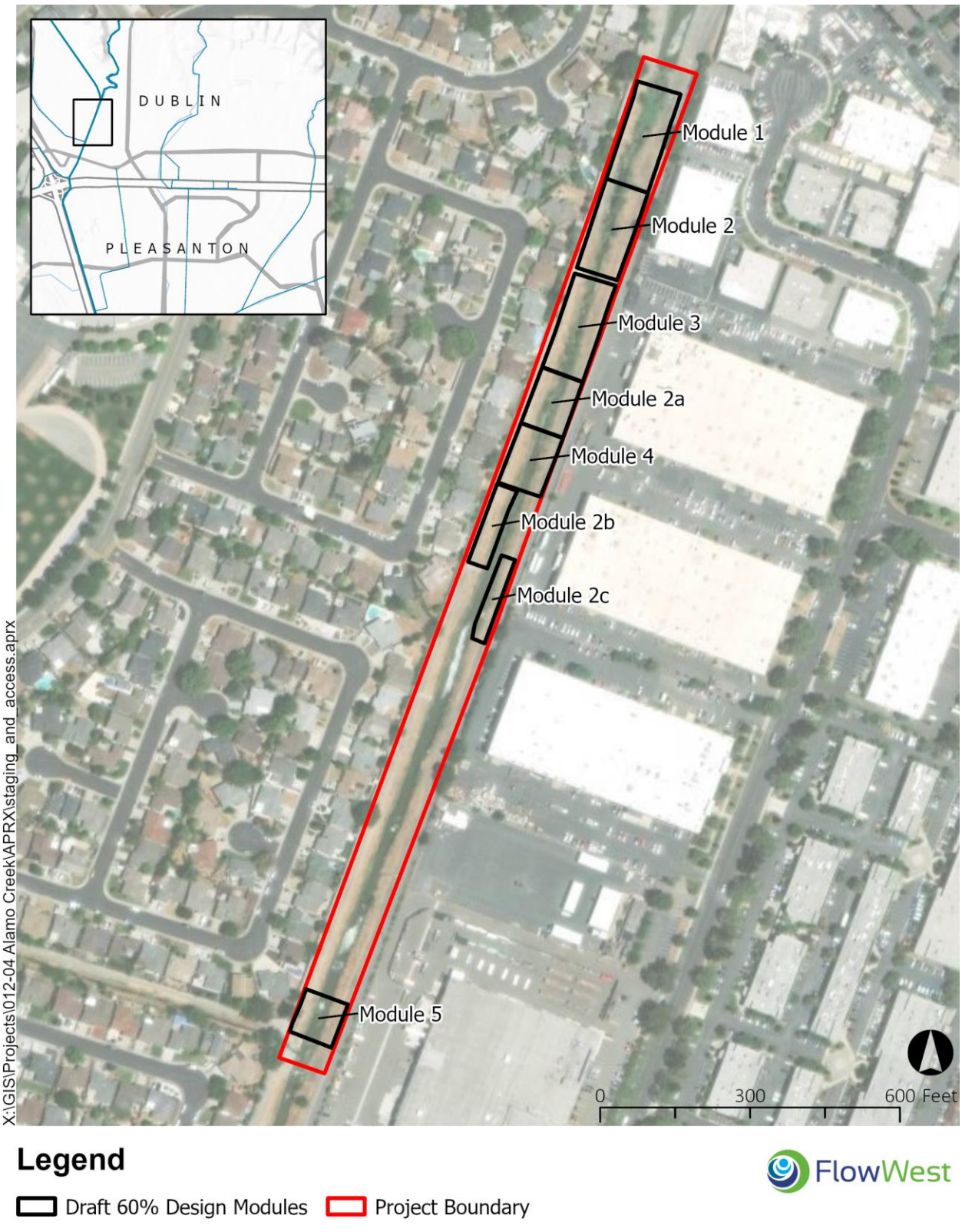


FIGURE 1-3 PROJECT MODULE PLACEMENTS

TABLE 1-1 MODULE FEATURES SUMMARY

Module ID	Stationing from Upstream	Rock Cross-vane Weir Station	Embedded Rock in the Bank	Toe Rock	Vegetated Soil Lifts	Planting
1	1+90 – 4+00	2+30	Up to the **100-year** water surface elevation	½ ton toe rock trench buried under the bank toe	*None*	Willow stakes up to the **10-year** water surface elevation. Hydroseeding deep-rooted grasses from the toe to the top of bank. Low-profile shrub plantings above the **10-year** water surface elevation. Select tree and shrub plantings near top of river-left bank.
2	4+00 – 5+85	5+50	Up to the **10-year** water surface elevation	½ ton toe rock trench buried under the bank toe	*None*	
3	6+00 – 8+00	*None*	From the bank toe and up to lowest course of vegetated soil lift, approximately 3 feet up from the channel bed.	½ ton toe rock trench buried under the bank toe	5 courses above the embedded bank rock up to **10-year** water surface elevation	
2a	8+00-9+20	*None*	Up to the **10-year** water surface elevation	½ ton toe rock trench buried under the bank toe	*None*	
4	9+20 – 10+50	9+50	From the bank toe and up to lowest course of vegetated soil lift, approximately 3 feet up from the channel bed.	½ ton toe rock trench buried under the bank toe	5 courses above the embedded bank rock up to **10-year** water surface elevation	
2b	10+50 – 12+20 ***River-right bank only**	*None*	Up to the **10-year** water surface elevation	½ ton toe rock trench buried under the bank toe	*None*	
2c	11+80 – 13+60 ***River-left bank only**	*None*	Up to the **10-year** water surface elevation	½ ton toe rock trench buried under the bank toe	*None*	
5	21+30-22+20	*None*	*None*	*None*	*None*	

1.4.1 Module Key Components

Rock Cross-Vane Weirs
Rock cross-vane structures will be constructed to redirect flows away from the banks and towards the center of the channel. These structures are shallow rock weirs that, in plan form, are concave in the downstream direction. The concave shape creates a scour pool that provides aquatic habitat benefit; scour will be modeled to ensure that it will not undermine cross-vane stability.

In the base of the channel, cross-vane weirs will be constructed using half-ton rock ranging from 30 to 48 inches diameter on the intermediate axis. Up to 10 feet downstream of each weir, limited excavation will occur to construct a reinforced plunge pool.

At the middle of the channel, rock will be embedded such that there is no more than six inches of height from the streambed grade to the top of the rock, and no more than six inches of drop from the streambed grade to the downstream plunge pool. Limiting the drop to 6 inches or less will ensure that fish passage is possible without the need for a notch. Laterally towards the edge of the weir, the height of the exposed rock will gradually increase by an additional 12 inches, and the base of the excavated plunge pool will meet existing grade. Rock placement will extend laterally until rocks are fully embedded into the armored banks.

The downstream plunge pool will be reinforced with 1/8-ton rock (18-30 inch diameter), and then backfilled with engineered streambed material. This treatment will prevent a deeper scour pool from forming downstream of the weir.

Embedded Rocks for Bank and Toe Stabilization
Banks will be armored with rock slope protection by over-excavating, placing rocks, and filling with soil. Rocks will be half-ton in size at the toe, and will decrease in size moving up the slope. Rock embedded in the banks will be placed with a maximum thickness of 3 feet measured perpendicularly from the slope, and then a 1-foot layer of soil will be placed over the rock and hydroseeded. Gaps between rocks will be filled in with soil. Live willow staking (discussed in greater detail in the following section) will be installed concurrently with the rock placement to ensure plant establishment throughout the stabilized bank.

In addition to rock slope protection, a small amount of geogrid will be placed under the access road and along part of the slope to prevent longitudinal cracking of the aggregate base road at the top of the slope.

Vegetated Soil Lifts
Vegetated soil lifts will be used in Modules 3 and 4 as an alternative approach to using rock for bank stabilization. Each 16-inch lift of native soil will be wrapped in woven coir fabric and compacted after installation. At the front of each lift is a densely packed mattress of biodegradable coir fibers that are attached to the coir fabric. The lifts will be anchored with stakes and/or live willow cuttings.

Vegetation Planting

Live stakes of willow and/or other riparian vegetation will be planted on the lower bank slope to "provide additional root structure, dampen turbulence, and reduce velocities while also providing vegetative enhancements" (Zone 7 Water Agency, 2022). Because rock slope protection is fully embedded and over-filled with soil, vegetation plantings are the primary mechanism of increasing the roughness on lower banks to decrease velocities. Live stake plantings will extend throughout the embedded rock on the lower bank slope (i.e. the portion of the bank slope corresponding to the 15-foot lateral distance of embedded rock). Plantings will also extend up to this level along the entire length of each module, whether or not embedded rock is present. Specific species may include:

- Arroyo willow (*Salix lasiolepis*)
- Pacific willow (*Salix lasiandra*)
- Red willow (*Salix laevigata*)
- Mulefat (*Baccharis salicifolia*)
- Sandbar willow (*Salix exigua*)

Container plantings will be interspersed amidst the hydro-seeded upper bank zone. Plantings will be random at an approximate 6 foot spacing. These low-profile shrubs and other perennial plants will provide additional soil stabilization and prevent the encroachment of non-native grasses/weeds. The following plants were evaluated for container planting in this zone and can be selected from as available:

- Creeping Snowberry (*Symphoricarpos mollis*)
- Manzanita, Dwarf (*Arctostaphylos edmundsii*)
- Coyote Brush, Prostrate (*Baccharis pilularis*)
- California Buckwheat (*Eriogonum fasciculatum*)
- California Lilac (*Ceanothus thyrsiflorus*)

Upslope of the toe plantings, the side slopes of the banks will be hydro-seeded with grasses and small non-grass perennials, which will be selected based on drought tolerance, quick growth, longevity, and deep-rooting erosion control properties. The following native species were selected as a preliminary seed mix, providing a combination of quick-growing grasses for rapid soil stabilization and slower-growing but longer-lived plants for longevity:

- Blue wildrye (*Elymus glaucus*)
- California brome (*Bromus carinatus*)
- California meadow barley (*Hordeum brachyantherum*)
- Creeping wildrye (*Elymus triticoides*)
- Purple needlegrass (*Stipa pulchra*)
- California oatgrass (*Danthonia californica*)
- Blue-eyed grass (*Sisyrinchium bellum*)
- Nude buckwheat (*Eriogonum nudum*)
- California poppy (*Eschscholzia californica*)
- Common yarrow (*Achillea millefolium*)
- Mugwort (*Artemisia douglasiana*)

The top of the left bank along the Alamo Creek Trail will be planted with native riparian trees and shrubs. These plantings will improve aesthetics along the corridor and provide shade for trail users. 15 trees and 11 shrubs will be planted in total. The planting palette will be selected

based on ecological suitability, ease of maintenance, and shade aesthetics. The 60% planting plan includes the following trees and shrubs, planted at a variable spacing of 20 to 50 feet:

- Valley oak (*Quercus lobata*)
- Coast live oak (*Quercus agrifolia*)
- Blue oak (*Quercus douglasii*)
- California buckeye (*Aesculus californica*)
- California black walnut (*Juglans hindsii*)
- Western sycamore (*Platanus racemosa*)
- California box elder maple (*Acer negundo* var. *californicum*)
- Blue elderberry (*Sambucus mexicana*)
- Coyote brush (*Baccharis pilularis*)
- Toyon (*Heteromeles arbutifolia*)
- California coffeeberry (*Rhamnus californica*)

The variety of oak species provides aesthetic interest and allows oaks to be clustered near their associates. However, valley oaks and coast live oaks may be replaced by additional blue oaks if they are determined to be more suitable for channel slopes. For information on tree and shrub placement, please refer to the 60% Basis of Design, Section 4.1.4.3.

1.5 PROJECT CONSTRUCTION

1.5.1 Construction Schedule/Sequencing

Project construction is anticipated to occur during the 2025 season (May 1 to October 31). The work days will be from Monday through Friday, and the estimated time to complete the Project is approximately 158 days. A team of up to 10 total construction workers will work on the Project site. The trails on both sides of the creek will be closed during project construction. An alternate route will be provided during this time.

1.5.2 Staging/Materials Delivery and Laydown

All staging and access activities will occur within the Project boundary as shown in **Figure 1-4**. The Project boundary shows the maximum area of disturbance. The primary access point will occur from Amador Valley Road, which is owned by Zone 7. Dublin Boulevard will be used for access from the south.

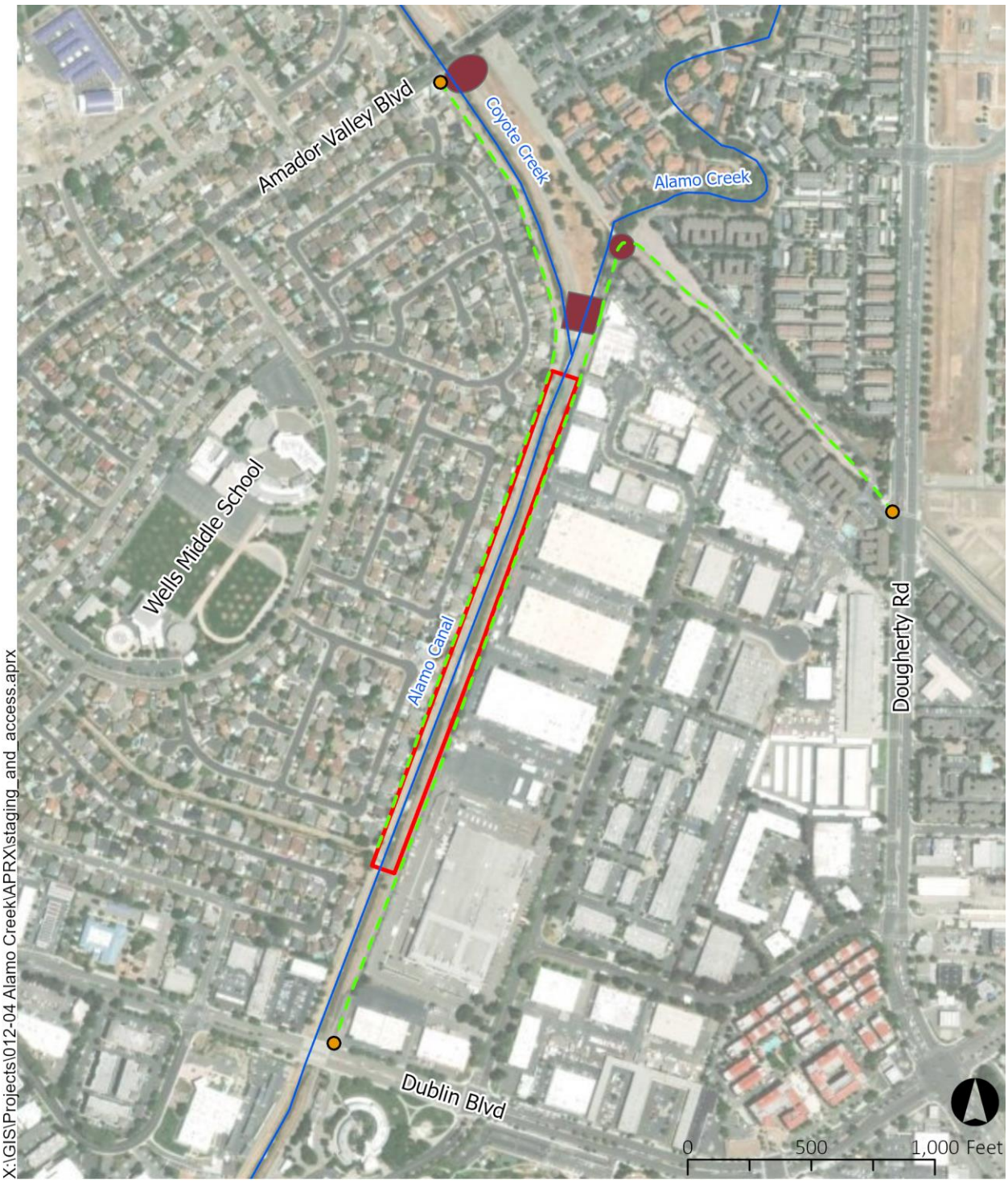


FIGURE 1-4 STAGING AND ACCESS

1.5.3 Construction Equipment

Construction equipment will be mobilized prior to the start of construction. Equipment and materials will be staged in upland areas and on access roads adjacent to Alamo Creek.

The following is a list of equipment that would be used for construction at the Project site.

- Bulldozer (2)
- Dump truck (2)
- Air compressor (1)
- Excavator (2)
- Compactor (1)
- Water truck (3)
- Dewatering pump (4)
- Skid steer loader (2)
- Backhoe (1)
- Paver (1)
- Roller (1)

TABLE 1-2 CONSTRUCTION EQUIPMENT USED BY PHASE

Phase	Equipment Type	Quantity
Site Preparation and Mobilization	Bulldozer	2
	Dump truck	2
	Air compressor	1
Toe Trench and Rock Scout Pool Installation and Bank Work	Excavator	2
	Dump truck	2
	Compactor	1
	Water truck	3
	Dewatering pump	4
	Surveying equipment	1
	Safety and traffic management equipment	1
Planting, Irrigation, and Trail Repair	Excavator	2
	Dump trucks	2
	Water trucks	3
	Skid steer loaders	2
	Backhoes	1
	Pavers	1
	Rollers	1
	Safety and traffic management equipment	1

1.5.4 Truck Trips and Haul Routes

Trucks will haul off unused or excess materials and haul in new materials (i.e., rock) for construction. Estimated earthwork of import and export of materials will require 1,549 roundtrip truck trips over the total duration of project construction. It is assumed that excavated unused materials will be disposed of at the Altamont Landfill, and materials brought to the site will be sourced from a quarry or area within 10 miles of the Project site.

1.5.5 Dewatering

Cofferdams, gravity pipes, and/or pump diversions may be used to divert streamflow in Alamo Creek and dewater as necessary to create suitable conditions for construction activities in the channel, and to prevent any impacts to in-stream water quality from construction activities. The

streamflow diversion activities will be determined by the contractor dependent on the baseflow conditions in the channel. Summer baseflow in the channel may range from 6 to 13 cubic feet per second (cfs). Cofferdams will be constructed of sandbags or similar material, or a water-filled plastic flood barrier will be stacked on plastic sheeting. Water may be diverted around the site using a gravity-fed bypass. If a gravity-fed bypass is not feasible, pumps with screened intakes may be used to dewater the construction area. The contractor shall be responsible for installing and operating the diversion and/or dewatering system in full conformance with the technical specifications, and with all permit requirements associated with this Project.

1.5.6 Excavation and Fill Information

The maximum excavation depths will be 5 feet, for installing the bank toe rock. The total excavation volume will be 12,148 cubic yards (CY), the total soil fill will be 4,636 CY, and the total rock fill will be 5,366 CY.

1.6 Project Operations and Maintenance

After completion of Project construction, the Project will be maintained and monitored in accordance with permits from state and federal resource agencies. This is expected to include annual monitoring and reporting, as well as meeting the defined success criteria for vegetative plantings (typically requiring a % survival rate at various years intervals).

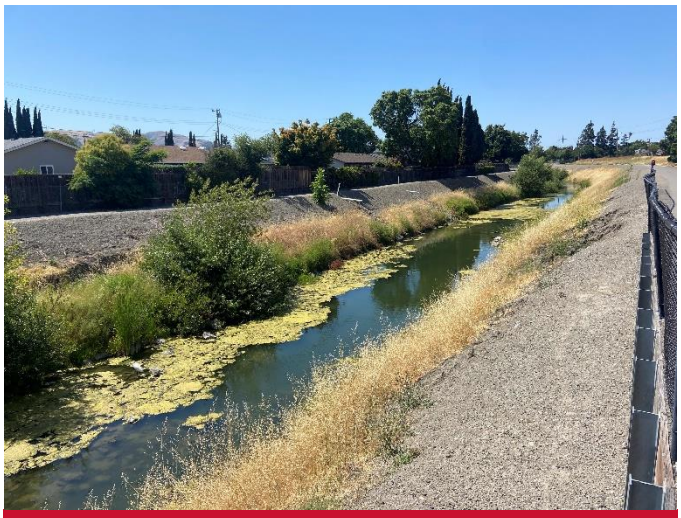
In addition, Zone 7 is responsible for routine maintenance activities required to maintain Zone 7's flood protection facilities, including this Project. Routine maintenance includes monthly visual inspections to identify any issues, as well as as-needed vegetation management, ecologically uplifting channel maintenance, access road maintenance, debris removal, and graffiti abatement pursuant to the Zone 7's routine maintenance agreement (RMA). Channel maintenance activities typically take place between May 1 and October 31. Any activities that require more intensive work beyond these listed maintenance activities covered by the RMA will require seeking additional permits and California Environmental Quality Act (CEQA) coverage as its own project.

1.7 References

Stanford, B., Grossinger, R. M., Beagle, J., Askevold, R. A., Leidy, R. A., Beller, E. E., Salomon, M., Striplen, C. J. & Whipple, A. (2013). *Alameda Creek Watershed Historical Ecology Study*. San Francisco Estuary Institute, Richmond, CA.

Zone 7 Water Agency, 2022. Alamo Creek Bank Stabilization and Flood Management Pilot Project: Full Proposal. Prepared for DWR Floodplain Management, Protection, and Risk Awareness Grant Program.

2 INITIAL STUDY



Initial Study

Alamo Creek Bank Stabilization and Flood Management Pilot Project

Dublin, CA

January 2025

Prepared for:

Zone 7 Water Agency

Prepared by:

HDR Engineering, Inc.

FlowWest, LLC.

This page is intentionally blank.

Contents

This page is intentionally blank.

2.1 Environmental Checklist Form

1. Project Title: Alamo Creek Bank Stabilization and Flood Management Pilot Project
2. Lead Agency name and address: Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency), 100 North Canyons Parkway, Livermore, CA 94551
3. Contact person and phone number: Elke Rank, (925) 454-5005
4. Project location: Dublin, California
5. Project sponsor's name and address: Jeff Tang (Zone 7 Water Agency), 100 N. Canyons Parkway, Livermore, CA 94551
6. General Plan designation: Open Space
7. Zoning: R-1 Single Family Residential (Minimum Lot Area)
8. Description of Project: The Alamo Creek Bank Stabilization and Flood Management Pilot Project will reduce erosion and manage flood risks along Alamo Creek. The project involves a series of bank stabilization modules aimed at reducing erosion, preventing bank failure, and improving habitat for aquatic and riparian species. The modules will include rock weirs, vegetated soil lifts, and native plantings to stabilize the creek banks and redirect turbulent flows. This project will inform Zone 7's Flood Management Plan for wider use throughout Zone 7's system.
9. Surrounding land uses and setting: The Project is located in a residential and commercial part of the City of Dublin in Alameda County, California, and is immediately downstream of a large concrete structure that was designed to hold the grade where South San Ramon Creek joins Alamo Creek.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.): California Department of Fish and Wildlife Lake and Streambed Alteration Agreement, Regional Water Quality Control Board Section 401, United States Army Corps of Engineers Section 404
11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?: California Native American tribes affiliated with the Project area have been alerted. None have requested consultation.

2.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality

☒	Biological Resources	☒	Cultural Resources	☒	Energy
☒	Geology/Soils	☒	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☒	Hydrology / Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☒	Noise	☐	Population/Housing	☒	Public Services
☒	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities/Service Systems	☒	Wildfire	☒	Mandatory Findings of Significance

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the Project would not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed 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 proposed Project may have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed 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 proposed 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.

Ike Rank — Sr Water Resources Planner, Zone 7 Water Agency — 1-24-2025

Signature — Date:

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to Projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on Project-specific factors, as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

a. Earlier Analysis Used. Identify and state where they are available for review.

b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a Project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:

a. The significance criteria or threshold, if any, used to evaluate each question; and

b. The mitigation measure identified, if any, to reduce the impact to less than significance.

2.4.1 Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.** A scenic vista is a view that possesses visual and aesthetic qualities of high value to the community. Scenic vistas can provide views of natural features or significant structures and buildings. The term "vista" generally implies an expansive view, usually from an elevated point or open area.

I-680 is designated as a State Scenic Highway. According to the State Scenic Highway website, "the scenic aspects of the corridor feature the rolling wooded hills of the Contra Costa range contrasted with the flat Sunol Valley ringed by distance hills to the north and east." A portion of I-680 is located 1,750 feet east of the closest part of the Project; however, the Project site is not visible from I-680.

Trail users along the Alamo Creek Trail, which runs along the eastern side of the Project site, have scenic views of the East Bay hills in the distance beyond single family homes. The Project site is in an area zoned as commercial, residential, and light industrial (City of Dublin, 2024).

The addition of the Project components is consistent with the site's current use as a flood control channel and will not obscure any scenic views after the Project is complete. However, there may be impacts during Project construction. Construction equipment such as excavators, cranes, and trucks may temporarily obscure views. However, these impacts would be limited to the construction window and would therefore be temporary. Therefore, there would be a less than significant impact.

b) **No Impact.** There are no resources within the Project area identified as scenic resources. The Project will not cause any damage to trees, rock outcroppings, or any historic buildings proposed as part of the Project. Therefore, there would be no impact.

c) **No Impact.** The Project is surrounded by light industrial and residential lands. The Project components are consistent with the existing visual character of the channel. The Project would not change the existing land use and therefore would not conflict with any zoning regulations governing scenic quality. Therefore, there would be no impact.

d) **No Impact.** Project components include in-channel modules, rock cross-vanes, rock slope protection, and vegetation planting. No new sources of light are proposed as part of this Project. Therefore, there would be no impact.

Mitigation measures related to aesthetic resources

No mitigation measures are required.

References related to aesthetic resources

Caltrans, 2024. State Scenic Highway Map, GIS Portal. Available Online: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed April 1, 2024.

City of Dublin, 2024. City of Dublin, GIS Portal. Available Online: https://gis.dublin.ca.gov/Html5Viewer/?viewer=default&layerTheme=7. Accessed March 15, 2024.

2.4.2 Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the Project:				
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
a) 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))?	☐	☐	☐	☒
b) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The Project would be constructed in the Alamo Creek channel in the developed area of the City of Dublin, surrounded by light industrial and residential land uses. The Project area is classified as urban and built-up land according to the Farmland Mapping and Monitoring Program, and would not sustain farmland. Project components, staging, and access would not occur on any type of farmland. The Project would not result in the conversion of any farmland to non-agricultural use. Therefore, there would be no impact.

b) **No Impact.** The Project would not be located in or near any land used or zoned for agricultural use. The Project area is zoned as R-1, Single Family Residential (Minimum Lot Area). The area to the west of the Project is zoned as R-1 Single Family Residential (Minimum Lot Area), the area east of the Project is zoned as M-1 Light Industrial, the area north of the Project is zoned as PD Planned Development, and the area south of the Project is zoned as C-2 General Commercial. Since the Project is not located on or near designated agricultural land, the Project would not conflict with a Williamson Act contract or use of agriculturally zoned parcels. Therefore, there would be no impact.

c), d) **No Impact.** The Project is surrounded by light industrial and residential lands. There is no forest land or timberland. Therefore, the Project would not conflict with any existing zoning for forest land or cause rezoning of forest land, and there would be no loss of forest or conversion of forest land to non-forest use. Therefore, there would be no impact.

e) **No Impact.** The Project and its surrounding area are not designated or zoned as any type of farmland or forest land. Therefore, there would be no changes in the existing environment which would result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. The closest plot designated as unique farmland is located approximately 3.05 miles south of the Project area, and would not be affected by any Project construction or maintenance activities. Therefore, there would be no impact.

Mitigation measures related to agricultural resources

No mitigation measures are required.

References related to agricultural resources

Department of Conservation (DOC), 2024. California Important Farmland Finder. Available Online: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 14, 2024.

2.4.3 Air Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

Impact Analysis

a) **Less Than Significant Impact**. The Project is located in Alameda County in the San Francisco Bay Area Air Basin and under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The latest air quality plan is the BAAQMD 2017 Clean Air Plan. The BAAQMD 2017 Clean Air Plan outlines a multi-pollutant approach to reduce the Bay Area air pollutant and GHG emissions in order to protect public health and the climate. Control measures are organized by sector including stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. The Project would reduce erosion, improve bank stabilization, and decrease the risk of a catastrophic bank failure from flooding. Improving this critical water infrastructure is consistent with the BAAQMD 2017 Clean Air Plan by making our infrastructure more resilient to climate change and extreme weather. The Project would not hinder implementation of any of the control measures outlined in the BAAQMD 2017 Clean Air Plan. The Project would include tree and shrub planting consistent with the purpose of the Urban Tree Planting control measure to increase carbon sequestration and reduce erosion in the long-term.

b) **Less Than Significant Impact**. Alameda County is in federal nonattainment for 8-hour ozone (both the 2008 and 2015 standards) and PM2.5 (2006 standard) and state nonattainment for ozone, PM2.5, and PM10. The BAAQMD sets project-level thresholds of significance for criteria pollutants for which the San Francisco Bay Area Air Basin is in non-attainment.

Construction GHG emissions would result from use of heavy-duty construction equipment, worker vehicle trips for up to ten workers, vendor trips, and 1,549 truck trips to haul rock, debris, soil, and other materials. As described in the Project Description, construction would occur for approximately 158 days, 6 days/week, between May 1, 2025 and October 31, 2025. Construction emissions for both air quality and GHG were calculated using CalEEMod Version 2022.1.1.22.

As shown in **Table 2-1,** the Project's construction emissions would not exceed the BAAQMD thresholds for ROG, NOx, PM10 exhaust, or PM2.5 exhaust. The Project would adhere to the basic best management practices (BMPs) for projects with a less-than-significant air pollutant impact. These include watering exposed surfaces twice a day, covering haul trucks, street sweeping, limiting vehicle speeds to 15 mph on unpaved roads, suspending grading activities when average wind speeds exceed 20 mph, wheel and truck

washing, treating unpaved roads (> 100 feet) with wood chips, mulch or gravel, and posting adequate signage at construction sites for dust complaints. Operational emissions would be minimal and similar to the existing maintenance along this section of Alamo Creek. Therefore, the Project would not be result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.

TABLE 2-1 MAXIMUM DAILY CONSTRUCTION EMISSIONS (LB/DAY)

	ROG	NOx	PM10 Exhaust	PM2.5 Exhaust
2025 Maximum Daily Emissions	3.10	24.88	1.02	0.94
BAAQMD Thresholds of Significance	54	54	82	54
Exceeds Threshold?	No	No	No	No
2025 Maximum Daily Emissions	ROG	NOx	PM10 Exhaust	PM2.5 Exhaust
BAAQMD Thresholds of Significance	3.10	24.88	1.02	0.94
Exceeds Threshold?	54	54	82	54
	No	No	No	No

c) **Less Than Significant Impact**. The Project has sensitive receptors located adjacent to the project boundary. There are single family homes along the west side of Alamo Creek and multi-family residential homes to the northeast and southwest of Iron Horse Regional Trail. Because the Project's construction duration would be temporary (6 months) and construction activity would not be substantial (Table 2-1), the Project is not anticipated to expose sensitive receptors to substantial pollutant concentrations. Average daily emissions would be even lower than those shown in Table 2-1. Furthermore, construction activity would be spread out intermittently along the project area and would not occur in one location for a long time. Impacts would be less than significant.

d) **Less Than Significant Impact**. According to the BAAQMD's 2022 CEQA Guidelines, land uses that typically generate odors include wastewater treatment plants, wastewater pumping facilities, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, painting/coating operations, rendering plants, coffee roasters, food processing facilities, confined animal facilities/feed lot/dairy, green waste and recycling operations, and metal smelting plants. The Project does not include any land use that would typically generate any long-term sources of odor as minimal maintenance would be required. Therefore, the Project would not expose sensitive receptors to adverse odors and the impact would be considered less than significant.

Mitigation measures related to air quality

No mitigation measures are required.

References related to air quality

BAAQMD. 2017. Clean Air Plan. Available Online: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf.

BAAQMD. 2022. CEQA Thresholds and Guidelines Update. Available Online: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.

2.4.4 Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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 wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Assessment

A desktop review and various field surveys were performed to characterize the environmental setting of the BSA, and to determine the potential effects Project-related activities could have on biological resources.

Desktop Review

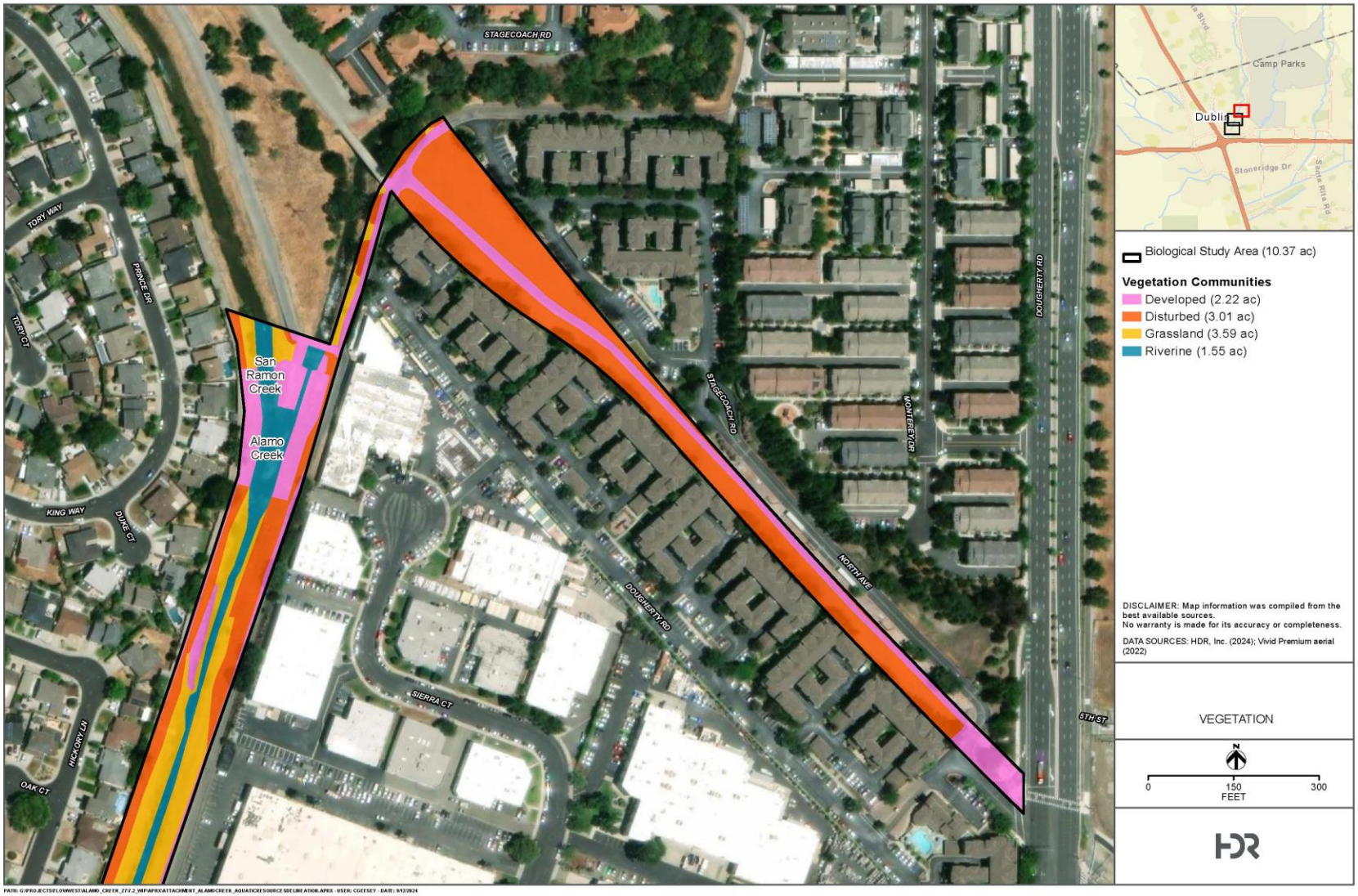
A desktop review and various field surveys were performed to characterize the environmental setting of the BSA, and to determine the potential effects Project-related activities could have on biological resources.

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (USFWS, 2024a)
- USFWS Critical Habitat Portal (USFWS, 2024b)
- National Marine Fisheries Service (NMFS), West Coast Region, Critical Habitat Mapper (NMFS, 2024)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) QuickView Tool in BIOS 5 (CDFW, 2024)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS, 2024)
- Dublin USGS 7.5-minute topographic quad maps
- Current and historical aerial photography for vegetative, topographic, and hydrologic signatures (Google Earth, 2024)

The USFWS and NMFS databases were queried to identify federally protected species and critical habitats with the potential to occur in the BSA. The NMFS query tool also provided information on the presence or absence of essential fish habitat. A query of the CNDDB provided a list of processed and unprocessed special-status species occurrences in the Dublin, California, USGS 7.5-minute quadrangle, along with all adjacent quads. In addition, the CNPS database was queried to identify special-status plant species and communities with the potential to occur in the aforementioned quads.

Field Surveys

HDR biologist performed a reconnaissance-level habitat assessment to map vegetation communities and determine the potential for special-status species in the BSA. Habitats that were identified include wild oat grassland, disturbed, developed, arroyo willow thicket, and riverine (**Figure 2-1**). Arroyo willow thicket and riverine communities are considered sensitive by CDFW.


STAGECOACH RD
TORY WAY
PRINCE DR
TORY CT
San Ramon Creek
Alamo Creek
KING WAY
DUKE CT
HICKORY LN
OAK CT
SIERRA CT
DOUGHERTY RD
STAGECOACH RD
MONTEREY DR
NORTH AVE
DOUGHERTY RD
5TH ST
Camp Parks
Dublin
Stoneridge Dr
Santa Rita Rd
Biological Study Area (10.37 ac)
Vegetation Communities
Developed (2.22 ac)
Disturbed (3.01 ac)
Grassland (3.59 ac)
Riverine (1.55 ac)
DISCLAIMER: Map information was compiled from the best available sources.
No warranty is made for its accuracy or completeness.
DATA SOURCES: HDR, Inc. (2024); Vivid Premium aerial (2022)
VEGETATION
N
0
150
300
FEET
HDR


Alamo Creek
PENN DR
EDEN ST
OAK CT
ELM CT
MCKORY LN
POPLAR WAY
TRINITY CT
YORK DR
FIR CT
HEMLOCK ST
SPRUCE LN
PINE CT
ASH CT
CEDAR LN
SIERRA CT
Camp Parks
Dublin
Stoneridge Dr
Santa Rita Rd
Biological Study Area (10.37 ac)
Vegetation Communities
Arroyo Willow Thicket (0.01 ac)
Developed (2.22 ac)
Disturbed (3.01 ac)
Grassland (3.59 ac)
Riverine (1.55 ac)
DISCLAIMER: Map information was compiled from the best available sources.
No warranty is made for its accuracy or completeness.
DATA SOURCES: HDR, Inc. (2024); Vivid Premium aerial (2022)
VEGETATION
N
0
150
300
FEET
HDR

FIGURE 2-1. VEGETATION COMMUNITIES

The Aquatic Resources Delineation was conducted by HDR Biologists, Ian Cain and Emily Burghart on May 8, 2024. The delineation used the Routine Determination Method as described in Part IV, Section D, of the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987), hereafter called the Corps Manual. The Corps Manual will be used in conjunction with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), hereafter referred to as the Supplement (United States Army Corps of Engineers 2008). For areas where the Corps Manual and the Supplement differ, the Supplement will be followed. In addition, the delineation report will incorporate the newly defined waters of the U.S. based on the Sackett vs. Environmental Protection Agency Court ruling, which amended the new definition in August 2023. The delineation survey area is accessible and was surveyed on foot during the field visit.

Vegetation Communities

Vegetation communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. The BSA is dominated by wild oat annual grassland. Disturbed and developed communities also occur in the landscape. Arroyo willow thicket and riverine communities are the only sensitive communities that occur in the BSA. Full descriptions of each vegetation community are provided in the Biological Technical Report (Appendix A).

Special-Status Species

Four special-status wildlife species were determined to have potential to occur in the BSA based on the presence of suitable habitat and the fact that the BSA overlaps with the current known range of the species. The BSA provides suitable habitat for the following species:

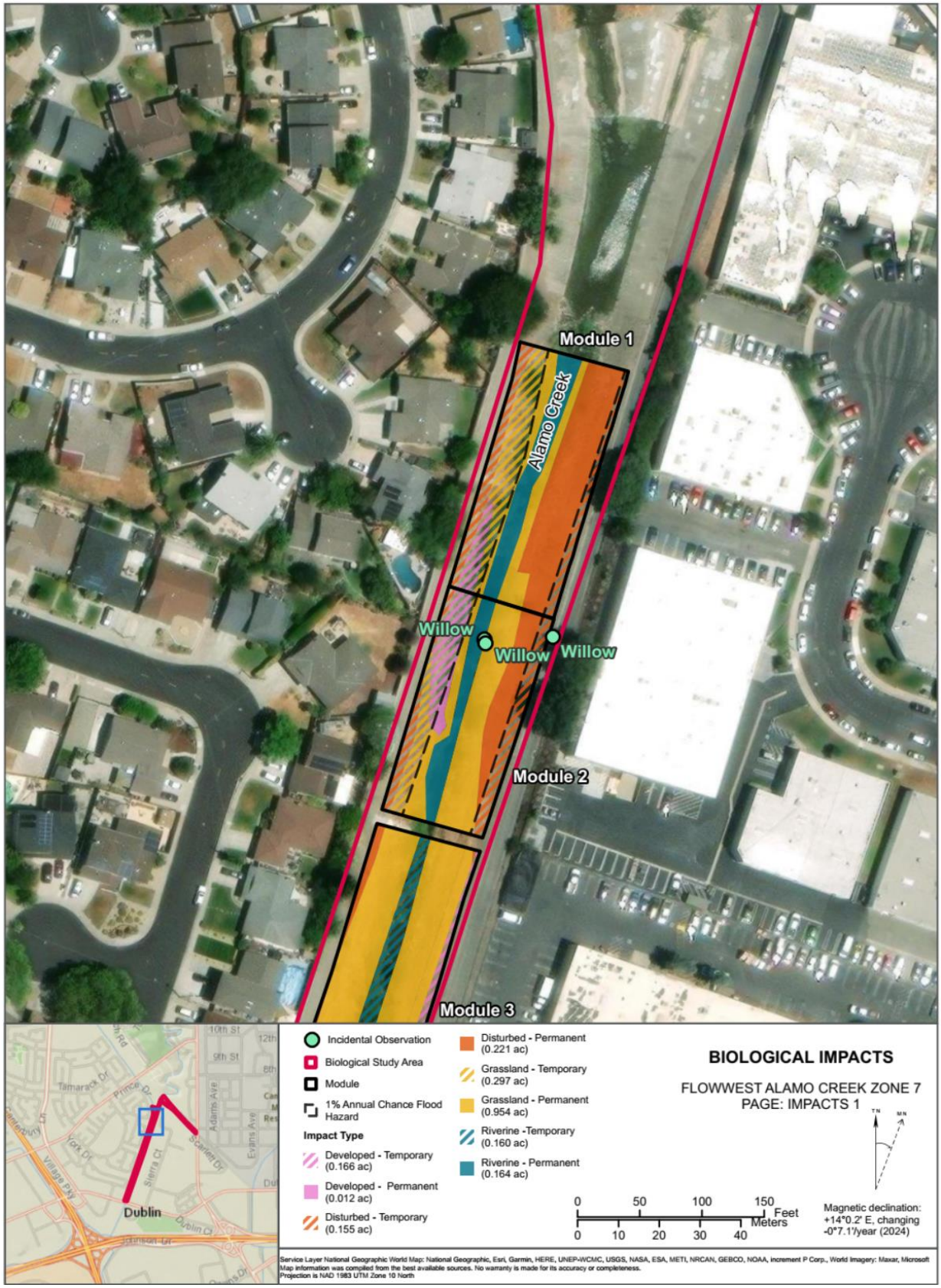
- Burrowing owl (*Athene cunicularia*; Species of Special Concern (SSC))
- Crotch's bumble bee (*Bombus crotchii*; State Candidate Endangered)
- Northwestern pond turtle (*Actinemys marmorata*; Federal Proposed Threatened, SSC)
- Pallid bat (*Antrozous pallidus*; SSC)
- Congdon's tarplant (*Centromadia parryi ssp. Congdonii;* CRPR 1B)[1]
- San Joaquin spearscale (*Extriplex joaquinana;* California Rare Plant Rank [CRPR] 1B)
- Prostrate vernal pool navarretia (*Navarretia prostrata;* CRPR 1B)
- Saline clover (*Trifolium hydrophilum*; CRPR 1B)

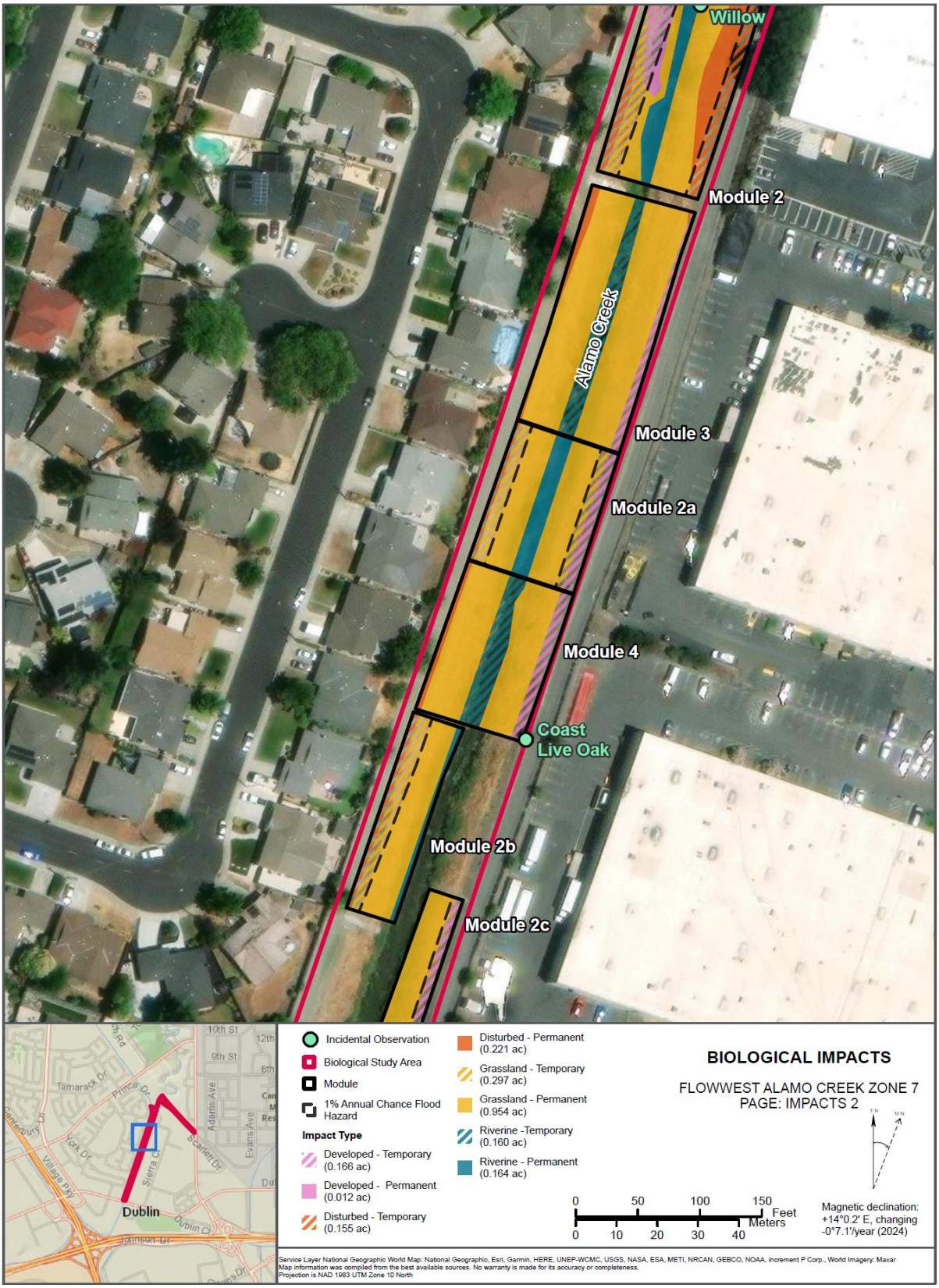
Full descriptions of each of these species including the habitats where they are typically found and their lifecycles is provided in the attached Biological Technical Report (Appendix A).

Impact Analysis

Based on the findings presented above, the section below analyzes the potential for impacts to biological resources to occur as a result of project implementation. **Figure 2-2** shows the proposed impacts to the mapped vegetation communities in the BSA. **Mitigation Measures BIO-1 through BIO-7** should be implemented during Project design and construction to lessen potential impacts on sensitive biological resources. The following measures do not clearly apply to a single species or resource, but instead can be applied to minimize impacts on all biological resources. Thus, they are listed prior to the resource-specific impact analysis and will be referenced in the following analyses as appropriate.

[1] Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California.


Module 1
Alamo Creek
Willow
Willow
Willow
Module 2
Module 3
Dublin
Incidental Observation
Biological Study Area
Module
1% Annual Chance Flood Hazard
Impact Type
Developed - Temporary (0.166 ac)
Developed - Permanent (0.012 ac)
Disturbed - Temporary (0.155 ac)
Disturbed - Permanent (0.221 ac)
Grassland - Temporary (0.297 ac)
Grassland - Permanent (0.954 ac)
Riverine -Temporary (0.160 ac)
Riverine - Permanent (0.164 ac)
BIOLOGICAL IMPACTS
FLOWWEST ALAMO CREEK ZONE 7
PAGE: IMPACTS 1
0 50 100 150 Feet
0 10 20 30 40 Meters
Magnetic declination: +14°0.2' E, changing -0°7.1'/year (2024)
Service Layer National Geographic World Map: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., World Imagery: Maxar, Microsoft
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North


Willow
Module 2
Alamo Creek
Module 3
Module 2a
Module 4
Coast
Live Oak
Module 2b
Module 2c
Dublin
Incidental Observation
Biological Study Area
Module
1% Annual Chance Flood Hazard
Impact Type
Developed - Temporary (0.166 ac)
Developed - Permanent (0.012 ac)
Disturbed - Temporary (0.155 ac)
Disturbed - Permanent (0.221 ac)
Grassland - Temporary (0.297 ac)
Grassland - Permanent (0.954 ac)
Riverine -Temporary (0.160 ac)
Riverine - Permanent (0.164 ac)
BIOLOGICAL IMPACTS
FLOWWEST ALAMO CREEK ZONE 7
PAGE: IMPACTS 2
0 50 100 150 Feet
0 10 20 30 40 Meters
Magnetic declination: +14°0.2' E, changing -0°7.1'/year (2024)
Service Layer National Geographic World Map: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., World Imagery: Maxar
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North


Module 2a
Module 4
Alamo Creek
Coast Live Oak
Module 2b
Module 2c
Dublin
Incidental Observation
Biological Study Area
Module
1% Annual Chance Flood Hazard
Impact Type
Developed - Temporary (0.166 ac)
Developed - Permanent (0.012 ac)
Disturbed - Temporary (0.155 ac)
Disturbed - Permanent (0.221 ac)
Grassland - Temporary (0.297 ac)
Grassland - Permanent (0.954 ac)
Riverine -Temporary (0.160 ac)
Riverine - Permanent (0.164 ac)
BIOLOGICAL IMPACTS
FLOWWEST ALAMO CREEK ZONE 7
PAGE: IMPACTS 3
0 50 100 150 Feet
0 10 20 30 40 Meters
Magnetic declination: +14°0.2' E, changing -0°7.1'/year (2024)
Service Layer National Geographic World Map: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp., World Imagery: Maxar
Map information was compiled from the best available sources. No warranty is made for its accuracy or completeness.
Projection is NAD 1983 UTM Zone 10 North

FIGURE 2-2. BIOLOGICAL IMPACTS

a) **Potentially Significant Unless Mitigation Incorporated.** There are four special-status plant species and four special-status wildlife species with potential to occur within the proposed Project area. All four plant species with potential to occur would occur within the wild oat grassland community of the project area. None of these species were observed during either of the April or May 2024 site visits. Approximately 0.297 acres of grassland will be temporarily impacted and 0.954 acres will be permanently impacted by the associated grading required to construct the modules. If any of the special-status plant species were to occur within these grassland areas, they could be damaged or destroyed during construction which would result in a significant impact. The implementation of **Mitigation Measure BIO-2: Pre-Construction Plant Surveys** would reduce impacts on special-status plants to a less than significant level.

Operations and maintenance of the constructed RSP and modules would involve only visual inspections and access road maintenance that would not impact vegetation outside of the extent of the road. Any special status plants would be flagged for avoidance during preliminary surveys.

Burrowing owls have the potential to utilize the ground squirrel burrows observed on-site. The lack of wide expanses of open grassland nearby the BSA render the site unsuitable for overwintering habitat, but burrowing owl could occur on the site during migration or while searching for more suitable habitat. The installation of modules along the channel banks will require excavation of the existing channel slope where burrows are found. This has the potential to collapse burrows that burrowing owls could utilize. If burrowing owls are utilizing these burrows at the time of construction, this could result in significant impacts to the species. The implementation of **Mitigation Measure BIO-3: Pre-Construction Burrowing Owl Survey** below would reduce the impact to a less than significant level.

Northwestern pond turtle has been observed within Alamo Creek during previous surveys of the BSA. The BSA does not offer suitable nesting or basking habitat for the species, but it could be utilized as a migratory pathway. Installation of the rock cross-vanes has the potential to directly harm turtles that are in the creek during construction. Direct impacts to NWPT would be considered a significant impact. Implementation of **Mitigation Measure BIO-4: Northwestern Pond Turtle Avoidance** will reduce these impacts to less than significant. Additionally, sedimentation caused by construction activities could degrade water quality which would decrease habitat suitability. Adherence to the construction best management practices listed above will decrease indirect impacts to a less than significant level.

Pallid bat has the potential to roost beneath the Dublin Boulevard bridge that is at the southern edge of the BSA. Although no work is proposed for the bridge itself, construction noise has the potential to disrupt roosting bats. If there are maternity roosts within the BSA, disturbance of active maternity roosts would affect the reproductive success of the species because young do not fly from the maternity roost until they reach several months in age. Implementation of **Mitigation Measure BIO-5: Bat Surveys** would decrease any impacts on bats to less than significant.

The BSA may provide nesting, wintering, and/or foraging habitat for special-status birds, migratory birds, and raptors. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under Fish and Game Code 3503. Ground disturbance during the nesting season could result in direct effects on nesting birds should they be present in disturbance areas. In addition, there is potential for construction noise and other human activity to result in nest abandonment if nesting birds are present within the vicinity of the disturbance footprint.

Project activities are planned to be conducted outside of the nesting season to minimize the potential for disturbance of active bird nests. However, if the Project must occur during nesting season, the **Mitigation Measure BIO-6: Nesting bird and raptor surveys** and **Mitigation Measure BIO-7: Nest Avoidance** are recommended to minimize potential impacts on birds that may be nesting in and around the disturbance footprint.

b) **Potentially Significant Unless Mitigation Incorporated.** Approximately 0.01 acre of arroyo willow thicket occurs along the bank of Alamo Creek. This community occurs farther south than the construction area for the project and will not be impacted by proposed Project activities. There are two willow trees that occur along the water line near the placement of Module 2 (Figure 2-2). These trees will be left in place during module construction and will not be impacted. A third willow tree occurs at the top of the berm along the paved walking trail. This tree is well outside of the top-of-bank and is not considered a riparian tree. This tree will likely be kept in place to avoid any detrimental impacts to native species. The grassland and disturbed habitats along the berms will be temporarily impacted during construction, but will be reseeded with native grasses or replanted with native trees and shrubs. Trees will be replaced at a 3:1 ratio, as outlined in Mitigation Measure BIO-1. There will be no impacts to sensitive communities as a result of the proposed Project and associated operations and maintenance.

Alamo Creek is a perennial stream. In-water work will occur within Alamo Creek to install the bank stabilization modules. Approximately 0.164 acres of permanent impacts and 0.160 acre of temporary impacts to open water, riverine habitat will be incurred as a result of Project construction. Construction of each module will involve excavating bottom sediment, installing rock within the channel, backfilling with sediment, and planting willow stakes within the lower bank slope. Disturbance to the creek channel would constitute a significant impact. Implementation of **Mitigation Measure BIO-8: No net loss of aquatic resources** will reduce impacts to aquatic resources to a less than significant level and resources will be replaced at a 1:1 ratio and comply with all requirements for aquatic impacts.

c) **No Impact.** The aquatic resources delineation did not identify any wetland habitat within the BSA. While the project would include the placement of embedded rock within locations that are already concrete, grouted rock, or rock, these areas are not characterized as wetland habitat. Therefore, no wetlands will be impacted as a result of the proposed Project.

d) **Less Than Significant Impact.** Alamo Creek is along an engineered, trapezoidal flood protection channel within an urbanized landscape. There are downstream barriers to fish passage that limit anadromous fishes from entering the creek. Additionally, the tall flow control structures just north of the Project area limit movement upstream as well. The position of the creek within the urban landscape does not allow for much terrestrial habitat connectivity and as such, is not included as an Essential Connectivity Area (CDFW 2024). Previous protocol level surveys have determined that CRLF and CTS do not have potential to occur within the study area and do not use the BSA as a migratory pathway. During in-water work the active work area will be dewatered. Flow will be diverted around the work area to retain connectivity. Upon completion of construction, the new modules will dampen flow in the creek, but wildlife migration will not be impacted as a result of the project. Impacts would be less than significant and no additional mitigation measures are necessary. Operations and maintenance activities will not impact wildlife movement as no work will be done in the creek.

e) **No Impact**. The Project is consistent with the City of Dublin General Plan and City of Dublin Municipal Code; both include policies to protect water resources, wetland areas, fish and wildlife habitat, wildlife movement corridors, vegetation communities, open space for the preservation of natural resources, threatened and endangered species, and aquatic habitats. Potential impacts on these resources would be appropriately mitigated through the implementation of the aforementioned mitigation measures.

f) **No Impact.** The BSA is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not conflict with any such plan and there would be no impact.

Mitigation measures related to biological resources

Mitigation Measure BIO-1: General Avoidance, Minimization, and Mitigation Measures

Minimize Footprint. Minimize project-related ground disturbance to the extent practicable. All project-related parking, storage areas, laydown and staging sites, and any other surface-disturbing activities shall be limited to previously disturbed areas when possible and avoid established trees and shrubs.

Environmentally Sensitive Area Fencing. All environmentally sensitive areas to be avoided during project activities shall be temporarily fenced and/or flagged as close to construction limits as feasible. Fencing or flagging shall be high-visibility and left in place for the duration of the project. Environmentally sensitive areas include aquatic resources, brackish marshes, or special-status species habitat. The location and extent of fencing/flagging shall be determined by a qualified biologist who will oversee its installation and conduct regular inspections.

Worker Environmental Awareness Training. Prior to the onset of construction, a qualified biologist shall conduct mandatory contractor/worker environmental awareness training for construction personnel to inform them on the locations of sensitive biological resources and site-specific protective measures required during construction activities. If new construction personnel are added to the project, the contractor shall require them to receive the mandatory training prior to starting work. Training shall discuss special-status species, including species identification, a description of life history, habitat requirements during various life stages, and the species' protected status.

Restoration of Temporarily Disturbed Areas. All exposed and/or disturbed areas resulting from construction activities shall be returned to their original contour and grade and shall be restored using existing topsoil and a hydroseed mix appropriate for the location. All trees removed will be replaced at a ratio of 3:1 or better.

Construction Best Management Practices. No fueling of construction equipment shall occur within 100 feet the Alamo Creek. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of spills and stormwater. Equipment shall be stored in areas that any possible contamination from the equipment would not flow or be washed back into the channel. Daily inspection and cleaning of equipment entering the BSA shall be conducted such that fuel, oil, grease, and deleterious amounts of soil are removed prior to entering the BSA. If an equipment leak occurs in the dewatered area, proper best management practices shall be installed immediately and the equipment shall be removed from the area.

Additionally, best management practices shall be employed on-site to prevent degradation to on- and off-site aquatic resources. Methods would include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All best management practices shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized. The use of monofilament netting or other erosion control materials that could be harmful to species shall be prohibited.

Clean Construction Area. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the BSA. On completion of construction activities, all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes, shall be removed and appropriately disposed.

Mitigation Measure BIO-2: Pre-Construction Plant Surveys.

Prior to initiating proposed ground disturbance or vegetation clearing, including along construction access routes or at temporary work areas, a qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to proposed disturbance areas. These surveys will be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018), which requires rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Surveys will be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern.

Mitigation Measure BIO-3: Pre-Construction Burrowing Owl Survey.

Within 2 weeks of initial ground disturbance, all fossorial mammal burrows within the BSA should be examined for signs of occupation by burrowing owls including presence of pellets, whitewash around the opening, or scattered feathers. If no burrowing owls are detected, no further mitigation is required. If burrowing owls are detected, the AMM methodologies outlined in CDFW's Staff Report on Burrowing Owl Mitigation (2012) would be implemented prior to initiating project-related activities that may impact burrowing owls.

Mitigation Measure BIO-4: Northwestern Pond Turtle Avoidance.

All in water work shall occur during the dry season (ex: May 15 to October 15). Upstream water sources shall be diverted around the sites during instream construction to minimize the likelihood of NWPT movement through the project area during construction.

A qualified biological monitor shall perform a pre-construction survey of the project area prior to construction to verify that NWPT are not present in work areas. Additionally, after the work areas have been dewatered, the biological monitor shall perform daily inspections to ensure that no individuals have entered the work area. If NWPT are identified in the work area, construction activities shall cease until the individual disperses from the area or is relocated by the biological monitor.

Mitigation Measure BIO-5: Bat Surveys.

Prior to implementation of project-related activities in undisturbed portions of the project site and in and around buildings or other human-made structures with recesses where bats could potentially roost, a qualified biologist will conduct a daytime site reconnaissance of the area. The biologist, focusing on buildings and other human-made structures or trees with cavities or exfoliating bark, would look for bats and bat signs including existing roost sites, bat guano deposits, and will listen for roosting bats. If the daytime survey does not identify the presence of potential bat

roosts, no further mitigation is required. If potential roost sites are identified, an exit nighttime survey will be conducted to determine species of roosting bats, relative bat activity, and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat roost sites are identified, appropriate spatial and temporal buffers, as defined by the biologist based on experience with bat species, would be implemented to minimize impact on roosting bats during construction of the project.

Mitigation Measure BIO-6: Nesting bird and raptor surveys.

If project activities occur during the nesting season (February 1 to August 31), then pre-construction surveys to identify active migratory bird and/or raptor nests shall be conducted by a qualified biologist no more than 7 days prior to construction initiation. Focused surveys shall be performed by a qualified biologist for the purpose of determining the presence or absence of active nest sites within the following distances form the disturbance footprint:

- Passerines: Disturbance footprint only, or at the biologist's discretion
- Raptors: 500 feet, or within sight of the disturbance footprint, whichever is smaller
- Special-status Raptors: ½ mile, or within sight of the disturbance footprint, whichever is smaller.

If a lapse in project activities of 7 days or greater occurs for any reason during the nesting season, a qualified biologist shall perform another survey for nesting birds and raptors prior to resuming project activities. If feasible, tree and vegetation clearing will be conducted outside the nesting season.

Mitigation Measure BIO-7: Nest avoidance.

If active nest sites are identified within the survey distances defined in the Nesting Bird and Raptor Surveys measure, a no-disturbance buffer shall be established for all active nest sites prior to commencement of any project-related activities to avoid disturbances to nesting activities. A no-disturbance buffer constitutes a zone in which project-related activities such as vegetation removal, earth moving, and construction cannot occur. The size of no-disturbance buffers would be determined by a qualified biologist based on the species, activities in the vicinity of the nest, and topographic and other visual barriers.

A qualified biologist shall monitor all active nests during construction activities until the nest(s) is deemed inactive. The amount and duration of monitoring would be determined by the qualified biologist and would depend on the same factors mentioned above when determining the size of the no disturbance buffer. If active special-status raptor nests are detected and an appropriately sized no-disturbance buffer (per current national or CDFW guidelines) is not feasible, the biologist may monitor the nest full time depending on the nest location, or only when noise are above background levels tolerated by raptors. Monitoring shall occur until the nestlings have fledged, or the nest is deemed inactive. If disturbance resulting from project activities is observed, construction may be delayed until the nest is no longer active, as determined by a qualified biologist, or the appropriate agency can be consulted.

Mitigation Measure BIO-8. No net loss of aquatic resources.

If permanent impacts to aquatic resources exceed 1/10th of an acre, no net loss of aquatic resources shall be achieved through impact avoidance, minimization, and/or compensatory mitigation. Mitigation for permanent impacts to aquatic resources shall be provided at a minimum of a 1:1 ratio or as required by permits issued through USACE, CDFW, and RWQCB. Mitigation may be provided by on-site creation or habitat restoration or by habitat restoration or enhancement.

Mitigation Measure BIO-9. CCC Steelhead Take Avoidance and Minimization Measures

In channel construction activities would be limited to the period from June 1-October 15, outside of the known migratory and spawning period for CCC steelhead. If minor flows are present, a temporary stream diversion would be used to divert water away from instream construction and maintain flow.

References related to biological resources

California Department of Fish and Wildlife (CDFW). 2024. 'California Natural Diversity Database BIOS 5 Viewer." CDFW Biogeographic Data Branch; Sacramento, California. http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.

California Native Plant Society (CNPS). 2024. "Inventory of Rare and Endangered Plants" (online edition, v 9.5). CNPS; Sacramento, California.

Google Earth Pro. 2024. Imagery date range 1993–2018.

National Marine Fisheries Service (NMFS). 2024. "National NMFS ESA Critical Habitat Mapper" https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318

U.S. Fish and Wildlife Service (USFWS). 2024a. "Information for Planning and Consultation System" (online edition). Carlsbad, California. https://ecos.fws.gov/ipac/.

U.S. Fish and Wildlife Service (USFWS). 2024b. "Critical Habitat Mapper." https://fws.maps.arcgis.com/home/webmap/viewer.html.

2.4.5 Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Environmental Setting

This section presents an overview of information on the local precontact history and historic-period of the Proposed Action area and vicinity. Understanding local cultural history is critical in defining important local, state, and/or regional events, trends, or patterns in prehistory and history by which the significance of prehistoric and historical cultural resources may be evaluated and their significance may be established.

Archaeological Context

The Project falls within the San Francisco Bay Area. During the mid to late 20th century, attempts to synthesize the regional archaeological record produced the Central California Taxonomic System. Bennyhoff and Fredrickson 1994 divided the prehistory of central California into a series of cultural periods, reflecting an increasing degree of cultural complexity through time. The Paleoindian Period includes the Pre-Clovis era (before 13,500 Cal B.P.) during which a hypothesized coastal colonization route allowed people to enter California. In the subsequent Clovis (13,500-10,500 Cal B.P.) era human populations spread within California. Hunting probably formed the base of substance practices. The Archaic Period includes the Lower Archaic (10,500-7,500 Cal B.P.). At this time, post-Pleistocene climatic changes caused lakes/wetlands to dry up. Milling technology became common. Most artifacts were manufactured from local materials. During the Middle Archaic (7,500-2,500 Cal B.P.), climate, habitats, and resources were unstable. The economy became more diversified. In the Upper Archaic (2,500-900 Cal B.P.) there was growth of sociopolitical complexity characterized by development of status distinctions based upon wealth. Shell beads became important, suggesting exchange and social status. During the Emergent Period, the Lower Emergent (1,000-500 Cal B.P.) witnessed replacement of the dart and atlatl by the bow and arrow. The Upper Emergent (500-150 Cal B.P.) is characterized by appearance of a “monetized” clam shell disk bead economy. More goods were moving farther in space.

Historic Context

Spanish colonization of the east San Francisco Bay Area began with the expeditions of Pedro Fages in 1770 and 1772. The expeditions traveled from Monterey to the vicinity of the Berkeley Hills and described the Indians met along the way. In fact, the 1772 expedition passed within the vicinity of the Project Area while traveling from the Carquinez Strait back to Monterey (Engelhardt 1912). Following the secularization of mission lands by the Mexican government, Jose Maria Amador became the administrator of Mission San Jose (Mora-Torres 2005). In 1834, Amador was granted portions of Mission San Jose’s lands, which he named Rancho San Ramon. During the Californio rebellion against the government of Micheltorena, Amador, a former soldier himself, retired to Rancho San Ramon to avoid the conflict. The decade following the rebellion against Micheltorena brought war between the United States and Mexico.

Following the Mexican-American War, immigrants from the United States and around the world began to flood California’s rancho lands. The 1849 gold rush was a major catalyst in this process. Amador, having made riches in the gold fields himself (Mora-Torres 2005), began selling off the lands of Rancho San Ramon, which included lands that were to become the City of Dublin. Over the remainder of the 19th century, agriculture was the primary driver of Dublin’s development. The next significant period in Dublin’s history came with the construction of Camp Parks and

other military facilities during WWII. Following the war and improvements to Highway 50, Interstate 580, Dublin became a suburban community. By the early 1980s, the community voted to officially incorporate as the City of Dublin. (City of Dublin 2024).

Regulatory Context

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal undertakings to consider the effects of the action on historic properties. Historic properties are defined by the Advisory Council on Historic Preservation (ACHP) regulations (36 Code of Federal Regulations [CFR] Part 800) and consist of any prehistoric or historical archaeological site, building, structure, historic district, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 CFR Part 800.16[l]).

To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, and architectural properties) must be inventoried and evaluated for listing in the NRHP.

For projects involving a lead federal agency, cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 CFR Part 60.4.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four criteria for inclusion on the NRHP:

- Criterion A, Association with events that have made a significant contribution to the broad patterns of history;
- Criterion B, Association with the lives of persons significant in the past;
- Criterion C, Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D, History of yielding, or the potential to yield, information important in prehistory or history.

If a cultural resources professional meeting the Secretary of Interior's Qualification Standards determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met.

Resources listed on, or eligible to, the NRHP are automatically considered historical resources for the purposes of CEQA.

California Environmental Quality Act

CEQA Guidelines define a historical resource as a resource included in or eligible for inclusion in the California Register of Historical Resources (Public Resources Code Section 5024.1). The term historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of PRC (PRC Section 5020.1[j]).

Historical resources may be designated as such through three different processes:

- Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1[k]);
- A local survey conducted pursuant to PRC Section 5024.1(g); or
- The property is listed in or eligible for listing in the NRHP (PRC Section 5024.1[d][1]).

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR, which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria.

It is associated with events that have made a significant contribution to the broad patterns of:

1. California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;

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 may be likely to yield, information important in prehistory or history. (CCR 14 Section 4852).

To be considered a historical resource for the purpose of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (CCR 14 Section 4852[c]).

Unique Archeological Resources

The PRC also requires the Lead Agency to determine whether or not a project would have a significant effect on unique archaeological resources (PRC Section 21083.2[a]).

The PRC defines a unique archaeological resource as follows.

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 that 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 (PRC Section 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

California Health and Safety Code Section 7050.5

Regarding the discovery of human remains on non-federal lands, Section 7050.5 of the California Health and Safety Code (CHSC) states the following:

a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [PRC]. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the [PRC] or to any person authorized to implement Section 5097.98 of the [PRC].

b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the California Government Code [CGC], that the remains are not subject to the provisions of Section 27491 of the CGC or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) (CHSC Section 7050.5).

Of particular note to cultural resources is subsection (c). After notification, NAHC would follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants (MLD), if possible, and recommendations for treatment of the remains. The MLD would have 24 hours after notification by the NAHC to make their recommendation (PRC Section 5097.98). In addition, knowing or willful possession of Native American

human remains or artifacts taken from a grave or cairn is a felony under State law (PRC Section 5097.99).

California Graves Protection and Repatriation Act of 2001

Section 8010 and 8011 of the CHSC also address the protection of Native American human remains and cultural items and state:

8010. This chapter shall be known and may be cited as the California Native American Graves Protection and Repatriation Act (CALNAGPRA) of 2001.

8011. It is the intent of the Legislature to do the following:

a) Provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items are treated with dignity and respect.

b) Apply the state's repatriation policy consistently with the provisions of the Native American Graves Protection and Repatriation Act (25 U.S.C. Sec. 3001 et seq.), which was enacted in 1990.

c) Facilitate the implementation of the provisions of NAGPRA with respect to publicly funded agencies and museums in California.

d) Encourage voluntary disclosure and return of remains and cultural items by an agency or museum.

e) Provide a mechanism whereby lineal descendants and culturally affiliated California Indian tribes that file repatriation claims for human remains and cultural items under the Native American Graves Protection and Repatriation Act (25 U.S.C. Sec. 3001 et seq.) or under this chapter with California state agencies and museums may request assistance from the commission in ensuring that state agencies and museums are responding to those claims in a timely manner and in facilitating the resolution of disputes regarding those claims.

f) Provide a mechanism whereby California tribes that are not federally recognized may file claims with agencies and museums for repatriation of human remains and cultural items.

City of Dublin Municipal Code

In addition to federal and state laws, the City of Dublin has passed ordinances pertaining to cultural resources. Municipal Code Chapter 8.62 protects and promotes the preservation of the Dublin Village Historic Area. Chapter 8.48 establishes regulations that protect precontact and historic archaeological resources. Section 8.48.020 enumerates the following actions in the event of the inadvertent discovery of archaeological artifacts during construction activities:

a) Construction and or ground disturbance shall cease, and the Department of Community Development is to be notified.

b) A qualified archaeologist is to be consulted to determine the significance of the finds in accordance with CEQA guidelines.

Methodology

The location and eligibility status of previously recorded archaeological, ethnographic, and built-environment resources were identified using:

- Records search data of previously conducted cultural resource studies and previously recorded cultural resources on file with Northwest Information Center (NWIC) of the California Historical Resources Information System – database search conducted in March 2024.
- Listings of the National Register of Historic Places (NRHP).
- Listings of the California Register of Historical Resources (CRHR).
- Listings of the California Office of Historic Preservation's (OHP) Built Environment Resources Directory (BERD).
- California Points of Historical Interest (1992).
- California State Landmarks (1996).
- California Inventory of Historic Resources (1988).
- The Web Soil Survey online mapping tool available from the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)(https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx).

- Historic aerials and topographic maps available at (www.historicaerials.com).

The records search data revealed that previous investigations only covered portions of the proposed Project area. As such, the entire proposed Project area had not previously been studied to current standards, and a survey of the proposed Project area was determined necessary. The field effort for the proposed Project consisted of an intensive pedestrian survey of all exposed ground surfaces in the proposed Project area. Surveys were conducted between March and May 2024. Consultation efforts with California Native American tribes that may have an interest in the proposed Project are summarized in the Tribal Cultural Resources chapter.

Identification Results

As a result of the records search and cultural surveys, one previously recorded resource (P-01-011775/ P-07-005021) and one newly recorded resource, the Southern Pacific Alamo Creek Bridge, were identified. Both resources are built-environment resources. No previously recorded or newly discovered precontact resources were encountered. Descriptions of these resources and evaluation recommendations in accordance with the criteria for CRHR listing (CCR 14 Section 4852), as described previously in this chapter, are provided in the following sections.

Built-environment Resources

P-01-011775/ P-07-005021, Alamo Canal segment. The Alamo Canal was constructed in the 1960s during the development of Interstate 680 and the surrounding residential and commercial properties. The resource has been determined ineligible for listing on the NRHP through consensus determination by a federal agency and the California SHPO. The Alamo Canal does not appear to be associated with events that have made significant contribution to the broad patterns of our history (Criterion 1). Research has not shown the Alamo Canal to be associated with the lives of persons significant in our past (Criterion 2). The Alamo Canal does not appear eligible under Criterion 3 as it is a common water conveyance system. Prior recordation of this built-environment resource encapsulates its likely information potential, and it is unlikely that further survey would reveal additional information potential (Criterion 4). As such, the resource has been recommended not eligible for listing on the CRHR.

Southern Pacific Alamo Creek Bridge. The 1909 extension of the San Ramon Branch Line from San Ramon to Pleasanton, which included the construction of the original bridge across Alamo Creek, was one component of a regional Southern Pacific project for faster and more reliable transportation between Sacramento and San Francisco. The existing Southern Pacific Alamo Creek Bridge was constructed circa 1950. By the 1950s, the San Ramon Branch Line was in a state of decline and had lost its role in regional transit. Therefore, the Southern Pacific Alamo Creek Bridge does not appear eligible for listing under Criterion 1. Research has not shown the bridge to be associated with the lives of persons significant in our past (Criterion 2). The bridge displays the characteristics of a standard timber trestle, including its multi-bent substructure, which is a common railroad bridge type found throughout California and the United States since the mid-nineteenth century (Criterion 3). The recording of this built-environment resource encapsulates its likely information potential, and it is unlikely that further survey would reveal additional information potential (Criterion 4). As such, the resource has been recommended not eligible for listing on the CRHR.

Identification of Historical Resources

No historical resources per CCR 14 Section 4852 were identified as a result of the records search and surveys.

Impact Analysis

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the NRHP, the CRHR, or a local register of historic resources pursuant to Section 5020.1(k) of the Public Resources Code.

a) **No Impact.** The proposed Project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 because no cultural resources located in or near the project area that qualify as CEQA historical resources would be affected by the proposed Project. There would be no impact.

b) **Potentially Significant Unless Mitigation Incorporated.** The cultural resource inventory and intensive pedestrian survey did not identify archaeological resources. Nevertheless, it is not possible to entirely remove the possibility of inadvertently discovering an unknown archaeological resource. If any previously unidentified buried resources are encountered and damaged during construction, the destruction of the archaeological resources would be a potentially significant impact. Implementation of **Mitigation Measure**

CUL-1: Construction Measures would reduce this impact to a less-than-significant level. Implementation of Mitigation Measure CUL-1 would reduce potentially significant impacts during construction resulting from inadvertent damage or destruction of newly discovered cultural resources to a less than significant level. The implemented measures would be followed to ensure that any unanticipated cultural resources discovered during Project-related ground-disturbing activities are appropriately handled and documented and that all necessary parties are contacted and coordinated with in a timely manner, in order to either avoid or minimize impacts on the cultural resources.

c) **Potentially Significant Unless Mitigation Incorporated.** No evidence for precontact or early historic interments has been found in the Project area to the extent documented. However, this does not preclude the existence of buried human remains. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. Damage to or destruction of human remains during Project construction or other Project-related activities would be considered a significant impact. Implementation of **Mitigation Measure CUL-2: Inadvertent Discovery** would reduce this impact to a less-than-significant level. Implementation of Mitigation Measure CUL-2 would reduce potentially significant impacts during construction resulting from the inadvertent uncovering of human remains to a less than significant level. The implemented measures would be followed to ensure that any human remains discovered during Project-related ground-disturbing activities are appropriately treated and that all necessary parties are contacted and coordinated with in a timely manner, in order to either avoid or minimize impacts on any human remains.

Mitigation measures related to cultural resources

Mitigation Measure CUL-1: Construction Measures.

If unrecorded cultural resources are encountered during Project-related ground-disturbing activities, a qualified cultural resources specialist shall be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during Project-related construction activities, ground disturbances in the area of the find will be halted, and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist will determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation, such as avoidance or data recovery. Construction work can continue on other parts of the project while archaeological mitigation takes place.

Mitigation Measure CUL-2: Inadvertent Discovery.

In accordance with the California Health and Safety Code Sections 7050.5 and 7052, Public Resources Code Section 5097.98, and CEQA Section 15064.5; if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find would be halted immediately, and the Alameda County coroner is to be notified to arrange the proper treatment and disposition of the human remains. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the Native American Heritage Commission (NAHC) within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will, in coordination with the landowner, determine the manner in which the remains are treated.

References related to cultural resources

Bennyhoff, J.A. and Fredrickson, D.A. 1994. A proposed integrative taxonomic system for central California archaeology. Toward a New Taxonomic Framework for Central California Archaeology, pp.15-24.

City of Dublin. 2024. Explore Dublin History. https://www.dublin.ca.gov/1556/History-of-Dublin. Accessed October 15, 2024.

Engelhardt, Zephyrin. 1912. The Missions and Missionaries of California Volume II Upper California. The James H Barry Company, San Francisco. Digitized Oct 18, 2007. Available online at https://www.google.com/books/edition/The_Missions_and_Missionaries_of_Califor/chxNAAAAMAAJ.

Mora-Torres, G. 2005. Californio voices: the oral memoirs of José María Amador and Lorenzo Asisara, University of North Texas Press, Denton, TX. Available online at https://archive.org/details/californiovoices0000amad.

2.4.6 Energy

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Impact Analysis

a) **Less than Significant Impact.** The Project will use gasoline during construction to power equipment and transport materials to the Project site. There will be a temporary increase in local truck trips during construction After construction, fuel use for operation and maintenance will stay the same as current levels, as maintenance will fall under Zone 7's existing maintenance plan. As a result, energy use will be efficient and not result in wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation. Therefore, the impact would be less than significant.

b) **No Impact.** Project construction will require the use of gasoline to transport materials. However, the Project would comply with all State and local plans for renewable energy and energy efficiency. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. There would be no impact.

Mitigation measures related to energy

No mitigation measures are required.

References related to energy

No references.

2.4.7 Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Impact Analysis

a.i) **No Impact.** The intent of the Alquist-Priolo Earthquake Fault Act is to reduce losses from surface fault rupture. Earthquake fault zones are established by the State Geologist to establish earthquake fault zones and the surface traces of active faults (DOC, 2024). The Project is not located within an earthquake fault zone. The nearest faults to the Project are the Calaveras Fault, located approximately one mile east of the Project, and Pleasanton Fault, located one mile west of the Project. The Project does not include any residential structures or facilities and would not expose people or structures to adverse effects relating to rupture of a known earthquake fault. There would be no impact.

a.ii) **Less Than Significant Impact.** The Project is located within one mile of two faults, but is not located within an earthquake fault zone. The California Earthquake Authority states that there is a 76 percent probability that a magnitude 6.7 earthquake or greater will occur in the San Francisco Bay Area, which includes Alameda County, where the Project is located.

There are no known published seismic design criteria for channel modification Projects, like there are for buildings. The Project's design would be subject to civil engineering standards. All construction would comply with the specifications, procedures, trainings, and best management practices in the final design plans and compliance documents. Adherence to these standards would ensure the Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Furthermore, the Project does not include habitable structures or facilities that would expose people or structures to the risk of loss, injury, or death involving strong seismic ground shaking. Therefore, impacts would be less than significant. Therefore, impacts would be less than significant.

a.iii) **Less Than Significant Impact.** The Department of Conservation has published an online mapping tool detailing earthquake zones. The tool also includes information on liquefaction and landslides information. The mapping tool indicates that the Project area is located within a liquefaction zone (DOC 2024).

In the case an earthquake occurs during construction, the existing structure may be subject to cracking and loss of ground support. Construction workers may be exposed to risks by working on the structures. However, Project construction would be temporary and the Project would not include the construction of residential structures or facilities. Any potential damage resulting from liquefaction due to seismic ground failure would be minimized by complying to the design specifications. Therefore, the impact related to liquefaction and seismic-related ground failure would be less than significant.

a.iv) **Less Than Significant Impact.** The Project is not within a landslide zone (DOC 2024). The Project does not include residential structures or facilities that would expose people or structures to landslide risks. Therefore, there would be no impact.

b) **Less Than Significant Impact.** Construction activities associated with the Project would involve ground-disturbing earthwork, including over-excavating, placing rocks, and using soil as fill to install the rock slope protection. As the Project would include over 1 acre of ground disturbance, a Stormwater Pollution Prevention Plan (SWPPP) would be developed. The SWPPP would include Best Management Practices (BMPs) to control and reduce soil erosion. Examples of some BMPs may include but are not limited to dewatering procedures, storm water runoff quality control measures, and watering for dust control. The implementation of the SWPPP's BMPs would minimize soil erosion or the loss of topsoil. Therefore, the impact would be less than significant.

c) **Less Than Significant Impact.** The Project site is located on soils mapped as alluvial gravel, sand and clay of valley areas, which can be susceptible to landslide and subsidence (Dibblee, 2005). Additionally, the Alameda County Local Hazard Mitigation Plan shows that the Project site is located within an area that is moderately susceptible to liquefaction. However, the Project would not include habitable structures, and the exposure of construction workers to risk related to liquefaction would be temporary. Civil engineering standards would be adhered to during design development to minimize any potential structural damage of the modules that could occur from liquefaction due to groundshaking. Therefore, the impact would be less than significant.

d) **Less Than Significant Impact.** Expansive soils typically contain some form of clay mineral that can absorb water when the soil is wet and then shrink when the soil is dry. A geomorphic assessment was conducted for this Project (FlowWest, 2023). The assessment showed that soil survey maps for the Project area indicate a combination of two alluvial soil series with clay-rich substrate layers: Sunnyvale silt loam over clay, which has a high extensibility rating of 7.5%, and Sycamore silt loam over clay, which has a lower extensibility rating of 1.5%. However, the subsurface layers that the engineered channels are cut into are likely similarly extensible.

While the Project area's soil can be highly extensible, the Project design would adhere to engineering practice standards as appropriate for the location. Project construction would adhere to the procedures outlined in the design plans. By complying with the design plan standards, the Project would not directly or indirectly cause substantial adverse effects involving expansive soils (FlowWest, 2023). The Project components include in-channel modules. No habitable structures or facilities that would expose people or property would be built as part of the Project. Therefore, impacts would be less than significant.

e) **No Impact.** The Project does not include the use of septic tanks or alternative wastewater systems. Therefore, the soils in the Project site do not have to be capable of adequately supporting septic tanks and alternative wastewater systems. Therefore, there would be no impact.

f) **Potentially Significant Unless Mitigation Incorporated.** A significant impact would occur if a Project would destroy a unique paleontological resource or site, or a unique geologic feature. Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

Geologic mapping by Dibblee and Minch (USGS, 2005) indicates Holocene-age alluvial deposits are present at the surface within a majority of the Project site. These deposits have low-to-high paleontological sensitivity, increasing with depth, with older, high sensitivity alluvium present at depth.

Ground disturbing activity during Project construction is anticipated to be up to 10 feet in depth, and is therefore likely to disturb geologic units with high paleontological sensitivity. The destruction of fossils would be a potentially significant impact to paleontological resources. In order to reduce impacts to paleontological resources to potentially significant unless mitigation incorporated, **Mitigation Measure GEO-1: Inadvertent Discovery of Paleontological Resources**, is recommended and provided below.

Mitigation measures related to geology and soils

Mitigation Measure GEO-1: Inadvertent Discovery of Paleontological Resources.

If paleontological resources are encountered during Project construction and no paleontological monitor is present, all ground disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist (as determined by the Project's qualified cultural resource professional) can be contacted to evaluate the find and make recommendations. If determined significant pursuant to CEQA and Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan shall be implemented. Adverse impacts to significant paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the curation of all fossil material to a paleontological repository, museum, or academic institution, as appropriate. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

References related to geology and soils

Alameda County. 2024. Alameda County Local Hazard Mitigation Plan. Available Online: https://lhmp.acgov.org/map.html?mapUrl=liquefaction. Accessed: April 12, 2024.

California Department of Conservation. 2024. Alquist-Priolo Earthquake Fault Zones. Available Online: https://www.conservation.ca.gov/cgs/alquist-priolo. Accessed: April 12, 2024.

California Earthquake Authority. 2024. California Earthquake Risk Map & Faults by County. Available Online: https://www.earthquakeauthority.com/california-earthquake-risk/faults-by-county.

Dibblee, T.W., and Minch, J.A. 2005. Geologic map of the Dublin quadrangle, Contra Costa and Alameda Counties, California. Available Online: https://ngmdb.usgs.gov/Prodesc/proddesc_73802.htm. Accessed: April 19, 2024.

2.4.8 Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Impact Analysis

a) **Less Than Significant Impact**. The Project is located in the San Francisco Bay Area Air Basin and under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD's 2022 CEQA Guidelines direct land use projects to do their fair share in reducing GHG emissions with the trajectory of achieving the statewide GHG emissions reduction goals. Projects that have a less than significant impact with regard to GHGs would not lock in future emissions that would hinder the state's ability to reach its goals.

Construction

Construction GHG emissions would result from use of heavy-duty construction equipment, worker vehicle trips for up to ten workers, vendor trips, and 1,549 truck trips to haul rock, debris, soil, and other materials. As described in the Project Description, construction would occur for approximately 158 days, 6 days/week, between May 1, 2025 and October 31, 2025. Construction emissions for both air quality and GHG were calculated using CalEEMod Version 2022.1.1.22.

The Project's construction would result in 600 MTCO2e over the 6-month construction period. The BAAQMD does not have a numeric threshold for construction GHG emissions. Rather, the BAAQMD's 2022 CEQA Guidelines encourage incorporation of the construction-related best management practices (BMPs) for GHG emissions. The Project would adhere to these BMPs as applicable . For haul truck trips, the excavated materials would be disposed of at the Altamont Landfill, which is 17 miles away, and other materials brought to the site would be from within 10 miles, which is relatively local and limits the vehicle miles traveled. As discussed in part b), the Project would be consistent with the statewide GHG emissions reduction targets for 2030 and 2045 through its consistency with the City of Dublin Climate Action Plan 2030 and Beyond. Therefore, the Project's construction GHG emissions would be considered less than significant.

Operations

No operations and minimal maintenance would be required. A limited number of truck trips would be required for visual inspections that are conducted once a month. Any vegetation, channel, and access road maintenance needs would be similar to existing maintenance along this section of Alamo Creek. GHG emissions during operations and maintenance would be minimal and not substantially different than existing conditions. Therefore, the Project's operational GHG emissions would be considered less than significant.

b) **Less Than Significant Impact.** According to the BAAQMD's 2022 CEQA Guidelines, "the climate impact thresholds of significance for land use projects are specific design elements to be included in the project. If these design elements are not included in the project, the project can demonstrate less than significance by being consistent with a locally adopted GHG Reduction Strategy that aligns with State CEQA Guidelines Section 15183.5(b)." The design elements listed in the BAAQMD's 2022 CEQA Guidelines are specific to buildings and transportation, which would not be relevant to this type of bank stabilization project as it would not be a major trip generator or construct any buildings. As a result, the Project is compared to the applicable local GHG plan and state regulations to establish consistency.

The Project is located within the City of Dublin in California, which has a history of sustainability. The first City of Dublin Climate Action Plan was adopted in 2010 to achieve the state's 2020 GHG emissions reduction target and the first communitywide GHG emissions inventory for the City was completed in 2005. The latest climate action plan is the City of Dublin Climate Action Plan 2030 and Beyond (2030 CAP) which was adopted in September 2020. The 2030 CAP outlines five main strategies and associated actions to reach GHG emissions reduction goals by 2030 consistent with SB 32. The 2030 CAP acknowledges that additional measures beyond those actions listed in the 2030 CAP would be needed to reach carbon neutrality by 2045 as set by EO B-55-18 and the 2022 CARB Scoping Plan. **Table 2-2** demonstrates how the Project is consistent with the 2030 CAP's five main strategies.

TABLE 2.4.8-2 CONSISTENCY ANALYSIS WITH THE CITY OF DUBLIN 2030 CAP

Strategy 1: 100% Renewable and Carbon Free Electricity	Not Applicable. As a bank stabilization project, this Project would neither generate any electricity nor consume large quantities of electricity for maintenance activities.
Strategy 2: Building Efficiency and Electrification	Not Applicable. As a bank stabilization project, this Project would not construct any new buildings. Therefore, improving building efficiency and electrification would not be relevant to the project.
Strategy 3: Sustainable Mobility and Land Use	Consistent. Vegetation and trees would be planted along the bike trail, which would be consistent with Strategy 3 to improve the bicycle infrastructure in the City.
Strategy 4: Materials and Waste Management	Consistent. The Project would use Altamont Landfill for waste disposal and a quarry within 10 miles of the project area for rocks/materials. The Project would adhere to the following BAAQMD best management practices for construction-related GHG emissions related to materials and waste management: • Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more by weight than the Title 24 diversion requirement. • Use locally sourced or recycled materials for construction materials with a goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk, and curb materials. Wood products used should be certified through a sustainable forestry program. • Use low-carbon concrete and minimize the amount of concrete used.
Strategy 5: Municipal Leadership Management	Consistent. This Project would support Zone 7's mission to provide safe, reliable, efficient and sustainable water and flood protection services. This Project would improve climate resiliency as it would implement measures to prevent erosion,

	downcutting, and associated sediment transport, which worsens during large winter storms. The Project would adhere to the following BAAQMD best management practices for construction-related GHG emissions related to construction equipment and contracting: • Require all diesel-fueled off-road construction equipment to be equipped with EPA Tier 4 Final compliant engines. • Minimize idling time by shutting equipment off or reducing the idling time to no more than 2 minutes. • Prohibit off-road diesel-power equipment from being in the "on" position for more than 10 hours per day. • Require all construction equipment is maintained and properly tuned in accordance with manufacturer's specifications. • When grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools. • Develop a plan to efficiently use water for adequate dust control. • Include all requirements in applicable bid documents, purchase orders, and contracts.

Therefore, the Project would be consistent with the strategies described in the 2030 CAP and the Project would not conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The impact would be considered less than significant.

Mitigation measures related to greenhouse gas emissions

No mitigation measures are required.

References related to greenhouse gas emissions

BAAQMD. 2023. CEQA Thresholds and Guidelines Update. Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.

City of Dublin. 2020. Climate Action Plan. Available at: https://dublin.ca.gov/2635/Climate-Action-Plan.

2.4.9 Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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 Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☒	☐	☐

Impact Analysis

a), b) **Less Than Significant Impact.** The Project would not create a significant hazard through the routine transport and use of hazardous materials. Construction vehicles would travel to and from the site during construction. These vehicles would use hazardous materials such as fuels (i.e., gasoline and diesels). However, these hazardous materials would be in small quantities and limited to use only during construction, which would minimize the hazard posed to the public or environment. Compliance with federal, state, and local hazardous materials regulations would further reduce the risk to the public presented by these potential

hazards during construction and from accident conditions such that the impact would be less than significant.

c) **No Impact.** The nearest school is Wells Middle School, approximately 750 feet west of the Project boundary. Access to the Project site would be from Amador Valley Road, and Dublin Boulevard south along Alamo Creek. Project construction could emit hazardous emissions from construction vehicles and hazardous materials from accidental release of hazardous materials. However, compliance with federal, state, and local hazardous materials regulations would reduce the risk posed by these materials to the school. The potential for hazardous emissions or waste to impact the school would be small; any hazardous emissions would be diffuse by the time they reached the school to have a limited impact, and no hazardous materials would be brought to the site in enough quantities that their release could impact the school. Therefore, the impact would be less than significant.

d) **No Impact.** The Project site is not included on a list of hazardous materials sites compiled under the Department of Toxic Substances Control's Cortese List (Department of Toxic Substances Control, 2024). Therefore, there would be no impact.

e) **No Impact.** The Livermore Municipal Airport is located approximately 5 miles east of the Project Site. The Project site is not within the Airport Influence Area (AIA), airport protection area, or its jurisdictional boundaries (Alameda County Community Development Agency, 2012). Therefore, there would be no impact.

f) **Less Than Significant Impact.** The City of Dublin's Emergency Operations Plan (City of Dublin, 2020) does not specify any designated evacuation routes. The only road closures required during Project construction are along the trail along the Project reach and a Zone 7 maintenance road that is not open to the public. Since neither closure would affect a public roadway that could handle emergency vehicles, the Project would not impair the implementation of or interfere with the emergency operations plan. Therefore, the impact would be less than significant.

g) **Potentially Significant Unless Mitigation Incorporated.** According to the California Department of Forestry and Fire Protection (CAL FIRE), the Project site is not mapped within a Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE, 2024).

However, Project construction would require vehicle trips and use of heavy machinery that could result as a potential hazard from igniting a fire fueled by existing vegetation. Due to the possible impacts to the residents to the west of the creek, **Mitigation Measure FIRE-1: Fire Safety Practices** would be implemented to minimize any impacts of a potential fire during construction. Therefore, the impact would be potentially significant unless mitigation incorporated.

Mitigation measures related to hazards and hazardous materials

Please refer to Section 2.2.20 *Wildfire* for the full mitigation measure description of Mitigation Measure FIRE-1: Fire Safety Practices.

References related to hazards and hazardous materials

Alameda County Community Development Agency. 2012. Livermore Executive Airport Land Use Compatibility Plan. Available Online: https://www.acgov.org/cda/planning/generalplans/documents/LVK_Ch3_Livermore_Municipal_Airport_Policies.pdf. Accessed: April 11, 2024.

Department of Toxic Substances Control. 2024. Hazardous Waste and Substances Site List (CORTESE). Available Online: https://shorturl.at/JxuNH Accessed: April 11, 2024.

2.4.10 Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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;	☐	☐	☐	☒
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
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; or	☐	☐	☐	☒
iv. impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.** This Project will have access routes that are close in proximity to the active channel; construction equipment operating in close quarters with the active channel could impact water quality from construction equipment spilling materials into the creek. This also has the potential to impact

the turbidity of the water and water quality at the Project site. However, with the implementation of a SWPPP and accompanying BMPs, Project construction and Project implementation would not violate water quality standards or waste discharge requirements. Therefore, there would be less than significant.

b) **No Impact.** This Project would not include the addition of any new impervious surfaces and, as a result, would not substantially interfere with the groundwater recharge. By implementing live stake planting at the toe of the banks and introducing native grass seeding up the side slopes, we expect to increase groundwater recharge and improve sustainable groundwater management of the basin. Therefore, there would be no impact.

ci) **No Impact.** The goal of this Project is to modify the channel bed and banks to mitigate future risk of bank failure, toe scour, and downcutting. The five module locations are sited in areas of relatively high velocity and in areas of documented bank failures. Module elements include a rock cross-vane to redirect turbulent flows away from the banks and toward the center of the channel. Toe rock and embedded rock in the banks are designed to prevent scout and enhance bank stability. Live stake plantings at the toe of the banks and planted up to approximately the 10-year water surface elevation help to reduce velocities along the banks and prevent erosion. Native grass seeding up the side slopes enhances bank stability and provides habitat benefits. Therefore, there would be no impact.

cii) **No Impact.** This Project does not propose to add any new impervious surfaces and does not include any alteration of the channel. As a result, there will not be a substantial increase in the rate or amount of surface runoff which would result in flooding on or off site for this Project. Therefore, there would be no impact.

ciii) **No Impact.** This Project will not create or contribute runoff water which would exceed the capacity of existing stormwater drainage systems nor provide substantial additional sources of polluted runoff. As previously mentioned there will be no additional impervious services added or channel alterations which would increase runoff quantity. Existing concrete storm drain outfalls will be excluded from bank treatment in module locations. The final design will incorporate appropriate transition treatments between construction of the modules and the concrete edges of the outfalls. Therefore, there would be no impact.

civ) **Less than Significant Impact.** This Project will not impede or redirect flood flows through the channel. Hydraulic modeling was done for this Project with considerations up to the 100-year flow simulations to evaluate the flood protection impacts of the proposed design and confirms the lack of adverse impacts. Comparing the baseline versus design water surface elevation (WSE), there is a minor (visually imperceptible) rise in WSE (0.1 ft) at the upstream end of the Project reach near the confluence and Modules 1 and 2. At this location, 100-year freeboard far exceeds the one foot required by Zone 7. Farther downstream, where freeboard is more constrained, the rise in WSE does not exceed 0.03 ft. Therefore, there would be no impact.

d) **Less Than Significant Impact.** This Project is located within the FEMA/DWR 100-year Floodplain zone. The Project would not include storage of any pollutants that would be at risk of release due to inundation because no new chemicals or fuels would be stored onsite. Seiches are large waves on an enclosed or semi-enclosed body of water that can be caused by seismic activity. The Project area is landlocked and not within proximity of any closed or semi-enclosed water body; there is no risk of the Project altering conditions related to seiches. Tsunamis occur on the ocean and the Project area is not located near the ocean. Therefore, regarding the risk of release of pollutants due to Project inundation caused by a flood, seiche, or tsunami, there would be a less than significant impact.

e) **No Impact.** This Project does not obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Alamo Creek was surveyed for the potential pollutant 2,4-D (2,4-Dichlorophenoxy acetic acid) as part of the integrated report for the 303(d) list of impaired waters. The RWQCB staff concluded that the water body-pollutant combination should not be placed on the section 303(d) list. This Project does not impact sustainable groundwater management plan. Therefore, there would be no impact.

Mitigation measures related to hydrology and water quality

No mitigation measures are required.

References related to hydrology and water quality

State Water Resources Control Board. 2024. Final California 2024 Integrated Report (303(d) List/305(b) Report). Available Online: https://www.waterboards.ca.gov/water_issues/programs/tmdl/2023_2024state_ir_reports/apx-b-factsheets/04566.shtml. Accessed April 25, 2024.

2.4.11 Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The Project would not divide an established community. The Project would be built entirely within the Alamo Creek channel and banks and the purpose of the Project is bank stabilization. The Project would be limited to in-channel structures and vegetation planting and does not include any elements that would result in the division of existing residential communities. Therefore, there would be no impact.

b) **No Impact.** The Project would be consistent with all relevant land use plans, policies and regulations. The Project site is the Alamo Creek flood protection channel and is designated as Open Space, as a channel corridor by the City of Dublin and in an area zoned as commercial, residential, and light industrial (City of Dublin, 2024). The Project would not change the use or character of Alamo Creek and would remain consistent with all land use plans, policies, and regulations. These policies include the City of Dublin's General Plan's guiding and implementing policies for open space for preservation of natural resources and for public health and safety, stream corridors and riparian vegetation, and open space maintenance and management. In addition to complying with the policies set by the City of Dublin's General Plan, the Project would also comply with Zone 7 Water Agency's Stream Management Master Plan (Zone 7, 2006). Therefore, there would be no impact.

Mitigation measures related to land use and planning

No mitigation measures are required.

References related to land use and planning

City of Dublin. 2024. City of Dublin General Plan. Available Online: https://www.dublin.ca.gov/DocumentCenter/View/36592/Complete-General-Plan-Updated-2-5-24-. Accessed April 11, 2024.

Zone 7 water Agency. 2006. Zone 7 Water Agency Stream Management Master Plan. Available Online: https://www.zone7water.com/sites/main/files/file-attachments/smmp-booklet-web.pdf?1619989042. Accessed April 26, 2024.

2.4.12 Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Impact Analysis

a, b) **No Impact.** The Project would not result in the loss of availability of any known local, regional, or state mineral resources. Though there are gravel mines in the vicinity of the Project, the City of Dublin, California does not have any mineral extraction areas (City of Dublin, 2014). The Project would result in no loss of known mineral resources; only soil/sediment would be excavated from the site. Therefore, there would be no impact.

Mitigation measures related to mineral resources

No mitigation measures are required.

References related to mineral resources

City of Dublin, 2014. City of Dublin General Plan, Conservation Element. Available Online: https://www.dublin.ca.gov/DocumentCenter/View/7088/Chapter-7-Environmental-Resources-2014?bidId=. Accessed April 1, 2024.

2.4.13 Noise

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
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 or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Unless Mitigation Incorporated.** Construction of the Project would occur over a cumulative period of 6 months and would be entirely within the City of Dublin. Project construction would result in temporary increases in ambient noise levels.

Alameda County has a noise ordinance limiting noise received on residential and commercial properties, contained in the Alameda County Code of Ordinance, Chapter 6.60, Noise. However, Section 6.60.070, line E of these ordinances states that construction is exempt from these limits, provided that construction only occurs between 7:00 am and 7:00 pm on Mondays through Fridays, and between 8:00 am and 5:00 pm on Saturdays and Sundays. Additionally, Caltrans standards Section 14-8.02, Noise Control, provides limits for construction noise. The specification states that a level of 86 dBA cannot be exceeded at 50 ft from construction activities from 9:00 pm to 6:00 am. However, as long as the Alameda County ordinance is followed by not having construction activities during the specified times, this standard would not be applicable to the Project. The city of Dublin does not have noise restrictions that would apply to construction of the Project.

For lack of applicable local quantitative noise limits, guidelines on construction noise provided by the Federal Transit Administration have been identified for impact analysis. The Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual (FTA, 2018) provides guidelines on construction noise, which if exceeded may result in adverse community reaction. For residential land uses, this limit is a 90 dBA L_{eq} over one hour. The L_{eq} represents a constant sound that over a specified period of time has the same acoustic energy as the time-varying signal. The L_{eq} is often used to describe sound levels that vary over time, typically for a 1-hour period.

The construction noise assessment was based on the General Assessment methodology for construction noise described in the FTA guidance manual. In this methodology, construction is split into phases, or steps. Each phase of construction has associated types and amounts of equipment. For example, a phase of vegetation clearing may take four chainsaws, an excavator, and two front end loaders. The noise levels from the two loudest pieces of equipment in each phase are combined and used as the L_{eq} for that phase of construction. This noise level is then propagated from the center of the construction limits to determine the distance to the 90 dBA impact threshold, and any noise-sensitive receptors within that distance are

identified. Note that for conservatism, distances to impacts for analyses were propagated from the edge of the construction limits, rather than the center.

The sound propagation calculations do not account for elevation or shielding and assume each piece of equipment is in use for 100 percent of each hour it is used. Equipment noise levels were sourced from the FTA guidance manual if available, and from the Federal Highway Administration's (FHWA) Roadway Construction Noise Model database otherwise.

Table 2-3 shows the proposed equipment per phase, provided by FlowWest.

TABLE 2-3 PROPOSED CONSTRUCTION SCHEDULE

Phase	Equipment Type	Quantity
Site Preparation and Mobilization	Bulldozer	2
	Dump Truck	2
	Air Compressor	1
Toe Trench and Rock Scout Pool Installation and Bank Work	Excavator	2
	Dump Truck	2
	Compactor	1
	Water truck	3
	Forklift	2
	Crane	1
	Dewatering Pump	4
	Surveying Equipment	1
	Safety and Traffic Management Equipment	1
	Concrete Saw	1
Planting, Irrigation, and Trail Repair	Excavator	2
	Dump Trucks	2
	Water trucks	3
	Skid Steer Loaders	2
	Backhoes	1
	Pavers	1
	Rollers	1
	Safety and Traffic Management Equipment	1

All phases of construction were found to have potential noise impacts as defined by FTA. **Table 2-4** shows the L_{eq} at various distances from the limits of construction, as well as the distance to which the L_{eq} of each phase drops below the 90 dBA FTA limit, due to the only sensitive receivers near the Project area being residences. Receivers within this distance to the limits of construction are considered to have an impact by FTA guidance.

TABLE 2-4 CONSTRUCTION NOISE IMPACT CONTOUR DISTANCES

Construction Phase	L_{eq} (dBA) at 50 ft	L_{eq} (dBA) at 100 ft	L_{eq} (dBA) at 200 ft	Distance to no impact from center of construction limits (ft)
Site Preparation and Mobilization	89	83	77	48
Toe Trench and Rock Scout Pool Installation and Bank Work	94	88	82	49
Planting, Irrigation, and Trail Repair	88	82	76	40

Table 2-5 lists the receivers that fall within these noise impact contours.

TABLE 2-5 POTENTIAL CONSTRUCTION NOISE IMPACTS

Address	Distance from limits of construction (ft)
6450 Dougherty Rd (South)	1 (adjacent)
Prince Drive Residences	23
Hickory Lane Residences	7
Spruce Lane Residences	14
Ebensburg Lane Residences	24

Mitigation Measure NOISE-1: General Noise Mitigation Measures would be implemented. Additionally, the Project as currently proposed would add a total of approximately 32 one-way haul trips per day to the construction site during the Toe Trench and Rock Scour Installation and Bank Work phase, and 14 one-way haul trips per day during the Planting, Irrigation, and Trail Repair phase. Across an 8-hour workday, this is equivalent to 4 and 1.75 trips per hour, respectively. These haul routes would result in short-term increases in local traffic and noise along residential streets nearby the site. However, the noise produced would be in the form of occasional passbys rather than constant like the related construction noise. As the effects of these haul routes are short-term and occasional throughout the construction period, no impact is expected, therefore no mitigation is recommended.

b) **Potentially Significant Unless Mitigation Incorporated.** Most construction equipment can cause ground-borne vibration, which rapidly diminishes in strength with distance. A quantitative construction vibration assessment is generally necessary only when the construction activities have potential for damaging fragile buildings or interfering with equipment or activities that are highly sensitive to ground-borne vibration. Examples include projects that use blasting, pile driving, pavement breaking, vibratory compaction, and drilling or excavating the ground near sensitive structures. Based on the proposed equipment used in the Project construction, a construction vibration assessment was performed.

The construction vibration assessment was based on the Quantitative Construction Vibration methodology described in the FTA guidance manual. Similar to the construction noise assessment, construction is split into phases, each with associated types and amount of equipment. The vibration from each piece of equipment is calculated from the center of the Project site to any noise sensitive receivers in the vicinity. Vibration is calculated solely from the most vibratory piece of equipment per phase, not the cumulative sum of the equipment like noise. Vibration impacts are evaluated based on both potential annoyance and damage to buildings. For conservatism, vibration contours were based on distance from the edge of the construction limits rather than the center.

For frequent events (greater than 70 vibration events per day), the FTA recommends limiting vibration to 72 VdB at residences to prevent potential annoyance. If exceeded, adverse community reaction may occur.

For non-engineered timber or masonry buildings, such as most residences, the FTA recommends limiting vibration to 0.20 PPV (peak particle velocity) to prevent structural damage.

Table 2-6 lists the vibration impact contours, as well as the most vibratory piece of equipment per phase.

TABLE 2-6 POTENTIAL CONSTRUCTION VIBRATION IMPACT CONTOURS

Construction Phase	Distance to no annoyance impact from limits of construction (ft)	Distance to no damage impact from limits of construction (ft)	Most vibratory piece of equipment during phase
Site Preparation and Mobilization	79	15	Bulldozer
Toe Trench and Rock Scout Pool Installation and Bank Work	73	13	Dump Truck
Planting, Irrigation, and Trail Repair	135	26	Vibratory Roller

Table 2-7 lists the potential vibration damage impacts, and **Table 2-8** lists the potential vibration annoyance impacts.

TABLE 2-7 POTENTIAL CONSTRUCTION VIBRATION DAMAGE IMPACTS

Address	Distance from limits of construction (ft)	Impacting Phase
6450 Dougherty Road (South)	1 (adjacent)	All
Prince Drive Residences	23	Planting, Irrigation, and Trail Repair
Hickory Lane Residences	7	All
Spruce Lane Residences	14	Site Preparation and Mobilization; Planting, Irrigation, and Trail Repair
Ebensburg Lane Residences	24	Planting, Irrigation, and Trail Repair

TABLE 2-8 POTENTIAL CONSTRUCTION VIBRATION ANNOYANCE IMPACTS

Address	Distance from limits of construction (ft)	Impacting Phase
6450 Dougherty Road (South)	1 (adjacent)	All
6450 Dougherty Road (North)	50	All
6622-6630 S Mariposa Lane	112	Planting, Irrigation, and Trail Repair
6570-6574 S Mariposa Court	100	Planting, Irrigation, and Trail Repair
Stagecoach Drive Residence	99	Planting, Irrigation, and Trail Repair
Prince Drive Residences	23	All
Hickory Lane Residences	7	All
Spruce Lane Residences	14	All
Ebensburg Lane Residences	24	All

For the Planting, Irrigation, and Trail Repair phase, vibration damage and annoyance impacts are driven by the potential use of a vibratory roller. To mitigate vibration impacts, it is recommended to utilize a non-vibratory roller.

For the remaining phases, vibration damage and annoyance impacts are driven by the potential use of bulldozers and dump trucks. As mitigation, it is recommended to limit the use of bulldozers and dump trucks to at least 15 feet away from nearby structures. If this cannot be reasonably achieved, vibration monitoring is recommended at 6450 Dougherty Road (South), a residence located on Hickory Lane adjacent to the site, and a residence located on Spruce Lane adjacent to the site. On-site vibration monitoring at impacted buildings can allow the construction team to stop or modify construction activity if/when exceedances of criteria occur, thereby preventing damage from construction activity. Examples of vibration monitoring include but are not limited to distress monitoring devices such as displacement monitoring gauges or settlement gauges, or any other type of benchmark.

Due to the narrow shape of the Project construction area, in combination with the close proximity of the Project construction area and sensitive receivers, vibration annoyance mitigation is challenging. Effective equipment distance limits from sensitive receivers to mitigate annoyance are unlikely to be reasonably achievable. It is recommended that the contractor work with the occupants / owners to keep construction to times that will minimize disturbance, as described in **Mitigation Measure NOISE-1: General Noise Mitigation Measures.**

d) **No Impact.** The Project is located approximately 6 miles west of the Livermore Municipal Airport. The Project is not located within the airport influence area as determined by the *Livermore Municipal Airport Land Use Compatibility Plan* (ALUCP) (Alameda County, 2012). Therefore, there would be no impact.

Mitigation measures related to noise

Mitigation Measure NOISE-1: General Noise Mitigation Measures

- Provide temporary construction noise barriers, blocking the line-of-sight from noisy activities to noise-sensitive receivers; provide walled enclosures or mass-loaded vinyl curtains around noisy equipment or activities; and/or wrap noisy equipment with mass-loaded vinyl as feasible;
- Utilize quiet and properly functioning equipment that is maintained in a state of good repair and fitted with silencers or mufflers that provide the same or better noise reduction than original equipment manufacturer (OEM) equipment;
- Plan truck routes and loading activities away from noise-sensitive receivers.

To comply with the Alameda County noise ordinance, construction should not take place between 7:00 pm and 7:00 am on Mondays through Fridays, or between 5:00 pm and 8:00 am on Saturdays and Sundays.

Planting, Irrigation, and Trail Repair phase: Utilize a non-vibratory roller in place of a vibratory roller.

Remaining phases: Bulldozers and loaded trucks should have limited use within 15 feet of nearby structures. If this is not reasonably achievable, vibration monitoring is recommended at 6450 Dougherty Road (South), a residence located on Hickory Lane adjacent to the site, and a residence located on Spruce Lane adjacent to the site. Contractor should work with occupants / owners to keep construction to times that will minimize disturbance.

References related to noise

FTA. 2018. Transit Noise and Vibration Impact Assessment. Available Online: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

Caltrans. 2018. Standard Specifications Section 14-8, Noise and Vibration. Available Online: https://dot.ca.gov/-/media/dot-media/programs/design/documents/f00203402018stdspecs-a11y.pdf.

FHWA. 2017. Roadway Construction Noise Model version 2.0.

Alameda County. 2012. Livermore Municipal Airport Land Use Compatibility Plan. Available Online: https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf.

Alameda County. 2005. Code of Ordinances, Chapter 6.60, Noise. Available Online: https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT6HESA_CH6.60NO.

2.4.14 Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The Project would not create any new residential development that would indirectly or directly induce substantial unplanned population growth in the area. Therefore, there would be no impact.

b) **No Impact.** The Project is located within a flood control channel and does not contain any residential facilities. No people would be displaced because of the temporary construction of the Project components. Therefore, there would be no impact.

Mitigation measures related to population and housing

No mitigation measures are required.

References related to population and housing

No references.

2.4.15 Public Services

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the Project 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. Fire Protection?	☐	☐	☒	☐
ii. Police Protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Impact Analysis

ai-aii) **Less Than Significant Impact.** The Project would be limited to bank stabilization, habitat enhancement and flood risk reduction. These improvements would maintain the existing level of flood protection and therefore would not remove any existing barriers to growth or require the provision of any other new or physically altered government facilities to maintain acceptable service ratios. Project construction would not require the provision of new government facilities to maintain response times. Construction of the Project would involve 1,731 truck trips and require up to 10 total construction workers for approximately 125 days; these trips would not impact the provision of public services. The only road closure would be the Zone 7 maintenance road that is not open to the public on the west side of the creek and an East Bay Regional Park District trail on the east side of the creek. Since neither the maintenance road nor trail are open to public vehicles, the Project would not result in a significant increase in traffic that would result in significantly longer response times for fire and police protection services. The operation and maintenance of the Project would be conducted under Zone 7's Operation and Maintenance protocol for maintaining their flood protection facilities. There would be no significant addition of staff required to operate and maintain the facility. Additional fire and police staff would not be required to maintain the existing service ratios. Therefore, there would be a less than significant impact.

aiii-av) **No Impact.** The Project would not result in the need to increase school services to maintain acceptable service ratios. As stated in Section l) Population and Housing, the Project would not directly or indirectly contribute to population growth. Construction of the Project would not alter any schools. The trail would be temporarily closed, but would not impact any parks. Project maintenance after construction is complete would be conducted by existing Zone 7 staff. Since no additional new staff would be required, there would be no impact to service ratios to schools, parks, or other public facilities. Therefore, there would be no impact.

Mitigation measures related to public services

No mitigation measures are required.

References related to public services

No references.

2.4.16 Recreation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Would the Project 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?	☐	☐	☒	☐
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.** The Project area is not designated as open space (City of Dublin, 2024). The Project area is also used for recreational purposes through the Alamo Creek Trail, located adjacent to and alongside the Project area. Truck traffic and construction activities during construction would temporarily interfere with this trail for the duration of the project.

Trail rerouting is anticipated for the Project. Both the Iron Horse Regional Trail and Stagecoach Trail connect to the Alamo Creek Trail on the north side of the Project area. These trails will be detoured eastward to the Alamo Creek Trail. The section of the Alamo Creek Trail passing through the project area will be closed to trail users.

Zone 7 will work closely with City of Dublin and East Bay Regional Park District on adequate signage and notifications while the trail is closed. However, Project construction will be temporary in nature and would not result in a shift of use affecting existing neighborhood and regional parks or other recreational facilities in the area. Therefore, the impact would be less than significant.

b) **No Impact.** The Project components do not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact.

Mitigation measures related to recreation

No mitigation measures are required.

References related to recreation

City of Dublin, 2024. City of Dublin, GIS Portal. Available Online: https://gis.dublin.ca.gov/Html5Viewer/?viewer=default&layerTheme=7. Accessed March 15, 2024.

2.4.17 Transportation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.** As described in the Project Description, the Proposed Project will increase traffic temporarily in the area due to construction worker and haul trips. The Project Description has one construction season which is approximately six months or 158 days. There is assumed to be a 10-worker crew and 1,549 haul trips over the total duration of construction. It is assumed the 1,549 haul trips would occur equally over the 158 days of construction which would result in approximately 10 haul roundtrips every day during the construction days.

The major roadways that will be used to access the Proposed Project are Dublin Boulevard (between Alamo Creek and Dougherty Road), Amador Valley Boulevard (between Village Parkway and Alamo Creek), and Dougherty Road (between Dublin Boulevard and Park Sierra driveway). **Table 2-9** displays the 2022 volumes from the City of Dublin's GIS website (City of Dublin GIS Portal) and the daily construction volume. The City of Dublin Traffic Impact Analysis Guidelines (Transportation Impact Analysis Guidelines) notes that smaller projects which generate or attract fewer than 110 vehicle trips per day is presumed to have a less than significant transportation impact. Therefore, since the construction traffic volume will be temporary and is less than 110 vehicle trips per day, the impact would be less than significant.

TABLE 2-9 DAILY EXISTING AND CONSTRUCTION TRAFFIC VOLUMES

	2022 Volumes	Construction Vehicle Trips	Total Volume
Dublin Blvd	31,680	40	31,720
Amador Valley Blvd	10,360	40	10,400
Dougherty Rd	31,910	40	31,950

b) **Less Than Significant Impact.** The proposed plan would not cause a long-term increase in vehicle-miles traveled (VMT). The construction would cause a marginal VMT increase. The construction vehicle trips are less than 110 vehicle trips per day. Therefore, the impact would be less than significant.

c) **No Impact.** The proposed plan would not change geometric design features or require incompatible uses. Thus, the Proposed Project would have no impact.

d) **No Impact.** The proposed plan would not result in inadequate emergency access. The construction haul trips would not cause any roadway closures or detours to impact the existing emergency access. Thus, the Proposed Project would have no impact.

Mitigation measures related to traffic and transportation

No mitigation measures are required.

References related to traffic and transportation

City of Dublin. 2024. GIS Portal. Available Online: https://gis.dublin.ca.gov/Html5Viewer/?viewer=default&layerTheme=3. Accessed September 23, 2024.

City of Dublin. 2021. Transportation Impact Analysis Guidelines, July 15, 2021. Available Online: https://dublin.ca.gov/DocumentCenter/View/28516/Transportation-Impact-Analysis-Guidelines-2021?bidId=. Accessed September 23, 2024.

2.4.18 Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project 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 the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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)?	☐	☐	☐	☒
b) 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?	☐	☒	☐	☐

Environmental Setting

The Project area is situated in territory once occupied by Costanoan (also commonly referred to as Ohlone) language groups. Eight Ohlone languages were spoken in the region from the southern edge of the Carquinez Strait to portions of the Big Sur and Salinas Rivers south of Monterey Bay and approximately 50 miles inland from the Pacific coast. The Project area is within the ethnolinguistic boundary of the Chochenyo Ohlone language. The language was spoken across large areas of the East San Francisco Bay and is currently being revitalized by the Muwekma Ohlone Tribe (Muwekma Ohlone Tribe 2024).

Ohlone territories were composed of one or more land-holding groups that anthropologists refer to as “tribelets.” The tribelet consisted of a principal village occupied year-round, with a series of smaller hamlets and resource gathering and processing locations occupied intermittently or seasonally (Kroeber 1955). Seven Spanish missions were founded in Ohlone territory between 1776 and 1797. While living within the mission system, the Ohlone commingled with other groups, including the Yokuts, Miwok, and Patwin. Mission life was devastating to the Ohlone population (Milliken 1995).

Ohlone recognition and assertion moved to the forefront during the early twentieth century, enforced by legal suits brought against the United States government by Indians of California for reparation due them for the loss of traditional lands. The Ohlone participated in the formation of political advocacy groups, which brought focus upon the community and reevaluation of rights due its members (Bean 1994). In recent years, the Ohlone have become increasingly organized as a political unit and have developed an active interest in preserving their ancestral heritage.

Regulatory Context

Indian Trust Assets

ITAs are legal interests in property held in trust by the U.S. for Native American tribes or individuals. Examples of potential ITAs are lands, minerals, fishing rights, and water rights. Management of ITAs is based on the following orders, agreements, and regulations:

- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments 65 FR 67249
- Memorandum on Government-to-Government Relations With Native American Tribal Governments (FR

Volume 59, Number 85, signed April 29, 1994)

- Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources
- Secretarial Order No. 3206 – American Indian Tribal Rights, Federal -Tribal Trust Responsibilities, and the federal Endangered Species Act (ESA)
- Secretarial Order No. 3215 – Principles for the Discharge of the Secretary's Trust Responsibility
- Secretarial Order No. 3342 – Identifying Opportunities for Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Lands and Resources
- Secretarial Order No. 3335 – Reaffirmation of the Federal Trust Responsibility to Federally Recognized Tribes and Individual Indian Beneficiaries

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act of 1978 (AIRFA; 42 U.S.C. § 1996) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Historic Sites Act of 1935

The Historic Sites Act of 1935 (54 U.S.C. 320101–320106, formerly 16 U.S.C. 461–467) declares"...that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance…," asserting historic preservation as a government duty under jurisdiction of the United States Secretary of the Interior.

National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. For purposes of the discussion regarding tribal cultural resources, it is important to underscore that historic properties include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 C.F.R. § 800.16[l]).[1].

Traditional Cultural Properties and Traditional Cultural Landscapes

TCPs are properties associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of a community. TCPs can refer to properties of importance to any community, including Indigenous communities.

National Register Bulletin 38 provides examples of TCPs – and TCLs – that fit the definition in the guidelines:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice
- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity

TCPs and TCLs are eligible for inclusion on the NRHP if they meet the criteria set forth in 36 C.F.R. § 60.4, National Register Criteria for Evaluation. The steps in the identification and evaluation of TCPs are the following (abbreviated from Parker and King 1998):

- Potential Traditional Cultural Properties must be identified through consultation with the affected community or Tribe
- The investigation must consider the beliefs and practices associated with a potential Traditional Cultural Properties from the perspective of the community or Tribe
- The potential Traditional Cultural Properties must be a property, that is, a tangible place on the landscape, rather than an intangible belief or practice
- The property must retain integrity of relationship with the beliefs and practices that give it meaning to the community or Tribe

- The property must retain integrity of condition, such that the elements of the property associated with the beliefs and practices that give it significance are present
- The property must meet one or more of the four criteria for eligibility on the National Register

Cultural resources routinely not considered for eligibility for inclusion in the NRHP are religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. However, these resources can be evaluated as eligible if they meet one or more of the NRHP eligibility criteria for evaluation, retain integrity, and meet special criteria requirements called criteria considerations. The most notable of the seven considerations (A through G) is Criteria Consideration G, which specifies that a property that has achieved significance within the last 50 years can qualify for the NRHP only if it is of exceptional importance. As noted by Parker and King (1998), "a significance ascribed to a property only in the past 50 years cannot be considered traditional." However, they also note: "The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the [National] Register" (Parker and King 1998).

If a property is determined to be a TCP, it becomes the responsibility of the lead agency to assess whether the proposed Project would have an effect on the property, and should the effect be adverse, would it alter or destroy the elements that make the property significant and eligible. If a proposed Project is determined to have an adverse effect, the lead agency is responsible for seeking measures that would mitigate the adverse effects to TCPs.

Tribal Cultural Resources

As defined at PRC § 21074, a Tribal Cultural Resource (TCR) is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to TCPs in terms of their characteristics, identification, and treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC § 21074(c), a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC § 21074(a). CEQA mandates that lead agencies determine whether a project will have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource), or are determined to be significant by the lead agency in order to appropriately mitigate any such impacts.

Under the CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1)
- Is associated with the lives of persons important in our past (Criterion 2)
- 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 (Criterion 3)
- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4)

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR §15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

- Identify cultural resources in the proposed Project area
- Evaluate against the CRHR criteria of significance (listed below)
- Evaluate the impacts of the proposed Project on all cultural/tribal resources
- Develop and implement measures to mitigate proposed Project impacts on historical resources or resources deemed significant by the lead agency

As TCRs hold cultural value to a California Native American tribe, consultation with local Native American tribes is an integral component of each of the cultural resources investigation steps described above.

Assembly Bill 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to Assembly Bill (AB) 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). Assembly Bill 52 recognizes that "…tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated…" and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance."

A proposed Project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

As such, Zone 7 is committed to working together with tribes and consultation efforts with California Native American tribes are described below.

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC 5097.94 the NAHC has authority and duty to "identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands" and has the power and duty to make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

California Native American Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act of 2001 (CalNAGPRA) requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes.

Methodology

Pursuant to PRC § 21080.3.1 and in support of AB 52, consultation efforts with Native American tribal contacts have been incorporated in the cultural resource investigation of the proposed Project area, as "California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources" (PRC § 21080.3.1[a]). Pursuant to PRC § 21080.3.1(b), lead agencies are required to send notifications of proposed Projects to California Native American tribes that have requested in writing to be informed of proposed Projects for consultation. Accordingly, the Native American Heritage Commission (NAHC) was contacted on February 9, 2024, to request a list of California Native American tribes and organizations that may have an interest in the proposed Project pursuant to PRC 21080.3.1(c), as well as to request a search of the Sacred Lands File (SLF). The NAHC responded on February 16, 2024, providing a list of tribes that have cultural and traditional affiliation to the proposed Project area. The NAHC response letter stated that the SLF search result was negative.

Contact information for the following Native American tribes and tribal representatives was provided with the NAHC letter dated March February 16, 2024:

- Chairperson Irene Zwierlein, Amah Mutsun Tribal Band of Mission San Juan Bautista
- Chairperson Corrina Gould, Confederated Villages of Lisjan Nation
- Tribal Cultural Resource Manager Cheyenne Gould, Confederated Villages of Lisjan Nation
- Language Program Manager Deja Gould, Confederated Villages of Lisjan Nation
- Tribal Liaison Desiree Munoz, Costanoan Rumsen Carmel Tribe
- Tribal Council Carla Munoz, Costanoan Rumsen Carmel Tribe

- MLD Contact Kanyon Sayers-Roods, Indian Canyon Mutsun Band of Costanoan
- Chairperson Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan
- Vice Chairwoman Monica Arellano, Muwekma Ohlone Indian Tribe of the SF Bay Area
- Tribal Compliance Officer Timothy Perez, Northern Valley Yokut / Ohlone Tribe
- Cultural Leader Vincent Medina, The Ohlone Indian Tribe
- Tribal Historic Preservation Officer Desiree Vigil, The Ohlone Indian Tribe
- Chairperson Andrew Galvan, The Ohlone Indian Tribe
- Executive Director of Administration Dahlton Brown, Wilton Rancheria
- Executive Director of Cultural Preservation Herbert Griffin, Wilton Rancheria
- Chairperson Kenneth Woodrow, Wuksachi Indian Tribe/Eshom Valley Band

On March 21, 2024, Zone 7 sent letters to the above listed Native American Tribes and Tribal representatives. To date, Zone 7 has received no responses and, as such, no TCRs have been identified. Should additional information be forthcoming from the Native American community, Zone 7 will continue to conduct outreach as needed.

Impact Analysis

If a lead agency determines that a project may cause a substantial adverse change to a TCR, the lead agency must consider measures to mitigate that impact. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2). Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records act.]

a) **No Impact.** The proposed Project would not cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code section 5020.1(k) because no cultural and/or tribal resources located in or near the Project area that qualify as CEQA historical resources would be affected by the proposed Project. There would be no impact.

b) **Less Than Significant With Mitigation Incorporated.** Although no specific tribal cultural resources were identified during consultation, any previously unrecorded archaeological resource discovered during construction, or any other phase of the Project may also be determined to be a tribal cultural resource per the CEQA criteria noted above. Protocols detailed under the Inadvertent Discovery Mitigation Measures CUL-1 and CUL-2 would address such a potential impact, and therefore, impacts to tribal cultural resources would be less than significant and no additional mitigation measures specific to tribal cultural resources are required.

Mitigation measures related to tribal cultural resources

Mitigation Measure CUL-1: Construction Measures.

Mitigation Measure CUL-2: Inadvertent Discovery.

References related to tribal cultural resources

Bean, L. J. 1994. The Ohlone Past and Present: Native Americans of the San Francisco Bay Region. Menlo Park, California: Ballena Press. Available online at https://archive.org/details/ohlonepastpresen00bean.

Kroeber, A. L. 1955. Nature of the Land-Holding Group. Ethnohistory 2:303–314. Available online at https://escholarship.org/content/qt7zb3b2vr/qt7zb3b2vr.pdf?t=lnq5ax.

Muwekma Ohlone Tribe. 2024. Chochenyo Language Revitalization. https://www.muwekma.org/language-revitalization.html. Accessed October 15, 2024.

2.4.19 Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The Project would be limited to the reduction of flood risk to adjacent and downstream communities of the Alamo Creek channel, including the construction of in-channel structures. The Project components do not include the construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities. It would also not result in the relocation of any of these facilities. Therefore, there would be no impact.

b) **Less Than Significant Impact.** As stated in a), the Project would not require or result in the relocation or construction of any new sources of water. The main objective of this Project is to reduce flood risk to adjacent and downstream communities. No minimum water supply is required to serve the Project. Therefore, there would be no impact.

c) **Less Than Significant Impact.** Construction, operation, and maintenance of the Project would not require any wastewater treatment. Portable toilets would be used onsite during construction for approximately 4

months. The Dublin San Ramon Services District (DSRSD) would be the closest facility to provide service to the Project. DSRSD has a capacity of 17 million gallons per day (DSRSD, 2024). Temporary Project needs during construction would be insignificant compared to DSRSD's service capacity. Therefore, the impact would be less than significant.

d, e) No Impact. The Project would require removal of any unused or excess materials during construction. Estimated earthwork of import and export of materials would require approximately 1,731 truck trips. It is assumed that excavated unused materials would be disposed of at the Altamont Landfill. Altamont Landfill currently has 65,400,000 cubic yards of remaining capacity (CalRecycle, 2024). No waste would be created or disposed of during operation and maintenance of this Project. Therefore, there would be no impact.

Mitigation measures related to utilities and service systems

No mitigation measures are required.

References related to utilities and service systems

CalRecycle. 2024. SWIS Facility/Site activity Details. Available Online: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/7?siteID=7. Accessed: April 11, 2024.

Dublin San Ramon Services District (DSRSD). 2024. About Us. Available Online: https://www.dsrsd.com/about-us/library/diagrams-maps. Accessed: April 11, 2024.

2.4.20 Wildfire

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

The Project area is located within a Local Responsibility Area (LRA) and is not located within a State Responsibility Area (SRA) or a Federal Responsibility Area (FRA) (CAL FIRE, 2024). The Project area is not classified as a Very High Fire Hazard Severity Zone (VHFHSZ) (ACFD, 2024).

Impact Analysis

a) **Less Than Significant Impact.** According to the City of Dublin Fire Services & Protection Department, the Dublin Fire Prevention Bureau actively enforces fire codes and regulations to ensure compliance. This applies to new construction and business operations facilities (City of Dublin, 2024). The Project would not include business operations facilities or the construction of any new facilities requiring a building permit and would therefore not impair an adopted emergency response plan enforced by ACFD.

b) **Potentially Significant Unless Mitigation Incorporated.** Project construction would require multiple vehicle trips and the use of heavy construction equipment, which with surrounding vegetation could result in a wildfire. The Project area is not surrounded by dense flammable vegetation, but there are flammable annual grasses and there is residential housing on the west side that could be exposed to fire impacts from a construction-related fire. **Mitigation Measure FIRE-1: Fire Safety Practices** would be implemented to minimize the impact of a wildfire during construction. Therefore, there would be a less than significant impact with mitigation incorporated.

c) **No Impact.** The Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or ongoing impacts to the environment. Maintenance would be conducted under Zone 7's Operation and Maintenance protocol for maintaining their flood protection facilities. Therefore, there would be no impact.

d) **No Impact.** The Project does not support factors such as runoff, post-fire slope instability, or drainage changes which could contribute to fire risks. Therefore, there would be no impact.

Mitigation measures related to wildfire

Mitigation Measure FIRE-1: Fire Safety Practices

Zone 7 shall require the construction contractor to ensure that the following fire safety construction practices are implemented:

- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire;
- Appropriate fire suppression equipment shall be maintained at the construction site;
- Flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame; and
- Construction personnel shall be trained in fire safe work practices, use of fire suppression equipment, and procedures to follow in the event of a fire.

References related to wildfire

Alameda County Fire Department (ACFD), 2024. Hazard Locator. Available Online: https://fire.acgov.org/hazard-locator/. Accessed March 15, 2024.

CAL FIRE, 2024. State Responsibility Area (SRA) Viewer. Available Online: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1. Accessed March 15, 2024.

City of Dublin, 2024. Fire Services & Prevention. Available Online: https://www.dublin.ca.gov/22/Fire-Services-Prevention. Accessed March 15, 2024.

2.4.21 Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Does the Project have the potential to substantially 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, substantially 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?	☐	☒	☐	☐
b) Does the 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)?	☐	☒	☐	☐
c) Does the Project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Impact Analysis

a, c) **Potentially Significant Unless Mitigation Incorporated.** This Initial Study has identified a number of potentially significant impacts resulting from Project construction. The Project will comply with all mitigation measures as outlined in the Mitigation, monitoring, and Reporting Plan (MMRP). The Project will result in a less than significant impact with the implementation of these mitigation measures, and therefore will not have the potential to substantially degrade the quality of the environment or reduce the habitat of a fish or wildlife species or their habitat, their communities, or important examples of the major period of California history or prehistory, or adverse effects on human beings. The impacts resulting from Project construction would be potentially significant unless mitigation incorporated.

c) **Potentially Significant Unless Mitigation Incorporated.** Consideration of past, present, and probable future projects indicate that the Project would have a less than significant cumulative impact. This Project is meant to serve as a pilot project that informs Zone 7's Flood Management Plan for wider use within Zone 7's system.

The Project would not have impacts to agriculture and forestry resources, land use and planning, mineral resources, and population and housing. The Project's proposed activities could have impacts to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. However, these impacts

would be limited to the Project site and mitigated to reduce the impact level from potentially significant to less than significant.

Mitigation Measures

The following mitigation measures would be implemented to ensure that the project would not have a cumulative effect on the environment when considered together with other Zone 7 projects. The full language of these measures is found in their respective resource analysis in this document or in the Mitigation, Monitoring, and Reporting Plan.

Mitigation Measure BIO-1: Construction-related Biological Resources Mitigation Measures

Mitigation Measure BIO-2: Pre-Construction Plant Surveys

Mitigation Measure BIO-3: Pre-Construction Burrowing Owl Survey

Mitigation Measure BIO-4: Northwestern Pond Turtle Avoidance

Mitigation Measure BIO-5: Bat Surveys

Mitigation Measure BIO-6: Nesting bird and raptor surveys

Mitigation Measure BIO-7: Nest avoidance

Mitigation Measure BIO-8: No net loss of aquatic resources

Mitigation Measure BIO-9: CCC Steelhead Take Avoidance and Minimization Measures

Mitigation Measure CUL-1: Construction Measures

Mitigation Measure CUL-2: Inadvertent Discovery

Mitigation Measure GEO-1: Inadvertent Discovery of Paleontological Resources

Mitigation Measure NOISE-1: General Noise Mitigation Measures

Mitigation Measure FIRE-1: Fire Safety Practices

3 REPORT PREPARERS

3.1 LEAD AGENCY

Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Elke Rank	Zone 7 Integrated Planning, Environmental Review Manager
Jeff Tang, P.E.	Zone 7 Flood Protection Engineering, Project Manager

3.2 CONSULTANTS

HDR
1 Capitol Mall #500, Sacramento, CA 95814

Nolan Ames	Noise Specialist
Ian Cain	Senior Biologist
David Clinnick	Cultural Resources Specialist 2
Victoria Hsu	Senior Air Quality Specialist
David Petree	Senior Traffic and Data Analysis Lead
Eliza Schlein	Biologist 2

FlowWest
P.O. Box 29392, Oakland, CA 94604

Ari Frink	FlowWest Senior Environmental Planner
Priscilla Liang	Staff Environmental Planner
Aidan Kelleher	Staff GIS Analyst
Skyler Lewis	Staff Scientist

4 APPENDICES

Appendix A. Special-Status Species

Please refer to the tables below for a list of special-status plants and animals known from the region. A copy of the Biological Technical Report prepared for this Project will be posted on Zone 7 Water Agency's website in its entirety.

SPECIAL-STATUS PLANTS KNOWN FROM THE REGION

Scientific Name	Common Name	Federal	State	CRPR	Habitat Characteristics	Potential for Occurrence	Rationale
Astragalus tener var. tener	alkali milk-vetch	None	None	1B.2	Alkaline soils in playas, adobe clay grassland, and vernal pools. Elevation: 0–195 feet. Blooming period: March-June	Not expected to occur	This species is not know to occur within 5 miles of the survey area which is surrounded by urban developmen t
Atriplex depressa	brittlescale	None	None	1B.2	Alkaline or clay soils in chenopod scrub, meadows, seeps, playas, vernal pools, and grassland. Elevation: 3-1,049 feet. Blooming period: April–October	Not expected to occur	This species is not know to occur within 5 miles of the survey area which is surrounded by urban developmen t
Atriplex minuscula	lesser saltscale	None	None	1B.1	Alkaline and sandy soils in chenopod scrub, playas, and grassland. Elevation: 49–656 feet.	Not expected to occur	This species is not know to occur within 5 miles of the

					Blooming period: May-October		survey area which is surrounded by urban developmen t
Centromadia parryi ssp. congdonii	Congdon's tarplant	None	None	1B.1	Alakline soils in grassland. Elevation: 0-755 feet. Blooming period: May–November	Could occur	The wild oat grasslands offer suitable habitat for this species.
Chloropyron palmatum	palmate-bracted bird's-beak	FE	SE	1B.1	Alkaline soils in chenopod scrub and grassland. Elevation: 15-510 feet. Blooming period: May–October	Not expected to occur	This species is not know to occur within 5 miles of the survey area which is surrounded by urban developmen t
Eriogonum truncatum	Mt. Diablo buckwheat	None	None	1B.1	Sandy soils in chaparral, coastal scrub, and grassland. Elevation: 5-1,150 feet. Blooming period: April–September (November and December)	Not expected to occur	The only record for this species within 5 miles is from 1933 and this species current distribution is only

							known around Mount Diablo
Extriplex joaquinana	San Joaquin spearscale	None	None	1B.2	Alkaline soils in chenopod scrub, meadows, seeps, playas, and grassland. Elevation: 0–2,740 feet. Blooming period: April–October (synonym of Atriplex joaquiniana)	Could occur	The wild oat grasslands offer suitable habitat for this species.
Helianthella castanea	Diablo helianthella	None	None	1B.2	Usually rocky, axonal soils, often in partial shade of broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and grassland. Elevation: 197–4,265 feet. Blooming period: March–June	Not expected to occur	The only record for this species within 5 miles is from a collection that gives potentially innaccurate location information, and is marked as an atypical site for the species. Habitat preferences for this species are not present

							in the survey area
Navarretia prostrata	prostrate vernal pool navarretia	None	None	1B.1	Mesic coastal scrub, meadows and seeps, alkaline grassland, and vernal pools. Elevation: 49–3,968 feet. Blooming period: April–July	Could occur	The wild oat grasslands offer suitable habitat for this species.
Plagiobothrys glaber	hairless popcornflower	None	None	1A	Alkaline soils in meadows and seeps and coastal salt marshes and swamps. Elevation: 45–590 feet. Blooming period: March–May	Not expected to occur	This species is presumed to be extinct
Spergularia macrotheca var. longistyla	long-styled sand-spurrey	None	None	1B.2	Alkaline soils in meadows, seeps, marshes and swamps. Elevation: 0–835 feet. Blooming period: February–May	Not expected to occur	This species is not know to occur within 5 miles of the survey area which is surrounded by urban developmen t
Trifolium hydrophilum	saline clover	None	None	1B.2	Marshes, swamps, vernal pools, and grassland with mesic or alkaline soils. Elevation: 0–985 feet.	Could occur	The wild oat grasslands offer suitable

					Blooming period: April–June		habitat for this species.
Tropidocarpum capparideum	caper-fruited tropidocarpum	None	None	1B.1	Alkaline hills in grassland. Elevation: 3–1,493 feet. Blooming period: March–April	Not expected to occur	This species is not know to occur within 5 miles of the survey area which is surrounded by urban developmen t

SPECIAL-STATUS ANIMALS KNOWN FROM THE REGION

Scientific Name	Common Name	Federal	State	Habitat Characteristics	Potential for Occurrence	Rationale
Invertebrates						
Bombus crotchii	Crotch's bumble bee	None	SCE	Occurs primarily in California, ranging through most of southewestern California from the coast and coastal ranges, through the Central Valley, and to the adjacent foothills. Also range into Baja California, Mexico and southwest Nevada near the California border. Historically common throughout the southern two-thirds of California but now absent from most of it. Known to inhabit open grassland and shrublands. Requires floral resources and undisturbed nesting and overwintering sites. This species is classified as a short-tongued species, whose food plants include open flowers with short corollas particularly in families Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, Hydrophyllacae, Asclepiadaceae and Boraginaceae. Known to produce annual colonies and typically nest underground and may rely on sufficient availability of rodent or other animal burrows to provide potential nesting sites. The flight period for Crotch bumble bee queens in California is from late February to late October. The flight period for workers and males flight period is from late March through September. Mated queens	Not Expected	While the study area is within the known range of the species, there are no suitable nectar plants that would support this species. Additionally, the species has not been observed within 5 miles of the BSA for over 75 years (CDFW 2024).

				overwinter in soft debris, leaf litter, or disturbed soils and emerge in early spring to feed and search for a new colony site (CDFW 2019). Nests are also sometimes located above ground in tufts of grass, old bird nests, rock pile, or cavities in dead trees. (ICUN 2023).		
Bombus occidentalis	western bumble bee	None	SCE	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Typically nests underground in abandoned rodent burrows, such as old squirrel or other animal nests, and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nest sites may depend on rodent abundance (Xerces 2014). In California, this generalist short-tongued forager primarily feeds associated plants in the Fabaceae, Asteraceae, Rhamnaceae, and Rosaceae families (Thorp et al. 1983). Range occurs along the West Coast and Mountain West of North America, from Arizona, New Mexico and Mediterranean California, north through the Pacific Northwest and Tundra/Taiga region to Alaska. Eastward, the distribution stretches to the northwestern Great Plains and southern Saskatchewan (Hatfield et al, 2015).	None	The study area is outside of the known range of this species.
Branchinecta lynchi	vernal pool fairy shrimp	FT	None	Endemic to the grasslands of the Central Valley and the Central and South Coast Range mountains of California, and the Agate Desert of southern Oregon. Found only in cool water vernal pools and vernal pool-like habitats; does	None	There are no vernal pool habitats within the study area capable of

				not occur in riverine, marine, or other permanent bodies of water (USFWS 2007).		supporting this species.
Danaus plexippus	monarch butterfly	FC	None	In the larva stage monarch butterflies require milkweed host plants, primarily of the genus Asclepias. Adult monarch butterflies require a diverse set of nectaring resources, which would include milkweed for ovipositioning in addition to larval feeding. Monarchs will often also use a variety of roosting trees along their fall migration routes. The overwintering habitats in California include tree groves of blue gum eucalyptus (Eucalyptus globulus), Monterey pine (Pinus radiata), and Monterey cypress (Hesperocyparis macrocarpa) all of which act as roost trees.	Not Expected	There are no overwintering sites within the vicinity of the study area and no milkweed was observed onsite.
Lepidurus packardi	vernal pool tadpole shrimp	FE	None	Found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands. Patchily distributed across the Central Valley from Shasta County south to Tulare County with isolated occurrences in the East Bay Area (USFWS 2007).	None	There are no vernal pool habitats within the study area capable of supporting this species.
Fish						
Acipenser medirostris (pop. 1)	green sturgeon (southern DPS)	FT	SSC	Spawning occurs primarily in the Sacramento River, but those that spawn in the Feather and Yuba Rivers are also part of the southern DPS. Oceanic waters, bays, and estuaries during non-spawning season. Enters San Francisco Bay late winter through early spring, and spawn occurs from April through early July. Spawn in cool sections of river mainstems in deep pools	None	The study area is outside of the known range of this species.

				containing small to medium-sized gravel, cobble, or boulder substrate (NMFS 2015).		
Oncorhynchus mykiss irideus (pop. 8)	steelhead (central California coast DPS)	FT	None	Includes naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Russian River to and including Aptos Creek, and all drainages of San Francisco and San Pablo Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers. Also, steelhead from two artificial propagation programs: Don Clausen Fish Hatchery Program and Kingfisher Flat Hatchery Program (Monterey Bay Salmon and Trout Project). Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NOAA 2019).	May occur	Suitable habitat and critical habitat are present.
Spirinchus thaleichthys	longfin smelt	FPE	ST	Considered pelagic and anadromous, though anadromy in this species is poorly understood, and certain populations are not anadromous, completing their life cycle in freshwater lakes and streams (USFWS 2012). Bay-Delta longfin smelt DPS occupies the San Francisco Bay Estuary and areas of the Pacific Ocean out to the Farallon Islands. This DPS is pelagic fish that exhibit a faculatively anadromous life history with reporduction within low-salinity to freshwater habitats beginning in late fall/early winter and extends into the spring as water temperature and low-salinity conditions allow. (USFWS 2022)	None	There is no estuarine habitat within the study area capable of supporting this species.

Amphibians						
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	FT	ST	Occurs in the San Joaquin- Sacramento River valleys, bordering foothills, and coastal valleys of Central California. Found from sea level in the Central Valley up to 3,940ft in the coast ranges and 1,640ft in the Sierra Nevada foothills. Have been reported to migrate up to 1.3 miles between breeding ponds and upland habitat. Require large tracts of upland habitat occupied by small burrowing mammals, especially California ground squirrel (Otospermophilus beecheyi) and Botta's pocket gopher (Thommomys bottae). Spend most of the year underground in burrows. Upland habitat usually dominated by grassland, oak woodland, or oak savannah. Breed in vernal pools, natural ponds, livestock ponds, and other modified permanent or ephemeral ponds usually free of predatory fish or breeding bullfrog populations. May sometimes breed in ditches containing seasonal wetlands, slow-moving swales, and creeks near other suitable breeding habitat. Also have been documented breeding in sewage treatment ponds. Optimal breeding ponds dry for at least 30 days in the summer to preclude fish and bullfrogs (USFWS 2017). Breeding area should hold water for at least 12 weeks of the year and typically fill during winter rains (USFWS 2005). Typically, breeding pools have moderate to high levels of turbidity. California tiger salamanders rarely use ponds with clear water. Studies show that 95% of the	Not Expected	The grassland habitat within the study area is not suitable for CTS as it is surrounded on all sides by developed areas, cut off from any suitable breeding ponds. Alamo Canal is not suitable breeding habitat for this species.

				population is within a 1.16 mile dispersal distance of a breeding pond. While topographic differences between flat areas and rolling hills might not be a factor in dispersal distance, land use and vegetation appear to play a role in dispersal route. Studies have found the species were most likely to successfully traverse chaparral, followed by grassland, and then oak woodland habitat and adults were more abundant in grasslands with scattered large oaks than in more densely wooded areas(USFWS 2016).		
Rana boylii pop. 4	Foothill yellow-legged frog – Central Coast DPS	FT	SE	This DPS ranges from southern San Francisco Bay through the Diablo Mountain Range, and the Coast Range east of Salinas Valley (USFWS 2021). Generally found in shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel. Eggs have been found at depths to 34 inches in water velocities of 0 - 0.69 feet per second and at most 40 feet from shore. Maximum water temperature for breeding is 79oF and 48 to 70oF is the preferred range. Tadpoles avoid areas below 55oF and prefer temperatures between 62oF and 72oF (Thomson et al. 2016).	Not Expected	Alamo Canal is not comprised of suitable substrate to support breeding populations of this species. Additionally

Rana draytonii	California red-legged frog	FT	SSC	Aquatic breeding habitat is generally found in still or slow-moving water and can have a wide range of edge and emergent cover amounts. In streams and creeks, frogs have been documented in low, moderate, high, and extreme gradients ranging from 0.4 percent to 21.0 percent slopes; however, the most stable populations and the highest breeding densities occur in low and moderate stream gradient types (less than 4 percent) with minimal scouring flows. Breed from November to May and breeding sites typically retain water for a minimum of 20 weeks to allow for tadpole development and metamorphosis. Breeding sites typically also contain shelter such as vegetation, rocks, or other cover and water more than 0.7 m deep. Typically use partially shaded pools and creeks with emergent vegetation as breeding habitat containing shelter such as vegetation, rocks, or other cover and water more than 0.7 m deep but the species can deposit eggs in a large variety of habitats. Also typically deposit egg masses in relatively shallow water (less than 38 cm) on emergent vegetation within 1 meter of shore, but can deposit eggs on a wide variety of substrates including boulders and cobbled substrate and submerged tips of overhanging branches and up to 12 m from shore in water up to 3.2 m deep. Can successfully breed in ponds with water temperatures up to 30o C. Ponds or streams completely choked with emergent vegetation such as cattails or giant reed (Arundo sp.) are generally considered	Not Expected	Alamo Canal is mostly devoid of emergent vegetation cover along the banks throughout the study area. There is no overhead shading to protect egg masses. Multiple previous sampling efforts in the study area have not found the species.

				unsuitable for breeding because the dense vegetation can impede adult movement. Non-breeding aquatic habitat is found in similar aquatic features as breeding habitat but these features may not hold water long enough for the species to successfully complete its aquatic life cycle. While generally found in freshwater habitats, can survive in saline water for short periods and have been observed in salinities up to 36 ppt. Non-breeding aquatic features provide habitat for foraging, shelter, movement, and other essential behaviors. In addition to the aquatic features used for breeding, aquatic non-breeding habitat may include plunge pools within intermittent creeks, seeps, quiet water refugia during high water flows, and springs of sufficient flow to withstand the summer dry period. Readily use disturbed areas such as channelized creeks and drainage ditches as aquatic habitat. Suitable upland habitat for the California red-legged frog includes nearly any terrestrial area within 100 m of breeding or non-breeding aquatic habitat that contains cover features such as dense riparian vegetation, wood or rock debris, burrows, or anthropogenic cover including discarded tires and wooden boards. Dispersal habitat consists of terrestrial areas up to 3.2 km away from breeding and non-breeding aquatic habitat used to move along and between watersheds during long-distance dispersal events (USFWS 2022).		

Spea hammondii	western spadefoot	FPT	SSC	Endemic to California and northern Baja California ranging from Redding throughout the central valley and associated foothills, through the South Coast Ranges into southern California west of the Peninsular mountains. Breeding sites include vernal pools, temporary rain pools, cattle tanks, and occasionally pools of intermittent streams typically in turbid water with little to no cover that remain wet for at least 30 days to allow for transfomation of larvae (Nafis 2023). Prefers open areas with sandy or gravely soils, in a variety of habitats including grasslands, oak woodlands, coastal sage scrub, chaparral, sandy washes, floodplains, alluvial fans, playas, and alkali flats. Pools with invasive species, such as crayfish (Pacifasticus spp.), or bullfrogs (Lithobates catesbeianus) often, but not always, exclude this species (Thomas et al. 2016).	None	This species is not known to occur within x miles of the study area. The study area does not contain suitable habitat to support this species.
Reptiles						
Actinemys marmorata	northwestern pond turtle	FPT	SSC	Ranges throughout California except for Inyo and Mono Counties. Generally occurs in various water bodies including permanent and ephemeral systems either natural or artificial. Upland habitat that is at least moderately undisturbed is required for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016).	Possible	This species has been documented in a hydrolically connected waterway and was observed in previously conducted surveys in the study area (ESA 2016)

Masticophis lateralis euryxanthus	Alameda whipsnake	FT	ST	Endemic to California where it is only found in the East Bay area in Alameda and Contra Costa Counties. Prefers open areas in canyons, rocky hillsides, and chaparral scrublands, but will range into adjacent grasslands and woodlands (Nafis 20XX).	Not Expected	There are multiple occurrences of this species nearby, but the study area does not contain chaparral scrublands that this species prefers.
Birds						
Agelaius tricolor	tricolored blackbird	None	ST, SSC	Mostly a year-round resident in California. Common locally throughout Central Valley and in coastal districts from Sonoma County south. Breeds locally in northeastern California. In winter, becomes more widespread along the central coast and San Francisco Bay area, and can be found in portions of the Colorado Desert. Preferred nesting habitat includes cattails (Typha spp.), bulrushes (Schoenoplectus spp.), Himalayan blackberry (Rubus armeniacus), and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 30 feet or more wide but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails. (CWHR Program Staff 2008).	Not Expected	The study area does not support dense emergent vegetation along Alamo Canal that this species would require as suitable nesting habitat.

Aquila chrysaetos	golden eagle	BGEPA	FP	Uncommon resident in hills and mountains throughout California, and an uncommon migrant and winter resident in the Central Valley and Mojave Desert. Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops. (Polite et al. 1990)	None	The habitat within the Study Area is unsuitable for this species
Ardea herodias	great blue heron	None	None	Common resident to California all year, usually within shallow estuaries and fresh and saline emergent wetlands. Can also be less commonly found along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills. Usually nests in colonies in tops of secluded large snags or live trees, rarely nesting on the ground, rock ledges, sea cliffs, mats of tules, or shrubs (CHWR 2005).	None	Only the rookeries of this species are protected and no suitable nesting trees are present within the study are.
Athene cunicularia	burrowing owl	None	SSC	Resident in much of the state in open, dry grasslands and various desert habitats. Requires open areas with mammal burrows; especially those of California ground squirrel (Otospermophilus beecheyi) Inhabits rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other open human disturbed lands such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CWHR Program Staff 1999).	Possible	Ground squirrels were observed onsite and mutliple burrows were documented. No sign of owl was detected, but the species has been documented within a mile of the study area.

Buteo swainsoni	Swainson's hawk	None	ST	Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Increasingly also nests in sparse stands of gum trees (Eucalyptus spp.) and Australian pines (Casuarina equisetifolia) and often forage along roadsides and grassy highway medians. Breeding resident in the Central Valley, Klamath Basin, Northeastern Plateau, and in juniper-sagebrush flats of Lassen County. Limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Winters primarily in Argentina, with most birds absent from California October through February, though a few overwinter in the Sacramento-San Joaquin River Delta. Prolific migrant through southern California in spring and fall, with large mixed-age groups of birds frequently observed kettling high overhead on thermals or foraging together on freshly cut agricultural fields (CWHR Program Staff 2006). Regulatory buffer of 1,320 feet (¼ mile) from active nests. Buffer should be increased to 1/2 mile if nesting area is away from urban development (CDFW 1994)	None	There is no suitable nesting or foraging habitat within the vicinity of the study area.
Charadrius nivosus nivosus	western snowy plover	FT	SSC	Coastal populations nest on sandy or gravelly dune-backed beaches, sand spits, and on estuarine salt pans and lagoons (USFWS 2005). Inland populations nest along barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds,	None	There are no sandy beaches within the study area capable of supporting nesting

				braided river channels, agricultural wastewater ponds, and salt evaporation ponds (Shuford and Gardali 2008). Inland nesting occurs at Salton Sea, Mono Lake, and isolated sites on the shores of alkali lakes in northeastern California, the Central Valley, and southeastern deserts (CWHR Program Staff 2008).		populations of this species.
Circus hudsonius	northern harrier	None	SSC	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats, and desert sinks (Shuford and Gardali 2008).	Not Expected	This species may forage in the vicinity of the study area, but there is no suitable nesting habitat.
Coturnicops noveboracensis	yellow rail	None	SSC	Nests in sedge marshes and meadows with moist soil or shallow standing water. Winters in wet meadows and tidal marshes. Much is unknown about the abundance and distribution of this species because it is extremely secretive and difficult to detect. Has been found nesting on the Modoc Plateau and in Plumas and Lassen Counties. Very rarely detected in migration, and recorded in winter at a very few sites scattered along the coast, though seemingly regular at Tomales Bay in Marin County and Arrowhead Marsh in Alameda County (Shuford and Gardali 2008).	None	The study area does not contain marshlands capable of supporting this species.
Elanus leucurus	white-tailed kite	None	FP	Fairly common resident of the Central Valley, coast, and Coast Range Mountains. Nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near	Not Expected	This species may forage in the vicinity of the study area, but

				foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands. Often seen hover foraging over roadsides or grassy highway medians (CWHR Program Staff 2005).		there is no suitable nesting habitat.
Falco peregrinus anatum	American peregrine falcon	None	FP	Breeds near wetlands, lakes, rivers, or other waters on cliffs, banks, dunes or mounds, mostly in woodland, forest, and coastal habitats. Nest is a scrape on a depression or ledge in an open site. May use man-made structures (such as bridges, skyscrapers, or electrical towers), large snags, or trees for nesting (Polite et al. 1990).	none	There is no suitable nesting or foraging habitat within the vicinity of the study area.
Geothlypis trichas sinuosa	San Francisco common yellowthroat	None	SSC	Dwells only in the San Francisco Bay Area. Primarily found in brackish and fresh marshes, but also occupies salt marsh and riparian woodland habitat. (Shuford and Gardali 2008).	None	The study area does not contain suitable habitat to support this species.
Gymnogyps californianus	California condor	FE	SE, FP	Formerly ranged across much of North America, but over the course of the 20th Century, disappeared over nearly its entire range. Dwindled to such small numbers that by the 1980's, all remaining birds were removed from the wild to a captive rearing program. In the 1990's, began being re-released, and now the species has re-established in the foothills of the southern Sierra Nevada Range, across the Tehachapi Range and through the Transverse Ranges from Los Angeles County to Santa Barbara County, and up the Coast Range Mountains to Big Sur and Pinnacles National Park. Nests in cavities located on steep rock	None	There are no old growth forests within the vicinity of the study area that this species would nest in.

				formations or in the burned out hollows of old-growth coast redwoods (Sequoia semervirens) or giant sequoias (Sequoiadendron giganteum). Less commonly uses cliff ledges or large old nests of other bird species. Forages in open terrain of foothill grassland and oak savanna habitats, and at coastal sites in central California (USFWS 2013).		
Laterallus jamaicensis coturniculus	California black rail	None	ST, FP	Saline, brackish, and fresh emergent wetlands. Scarce, but true abundance difficult to determine due to small size and extremely secretive nature. Known to nest at scattered locations in the San Francisco Bay Area and Delta region, Point Reyes National Seashore, San Luis Obispo and Orange Counties, as well as the Imperial and Lower Colorado River Valleys. Appears intermittently and sparingly at a few locations in the Sacramento Valley (CWHR Program Staff 1999).	None	The study area does not contain marshlands capable of supporting this species.
Melospiza melodia	song sparrow (Modesto population)	None	SSC	Often found in emergent freshwater marshes dominated by bulrushes (Scirpus spp.), cattails (Typha spp.), and willow (Salix spp.). Also nests in riparian forests of valley oak (Quercus lobata) with a sufficient understory of blackberry (Rubus spp.), along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites. Found throughout the Sacramento Valley, from the delta north to Chico (Shuford and Gardali 2008).	Not Expected	The study area does not contain sufficient emergent vegetation to support this species.

Rallus obsoletus obsoletus	California Ridgway's rail	FE	SE, FP	Restricted to tidal marshes on the fringes of San Pablo Bay, San Francisco Bay, Monterey Bay, and Morro Bay. Requires intricate network of sloughs with small natural berms along tidal channels, preferably with cordgrass (Spartina spp.) and pickleweed (Salicornia spp.) (USFWS 2017).	None	The study area does not contain marshlands capable of supporting this species.
Riparia riparia	bank swallow	None	ST	A colonial nester in riparian and lacustrine bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks as well as sand and gravel pits. Declined drastically in the state over the 20th Century due to loss of riparian habitat and stabilization of natural banks. Currently most numerous in the Sacramento Valley along the Sacramento, Feather, and American Rivers, and Cache Creek in western Yolo County. Scarce and very local on the central coast. Occurs elsewhere in the state as an uncommon to rare migrant (CWHR Program Staff 1999).	None	The study area is outside of the known range of this species.
Setophaga petechia	yellow warbler	None	SSC	Usually found in riparian deciduous habitats in summer: cottonwoods (Populus ssp.), willows (Salix ssp.), alders (Alnus ssp.), and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open coniferous forests (CWHR Program Staff 2005).	None	The study area does not contain suitable habitat to support this species.
Sternula antillarum browni	California least tern	FE	SE, FP	Breeds on the coast from San Francisco Bay south, and rarely up through the Delta to Sacramento County and at the Salton Sea. Nests and roosts in colonies on fine-grain	None	The study area does not contain sandy beaches to support nesting

				sandy or pebbly beaches, or in smaller numbers on pebbly levees at water treatment plants or evaporation ponds. Forages over near shore ocean waters and in shallow estuaries and lagoons (USFWS 2006).		habitat for this species.
Mammals						
Antrozous pallidus	pallid bat	None	SSC	Ranges across all of California in a wide variety of habitats with preference for arid and semi-arid, and rocky, mountainous areas (Miller 2002); it is abundant in xeric ecosystems. Day and night roosts include rocky crevices, caves, mines, trees (snags, exfoliating bark, hollows of larger trees) and anthropogenic structures (bridges, vacant buildings, bat boxes, attics) (WBWG 2005). Common tree species used are coast redwoods; oaks (valley, live, blue); pine (Ponderosa, lodgepole).Pallid bats are not documented to have very low roost fidelity and will often switch roosts seasonally or even daily (WBWG 2005). When hibernating, pallid bats can be found roosting in buildings, caves, or rock crevices; overwintering roosts will typically be found in protected structures out of direct sunlight with stable temperatures (Miller 2002, WBWG 2005). There is a paucity of information pertaining to maternity colonies of pallid bats; however, it is understood that individuals within a roost will be greater than normal, but roost selection does not vary greatly from normal behaviors (WBWG 2005). Ranges across nearly all of California except for high elevation portions of the Sierra Nevada Mountains and Del Norte, western Siskiyou,	Possible	Small crevices between pipes connected to the underside of the Dublin Boulevard bridge could provide suitable roosting habitat for this species.

				Humboldt, and northern Mendocino Counties (Harris et al. 1990).		
Corynorhinus townsendii	Townsend's big-eared bat	None	SSC	There are currently two accepted subspecies of C. townsendii whose ranges include California: C. t. pallescens and C. t. townsendii. This species has a broad range in the western U.S., occupying montane forests dominated by pine, fir, and aspen trees as well as subalpine areas and arid desert habitats (Adams 2003, Kunz and Martin 1982). Roosting commonly occurs in caves and cave-like structures, including anthropogenic mines and buildings, bridges, and hollow trees (WBWG 2005). Abandoned buildings are typically used in summer months, with a preference of caves and mines in the winter (Adams 2003).Maternity colonies are relatively well documented compared to other species. These colonies form between March and June and can hold between a few individuals and several hundred individuals (WBWG 2005). These maternity colonies will almost exclusively be found in caves and cave-like systems. Townsend's big-eared bats are extremely sensitive to disturbance and will relocate roosts at minimal signs of human activity (Kunz and martin 1982). Ranges throughout California except for high elevation portions of	Not Expected	The only suitable roosting habitat within the study area is subject to constant disturbance as it is beneath an active roadway. This renders it unsuitable for this species.

				the Sierra Nevada Mountains. Generally prefers mesic habitats but known to occur in all non-alpine habitats of California. This species may use different roosting sites for day and night (CWHR Program Staff 2000).		
Eumops perotis californicus	western mastiff bat	None	SSC	Ranges throughout all of Southern California, the central coast, and the Sierra Nevada Mountains. Generally occurs in open, arid, or semi-arid habitats. Roosts in rock crevices and buildings. (Ahlborn and White 1990).	Not Expected	There are no documented occurrences within the vicinity of the study area.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	None	SSC	Found throughout the San Francisco Bay area in grasslands, scrub and wooded areas with evergreen / live oaks (Quercus spp.) and other thick-leaved trees and shrubs. Houses are typically placed on the ground, against or straddling a log or exposed roots of a standing tree, and are often located in dense brush. Nests are also placed in the crotches and cavities of trees and in hollow logs. Sometimes arboreal nests are constructed but this behavior seems to be more common in habitat with evergreen / live oak trees (Kelly 1990).	Not Expected	The study area does not contain sufficient woodland cover to support nesting individuals of this species.
Reithrodontomys raviventris	salt-marsh harvest mouse	FE	SE, FP	Salt and brackish marshes with dense stands of pickleweed (Salicornia pacifica) adjacent to upland, salt-tolerant vegetation in the San Francisco, San Pablo, and Suisun Bay areas (USFWS 2010).	None	The study area does not contain pickleweed marshes that this species requires for foraging.

Sorex vagrans halicoetes	salt-marsh wandering shrew	None	SSC	Based on available museum specimen records, occurred historically in salt marshes bordering the southern arm of the San Francisco Bay from San Pablo, south along the bay margin through Oakland, Hayward, and Alviso, then north through Palo Alto, Belmont, and South San Francisco. Currently, it is confined to small remnant stands of salt marsh found around the southern arm of the San Francisco Bay in San Mateo, Santa Clara, Alameda and Contra Costa counties (Bolster 1998).	None	There are no salt marshes within the study area.
Taxidea taxus	American badger	None	SSC	Ranges across nearly all of California except northernmost Humboldt and Del Norte Counties. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils (Ahlborn and White 1990).	None	There is no shrub or forest habitat within the study area.
Vulpes macrotis mutica	San Joaquin kit fox	FE	ST	The subspecies historically ranged in alkali scrub/shrub and arid grasslands throughout the level terrain of the San Joaquin Valley floor from southern Kern County north to Tracy in San Joaquin County, and up into more gradual slopes of the surrounding foothills and adjoining valleys of the interior Coast Range. Occurs in desert-like habitats characterized by sparse or absent shrub cover, sparse ground cover, and short vegetative structure. Prefers areas with open, level, sandy ground (USFWS 2010).	Not Expected	The study area does not contain suitable habitat to support this species.

Appendix B. Mitigation Monitoring and Reporting Plan

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
Biological Resources				
BIO-1	**BIO-1: Construction-related Biological Resources Mitigation Measures** **Minimize Footprint.** Minimize project-related ground disturbance to the extent practicable. All project-related parking, storage areas, laydown and staging sites, and any other surface-disturbing activities shall be limited to previously disturbed areas when possible and avoid established trees and shrubs. **Environmentally Sensitive Area Fencing**. All environmentally sensitive areas to be avoided during project activities shall be temporarily fenced and/or flagged as close to construction limits as feasible. Fencing or flagging shall be high-visibility and left in place for the duration of the project. Environmentally sensitive areas include aquatic resources, brackish marshes, or special-status species habitat. The location and extent of fencing/flagging shall be determined by a qualified biologist who will oversee its installation and conduct regular inspections. The contractor will work with the biologist to install fencing. **Worker Environmental Awareness Training.** Prior to the onset of construction, a qualified biologist shall conduct mandatory contractor/worker environmental awareness training for construction personnel to inform them on the locations of sensitive biological resources and site-specific protective measures required during construction activities. If new construction personnel are added to the project, the contractor shall require them to receive the mandatory training prior to starting work. Training shall discuss special-status species, including species identification, a description of life history, habitat requirements during various life stages, and the species' protected status. **Restoration of Temporarily Disturbed Areas.** All exposed and/or disturbed areas resulting from	Before construction	Before construction, throughout construction, after construction	Zone 7 Biologist, Contractor

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	construction activities shall be returned to their original contour and grade and shall be restored using existing topsoil and a hydroseed mix appropriate for the location. All trees removed will be replaced at a ratio of 3:1 or better. **Construction Best Management Practices.** No fueling of construction equipment shall occur within 100 feet the Alamo Canal. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of spills and stormwater. Equipment shall be stored in areas that any possible contamination from the equipment would not flow or be washed back into the channel. Daily inspection and cleaning of equipment entering the BSA shall be conducted such that fuel, oil, grease, and deleterious amounts of soil are removed prior to entering the BSA. If an equipment leak occurs in the dewatered area, proper best management practices shall be installed immediately and the equipment shall be removed from the area. Additionally, best management practices shall be employed on-site to prevent degradation to on- and off-site aquatic resources. Methods would include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. All best management practices shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized. The use of monofilament netting or other erosion control materials that could be harmful to species shall be prohibited. **Clean Construction Area.** All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the BSA. On completion of construction activities, all temporary fill and construction refuse, including, but not limited to, broken			

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes, shall be removed and appropriately disposed.			
BIO-2	**BIO-2: Pre-Construction Plant Surveys.** Prior to initiating proposed ground disturbance or vegetation clearing, including along construction access routes or at temporary work areas, a qualified botanist will perform focused surveys to determine the presence or absence of special-status plant species with potential to occur in and adjacent to proposed disturbance areas. These surveys will be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018), which requires rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Surveys will be scheduled to coincide with known flowering periods, and/or during appropriate developmental periods that are necessary to identify the plant species of concern.	Before construction	Once	Zone 7 Biologist
BIO-3	**BIO-3: Pre-Construction Burrowing Owl Survey.** Within 2 weeks of initial ground disturbance, all fossorial mammal burrows within the BSA should be examined for signs of occupation by burrowing owls including presence of pellets, whitewash around the opening, or scattered feathers. If no burrowing owls are detected, no further mitigation is required. If burrowing owls are detected, the AMM methodologies outlined in CDFW's Staff Report on Burrowing Owl Mitigation (2012) would be implemented prior to initiating project-related activities that may impact burrowing owls.	Before construction	Once	Zone 7 Biologist
BIO-4	**BIO-4: Northwestern Pond Turtle Avoidance.** All in water work shall occur during the dry season (ex: May 15 to October 15). Upstream water sources shall be diverted around the sites during instream construction to minimize the	Before and during construction	Daily	Zone 7 Biologist

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	likelihood of NWPT movement through the project area during construction. A qualified biological monitor shall perform a pre-construction survey of the project area prior to construction to verify that NWPT are not present in work areas. Additionally, after the work areas have been dewatered, the biological monitor shall perform daily inspections to ensure that no individuals have entered the work area. If NWPT are identified in the work area, construction activities shall cease until the individual disperses from the area or is relocated by the biological monitor.			
BIO-5	**BIO-5: Bat Surveys.** Prior to implementation of project-related activities in undisturbed portions of the project site and in and around buildings or other human-made structures with recesses where bats could potentially roost, a qualified biologist will conduct a daytime site reconnaissance of the area. The biologist, focusing on buildings and other human-made structures or trees with cavities or exfoliating bark, would look for bats and bat signs including existing roost sites, bat guano deposits, and will listen for roosting bats. If the daytime survey does not identify the presence of potential bat roosts, no further mitigation is required. If potential roost sites are identified, an exit nighttime survey will be conducted to determine species of roosting bats, relative bat activity, and to estimate the number of individual bats. This nighttime survey may be an active or passive acoustic monitoring survey. If occupied bat roost sites are identified, appropriate spatial and temporal buffers, as defined by the biologist based on experience with bat species, would be implemented to minimize impact on roosting bats during construction of the project.	Before construction	Once if no roost sites are found, twice if roost sites are found	Zone 7 Biologist
BIO-6	**BIO-6: Nesting bird and raptor surveys.** If project activities occur during the nesting season (February 1 to August 31), then pre-construction surveys to identify active migratory bird and/or raptor nests shall be conducted by a qualified biologist no more than 7 days prior to construction initiation. Focused surveys shall be	Before and during construction	Once	Zone 7 Biologist

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	performed by a qualified biologist for the purpose of determining the presence or absence of active nest sites within the following distances form the disturbance footprint: • Passerines: Disturbance footprint only, or at the biologist's discretion • Raptors: 500 feet, or within sight of the disturbance footprint, whichever is smaller • Special-status Raptors: ½ mile, or within sight of the disturbance footprint, whichever is smaller. If a lapse in project activities of 7 days or greater occurs for any reason during the nesting season, a qualified biologist shall perform another survey for nesting birds and raptors prior to resuming project activities. If feasible, tree and vegetation clearing will be conducted outside the nesting season.			
BIO-7	**BIO-7: Nest avoidance.** If active nest sites are identified within the survey distances defined in the Nesting Bird and Raptor Surveys measure, a no-disturbance buffer shall be established for all active nest sites prior to commencement of any project-related activities to avoid disturbances to nesting activities. A no-disturbance buffer constitutes a zone in which project-related activities such as vegetation removal, earth moving, and construction cannot occur. The size of no-disturbance buffers would be determined by a qualified biologist based on the species, activities in the vicinity of the nest, and topographic and other visual barriers. A qualified biologist shall monitor all active nests during construction activities until the nest(s) is deemed inactive. The amount and duration of monitoring would be determined by the qualified biologist and would depend on the same factors mentioned above when determining the size of the no disturbance buffer. If active special-status raptor nests are detected and an appropriately sized no-disturbance buffer (per current national or CDFW guidelines) is not feasible, the biologist	During construction	To be determined by biologist	Zone 7 Biologist

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	may monitor the nest full time depending on the nest location, or only when noise are above background levels tolerated by raptors. Monitoring shall occur until the nestlings have fledged, or the nest is deemed inactive. If disturbance resulting from project activities is observed, construction may be delayed until the nest is no longer active, as determined by a qualified biologist, or the appropriate agency can be consulted.			
BIO-8	**BIO-8: No net loss of aquatic resources.** If permanent impacts to aquatic resources exceed 1/10th of an acre, no net loss of aquatic resources shall be achieved through impact avoidance, minimization, and/or compensatory mitigation. Mitigation for permanent impacts to aquatic resources shall be provided at a minimum of a 1:1 ratio or as required by permits issued through USACE, CDFW, and RWQCB. Mitigation may be provided by on-site creation or habitat restoration or by habitat restoration or enhancement.	During construction	As long as necessary to complete mitigation activities	Zone 7
BIO-9	**BIO-9: CCC Steelhead Take Avoidance and Minimization Measures.** In channel construction activities would be limited to the period from June 1-October 15, outside of the known migratory and spawning period for CCC steelhead. If minor flows are present, a temporary stream diversion would be used to divert water away from instream construction and maintain flow.	During construction	Throughout construction	Contractor
Cultural Resources				
CUL-1	**CUL-1: Construction Measures.** If unrecorded cultural resources are encountered during Project-related ground-disturbing activities, a qualified cultural resources specialist shall be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during Project-related construction activities, ground disturbances in the area of the find will be	During construction	Whenever unrecorded cultural resources are encountered	Zone 7 Archaeologist

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	halted, and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist will determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation, such as avoidance or data recovery. Construction work can continue on other parts of the project while archaeological mitigation takes place.			
CUL-2	**CUL-2: Inadvertent Discovery.** In accordance with the California Health and Safety Code Sections 7050.5 and 7052, Public Resources Code Section 5097.98, and CEQA Section 15064.5; if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find would be halted immediately, and the Alameda County coroner is to be notified to arrange the proper treatment and disposition of the human remains. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the Native American Heritage Commission (NAHC) within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will, in coordination with the landowner, determine the manner in which the remains are treated.	During construction	Whenever human remains are uncovered	Contractor
Geology and Soils				
GEO-1	**GEO-1: Inadvertent Discovery of Paleontological Resources.** If paleontological resources are encountered during Project construction and no paleontological monitor is present, all ground disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist (as determined by the Project's qualified cultural resource professional) can be contacted to evaluate the find and make recommendations. If determined significant pursuant to CEQA and Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan	Before and during construction	Whenever paleontological resources are encountered	Zone 7 Paleontologist

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	shall be implemented. Adverse impacts to significant paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the curation of all fossil material to a paleontological repository, museum, or academic institution, as appropriate. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.			
Noise				
NOISE-1	**NOISE-1: General Noise Mitigation Measures** • Provide temporary construction noise barriers, blocking the line-of-sight from noisy activities to noise-sensitive receivers; provide walled enclosures or mass-loaded vinyl curtains around noisy equipment or activities; and/or wrap noisy equipment with mass-loaded vinyl as feasible; • Utilize quiet and properly functioning equipment that is maintained in a state of good repair and fitted with silencers or mufflers that provide the same or better noise reduction than original equipment manufacturer (OEM) equipment; • Plan truck routes and loading activities away from noise-sensitive receivers. To comply with the Alameda County noise ordinance, construction should not take place between 7:00 pm and 7:00 am on Mondays through Fridays, or between 5:00 pm and 8:00 am on Saturdays and Sundays. Planting, Irrigation, and Trail Repair phase: Utilize a non-vibratory roller in place of a vibratory roller.	During construction	Daily	Contractor

Impact	Mitigation Measure	Timing	Frequency	Responsible Entity
	Remaining phases: Bulldozers and loaded trucks should have limited use within 15 feet of nearby structures. If this is not reasonably achievable, vibration monitoring is recommended at 6450 Dougherty Road (South), a residence located on Hickory Lane adjacent to the site, and a residence located on Spruce Lane adjacent to the site. Contractor should work with occupants / owners to keep construction to times that will minimize disturbance.			
Wildfire				
FIRE-1	**FIRE-1: Fire Safety Practices** Zone 7 shall require the construction contractor to ensure that the following fire safety construction practices are implemented: • Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire; • Appropriate fire suppression equipment shall be maintained at the construction site; • Flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame; and • Construction personnel shall be trained in fire safe work practices, use of fire suppression equipment, and procedures to follow in the event of a fire.	During construction	Daily	Contractor