

BEFORE THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CRUZ,  
STATE OF CALIFORNIA

RESOLUTION NO. \_\_\_\_\_

On the motion of Supervisor:  
Duly seconded by Supervisor:  
The following Resolution is adopted:

RESOLUTION ADOPTING THE ADDENDUM TO THE MITIGATED NEGATIVE  
DECLARATION AND MITIGATED NEGATIVE DECLARATION AND MITIGATION  
MONITORING AND REPORTING PROGRAM FOR 100 UNIT RESIDENTIAL  
SUBDIVISION (Application Number 241488)

WHEREAS, on December 10, 2025, the Planning Commission of the County of Santa Cruz held a public hearing on Application No. 241488, involving property located within the Live Oak planning area and forwarded recommendations to the Board of Supervisors for further consideration; and

WHEREAS, the Board of Supervisors for the County of Santa Cruz has convened a duly noticed public hearing to consider the proposed project and proposed adoption of an Addendum to a Mitigated Negative Declaration, and considered public testimony prior to taking action.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED, that the Board of Supervisors has independently reviewed and analyzed the Addendum to the Mitigated Negative Declaration, in conjunction with the previously adopted Mitigated Negative Declaration and other information in the record, and has considered the information contained therein prior to acting upon the Project. Based on all evidence in the administrative record for the Project, the Board hereby makes the following findings and hereby adopts the attached California Environmental Quality Act (CEQA) Addendum to a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP) related to the proposed project.

1. The project that was the subject of environmental review includes but is not limited to the following components: a 100-unit residential development project including the following approvals: Amendments to Planned Unit Development Ordinance 5027, Land Division, and a Site Residential Development Permit with Design Review.
2. Environmental review completed for the proposed project determined that the minor technical changes and additions of proposed project, as amended from PUD Ordinance 5027, do not affect the mandatory findings of significance presented in the 2008 Initial Study and Mitigated Negative Declaration. Mitigation measures present in the Mitigation Monitoring and Reporting Plan will be implemented to ensure that the Project's impacts remain below levels considered significant. The impact determinations remain consistent with those presented in the 2008 Initial Study and Mitigated Negative Declaration. None of the factors listed in CEQA Guidelines Section 15162(a) are present; therefore, the addendum to the 2008 Initial Study and Mitigated Negative Declaration is an appropriate

level of environmental review for the proposed project changes, as identified in CEQA Guidelines Section 15164.

3. The Board of Supervisors adoption of the Addendum to a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP) requires that mitigation measures be incorporated into the Project, and the Board of Supervisors finds that implementation of these mitigation measures will reduce any potentially significant effects of the proposed project to a less than significant level.
4. In adopting the Addendum to a Mitigated Negative Declaration, the Board of Supervisors finds, on the basis of the whole record before it, that there is no substantial evidence that the project will have a significant effect on the environment, and that the Mitigated Negative Declaration and Addendum reflect the lead agency's independent judgement and analysis.
5. The material which constitutes the record of proceedings upon which the Board's decision is based shall be located in the offices of the Clerk of the Board, located at 701 Ocean Street, Santa Cruz, California.

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Cruz, State of California, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the following vote:

AYES:            SUPERVISORS:  
 NOES:           SUPERVISORS:  
 ABSENT:        SUPERVISORS:  
 ABSTAIN:      SUPERVISORS:

\_\_\_\_\_  
Chairperson of the Board of Supervisors

ATTEST: \_\_\_\_\_  
Clerk of the Board

APPROVED AS TO FORM:

Signed by:  
*Natalie Kirkish*  
\_\_\_\_\_

0520C8AA0E74498  
COUNTY COUNSEL

Exhibits:

- D. Addendum to the 2008 Initial Study and Mitigated Negative Declaration
- E. Mitigated Negative Declaration
- F. Mitigation Monitoring and Reporting Program

# **Addendum to the Initial Study/Mitigative Negative Declaration**

5940 Soquel Avenue Project  
(SCH: 2008092113)

County of Santa Cruz, California

*Prepared for*

**County of Santa Cruz**

701 Ocean Street, 4th Floor  
Santa Cruz, CA 95060

*Prepared by*



**Integral Consulting Inc.**

433 Visitacion Avenue  
Brisbane, CA 94005

October 2025

**Exhibit D**

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## **ACRONYMS AND ABBREVIATIONS**

AMM	avoidance and minimization measure
BMP	best management practice
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
2008 IS/MND	Initial Study/Mitigated Negative Declaration from 2008
PUD	Planned Unit Development
woodrat	San Francisco dusky-footed woodrat

## **LIST OF TABLES**

Table 1. Summary of Additional Analyses

This environmental document is an Addendum to the Final Initial Study/Mitigated Negative Declaration (dated November 2008, 2008 IS/MND) prepared for the 5940 Soquel Avenue Project (approved Project) and adopted by the County of Santa Cruz on November 19, 2008, under application Number 07-0414, in compliance with the California Environmental Quality Act (CEQA).

This Addendum to the 2008 IS/MND is necessary to address modifications to the approved Project. As demonstrated in this Addendum, the 2008 IS/MND continues to serve as the appropriate document for addressing the environmental impacts of the Project pursuant to CEQA, as no new significant impacts are expected related to the aquatic resources, special-status species, or the other changes.

The approved Project entails the construction of an approximately 5-acre multi-family residential development with 100 townhome-style condominiums and associated infrastructure.

CEQA LEAD AGENCY: County of Santa Cruz	CONTACT: Jonathan DiSalvo Senior Planner PHONE: (831) 454-3157	ADDRESS: 701 Ocean Street, 4 <sup>th</sup> Floor Santa Cruz, CA 95060
SPONSOR/APPLICANT: KB Home South Bay	CONTACT: Troy Bowser Forward Planner PHONE: (925) 983-4524	ADDRESS: 5000 Executive Pkwy Suite 125 San Ramon, CA 94583
APPROVAL ACTION UNDER CONSIDERATION:		
The proposed action consists of a General Plan Amendment, zone change, Riparian Exception, and Planned Unit Development (PUD) allowing a maximum development density of 20 dwelling <i>units</i> per usable acre on the Project site.		

The following summarizes the changes to the project, primarily related to the project setting:

- An updated aquatic resource delineation was conducted on the Project site and an offsite outfall construction area in 2024 and 2025 (see Attachment A, Appendix C. Aquatic Resource Delineation Report). The currently proposed project includes disturbance of approximately 0.04 acre of aquatic resources on the Project site that are potentially jurisdictional pursuant to the Clean Water Act, Porter-Cologne Act, and Section 1600 of the California Fish and Game Code, including seasonal wetland, non-wetland waters, and culverted waters (see Attachment A, Appendix B. Site Plans). In addition, the currently proposed project includes two options for offsite stormwater infrastructure: 1) construction of an outfall within Rodeo Gulch resulting in the disturbance of 0.07 acre of riparian habitat potentially jurisdictional pursuant to the Porter-Cologne Act and Section 1600 of the California Fish and Game Code; or, if practicable, 2) tapping into an existing box culvert within Soquel Avenue. The 2008

IS/MND did not account for disturbance of aquatic resources on the Project site associated with project activities.

- While the entire Project site and all lands immediately adjacent to the Project site are developed or otherwise disturbed, the trees and structures on and adjacent to the Project site may provide suitable roosting habitat for special-status bats and/or suitable nesting habitat for passerines and raptors. Considerations for nesting birds and roosting bats were not provided in the 2008 IS/MND.
- San Francisco dusky-footed woodrat (woodrat) middens were observed proximal to the outfall construction site in Rodeo Creek Gulch. While there is no evidence that this species occurs within the work area, considerations for woodrats were not provided in the 2008 IS/MND.

# 1 BACKGROUND OF APPROVED PROJECT

The approved Project entailed a General Plan amendment, zone change, Riparian Exception, and Planned Unit Development (PUD) allowing a maximum development density of 20 dwelling *units* per usable acre on the Project site. Following project approval in 2008, future development of the Project site would be by-right in that the use and density for the site are not discretionary. The site contains approximately 5 usable (developable) acres equating to a maximum of 100 dwelling units. The Project entailed amending the General Plan from “Service Commercial/Light Industry (C-S)” to “Urban High Residential (R-UH)” with the PUD.

The Urban High Residential would be amended to allow 20 units per net developable acre with a 2,000 square foot lot size requirement. In addition, the parcel was rezoned from “Light Industrial (M-1)” to “Multi-Family Residential - (RM-2).” The approved Project is located on the south side of Soquel Avenue at 5940 Soquel Avenue, between Chanticleer Avenue and Mattison Lane within the Live Oak planning area of unincorporated Santa Cruz County, California.

When project changes are proposed, the lead agency must determine whether additional CEQA documentation is warranted, and if so, what kind of environmental document is appropriate. Where, as here, an MND was prepared for the original project, CEQA Guidelines Section 15162 provides that a subsequent environmental impact report (EIR) is not allowed where the following criteria are met:

- No new significant impacts will result from implementation of the modified project.
- No substantial increase in the severity of previously-identified environmental impacts will occur.
- No new feasible alternatives or mitigation measures that would reduce impacts previously found not to be feasible have since been found to be feasible.
- No new feasible alternatives or mitigation measures that (1) are considerably different from those previously analyzed, (2) would substantially reduce one or more significant impacts, and (3) the project proponent declines to adopt.

As more fully explained below, all of these criteria are met here. Under these circumstances, Section 15162(b) authorizes the lead agency to prepare a subsequent negative declaration, an addendum to the MND, or no further documentation. The lead agency has decided to prepare this Addendum (pursuant to Section 15164) explaining the basis for its conclusion that none of the CEQA Guidelines Section 15162 conditions is present and making any minor technical changes or additions to the MND that are necessary.<sup>1</sup> An addendum to an MND is appropriate when only minor or technical additions or changes are needed and a subsequent EIR is not allowed under the criteria set forth above.

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<sup>1</sup>CEQA Guidelines Section 15164(b)

An addendum is not subject to the same notice and public review requirements as the original environmental document (the 2008 IS/MND), but the lead agency may elect to provide notice and a public review period.

## **2 PROPOSED CHANGES TO THE PROJECT DESCRIPTION**

While the inherent nature of the proposed project would be the same, there have been some modifications presented that would warrant subsequent review under CEQA. The following changed conditions for the project differ from what was analyzed in the 2008 IS/MND.

The sections below describe the changes and provide updates to the project description. The changes are related to biological resources, required permits and approvals, and modified/additional control measures and plans. All other aspects of the project remain unchanged. Analysis of these changes is provided in Section 3.

### **2.1 Biological Resources**

The sections below provide a summary of changes to the project setting and conditions with regards to biological resources. A detailed report is provided in Attachment A.

#### **2.1.1 Aquatic Resources**

An updated aquatic resource delineation was conducted on the Project site and the offsite outfall construction area in 2024 and 2025. The currently proposed project includes disturbance of approximately 0.04 acre of aquatic resources on the Project site that are potentially jurisdictional pursuant to the Clean Water Act, Porter-Cologne Act, and Section 1600 of the California Fish and Game Code, including seasonal wetland, non-wetland waters, and culverted waters. In addition, the currently proposed project includes disturbance of as much as 0.07 acre of riparian habitat potentially jurisdictional pursuant to the Porter-Cologne Act and Section 1600 of the California Fish and Game Code. The 2008 IS/MND did not account for disturbance of aquatic resources on the Project site associated with project activities.

#### **2.1.2 Nesting Birds and Roosting Bats**

While the entire Project site and all lands immediately adjacent to the Project site are developed or otherwise disturbed, the trees and structures on and adjacent to the Project site may provide suitable roosting habitat for special-status bats and/or suitable nesting habitat for passerines and raptors. Considerations for nesting birds and roosting bats were not provided in the 2008 IS/MND.

#### **2.1.3 San Francisco Dusky-footed Woodrat**

Woodrat middens were observed proximal to the outfall construction site in Rodeo Creek Gulch. While there is no evidence that this species occurs within the work area, considerations for woodrats were not provided in the 2008 IS/MND.

## 2.2 Permits, Approvals, and Notifications

Permits and approvals required for the approved Project are listed in the 2008 IS/MND and considered the following discretionary approvals:

- **Local Approvals**
  - General Plan Amendment
  - Land Division
  - Rezoning
  - Development Permit
  - Grading Permit
  - Riparian Exception
  - Planned Unit Development
- **Non-local Approvals**
  - California Department of Fish and Wildlife, Section 1602, Streambed Alteration Agreement
  - City of Santa Cruz Water Department
  - State Water Resources Control Board–National Pollutant Discharge Elimination System (NPDES) Permit

It is anticipated that the following additional permits and/or approvals (in addition to those listed in the 2008 IS/MND) would be required:

- County of Santa Cruz approval of the CEQA Addendum
- Regional Water Quality Control Board 401 Certification or Waste Discharge Requirements

The U.S. Army Corps of Engineers has indicated in email correspondence that the wetlands and other water on the Project site do not constitute waters of the U.S. Additionally, the offsite outfall is located entirely outside of potential waters of the U.S. Therefore, a Section 404 Clean Water Act permit is not required.

## 2.3 Control Measures and Plans

Numerous control measures, also known as avoidance and minimization measures (AMMs), would be incorporated into the Project Contract Documents to address environmental and public health and safety concerns. Control measures are procedures known to further reduce the potential for impacts based on regulatory agency requirements, standards in the industry, and construction and operating experiences of the design engineer.

Control measures/AMMs for proposed project changes would be identical to those outlined in the 2008 IS/MND, with the additions and modifications below:

- AMMs, including biological surveying for nesting birds, roosting bats, and woodrats prior to construction activities

The following additional plans would be required to be prepared:

- Stormwater Pollution Prevention Plan
- Wetland Monitoring Plan for the created wetland

Attachment A to this document provides the recommended AMMs.

### 3 SCOPE OF ENVIRONMENTAL ANALYSIS

This Addendum addresses the permanent loss of 0.041 acre of artificial wetlands and other waters, which will be avoided through the creation of a 0.1-acre seasonal wetland within the northwest corner of the Project site. The wetland will be seeded with native wetland vegetation and monitored for a period of at least 5 years to ensure successful replacement of functions and services, as it has been designed to exceed those of the existing artificial wetlands and other waters. Similarly, the permanent loss of 0.07 acre of riparian habitat would be avoided through the replacement of trees removed at a 3:1 ratio. This Addendum also addresses the potential impacts to nesting birds, roosting bats, and woodrats from proposed suitable habitat removal at the proposed Project site.

The discussion below indicates which CEQA checklist environmental factors are included in the impact analysis for this Addendum, relative to the changes to the project described in Section 2.

Table 1. Summary of Additional Analyses

Analysis Section	Changes in Biological Considerations
Air Quality	No new impacts are expected
Biological Resources	X
Cultural Resources	No new impacts are expected
Geology and Soils	No new impacts are expected
Hazards and Hazardous Materials	No new impacts are expected
Hydrology, Water Supply, and Water Quality	No new impacts are expected
Land Use, Population, and Housing	No new impacts are expected
Noise	No new impacts are expected
Public Services and Utilities	No new impacts are expected
Recreation	No new impacts are expected
Transportation and Traffic	No new impacts are expected
Visual Resources and Aesthetics	No new impacts are expected

Note: X = analysis included in this Addendum

Because the changes to the approved Project only account for existing changes in biological resources at the Project site and potential impacts to habitats, only the Biological Resources factor requires analysis herein.

These changes and revisions to the approved Project, analyzed in Section 4, do not result in any new significant or more severe impacts, and no additional mitigation measures or significant changes to mitigation measures are necessary. Therefore, an addendum to the 2008 IS/MND is appropriate.

## 4 BIOLOGICAL RESOURCES

Analysis of impacts to biological resources of the approved Project is presented in Section C of the 2008 IS/MND. All impacts to biological resources were less than significant with mitigation measures.

For the analysis in this Addendum, project activities likely to create an impact are:

- Removal of artificial wetlands at the Project site.
- Removal of trees that could be suitable for nesting bird and roosting bat habitat at the Project site.
- Disturbance of riparian habitat that could be suitable habitat for woodrats.
- Creation of a new onsite seasonal wetland and replacement of riparian trees.

A Supplemental Biotic Report (Attachment A) was completed in October 2025 and includes analysis the project activities discussed above. The Project site is entirely developed or otherwise disturbed and is surrounded by development on all sides. Therefore, special-status plants are not expected to be present, and most special-status wildlife have no potential to occur. However, the site contains nine trees and various structures or structure-like items (e.g., storage containers, campers) that could support nesting of birds and roosting of bats. In addition, the site contains aquatic features at the northern and southern ends, some of which support wetlands. In addition, the offsite outfall construction area is dominated by riparian habitat. However, with the use of AMMs and best management practices (BMPs) described in detail in the Supplemental Biotic Report (Attachment A), the proposed project would result in less than significant impacts to biological resources pursuant to CEQA.

An evaluation of environmental effects based upon the factors in the 2008 CEQA checklist is provided below.

- a. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife Service?**

The trees that occur on and adjacent to the Project site and within the outfall construction area provide suitable nesting habitat for many species of passerine birds and raptors known to occur in the region. Similarly, the trees and structures on the Project site and within the outfall construction area may provide suitable roosting habitat for special-status bat species.

During the August 2025 site visit, multiple woodrat middens were observed between 10 and 25 ft from the outfall construction area. The riparian area within the outfall construction area provides suitable habitat for this species.

Implementation of the BMPs and AMMs found in Attachment A would ensure that impacts are less than significant.

**b. Have an adverse effect on sensitive biotic community (riparian corridor), wetland, native grassland, special forest, intertidal zone, etc.)?**

Approximately 0.041 acre (455 linear feet) of artificial wetlands and other waters and 0.07 acre of riparian habitat would be impacted by the Project. The permanent loss of waters of the U.S. and/or State would be avoided through the creation of a seasonal wetland within the northwest corner of the Project site and by the replacement of riparian trees at a 3:1 ratio at Rodeo Creek. While Project implementation would result in impacts to aquatic resources, the functions and values of these resources will be replaced, so these impacts would be considered less than significant. The existing seasonal wetlands on the Project site are considered poor quality because they are small, isolated from native habitats by development, and receive untreated runoff from adjacent roadways and the Project site. These wetlands will be replaced with a single much larger (0.09 acre) wetland that will receive treated stormwater from the Project site, thereby providing an increase in both wetland area and wetland functions and values on the Project site. Furthermore, permanent loss of aquatic resources does not exceed those considered in the 2008 IS/MND.

**c. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites?**

The outfall construction area occurs within the Rodeo Creek riparian corridor, which would be considered a wildlife corridor, a nursery site, and a Sensitive Natural Community. As the outfall construction component of the project is limited in nature, impacts to these resources would be avoided through tree replacement and implementation of the BMPs and AMMs found in the attached Supplemental Biotic Report (Attachment A). Therefore, impacts are less than significant.

## 5 MANDATORY FINDINGS OF SIGNIFICANCE

The minor technical changes and additions described above do not affect the mandatory findings of significance presented in the 2008 IS/MND. Mitigation measures presented in the Mitigation Monitoring and Reporting Plan will be implemented to ensure that the Project's impacts remain below levels considered significant. The impact determinations remain consistent with those presented in the 2008 IS/MND. None of the factors listed in CEQA Guidelines Section 15162(a) are present; therefore, this addendum to the 2008 IS/MND is an appropriate level of environmental review for the proposed project changes, as identified in CEQA Guidelines Section 15164.

### **Certification:**

-----  
Jonathan DiSalvo

-----  
Date

## **6 REPORT PREPARATION**

This Addendum was prepared under the direction of Integral Consulting Inc. and its subconsultants with support from the County of Santa Cruz. This Addendum to the IS/MND reflects the independent review, analyses, and judgment of the County of Santa Cruz, as the lead agency for the approved Project. Project participants included:

### **County of Santa Cruz**

Jonathan DiSalvo

Senior Planner

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### **Environmental Consultants**

#### *Lead Consultant and Biological Resources*

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Project Director: Bridgette DeShields

Lead Biologist: Sadie McGarvey

**Attachment A. Supplemental Biotic Report**

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# 5940 Soquel Avenue Supplemental Biotic Report

County of Santa Cruz, CA

*Prepared for*

**KB Home South Bay**

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*Prepared by*



**Integral Consulting Inc.**

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October 2025

**Exhibit D**

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## ACRONYMS AND ABBREVIATIONS

AMM	Avoidance and Minimization Measures
APN	Accessor Parcel Number
BMP	Best Management Practices
C-1,2	Culverted Waters
CC&Rs	Covenants, Conditions, and Restrictions
CDFW	California Department of Fish and Wildlife
CNDDDB	California Natural Diversity Database
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
CWA	Clean Water Act
CFR	Code of Federal Regulations
EIR	Environmental Impact Report
ESD	Environmental Services Division
FESA	Federal Endangered Species Act
Integral	Integral Consulting Inc.
IPaC	Information for Planning and Consultation
IS/MND	Initial Study/Mitigated Negative Declaration
LCP	Local Coastal Program
MBTA	Migratory Bird Treaty Act
MS4s	Municipal Separate Storm Sewer Systems
NAVD88	North American Vertical Datum of 1988
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
PBFs	Physical or Biological Features

OW-1	Other Water
RM-2-R	Residential Zone District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish Wildlife Service
USGS	U.S. Geological Survey
W-1,2,3,4	Wetlands
WDR	Waste Discharge Requirements
WMP	Wetland Management Plan

## EXECUTIVE SUMMARY

KB Home South Bay proposes to impact a 5-acre site at 5940 Soquel Avenue in unincorporated Santa Cruz County for the construction of a multi-family residential development with 100 townhome-style condominiums and associated infrastructure. Offsite construction activities will include road frontage improvements along Soquel Avenue and construction of a stormwater outfall within the Rodeo Gulch corridor. The project site is entirely developed or otherwise disturbed and is surrounded by development on all sides. Therefore, special-status plants are not expected to be present, and most special-status wildlife have no potential to occur. However, the site contains nine trees and various structures or structure-like items (e.g., storage containers, campers, etc.) that could support nesting birds and roosting bats. Additionally, the site contains aquatic features at the northern and southern ends, some of which support wetlands. However, with the use of avoidance and minimization measures (AMMs) and best management practices (BMPs) described below in Section 6, the proposed project would result in less than significant impacts to biological resources pursuant to CEQA.

# 1 INTRODUCTION

## 1.1 PURPOSE OF THE DOCUMENT

The purpose of this Supplemental Biotic Report is to gather information necessary to complete a review of biological resources and potential effects to those resources under the California Environmental Quality Act (CEQA) associated with the 5940 Soquel Avenue Project (Project). The analysis considers the Project location and regional potential occurrence of special-status species and their habitat in conjunction with proposed work activities to analyze potential Project-related impacts on the natural environment.

## 1.2 PROJECT LOCATION AND ADJACENT LAND USES

The approximately 5-acre Project site is located immediately south of State Route 1 at 5940 Soquel Avenue, between the cities of Santa Cruz and Capitola in unincorporated Santa Cruz County, California (Lat. 36.9833278°, Long. -121.9765361°) (Appendix A, Figure 1). The Project site is situated within the Live Oak community and includes Accessor Parcel Number (APN) 029-021-47 (Appendix A, Figure 2). The site is bound to the north by Soquel Avenue, to the west by the County of Santa Cruz's Sheriff's Headquarters, to the south by residential development, and to the east materials supply and storage businesses. All land immediately adjacent to the site is developed or otherwise disturbed. The offsite work area associated with the construction of the stormwater outfall (i.e., the outfall construction area) is located 0.27 miles east of 5940 Soquel Avenue in unincorporated Santa Cruz County.

## 1.3 PROJECT DESCRIPTION

The Project involves the construction of an approximately 5-acre multi-family residential development with 100 townhome-style condominiums and associated infrastructure. The Project will include utilities, community amenities, landscaping, and bioretention facilities for stormwater treatment. A new protected seasonal wetland will be created onsite to provide compensatory mitigation for impacts to wetlands and other waters. Offsite work would include road frontage improvements along Soquel Avenue and improvements to the stormwater system that services the Project site and surrounding area through the construction of either 1) a stormwater outfall into Rodeo Gulch or 2) tapping into an existing box culvert within Soquel Avenue.

The Project would be constructed using typical site grading, site improvement, and Type 'V' wood-framed construction techniques per the California Building Code requirements. To complete these standard forms of construction, the Project requires the use of water trucks, scrapers, compactors, bulldozers, caterpillars, back-hoes, augers, concrete trucks, and assorted other hand tools and professional grade equipment.

Project implementation would include the demolition and removal of all existing onsite structures and trees, mass grading of the entire Project site, and construction of project components. The existing and proposed site plans are provided as Appendix B.

### **1.3.1 Wetland Creation**

The permanent loss of 0.041 acre of artificial wetlands and other waters will be avoided through the creation of a 0.1-acre seasonal wetland within the northwest corner of the Project site. The wetland will be seeded with native wetland vegetation and monitored for a period of at least 5 years to ensure successful replacement of functions and services, as it has been designed to exceed those of the existing artificial wetlands and other waters.

### **1.3.2 Outfall Construction**

Work associated with outfall construction would require removal of riparian trees occurring within the Project footprint. All trees removed would be replanted within Rodeo Gulch on and adjacent to the Project site at a 3:1 ratio. The outfall construction area will be surrounded with wildlife exclusion fencing and water quality BMPs prior to commencement of construction activities.

### **1.3.3 Work Activity Timing**

Work is assumed to take place Monday through Saturday (6 days per week), between 7:00 a.m. to 5:00 p.m. (10 working hours per day). Some work could occur after hours or during night-time, with appropriate permits and approvals. To the extent practicable, tree removal and demolition shall occur outside timeframes when young or overwintering bats may be present (generally presumed March through April and August through October) to ensure protection of bats and their roosts.

### **1.3.4 Compliance and Monitoring Plans**

Compliance and monitoring plans will be developed and implemented to provide compliance monitoring during construction to guide the development and implementation of construction controls. A number of avoidance and minimization measures (AMMs) would be incorporated into Project Contract Documents to address environmental and public health and safety concerns. AMMs are procedures known to further reduce the potential for adverse effects to the natural environment and are standard regulatory agency requirements, standards in the industry, and construction and operating experiences of the design engineer. During construction, controls would be implemented to minimize the temporary effect of construction on the surrounding community and environment. These compliance and monitoring plans and AMMs applicable to biological resources are provided in Section 6.

## 1.4 PROJECT HISTORY

The development of the Project site has been analyzed in two separate CEQA documents. An Initial Study/Mitigated Negative Declaration (IS/MND) was issued for a development consistent with the current Project in 2008 (State Clearinghouse Number 2008092113), after which the County of Santa Cruz issued an ordinance approving the Planned Use Development (Ordinance No. 5027). This development was never constructed. In 2021, an Environmental Impact Report (EIR) was issued for a medical office building project on the site (State Clearinghouse Number 2020039067). This development was also never constructed.

KB Home South Bay contracted with Integral Consulting Inc. (Integral) in 2024 to perform a review of biological constraints and then conduct a delineation of aquatic resources on the Project site. The Aquatic Resource Delineation Report (Appendix C) was submitted to the U.S. Army Corps of Engineers (USACE) in November 2024 for verification. Due to workload issues, USACE's review is still pending. An additional preliminary delineation of aquatic resources within the outfall construction area was conducted in August 2025.

## 1.5 SIGNIFICANCE THRESHOLDS FOR PROJECT IMPACTS

Potential impacts associated with implementation of the Project are addressed in the following sections. In accordance with Appendix G of the State CEQA Guidelines, Project-related impacts are considered significant if the Project would result in one or more of the following effects:

- a. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife Service; or
- b. Have an adverse effect on sensitive biotic community (riparian corridor), wetland, native grassland, special forest, intertidal zone, etc.); or
- c. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites; or
- d. Produce nighttime lighting that will illuminate animal habitats; or
- e. Make a significant contribution to the reduction of the number of species of plants or animals; or
- f. Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6-inch diameters or greater); or

- g. Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan?

## **2 CURRENT SITE CONDITIONS**

### **2.1 PERSONNEL AND SURVEY DATES**

The Project site was surveyed on April 4 and October 8, 2024, by Integral personnel Naomi Schowalter, Sarah Beilman, and Shea Grady (resumes for field staff as well as the preparers of this biotic report are provided as Appendix D). The April survey included a reconnaissance-level assessment of the Project site to characterize vegetation, topography, and current uses. The October survey consisted of a formal delineation of potential waters of the U.S. and State on the Project site and offsite work areas (Appendix C). On August 4, 2025, a formal delineation of potential waters of the U.S. and State within the outfall construction area was conducted. Observations made during the site visits were used to determine the presence of suitable habitat for special-status species (presence of habitat components necessary to support the species) and sensitive habitat types.

### **2.2 LIMITATIONS AND ASSUMPTIONS THAT MAY INFLUENCE SURVEY RESULTS**

The surveys were limited to a general habitat assessment and an aquatic resources delineation applying delineation standards developed by the USACE. Two portions of the Project site used for storage were inaccessible due to fencing, so only desktop reviews were conducted for these areas. No wildlife was observed during the field surveys. However, wildlife species may be cryptic, generally difficult to detect, transient, nocturnal, or migratory species that may only occur within the Project site for short or fleeting time periods. Wildlife species may only be active during particular times of the year, such as the breeding season, or may only use the Project site temporarily. Some plant species are also only identifiable during particular times of year. For these reasons, plant and wildlife species may be present but not observed. This limitation may influence the study results.

### **2.3 EXISTING CONDITIONS**

The Project site is located in a multi-family residential zoning district (RM-2-R). According to the 2021 Draft EIR prepared for the property by the County of Santa Cruz, existing uses on the site include storage, salvage, and salvage yard purposes. Towing, storage, and concrete businesses operate from the site, and storage containers, vehicles, boats, and campers are scattered across the property. Three sheds and an office trailer with an attached workshop are also present. There is a single ingress/egress point from Soquel Avenue and coarsely paved internal roadways throughout the property. Various types of developments surround the property, including light-industrial, commercial, residential, and institutional.

The site is nearly flat, gently sloping southeast and southwest. Topographic depressions onsite are associated with constructed ditches at the northern and southern edges of the Project site. Mounds of dirt and debris are scattered across the site. There are numerous scattered patches of ruderal and ornamental vegetation and nine planted trees on the Project site (8 non-native and 1 native; see Appendix B). Vegetation communities onsite included non-native grassland, seasonal wetland, ruderal, and ornamental/urban. Multiple plant species on the Project site have a “High” rating on the California Invasive Plant Council Inventory, including *Cortaderia selloana* (pampas grass), *Genista monspessulana* (French broom), *Hedera helix* (English ivy), and *Rubus armeniacus* (Himalayan blackberry). However, most of the site consists of bare ground, a portion of which is paved. A full list of plant and tree species that were observed onsite during the April site visit are included in Appendix E, Table 1.

The outfall location includes portions of Soquel Avenue roadway, the southern roadway embankment, and the Rodeo Creek riparian corridor. The Rodeo Creek riparian area is characterized by an overstory dominated by arroyo willow (*Salix lasiolepis*) and coast live oak (*Quercus agrifolia*) and an understory dominated by Himalayan blackberry.

### 2.3.1 Soils

According to the Natural Resources Conservation Service (NRCS), one soil map unit is present on the Project site: Elkhorn sandy loam, 2 to 9 percent slopes. Elkhorn soils are derived from marine deposits and occur on terraces and alluvial fans. The typical soil profile is composed of sandy loam and sandy clay loam. Elkhorn soils are well drained with low runoff and no shallow restrictive features. Only one percent of the soil map unit has a hydric soil rating.

### 2.3.2 Hydrology

The Project site is in the Monterey Bay watershed (Hydrologic Unit Code 12: 180600150305) (Appendix A, Figure 3). Monterey Bay is approximately 1.5 miles south of the Project site. The closest major drainage, Rodeo Creek Gulch, is located approximately one-quarter mile east. The Project site is nearly flat, sloping slightly southwest and deriving hydrology primarily from direct precipitation. There is a drainage ditch and ponded area between the Project site and Soquel Avenue that prevents roadway runoff from flowing onto the property from the north. It is unclear where flow in the ditch (OW-1 on Appendix A, Figure 4) along the southern edge of the property goes upon leaving the parcel boundary. Santa Cruz County stormwater conduit data does not display any stormwater facilities in this area (Appendix A, Figure 5).

The Rodeo Creek is within the Arana Gulch-Rodeo sub-watershed which drains a 3.5 square-mile area along the eastern edges of the City of Santa Cruz. From the outfall construction site, Rodeo Creek flows southward for 1.5 miles where it enters Corcoran Lagoon, which empties into the Monterey Bay.

## 2.4 WATERS OF THE U.S./STATE

The Project site contains multiple artificial wetlands and other waters, created to convey stormwater. The 2008 IS/MND notes that a drainage pipe had been crushed years prior resulting in stormwater pooling onsite. The Project site contains approximately 0.041 acre (455 linear feet) of aquatic resources, including 0.031 acre of seasonal wetlands (W-1, W-2, and W-4), 0.010 acre (290 linear feet) of other waters (OW-1), and 165 linear feet of culverted waters (C-1 and C-2) (Appendix C). An additional 0.002-acre wetland (W-3) proposed for avoidance was mapped immediately east of the Project site. Aquatic resources on the Project site are *potentially* regulated as waters of the U.S. pursuant to the Clean Water Act and as waters of the State pursuant to the Porter-Cologne Act. The delineation map is provided in Appendix A, Figure 4.

Wetlands onsite are associated with topographic depressions receiving channelized and unconfined runoff from upslope surfaces. Geospatial data (Santa Cruz County, 2024a) indicates that W-1 and W-2 are part of the County's stormwater conduit system (Appendix A, Figure 5), and stormwater pipes drain to and from each wetland. However, no culverts were visible at W-1 during the field surveys, and though a culvert under State Route 1 currently conveys flow into W-2 (C-1), the culvert meant to convey flow away from W-2 (C-2) does not appear to be functioning. Therefore, W-2 functions as a pond for a large portion of the wet season. W-4 is not part of the County's stormwater conduit system but occurs at the terminus of a drainage ditch (OW-1) along the southern boundary of the Project site. All wetlands within the Project site are considered poor quality because they are small, isolated from native habitats by development, and receive untreated runoff from adjacent roadways and the Project site, both of which are likely to be source of contaminants. These wetlands will be replaced with a single much larger (0.09 acre) wetland that will receive treated stormwater from the Project site, thereby providing an increase in both wetland area and wetland functions and values on the Project site.

One other water (OW-1) was identified along the southern boundary of the Project site, consisting of a 1.5-foot-wide constructed ditch. It is assumed that this ditch was constructed to prevent runoff from the Project site from flooding the residential development to the south. Another ditch was observed along the eastern portion of the Project site that did not contain an ordinary high water mark and therefore does not constitute a potential water of the U.S. or State (located at SP-7 on Appendix A, Figure 4).

The outfall construction area contains approximately 0.07 acre of the Rodeo Creek riparian corridor; however, no wetlands or other waters occur within the Project footprint at this location. Impacted riparian trees will be replanted along Rodeo Creek at a 3:1 ratio.

## 3 POTENTIAL IMPACTS TO SPECIAL-STATUS SPECIES

### 3.1 APPLICABLE LAWS

Special-status species include species considered to be rare by federal and/or state resource agencies (USFWS, National Marine Fisheries Service (NMFS), and CDFW) and/or the scientific community (California Native Plant Society (CNPS)) and are accordingly legally protected pursuant to the federal, state, and/or local laws described below.

#### 3.1.1 Endangered Species Act of 1973

The Endangered Species Act of 1973 (referred to as the Federal Endangered Species Act [ESA]) prohibits the “take” of any wildlife species listed by the USFWS or NMFS (collectively referred to as the Services) as threatened or endangered, including the destruction of habitat that could hinder species recovery. The term “take” is defined by Federal ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct, with habitat protected under the “harm” and “harass” definitions. The USFWS and NMFS oversee the implementation of Federal ESA (50 Code of Federal Regulations (CFR) § 402.7, Section 305(b)(4)(B)) and have regulatory authority over listed plants, wildlife, and fish. When species are listed as endangered or threatened under Federal ESA, the federal government is also directed to designate critical habitat for these species. To remain compliant with the Federal ESA, federal action agencies, such as USACE, are required to consult with the Services prior to issuance of a permit if a project “may affect” a federally listed species or designated critical habitat. If the federal action agency determines the federal action would have no effect on a listed species (when there is no potential for presence of a listed species) or designated critical habitat, no consultation with the Services is required.

The USFWS and NMFS administer the Federal ESA and authorize exceptions to the take prohibition through issuance of Biological Opinions in consultation with the federal action agency. The USFWS has primary responsibility for terrestrial and freshwater organisms, whereas the responsibilities of the NMFS are mainly marine wildlife, such as whales, and anadromous fish, such as salmon.

#### 3.1.2 Migratory Bird Treaty Act (MBTA)

The MBTA of 1918 (16 United States Code (U.S.C.) 703-712; Ch. 128; July 13, 1918; 40 Stat. 755; as amended in 1936; 1960, 1968, 1969, 1974, 1978, 1986, and 1998) (between the United States, Canada, Mexico, and Japan) prohibits the take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct) of any migratory bird or any part, nest, or egg of any such bird. The USFWS issues permits for take of migratory birds related to scientific collecting, banding and marking, falconry, raptor

propagation, depredation, import, export, taxidermy, waterfowl sale and disposal, and special purposes.

### **3.1.3 California Endangered Species Act (CESA)**

The CESA prohibits the “take” of any wildlife species listed as endangered and threatened by the State of California. The term “take” is defined by Fish and Game Code Section 86 as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Section 2090 of the CESA requires state agencies to comply with regulations for protection and recovery of listed species and to promote conservation of these species. CDFW administers the CESA and authorizes exceptions to the take prohibition through Section 2081 agreements (Incidental Take Permits) (except for designated “fully protected species”). Species that the California Fish and Game Commission has accepted as candidates for listing are likewise given full CESA protection.

### **3.1.4 California Native Plant Protection Act (NPPA)**

The NPPA allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

### **3.1.5 California Fish and Game Code (Fully Protected Species)**

The State of California designated 37 species of wildlife that were rare or faced possible extinction with the classification of Fully Protected in the 1960s to provide additional protection to those species. To provide additional protections for wildlife that is rare or faces potential extinction, California Fish and Game Code Sections 3511, 4700, 5050, and 5515 designate “fully protected” status for specific birds, mammals, reptiles, amphibians, and fish. Fully protected species cannot be taken or possessed at any time and no licenses or permits can be issued for their take. Exceptions are established for scientific research collection, relocation of the bird species for the protection of livestock and take resulting from recovery activities for state-listed species.

### **3.1.6 California Fish and Game Code (Birds)**

California Fish and Game Code Section 3503 prohibits the take of nest or eggs of any bird. Raptors and other fully protected bird species are further protected in Sections 3503.5 and 3511, which state that these species or parts thereof may not be taken or possessed at any time.

### 3.1.7 CEQA

CEQA is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The planning process entered into with the County of Santa Cruz (County) will identify the County's specific CEQA process and what issues they would like to see addressed in a CEQA analysis. Certain species and habitats are afforded protection solely through the CEQA process.

#### 3.1.7.1 CDFW Species of Special Concern

A species of special concern is an administrative designation given by CDFW to a native species that meets one or more of the following criteria: is extirpated from the state; is federally (but not state) listed; is experiencing, or formerly experienced, population declines or range restrictions; or has naturally small populations at high risk of declines. While this designation carries no legal status, CEQA Guidelines Section 15380 clearly indicates that species of special concern should be included in an analysis of project impacts.

#### 3.1.7.2 CNPS Inventory of Rare and Endangered Plants

CNPS designates California rare plants through a ranking system, maintaining an Inventory of Rare, Threatened, and Endangered Plants of California. Many plant species have a CNPS rare plant rank but are not afforded legal protection under the NPPA or CESA. These species may still meet the CEQA definition of rare and endangered and therefore fall under Section 15380 of the CEQA Guidelines.

## 3.2 METHODOLOGY

Information about special-status species that could occur on the Project site was obtained from the following sources:

- California Natural Diversity Database (CNDDDB) (CDFW 2024a)
- CNPS Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2024)
- USFWS Information for Planning and Consultation (IPaC) (USFWS 2024b)
- Personal observations

The CNDDDB was used to query all special-status species with occurrences that are not identified as "extirpated" within 3 miles of the Project site. A query of the CNPS Inventory of Rare, Threatened, and Endangered plants of California was conducted for CNPS-ranked plant species with recorded occurrences on the same USGS 7.5-minute quadrangle as the Project site (Soquel quadrangle). An IPaC list was generated using the property boundary. The species

identified in these searches were compiled in tables (Appendix E, Tables 2 and 3) and evaluated for likelihood of occurrence on the Project site. The potential for species to be present on the Project site was classified as high, moderate, low, or none using the following definitions:

- **High:** The potential for a species to occur was considered high when the Project site was located within the range of the species, recorded observations were identified within known dispersal distance of the Project site, and suitable habitat was present on the Project site.
- **Moderate:** The potential for a species to occur was considered moderate when the Project site was located within the range of the species, recorded observations were identified nearby but outside known dispersal distance of the Project site, and suitable habitat was present on the Project site. A moderate classification was also assigned when recorded observations were identified within known dispersal distance of the Project site but habitat on the Project site was of limited or marginal quality.
- **Low:** The potential for a species to occur was considered low when the Project site was within the range of the species, but no recorded observations within known dispersal distance were identified, and habitat on the Project site was limited or of marginal quality. The potential for a species to occur was also classified as low when the Project site was located at the edge of a species' range and recorded observations were extremely rare, but habitat on the Project site was suitable.
- **None:** The potential for a species to occur was considered nonexistent when a species was not expected to occur within or adjacent to the Project site due to lack of suitable habitat and recorded observations within dispersal distance from the Project site.

### 3.3 POTENTIAL FOR OCCURRENCE OF SPECIAL-STATUS PLANTS

According to the CNDDDB, the CNPS Inventory of Rare, Threatened, and Endangered Plants of California, and the USFWS IPaC, a total of 18 special-status plant species have potential to occur in the vicinity of the Project site. A brief description of each of these species is included in Appendix E, Table 2, including the species' status, habitat, and probability of occurrence on the Project site.

Most of the regionally known special-status plant species require specialized soils or habitats that are not found on the Project site. Additionally, the entire Project site and the adjoining properties are developed or otherwise disturbed. While the outfall construction area occurs within riparian habitat, the only riparian species with presumed extant records in the area is the California bottle-brush grass (*Elymus californicus*), and no grasses were observed within the densely vegetated outfall construction area. This species is not expected to occur therein

due to the disturbed nature of the area (within the road prism) and the dense perennial vegetative cover. Therefore, no special-status plants are expected to occur.

### **3.4 POTENTIAL FOR OCCURRENCE OF SPECIAL-STATUS WILDLIFE**

According to the CNDDDB, records for a total of 15 special-status wildlife species have been documented within three miles of the Project site. A brief description of each of these species is included in Appendix E, Table 3, including the species' status, habitat, and probability of occurring within the Project site. Ten additional FESA species were identified by IPaC. Most of these regionally known special-status species require specialized habitats that do not occur on the Project site and therefore are not expected to occur. Additionally, the entire Project site and the adjoining properties are developed or otherwise disturbed. However, the outfall construction area occurs within riparian habitat. Therefore, only nesting birds, special-status bats, and San Francisco dusky-footed woodrats (*Neotoma fuscipes annectens*) have potential to occur on the Project site and/or the offsite outfall construction area.

#### **3.4.1 Special-Status Wildlife with Potential to Occur**

##### **3.4.1.1 Bats**

Two species of special-status bats have been observed in the vicinity of the Project site per CNDDDB: Townsend's big-eared bat (*Pelcotus townsendii*) and pallid bat (*Antrozous pallidus*). Trees and structures on the Project site and within the outfall construction area may provide suitable roosting habitat for these special-status bat species, though the likelihood is relatively low. Townsend's big-eared bat is particularly unlikely to roost on the property since it is extremely sensitive to disturbance of roosting sites and there is ongoing activity on the site.

##### **3.4.1.2 Nesting Birds**

The trees that occur on and adjacent to the Project site and within the outfall construction area provide suitable nesting habitat for many species of passerine birds and raptors known to occur in the region. No nests were observed during the site visits. However, owing to the mobile nature of birds and the seasonality of their nesting cycle, it is possible that birds will nest within the Project site during future nesting seasons.

##### **3.4.1.3 San Francisco Dusky-footed Woodrat**

During the August 2025 site visit, multiple San Francisco dusky-footed woodrat (woodrat) middens were observed between 10 and 25 feet from the outfall construction area. The riparian area within the outfall construction area provides suitable habitat for this species.

## 3.5 IMPACT ASSESSMENT

### 3.5.1 Special-Status Plants

The entire Project site and the adjoining properties are developed or otherwise disturbed. Therefore, no special-status plants are expected to occur, and Project implementation would not result in impacts to special-status plants.

### 3.5.2 Special-Status Wildlife

#### 3.5.2.1 Bats

There is potential for special-status bats, including Townsend's big-eared bat and pallid bat, to occur on the Project site. Nine trees and all existing structures and structure-like items (e.g., storage containers, campers, etc.) that could provide suitable roosting habitat would be removed for the development of the site. If bats are roosting in the Project vicinity, roost abandonment could occur as a result of disturbance. However, impacts to special-status bats would be avoided through implementation of Avoidance and Minimization Measures in Section 8.2. *Accordingly, while Project implementation could result in impacts to roosting bats, with implementation of these measures, these impacts would be reduced to a level considered less than significant pursuant to CEQA and do not exceed those considered in the 2008 IS/MND.*

#### 3.5.2.2 Nesting Birds

There is potential for birds to nest on the Project site. The removal of nine trees from the Project site and indirect impacts to trees adjacent to the Project site has the potential to result in nest abandonment by special-status birds. However, impacts to nesting birds would be avoided through implementation of Avoidance and Minimization Measures in Section 8.2. *Accordingly, while Project implementation could result in impacts to nesting birds, with implementation of these measures, these impacts would be reduced to a level considered less than significant pursuant to CEQA and do not exceed those considered in the 2008 IS/MND.*

#### 3.5.2.3 San Francisco Dusky-footed Woodrat

There is potential for woodrats to occur within or near the outfall construction area. However, impacts to woodrats would be avoided through isolation of the work area from the adjacent Rodeo Creek riparian corridor and implementation of Avoidance and Minimization Measures in Section 8.2. *Accordingly, while Project implementation could result in impacts to woodrats, with implementation of these measures, these impacts would be reduced to a level considered less than significant pursuant to CEQA and do not exceed those considered in the 2008 IS/MND.*

## **4 POTENTIAL IMPACTS TO SPECIAL-STATUS HABITATS**

### **4.1 APPLICABLE LAWS**

Certain habitats are regulated by state and federal resource agencies and are accordingly legally protected via the federal and/or state laws defined below.

#### **4.1.1 Section 401 and 404 of the Clean Water Act (CWA)**

Section 404 of the CWA, administered by the U.S. Environmental Protection Agency and USACE, establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including traditionally navigable waters, relatively permanent tributaries to those waters, and wetlands with a continuous surface connection to regulated waters. Per Section 404, a permit is required prior to discharge of dredged or fill material into waters of the United States, unless the activity is exempt from Section 404 regulation.

Under Section 401 of the CWA, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, or certification is waived. States and authorized tribes where the discharge originate are generally responsible for issuing water quality certifications. In the State of California, the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (Regional Water Boards) are the State certifying authorities.

#### **4.1.2 National Pollutant Discharge Elimination System (NPDES) Permit Program**

The NPDES Permit Program, also authorized by the CWA, controls water pollution by regulating point sources (discrete conveyances such as pipes or constructed ditches) that discharge pollutants into waters of the United States. The NPDES Permit Program includes the Municipal Storm Water Permitting Program, which regulates storm water discharges from municipal separate storm sewer systems (MS4s). The MS4 Permit Program was established to restore and maintain the chemical, physical, and biological integrity waters of the U.S./State and reduce/eliminate storm water pollution. The implementation of these federal programs has been charged to the State of California for implementation through the SWRCB and Regional Water Boards. In California, NPDES permits are also referred to as waste discharge requirements (WDR) that regulate discharges to waters of the United States.

#### **4.1.3 Porter Cologne Water Quality Control Act**

The SWRCB and its nine regional water boards have been charged with the protection and enhancement of water quality in the State of California. Pursuant to the Porter Cologne Water

Quality Control Act (Porter-Cologne Act), waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” This is generally taken to include all waters of the U.S., all surface waters not considered to be waters of the U.S. (e.g., non-jurisdictional wetlands), groundwater, and territorial seas (with territorial boundaries extending 3.0 nautical miles beyond outermost islands, reefs, and rocks and includes all waters between the islands and the coast). Per the Porter-Cologne Act, the Regional Water Board has authority to regulate discharges of fill and dredged material into waters of the State.

#### **4.1.4 Fish and Game Code Section 1600 *et seq.***

CDFW regulates diversions and obstructions of the natural flows, and material changes or uses of the beds, channels, or banks, of rivers, streams, and lakes under Section 1600 *et seq.* of California Fish and Game Code. The term stream, which includes creeks and rivers, is defined in 14 California Code of Regulations Section 1.72 as follows: “A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” Per Section 1.56, the term lake “includes natural lakes or man-made reservoirs.”

#### **4.1.5 FESA**

When species are listed as endangered or threatened under FESA, the federal government is also directed to designate critical habitat for these species. Critical habitat is designated by the Services to protect areas that are essential to the survival of federally listed species. Under FESA, critical habitat is defined as a “specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection.” When designating critical habitat, the Services focus on the principal biological or physical features (PBFs) in the defined area that are essential to the conservation of the listed species. The FESA requires Federal agencies to use their authorities to conserve endangered and threatened species and to consult USFWS and/or NMFS about actions that they carry out, fund, or authorize to ensure that they will not destroy or adversely modify critical habitat.

#### **4.1.6 CEQA**

##### **4.1.6.1 Sensitive Biotic Communities**

CDFW ranks Natural Communities according to their rarity and threats using NatureServe’s Heritage Methodology. Natural Communities with ranks of S1-S3 are considered Sensitive Biotic Communities and are required to be addressed in the environmental review processes of CEQA and its equivalents.

## 4.2 METHODOLOGY

Information about aquatic resources and special-status habitats that could occur on the Project site was obtained from the following sources:

- Integral site visits (April 4, and October 8, 2024; see Section 2.1)
- CNDDDB (CDFW 2024a)
- USFWS Critical Habitat shapefiles

The CNDDDB was used to query all special-status habitats with known occurrences within 3 miles surrounding the Project site. USFWS shapefiles were used to map critical habitat in the vicinity of the Project site.

## 4.3 SENSITIVE BIOTIC COMMUNITIES

The Project site supports approximately 0.041 acre (455 linear feet) of aquatic resources, including 0.031 acre of seasonal wetlands (W-1, W-2, and W-4), 0.010 acre (290 linear feet) of other waters (OW-1), and 165 linear feet of culverted waters (C-1 and C-2) (Appendix C). An additional 0.002-acre wetland (W-3) proposed for avoidance was mapped immediately east of the Project site. In addition, the outfall construction area occurs within 0.07 acre of the Rodeo Creek riparian corridor. Aquatic resources on the Project site are *potentially* regulated as waters of the U.S. pursuant to the Clean Water Act and waters of the State pursuant to the Porter-Cologne Act and Fish and Game Code Section 1600 *et seq.* Aquatic resources proposed to be impacted by the Project are displayed in Appendix A, Figure 6a and 6b.

There are no CNDDDB records of Sensitive Biotic Communities within 3 miles of the Project site, however, wetlands and riparian corridors like that associated with Rodeo Creek are considered Sensitive Biotic Communities.

## 4.4 CRITICAL HABITAT

No designated critical habitat occurs on or adjacent to the Project site. However, designated critical habitat for four species occurs within 3 miles of the Project site: Santa Cruz tarplant (*Holocarpha macradenia*), Zayante band-winged grasshopper (*Trimerotropis infantilis*), tidewater goby (*Eucyclogobius newberryi*), and robust spineflower (*Chorizanthe robusta* var. *robusta*). The closest designated critical habitat is for Santa Cruz tarplant and is approximately 0.6 mile from the Project site.

## 4.5 WILDLIFE CORRIDORS AND NURSERY SITES

The Project site does not act as a wildlife corridor or a nursery site. A wildlife corridor is a portion of land that adjoins two or more larger areas of similar natural environment, often connecting wildlife populations separated by natural or created activities, disturbances, or structures. Wildlife corridors are used for dispersal and migration of wildlife, allowing for genetic exchange, population growth, and access to larger stretches of suitable habitats, and reducing habitat fragmentation. While the Project site provides some foraging and marginal resting habitat, it is regularly disturbed, is surrounded on four sides by developed landscapes, and does not offer the necessary protection or resources required to be considered a wildlife corridor. Riparian corridors like that associated with Rodeo Creek are generally considered wildlife corridors.

A nursery site is an area where juveniles occur at higher densities, avoid predation more successfully, or grow faster there than in a different habitat (Beck et. al. 2001). The Project site exhibits no evidence of being a nursery site. As an active towing, storage, and concrete business site that is subject to regular disturbance, the Project site is not buffered from the adjacent urban landscape and does not provide enhanced protection or nesting/roosting habitats that would be components of nursery sites. Riparian corridors like that associated with Rodeo Creek are generally considered nursery sites.

## 4.6 IMPACT ASSESSMENT

### 4.6.1 Sensitive Biotic Communities

Approximately 0.041 acre (455 linear feet) of artificial wetlands and other waters would be impacted by the Project. The permanent loss of waters of the U.S. and/or State would be avoided through the creation of a seasonal wetland within the northwest corner of the Project site. Similarly, the permanent loss of 0.07 acre of riparian habitat would be avoided through the replacement of trees removed at a 3:1 ratio. *While Project implementation would result in impacts to aquatic resources, the functions and values of these resources will be replaced onsite and these impacts would be reduced to a level considered less than significant pursuant to CEQA and permanent loss of aquatic resources does not exceed those considered in the 2008 IS/MND.*

The outfall construction area occurs within the Rodeo Creek riparian corridor, which is considered a Sensitive Biotic Community. As the outfall construction component of the project is limited in nature, impacts to Sensitive Biotic Communities would be avoided through tree replacement, implementation of Avoidance and Minimization Measures in Section 8.2. *Accordingly, while Project implementation could result in impacts to Sensitive Biotic Communities, with implementation of these measures, these impacts would be reduced to a level considered less than significant pursuant to CEQA and do not exceed those considered in the 2008 IS/MND.*

#### **4.6.2 Critical Habitat**

The Project site does not occur within or near any designated critical habitat units. Therefore, Project implementation would not result in impacts to critical habitat.

#### **4.6.3 Wildlife Corridors and Nursery Sites**

The Project site does not occur within a wildlife corridor and does not support any wildlife nursery sites. However the outfall construction area occurs within the Rodeo Creek riparian corridor, which would be considered both a wildlife corridor and nursery site. As the outfall construction component of the project is limited in nature, impacts to wildlife corridors and nursery sites would be avoided through tree replacement, implementation of Avoidance and Minimization Measures in Section 8.2. *Accordingly, while Project implementation could result in impacts to wildlife corridors and nursery sites, with implementation of these measures, these impacts would be reduced to a level considered less than significant pursuant to CEQA and do not exceed those considered in the 2008 IS/MND.*

## 5 NIGHTTIME LIGHTING

Work is proposed to take place Monday through Saturday (6 days per week), between 7:00 a.m. to 5:00 p.m. (10 working hours per day). Some work could occur after hours or during the night-time, if necessary, and with appropriate permits and approvals. This remains consistent with the 2008 IS/MND.

## 6 REDUCTION OF SPECIES

The Project site is developed or otherwise disturbed. According to a 2021 Draft Environment Impact Report prepared for the property by the County of Santa Cruz, existing uses on the site include storage, salvage, and salvage yard purposes. Towing, storage, and concrete businesses operate from the site, and storage containers, vehicles, boats, and campers are scattered across the site. Three sheds and an office trailer with an attached workshop are also present. The Project site does not provide habitat conducive to supporting significant populations of native plants or animals.

While the outfall construction area occurs within riparian habitat, the outfall construction component of the project is limited in nature, and impacts to any significant number of species of plants or animals would be avoided through tree replacement and implementation of Avoidance and Minimization Measures in Section 8.2.

Implementation of the proposed Project would not result in significant reduction in the number of species or plants or animals at the Project site. This remains consistent with the 2008 IS/MND.

## 7 APPLICABLE LOCAL PLANS, ORDINANCES, AND LAWS

### 7.1 SANTA CRUZ COUNTY GENERAL PLAN 2024

The 2024 General Plan for the County of Santa Cruz (also known as the Local Coastal Program (LCP)) serves to guide and regulate land use and development in unincorporated Santa Cruz County. The following goals in the 2024 General Plan (County of Santa Cruz, 2024b) are relevant to the development of the Property with regard to biological resource constraints; the project complies with all of these goals. Justification for how the Project complies with each goal is provided in *italics* below the General Plan text.

#### 7.1.1 Objective ARC-3.1 Biological Diversity

To maintain the biological diversity of the County through an integrated program that includes open space acquisition and protection; identification and protection of plant habitat and wildlife corridors and habitats; protection and restoration of habitat for local, state, and federally protected species; careful regulation of low-intensity and resource compatible land uses in sensitive habitats; and mitigation for project impacts and resource extraction.

*The Project will maintain the biological diversity of the County by replacing impacted wetlands on the Project site with a single larger, higher quality wetland. The Project will also replace riparian trees removed from the riparian corridor at the offsite outfall construction area at a 3:1 ratio.*

##### 7.1.1.1 ARC-3.1.2 Definition of Sensitive Habitat

An area is defined as a sensitive habitat if it meets one or more of the following criteria:

- (1) Areas of special biological significance as identified by the State Water Resources Control Board.
- (2) Areas that provide habitat for locally unique biotic species/communities, including coastal scrub, maritime chaparral, native rhododendrons and associated Elkgrass, mapped grasslands in the coastal zone and sand parkland; and Special Forests including San Andreas Live Oak Woodlands, Valley Oak, Santa Cruz Cypress, indigenous Ponderosa Pine, indigenous Monterey Pine and ancient forests.
- (3) Areas adjacent to essential habitats of rare, endangered or threatened species as defined in (5) and (6) below.
- (4) Areas that provide habitat for Species of Special Concern as listed by the California Department of Fish and Wildlife in the Special Animals list, California Natural Diversity Database.
- (5) Areas that provide habitat for rare or endangered species that meet the definition of Section 15380 of the California Environmental Quality Act guidelines.

- (6) Areas that provide habitat for rare, endangered or threatened species as designated by the California Fish and Game Commission, United States Fish and Wildlife Service or California Native Plant Society.
- (7) Nearshore reefs, rocky intertidal areas, sea caves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sandy beaches, shorebird roosting, resting and nesting areas, cliff nesting areas and marine, wildlife or educational/research reserves.
- (8) Dune plant habitats.
- (9) All lakes, wetlands, estuaries, lagoons, streams and rivers.
- (10) Riparian corridors.

*Wetlands are the only sensitive habitats on the Project site. Additionally, a riparian corridor is present at the offsite outfall construction area.*

#### **7.1.1.2 ARC-3.1.4 Sensitive Habitat Protection Ordinance**

Implement protection of sensitive habitats and of ESHA [Environmentally Sensitive Habitat Areas] through SCCC [Santa Cruz County Code] Chapters 16.32 Sensitive Habitat Protection, 16.30 Riparian Corridor and Wetlands Protection, and 13.20 Coastal Zone Regulations. Any amendments to this ordinance shall require a finding that sensitive habitats shall be afforded equal or greater protection by the amended language.

*The Project will protect sensitive habitats, including wetlands and riparian corridors, by replacing and enhancing the functions and values of the impacted areas within these habitats. The low-quality wetlands on the Project site will be replaced with a higher quality wetland, and riparian trees removed at the offsite outfall construction area will be replaced at a 3:1 ratio within Rodeo Creek.*

#### **7.1.1.3 ARC-3.1.6 Development Within Sensitive Habitats**

Sensitive habitats shall be protected against any significant disruption of habitat values, and any proposed development within or adjacent to these areas must maintain or enhance the functional capacity of the habitat. Reduce in scale, redesign, or, if no other alternative exists, deny any project that cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of a project is legally necessary to allow a reasonable use of the land.

*The Project will not significantly disrupt habitat values of sensitive habitats, and impacted sensitive habitats will be enhanced by the Project. The wetlands on the Project site are considered low quality because they are small, surrounded by development, and receive untreated runoff. The riparian habitat at the outfall construction area is also relatively low quality because it is located along a trash-covered roadway embankment. The Project will enhance these impacted habitats by constructing a high-quality seasonal wetland on the Project site and by replacing riparian trees impacted by the work in Rodeo Gulch at a 3:1 ratio.*

#### **7.1.1.4 ARC-3.1.7 Site Design and Use Regulations**

Protect sensitive habitats against any significant disruption or degradation of habitat values in accordance with the Sensitive Habitat Protection ordinance. Utilize the following site design and use regulations on parcels containing these resources, excluding existing agricultural operations:

- (1) Structures, when allowed, shall be placed as far from the habitat as feasible.
- (2) Delineate development envelopes to specify location of development in minor land divisions and subdivisions.
- (3) Consider use of conservation or open space easements, deed restrictions, Conditions of Approval or equivalent measures to protect that portion of a sensitive habitat on a project parcel which is undisturbed by a proposed development activity or to protect sensitive habitats on adjacent parcels.
- (4) Limit or restrict outdoor access of domestic animals where they threaten sensitive habitats.
- (5) Limit removal of native vegetation to the minimum amount necessary for structures, landscaping, driveways, septic systems and gardens.
- (6) Maintain regulations and impose development permit conditions of approval as warranted, to limit landscaping with invasive or exotic species and to strongly encourage or require the use of characteristic native species, as well as consistency with the Water Efficient Landscaping Ordinance.

*Sensitive habitats will be protected by replacing them in-kind with higher quality habitats and by expanding the area of the sensitive habitats. Impacts to sensitive habitats are the minimum necessary to achieve the Project purpose.*

#### **7.1.2 Objective ARC-3.3 Riparian Corridors and Wetlands**

To preserve, protect, and restore all riparian corridors and wetlands for the protection of wildlife and aquatic habitat, water quality, erosion control, open space, aesthetic and recreational values and the conveyance and storage of flood waters.

*As outlined above, the Project will restore and enhance impacted riparian corridors and wetlands.*

##### **7.1.2.1 ARC-3.3.1 Designation of Riparian Corridors and Wetlands**

Designate and define the following areas as Riparian Corridors:

- (1) 50' from the top of a distinct channel or physical evidence of high-water mark of a perennial stream;
- (2) 30' from the top of a distinct channel or physical evidence of high water mark of an intermittent stream as designated on the General Plan maps and through field

- inspection of undesignated intermittent and ephemeral streams;
- (3) 100' of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water;
- (4) The landward limit of a riparian woodland plant community (water-dependent woodland areas); and
- (5) Wooded arroyos within urban areas.

*The riparian corridor at the outfall construction area has been mapped in accordance with this definition.*

#### **7.1.2.2 ARC-3.3.2 Riparian Corridor and Wetland Protection Ordinance**

Implement the protection of riparian corridors and wetlands through the Riparian Corridor and Wetland Protection ordinance to ensure no net loss and to encourage restoration and a net increase of riparian corridors and riparian wetlands. Any amendments to this ordinance shall require a finding that riparian corridors and wetlands shall be afforded equal or greater protection by the amended language.

*As outlined above, the Project will result in a net increase in riparian corridor and wetland area and function.*

#### **7.1.2.3 ARC-3.3.3 Activities Within Riparian Corridors and Wetlands**

Development activities, land alteration, and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception permit is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of a riparian exception permit, require evidence of compliance with applicable permit or review requirements of the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.

*A Riparian Exception was granted for the outfall riparian impacts in 2008. The Project will comply with the Riparian Corridor and Wetlands Protection ordinance by resulting in a net increase in riparian corridor and wetland area and function. The Project will obtain permits from CDFW and the Regional Water Board and will comply with applicable permit requirements.*

#### **7.1.2.4 ARC-3.3.5 Setback from Wetlands**

Prohibit development within the 100-foot riparian corridor of all wetlands. Permit exceptions to this setback only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands as feasible and mitigated. Require measures to prevent water quality degradation from adjacent land uses, as outlined in Goal ARC-4: Water Resources.

*The Project will comply with the Riparian Corridor and Wetlands Protection ordinance by resulting in a net increase in riparian corridor and wetland area and function. Impacts to riparian corridors and wetlands are the minimum necessary to achieve the Project purpose.*

#### **7.1.2.5 ARC-3.3.8 Environmental Review for Riparian Corridor and Wetland Protection**

Require environmental review of all proposed development projects affecting riparian corridors or wetlands and preparation of a Biotic Report for projects that, as proposed, may have a significant effect on the corridors or wetlands. Compliance with County regulations is generally considered to prevent the possibility of significant environmental impacts, and any biotic and/or riparian exception permit process may involve project specifications and/or conditions that would also prevent the possibility of significant environmental impacts.

*This document implements this requirement.*

#### **7.1.2.6 ARC-3.3.9 Management Plans for Wetland Protection**

Require development in or adjacent to wetlands to incorporate the recommendations of a management plan that evaluates: migratory waterfowl use from December 1 to April 30, native fish migration, compatibility of agricultural uses and biotic and water quality protection, maintenance of biologic productivity and diversity, flood protection and hydrologic value, and the permanent protection of adjoining uplands.

*The wetland created on the Project site will be managed in accordance with a long-term management plan, Stormwater Control Plan, and the Covenants, Conditions, and Restrictions (CC&Rs) for the development.*

#### **7.1.2.7 ARC-3.3.10 Development in Wetland Drainage Basins**

Require development projects in wetland drainage basins to include drainage facilities or Best Management Practices (BMPs) that will maintain surface runoff patterns and water quality, unless a wetland management plan specifies otherwise, and will minimize erosion, sedimentation, and introduction of pollutants.

*The wetland created on the Project site will be managed in accordance with a long-term management plan, Stormwater Control Plan, and the CC&Rs for the development. These documents will ensure that the Homeowners Association maintains drainage facilities providing hydrology to the wetland and protects the water quality of the wetland.*

## **8 IMPACTS, MONITORING PLANS, AVOIDANCE MEASURES**

With compliance with regulatory authorizations, implementation of compliance plans and monitoring programs, and AMMs, all Project-related impacts on biological resources would be reduced to a level considered less than significant and would not exceed those considered in the 2008 IS/MND.

### **8.1 REGULATORY AUTHORIZATIONS**

Implementation of the Project would result in impacts to a total of approximately 0.041 acre (455 linear feet) of aquatic resources on the Project site and 0.07 acre of riparian habitat within the outfall construction area. Preparation and implementation of the below Environmental Monitoring Plans and avoidance and minimization measures, in addition to agency consultation and compliance with Project authorizations issued by applicable regulatory agencies, would ensure reduction of impacts to protected habitats to a level considered less than significant pursuant to CEQA.

Prior to Project commencement, consultation with and/or authorization from applicable state agencies (e.g., Regional Water Board and CDFW) and federal agencies (e.g., USACE) charged with overseeing potential impacts on special-status habitats shall be secured. All terms and/or conditions (e.g., monitoring, reporting, timing, and work limits) established within the agency consultations and authorizations would be fully implemented. Any identified compensatory mitigation would be completed consistent with agency consultation and authorization requirements.

### **8.2 ENVIRONMENTAL MONITORING PLANS**

As discussed in Section 1.3.3, the compliance and monitoring plans described below would be incorporated into the Project's Contract Documents to ensure protection of the environment.

#### **8.2.1 Stormwater Pollution Prevention Plan**

Construction activities that would disturb 1 acre or more of soil, or that would disturb less than 1 acre but are part of a larger common plan of development that in total would disturb 1 or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (Construction General Permit). The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. The SWPPP would describe the best management practices (BMPs) to address potential stormwater runoff impacts from construction activities.

The temporary construction site BMPs to be included in the SWPPP will include but not be limited to the following:

- a. Measures for managing runoff when water is used for dust control on stockpiles.
- b. Measures for monitoring erosion and sediment migration from stockpiles.
- c. Specific practices that may be implemented to reduce the sediment load of stormwater runoff, including stormwater control devices (earth berms, silt fences/curtains, or other barriers) installed along the perimeter of stockpile areas and protection of existing catch basins with silt fences or gravel bags.
- d. Chemical and fuel storage plans (secondary containment and other measures).
- e. Inspection and maintenance of protected areas regularly during the course of the work.
- f. Sealing or placing filter fabric at storm drains and using other appropriate BMPs.

### **8.2.2 Wetland Monitoring Plan**

A Wetland Monitoring Plan (WMP) will be developed for the created wetland. The WMP will be prepared by a qualified biologist or restoration professional and will include the following minimum elements:

- a. Design plans for the created wetland.
- b. Criteria and standards by which the wetland will compensate for impacts of the proposed Project on aquatic resources.
- c. Discussion of the following shall be included: (1) the objectives of the created wetland, including the hydrologic and biotic conditions of the created wetland; (2) the specific methods to be employed for wetland creation and plant establishment; (3) success criteria and monitoring requirements to ensure the achievement of objectives; and, (4) remedial measures to be implemented in the event that performance standards are not achieved.
- d. Site-specific native seed mixes and/or plantings proposed to achieve the desired plant community in the mitigation wetland.
- e. A five-year management plan for maintenance and monitoring of the created wetland to ensure performance standards are achieved. Annual habitat monitoring reports will be submitted to the County Planning Department by January 31 of each monitoring year.

The project proponent will be responsible for execution of the 5-year management plan for maintenance and monitoring of the created wetland. If responsibility is transferred legally to

another entity, County Environmental Planning Staff will be informed of any such transfer of responsibility.

### **8.3 AVOIDANCE AND MINIMIZATION MEASURES**

The environmental component of the Project's monitoring program will include the following AMMs relevant to biological resources, as discussed in Section 1.3.3.

#### **8.3.1 General Avoidance and Minimization Measures**

During construction, measures shall be implemented to mitigate temporary construction impacts on the environment and surrounding community, including engineering controls and/or operational BMPs.

1. Worker Environmental Awareness Training: All construction personnel (hereinafter referred to as personnel) shall attend a mandatory environmental education program facilitated by the Project biologist prior to the initiation of construction activities. Training sessions shall be repeated for all new personnel before they are allowed access to the job site. All personnel shall complete the training and sign a form stating that they completed the training and understand all applicable agency regulations and consequences of non-compliance. The Project sponsor shall keep the forms on file and make them available to the regulatory agencies upon request.
2. Best Management Practices: Every reasonable precaution to protect offsite biological resources from construction by-products and pollutants such as debris, construction chemicals, fresh cement, saw water, or other deleterious materials shall be exercised. Measures will ensure minimization of disruptions to surrounding neighbourhoods, resources, and land uses and will include but not be limited to debris and dust controls, air and water pollution controls, water usage controls, and noise and vibration controls. The measures identified in these plans shall be based on the best available technology and shall include, but not be limited to, the following:
  - During construction, all onsite and/or construction related debris shall be disposed of at an authorized offsite disposal location.
  - All hazardous materials shall be stored and handled in strict accordance with the Safety Data Sheets for the products. The storage and handling of potential pollution-causing and hazardous materials, including but not necessarily limited to gasoline, oil, and paint, shall be in accordance with applicable federal, state, and local laws and regulations.
  - Erodible construction material shall be covered every night and during any rainfall event.
  - Vehicles and equipment that are used during the course of construction shall be fueled and serviced in an appropriate manner. Fueling locations shall be inspected after fueling

to document that no spills have occurred. Any incidental spills shall be cleaned up immediately.

- Once the Project is completed, construction material, wastes, debris, sediment, rubbish, trash, fencing, and other construction items shall be removed from the site and transported to an authorized disposal area or recycling facility, as appropriate, in compliance with applicable federal, state, and local laws and regulations.

### **8.3.2 Special-Status Species Avoidance and Minimization Measures**

- If construction and tree removal activities must occur during the migratory bird nesting season (February 1 through September 15), an avian nesting survey of the Project site and accessible contiguous habitat within 300 feet of all impact areas shall be conducted for active nests of protected migratory birds. The avian nesting survey shall be performed by a qualified wildlife biologist within 7 days prior to the start of ground or vegetation disturbance or building demolition activities. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate no disturbance buffer, which shall be determined by the biologist based on the species' sensitivity to disturbance (generally 50-250 feet for passerines and 250-500 feet for raptors and special-status species). The nest buffer shall be demarcated in the field with flagging and stakes or construction fencing. Work within the nest avoidance buffer shall be prohibited until the juveniles have fledged.
- A bat habitat assessment and preconstruction bat survey shall be conducted within 14 days of the removal of any trees or demolition of buildings within the Project site. The biologist shall have access to all structures and interior attics, as needed. The survey shall consist of an acoustic and visual emergence survey for bats, completed by a qualified biologist with experience identifying bat roosts and behavior. If a colony of bats is found roosting in a structure or vegetation, surveys will determine the species present and the type of roost, such as day, night, or maternity roost.

If a non-maternity and non-wintering bat colony is found, the biologist shall develop and implement acceptable passive exclusion methods in coordination with or based on CDFW recommendations to ensure their protection and to avoid unnecessary harm. If a maternity colony or overwintering colony is found on the project site, then the qualified biologist shall establish a suitable non-disturbance buffer around the location in coordination with CDFW. The non-disturbance buffer shall remain in place until the qualified biologist determines that the maternal colony or wintering roost is no longer active.

- During the preconstruction surveys for nesting birds, the qualified biologist shall survey for San Francisco dusky woodrat middens within and adjacent to the outfall construction area; all nests (active and inactive) shall be mapped and flagged. To the

extent feasible, San Francisco dusky woodrat nests shall be avoided during construction. If any existing nests can be avoided, they shall be isolated from the work area with the installation of wildlife exclusion fencing.

If individual woodrats are found within the Project work area during preconstruction surveys, work will not commence until the individual leaves the work area of its own volition. If woodrat middens are observed within the Project work area during preconstruction surveys, a relocation plan for woodrat nests affected by the Project will be prepared and approved by CDFW prior to implementation.

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[homearcgishub.hub.arcgis.com/datasets/c235869b3728451cabb08646516a44d2\\_1/explore](https://arc-gis-hub-homearcgishub.hub.arcgis.com/datasets/c235869b3728451cabb08646516a44d2_1/explore)

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## **Appendix A. Figures**

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Figure 1. Site and Vicinity Map

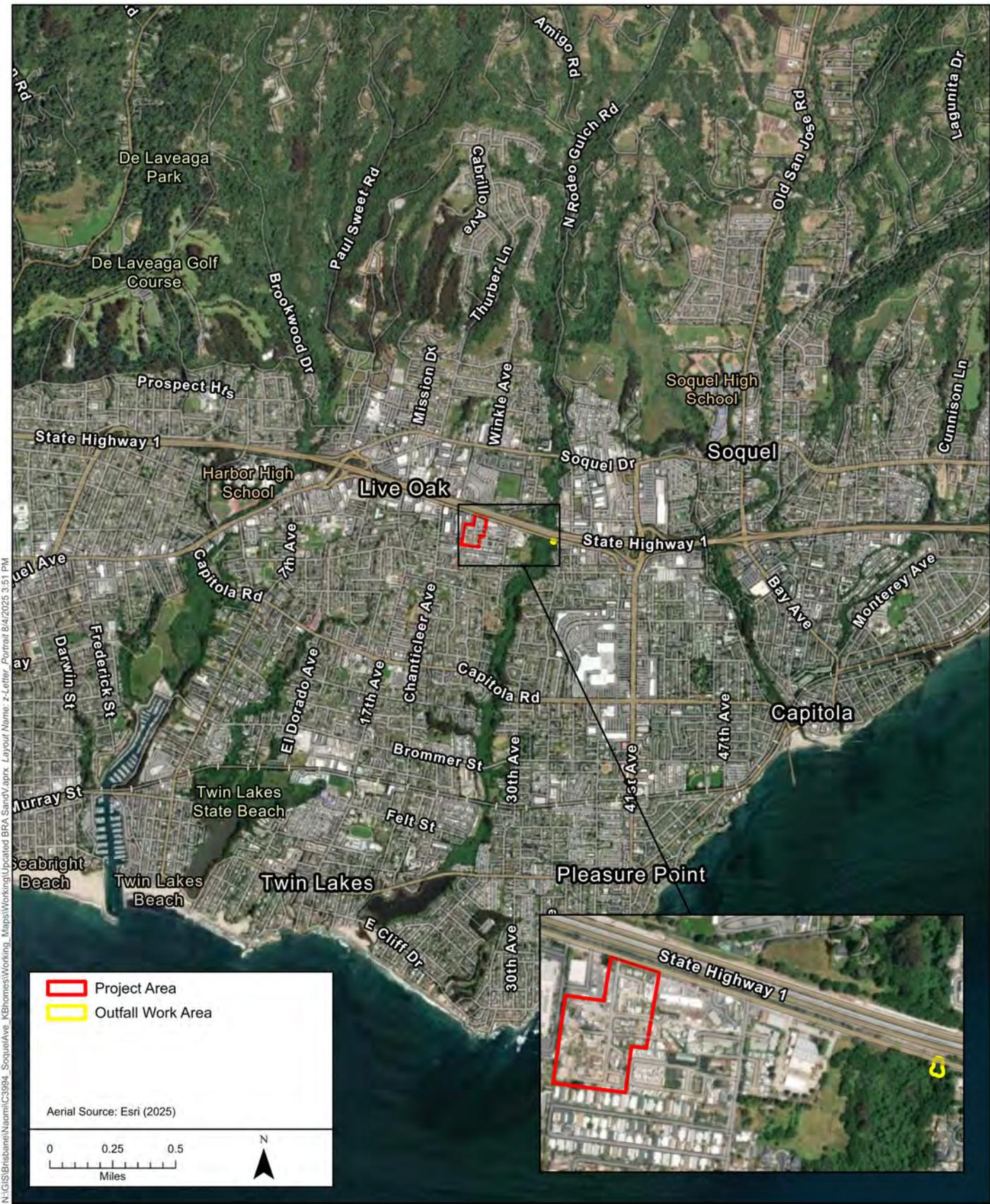
Figure 2. Site Map

Figure 3. Watershed Map

Figure 4. Delineation Map

Figure 5. Stormwater Map

Figures 6a & 6b. Impacts to Aquatic Resources Maps



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5940 Soquel Avenue  
 Figure 1. Site and Vicinity Map



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5940 Soquel Avenue  
Figure 2. Site Map

Exhibit D



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Study Area (5.218 AC)  
 National Hydrography Dataset  
 National Wetland Inventory

Aerial Source: Esri (2024)  
 Data Source: NWI (USFWS 2024), NDR (USGS 2024)

0      0.25      0.5  
 Miles

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Monterey Bay

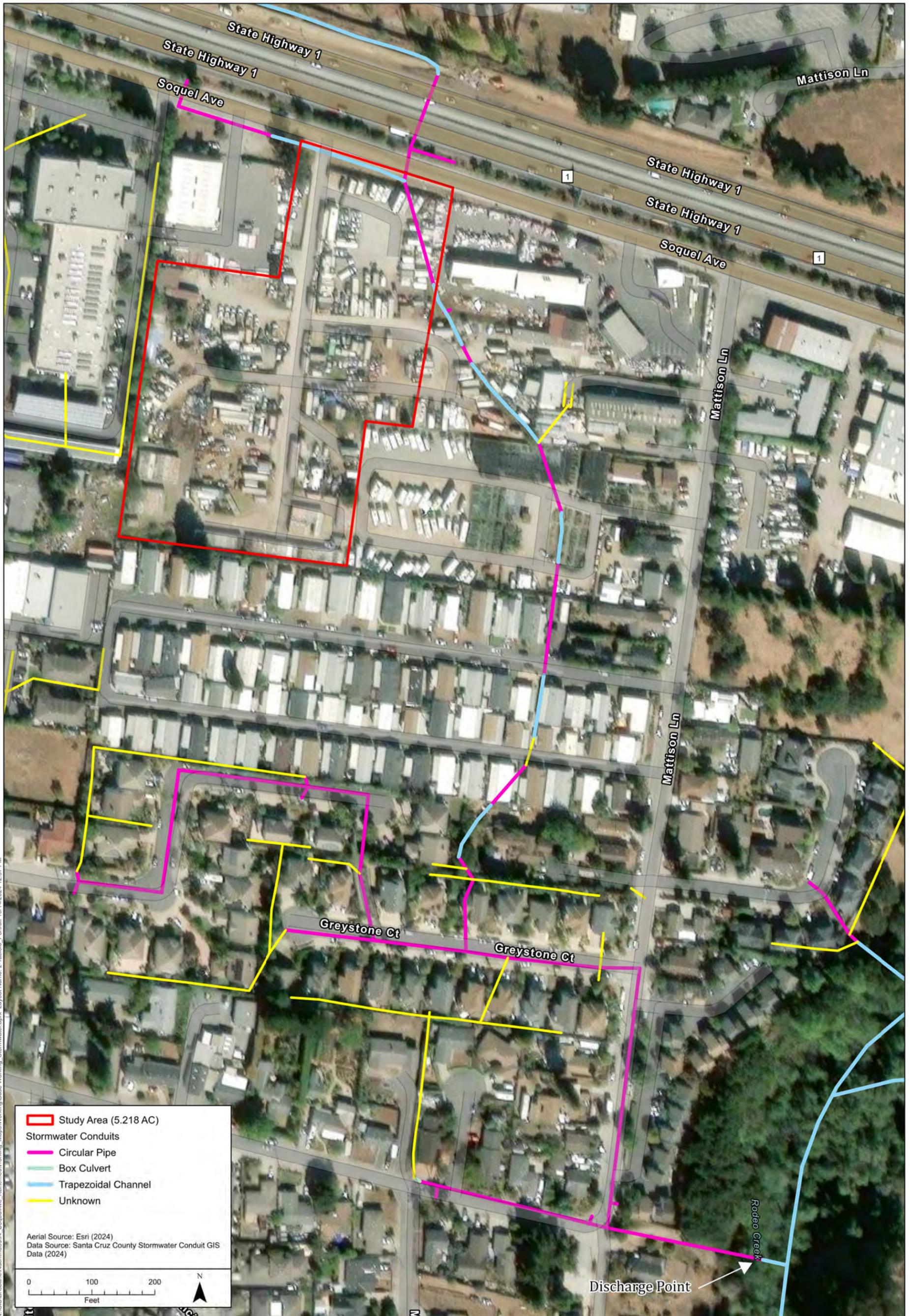


5940 Soquel Avenue  
Figure 3. Watershed Map

Exhibit D



5940 Soquel Avenue  
Figure 4. Delineation Map



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5940 Soquel Avenue  
 Figure 5. Stormwater Map



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5940 Soquel Avenue  
Figure 6a. Impacts to Aquatic Resources Map





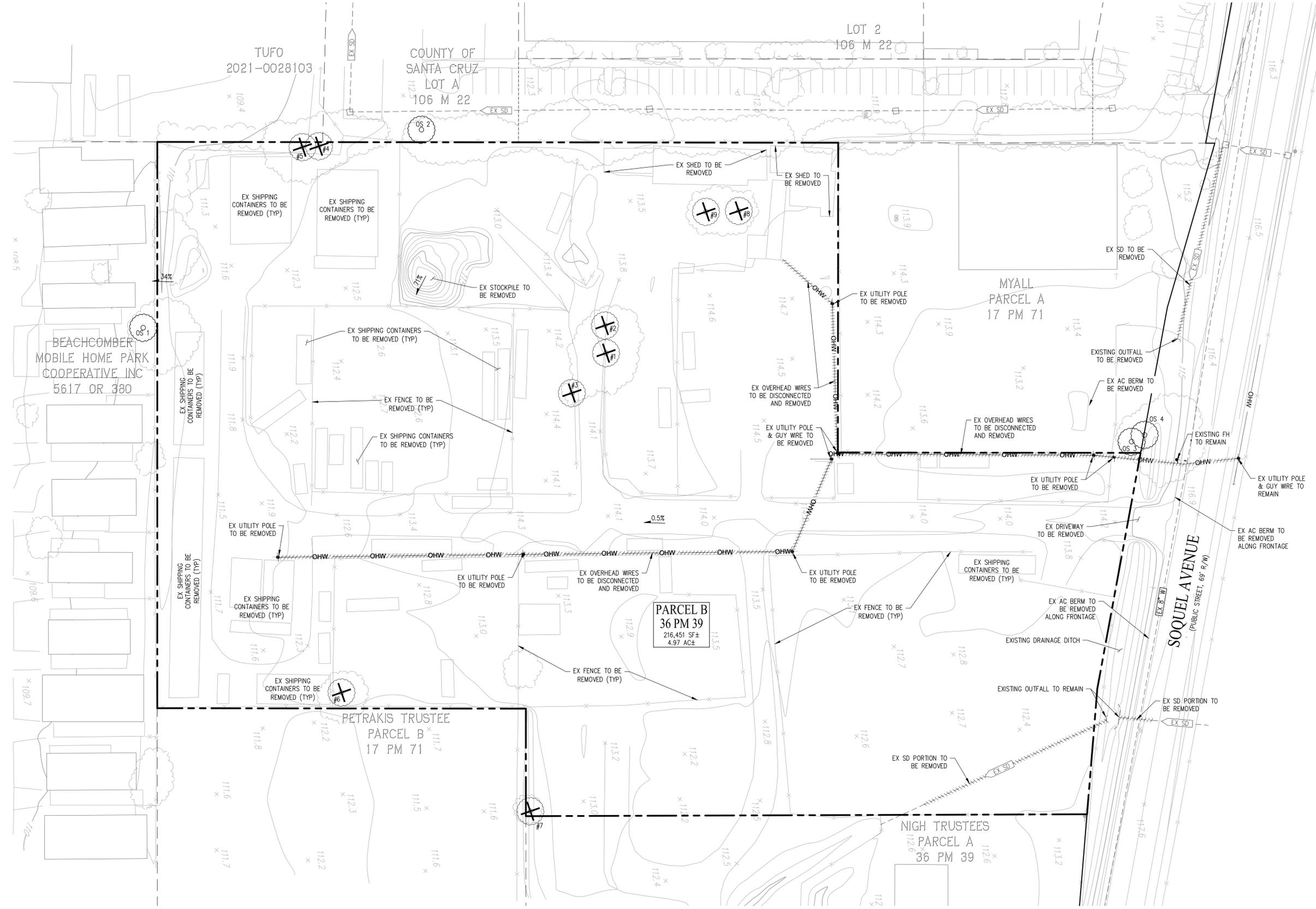
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**5940 Soquel Avenue**  
**Figure 6b. Impacts to Aquatic Resources Map at**  
**the Outfall Construction Area**

## **Appendix B. Site Plans**

---



**LEGEND**

- EXISTING BOUNDARY
- RIGHT OF WAY
- EXISTING CONTOUR
- EXISTING OVERHEAD WIRES
- EXISTING OVERHEAD WIRES TO BE REMOVED
- EXISTING STORM DRAIN
- EXISTING STORM DRAIN TO BE REMOVED
- EXISTING WATER MAIN
- EXISTING STORM DRAIN HEADWALL
- EXISTING FIELD INLET
- EXISTING FIRE HYDRANT
- EXISTING FENCE
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN

**ABBREVIATIONS**

- AC ACRE
- EX EXISTING
- FH FIRE HYDRANT
- R/W RIGHT OF WAY
- SD STORM DRAIN
- SF SQUARE FEET
- TYP TYPICAL
- W WATER

**ONSITE TREE SUMMARY**

TREE #	COMMON NAME	DIAMETER (BREAST HEIGHT)(INCHES)
1	SILVER WATTLE	20
2	SILVER WATTLE	MULTI (8.2, 9.3, 5.3)
3	RED MAPLE	5
4	RIVER RED GUM	10.7
5	RIVER RED GUM	MULTI (19, 11)
6	COAST LIVE OAK	NOT ACCESSIBLE
7	BLACKWOOD ACACIA	9
8	RAYWOOD ASH	NOT ACCESSIBLE
9	RAYWOOD ASH	NOT ACCESSIBLE

**OFFSITE TREE SUMMARY**

TREE #	COMMON NAME	DIAMETER BREAST HEIGHT (INCHES)
OS 1	COAST REDWOOD	UNKNOWN
OS 2	LONDON PLANE	UNKOWN
OS 3	MONTEREY PINE	37.7
OS 4	MONTEREY PINE	41.1

**NOTES:**

- 1) ENTIRE SITE TO BE CLEARED; ALL EXISTING STRUCTURES, TREES, DEBRIS, AND UTILITIES TO BE REMOVED.
- 2) AVERAGE SITE SLOPE: 0.50%±  
MAXIMUM SITE SLOPE: 71%±  
MAXIMUM SITE SLOPE IS LOCALIZED TO EXISTING STOCKPILE AND NOT REFLECTIVE OF SITE CONDITIONS.
- 3) REFER TO ARBORIST REPORT BY HMH, DATED NOVEMBER 12, 2024 FOR TREE DATA.
- 4) REFER TO GEOTECHNICAL FEASIBILITY REVIEW BY CORNERSTONE EARTH GROUP, DATED MARCH 29, 2024 FOR SOILS DATA.

3903-000  
5940 Soquel Avenue  
Santa Cruz, CA  
December 12, 2024

**KB Home**  
5000 Executive Parkway, Suite 125, San Ramon, CA 94583  
650.288.5970

**SDG Architects, Inc.**  
3361 Walnut Blvd, Suite 120  
Brentwood, CA 94513  
925.634.7000 | sdgarchitectsinc.com

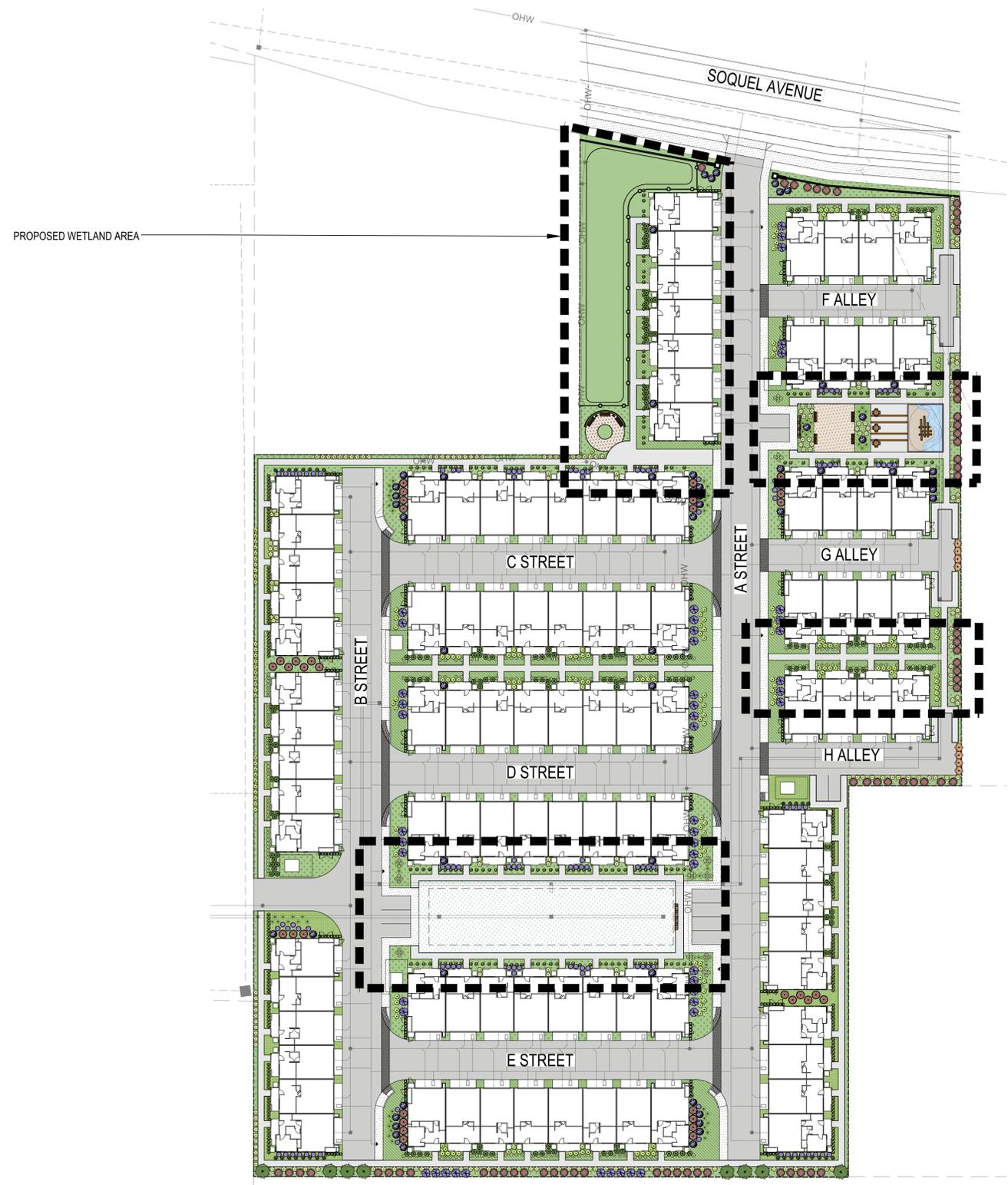


APN: 029-021-047  
**EXISTING SITE PLAN**  
TM-2



Land Use Entitlements  
 Land Planning  
 Landscape Architecture  
 Civil Engineering  
 Utility Design  
 Land Surveying  
 Stormwater Compliance

1570 Oakland Road (408) 487-2200  
 San Jose, CA 95131 HMHca.com



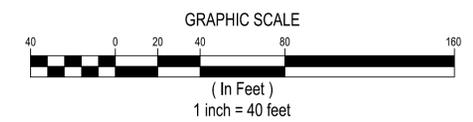
**SOQUEL AVENUE  
 SANTA CRUZ, CA  
 KB HOME**

NO	DATE	DESCRIPTION

PROJECT NO: 6986.00  
 CAD DWG FILE: 698600CL.DWG  
 DESIGNED BY: KY  
 DRAWN BY: TC  
 CHECKED BY: CM  
 DATE: APRIL 16, 2025  
 SCALE: 1" = 40'  
 © HMH

**OVERALL  
 LANDSCAPE PLAN**

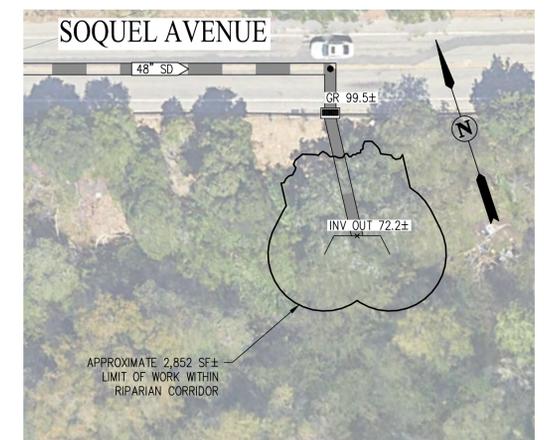
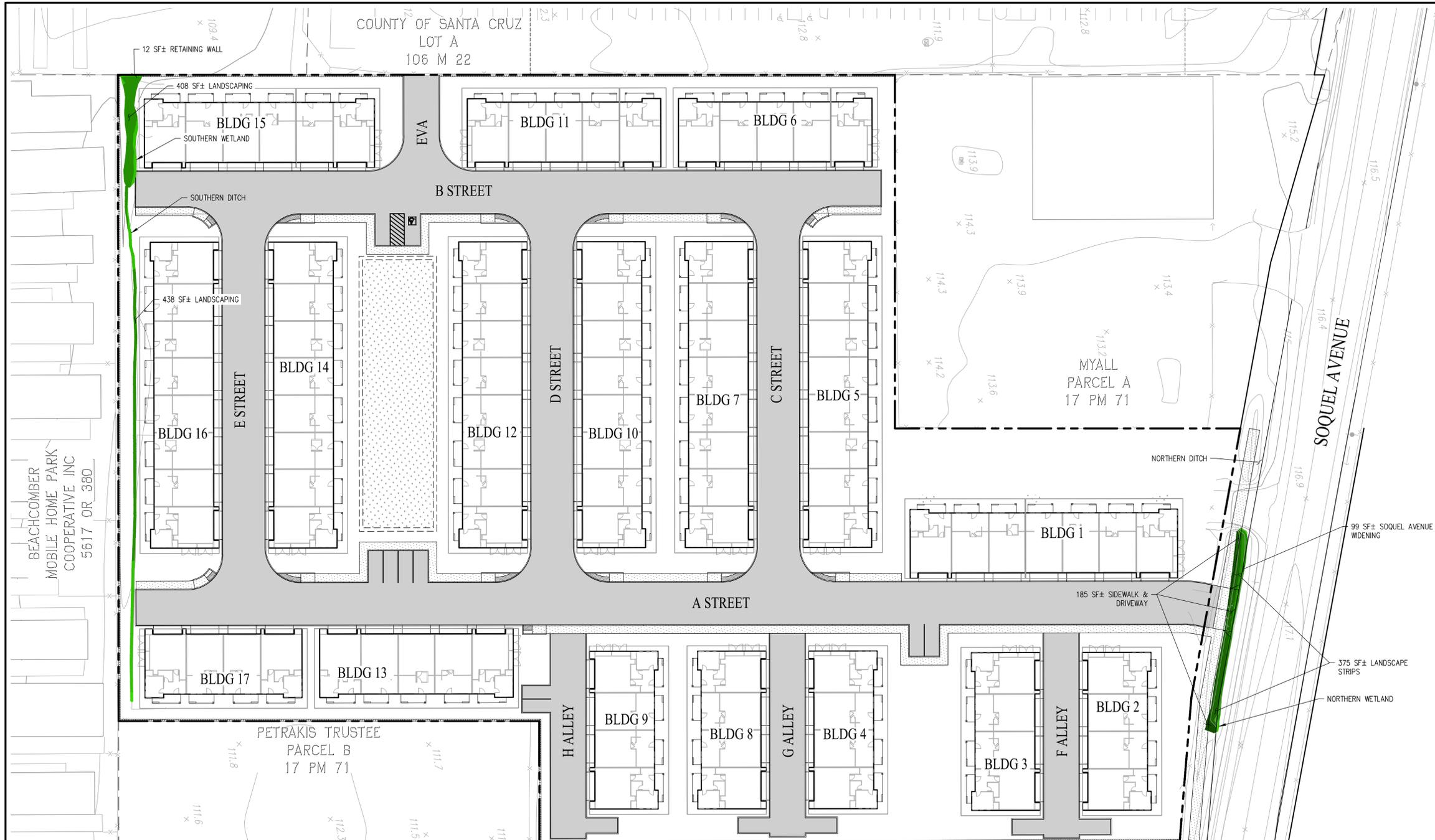
L3



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COUNTY OF SANTA CRUZ  
LOT A  
106 M 22



SOQUEL AVENUE STORM DRAIN OUTFALL  
NOT TO SCALE

OUTFALL EARTHWORK SUMMARY			
DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)
OUTFALL & 48" SD	250	0	250 (C)

- NOTES:
- (1) STORM DRAIN & OUTFALL DESIGNS AND ALIGNMENT ARE PRELIMINARY, SUBJECT TO FIELD VERIFICATION AND FINAL DESIGN.
  - (2) ALL EARTHWORK & QUANTITIES ARE PRELIMINARY, SUBJECT TO FINAL DESIGN.

EARTHWORK SUMMARY			
DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)
NORTHERN WETLAND			
DRIVEWAY & SIDEWALK	0	31	31 (F)
LANDSCAPE STRIPS	0	60	60 (F)
SOQUEL AVENUE WIDENING	0	13	13 (F)
SUBTOTAL (NORTHERN WETLAND)	0	104	104 (F)
SOUTHERN WETLAND			
RETAINING WALLS	0	1	1 (F)
LANDSCAPING	0	51	51 (F)
SUBTOTAL (SOUTHERN WETLAND)	0	52	52 (F)
SOUTHERN DITCH			
LANDSCAPING	0	50	50 (F)
SUBTOTAL (SOUTHERN DITCH)	0	50	50 (F)
<b>TOTAL</b>	<b>0</b>	<b>206</b>	<b>206 (F)</b>

EXISTING DRAINAGE DITCH AND WETLAND WORK SUMMARY SUMMARY	
DESCRIPTION	AREA (SF)
NORTHERN WETLAND	
SOQUEL AVENUE STREET WIDENING	99
SIDEWALK & DRIVEWAY	185
LANDSCAPE STRIPS	375
SUBTOTAL (NORTHERN WETLAND)	659
SOUTHERN WETLAND	
RETAINING WALLS	12
LANDSCAPING	408
SUBTOTAL (SOUTHERN WETLAND)	420
SOUTHERN DITCH	
LANDSCAPING	438
SUBTOTAL (SOUTHERN DITCH)	438
<b>TOTAL</b>	<b>1,517</b>

ELEVATION TABLE			
MINIMUM ELEVATION	MAXIMUM ELEVATION	AREA (SF)	COLOR
0.00	1.00	1,093	Light Green
1.00	2.00	1,483	Light Green
2.00	3.00	3,082	Light Green
3.00	4.00	3,752	Light Green
4.00	5.00	1,666	Light Green
5.00	6.00	427	Light Green

**LEGEND**

- PROPERTY LINE
- PROPOSED SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED ASPHALT CONCRETE
- PROPOSED DRIVEWAY CONCRETE

- NOTES:
- (1) DRAINAGE DITCH AND WETLAND LOCATIONS ARE APPROXIMATE, SUBJECT TO FIELD VERIFICATION.
  - (2) ALL DRAINAGE DITCH AND WETLAND WORK IS PRELIMINARY, SUBJECT TO FINAL DESIGN.

# CDFW JURISDICTION WORK

## 5940 SOQUEL AVENUE

SANTA CRUZ COUNTY CALIFORNIA  
SCALE: 1" = 30' DATE: AUGUST 5, 2025

**cbg**  
CIVIL ENGINEERS • SURVEYORS • PLANNERS

SAN RAMON • (925) 866-0322  
ROSEVILLE • (916) 788-4456  
WWW.CBANDG.COM

## **Appendix C. Aquatic Resource Delineation Report**

---

# Aquatic Resource Delineation Report

5940 Soquel Avenue

*Prepared for*  
**KB Home South Bay**  
5000 Executive Pkwy, Ste 125  
San Ramon, CA 94583

*Prepared by*  
  
433 Visitacion Avenue  
Brisbane, CA 94005

October 2024

Exhibit D

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## ACRONYMS AND ABBREVIATIONS

AJD	Approved Jurisdictional Determination
APN	accessor parcel number
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
Court	U.S. Supreme Court
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
Field Guide	<i>A Field Guide to Lake and Streambed Alteration Agreements: Section 1600-1607 California Fish and Game Code</i>
FR	Federal Register
GNSS	Global Navigation Satellite System
HQUSACE	Headquarters, U.S. Army Corps of Engineers
NL	not listed
NRCS	Natural Resources Conservation Service
OBL	obligate
OHWM	ordinary high water mark
ORM	OMBIL Regulatory Module
PDSI	Palmer Drought Severity Index
Procedures	<i>State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State</i>
RWQCB	Regional Water Quality Control Board
<i>Sackett</i>	<i>Sackett v. EPA</i>
SWRCB	State Water Resources Control Board
UPL	upland

U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USGS	U.S. Geological Survey
WDR	waste discharge requirements

# 1 INTRODUCTION

This report describes the extent and location of potential waters of the United States (U.S.) that may be subject to the U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. [United States Code] Section 1344), potential waters of the State that may be subject to Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA (33 U.S.C. Section 1341) and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and streams, lakes, and riparian vegetation subject to California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 1602 of California Fish and Game Code within the 5940 Soquel Avenue Study Area (Study Area). This investigation of potentially jurisdictional waters of the U.S. and State follows the methods described in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008a); the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), supplemented with guidance as directed by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b); and the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2021). The boundaries of potential waters of the U.S. and State depicted in this report represent a calculated estimation and are subject to modification following the regulatory review process. All provided maps are consistent with the most recent Map and Drawing Standards for the South Pacific Division Regulatory Program.

We are requesting that USACE issue a verification of the delineation map appended to this report. Though some of the aquatic resources present in the Study Area do not appear to meet the current regulatory definition of waters of the U.S., we do not believe that requesting an Approved Jurisdictional Determination (AJD) will result in improved permitting outcomes for KB Home South Bay.

## 1.1 STUDY AREA LOCATION

The approximately 5.2-acre Study Area is located at 5940 Soquel Avenue in the unincorporated Live Oak community of Santa Cruz County, California (Appendix A, Figure 1). The Study Area includes Accessor Parcel Number (APN) 029-021-47 and is within the Soquel, CA, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Appendix A, Figure 2). The approximate center point is at latitude 36.9833278°, longitude -121.9765361°.

## 1.2 WATERSHED

The Study Area is in the Monterey Bay watershed (Hydrologic Unit Code 12: 180600150305). Monterey Bay is approximately 1.5 miles south of the Study Area. The closest relatively

permanent tributary to Monterey Bay, Rodeo Creek Gulch, is located approximately one-quarter mile east of the Study Area (Appendix A, Figure 3).

### 1.3 SURROUNDING LAND USE

The Study Area is surrounded by development on all sides, including light-industrial, commercial, residential, and institutional developments. Soquel Avenue, a frontage road to State Route 1, borders the northern Study Area boundary.

### 1.4 TOPOGRAPHY

The Study Area is nearly flat, gently sloping southeast and southwest. Topographic depressions in the Study Area are associated with constructed ditches at the northern, southern, and eastern edges of the Study Area. Mounds of dirt and debris are scattered across the site.

### 1.5 EXISTING SITE CONDITIONS

The entire Study Area is developed or otherwise disturbed. According to a 2021 Draft Environment Impact Report prepared for the property by the County of Santa Cruz, existing uses on the site include storage, salvage, and salvage yard purposes. Towing, storage, and concrete businesses operate from the site, and storage containers, vehicles, boats, and campers are scattered across the site. Three sheds and an office trailer with an attached workshop are also present. There is a single ingress/egress point from Soquel Avenue and coarsely paved internal roadways throughout the Study Area.

### 1.6 VEGETATION COMMUNITIES

Vegetation communities in the Study Area include non-native annual grassland, seasonal wetland, ruderal, and ornamental/urban. Each of these vegetation communities is described below.

#### Non-Native Annual Grassland

This community is located within portions of the Study Area that are not subject to routine disturbance or planted with vegetation. This vegetation community occurs in patches throughout the Study Area and in linear strips at the edge of the Study Area. Typical plant species include *Festuca perennis* (Italian rye grass), *Avena* sp. (oats), *Bromus* sp. (brome), *Carduus pycnocephalus* (Italian thistle), *Erharta erecta* (panic veldt grass), *Geranium dissectum* (cutleaf geranium), *Helminthotheca echioides* (bristly ox tongue), *Hordeum murinum* (foxtail barley), *Hypochaeris* sp. (cat's ear), *Lysimachia arvensis* (scarlet pimpernel), *Medicago polymorpha*

(burclover), *Plantago lanceolata* (narrowleaf plantain), *Raphanus* sp. (radish), and *Rumex crispus* (curly dock). A low cover of *Rubus armeniacus* (Himalayan blackberry) was commonly observed in this vegetation community.

### Seasonal Wetland

This community is located in topographic low points at the southwestern, northern, and northeastern edges of the Study Area. During the October 2024 site visit, this community was characterized by a significant cover of plant species that generally occur in wetlands, including *Cyperus eragrostis* (tall flatsedge), *Mentha pulegium* (pennyroyal), *Epilobium ciliatum* (slender willow herb), and *Polypogon viridis* (beardless rabbitsfoot grass), mixed with plant species that are common to both wetlands and uplands, including Italian rye grass, Himalayan blackberry, and curly dock.

### Ruderal

This community is located in portions of the Study Area subject to routine disturbance. This community contains species quick to colonize disturbed surfaces, such as *Foeniculum vulgare* (fennel), *Fumaria capreolata* (white ramping fumitory), *Parietaria Judaica* (spreading pellitory), and various species common in the non-native annual grassland community. Plant cover and species diversity are generally lower in the ruderal community than the non-native annual grassland community.

### Ornamental/Urban

This community is located throughout the Study Area and consists of planted native and non-native species, including *Platanus acerifolia* (London planetree), *Fraxinus velutina* (Arizona ash), *Acacia baileyana* (bailey acacia), *Fraxinus angustifolia* (Raywood ash), *Cortaderia jubata* (pampas grass), *Crassula ovata* (jade), *Echium candicans* (pride of Madeira), *Herdera helix* (English ivy), *Lonicera japonica* (Japanese honeysuckle), *Eucalyptus globulus* (blue gum), and *Quercus agrifolia* (coast live oak).

## 1.7 SOILS

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, one soil map unit is present in the Study Area: Elkhorn sandy loam, 2 to 9 percent slopes. Elkhorn soils are derived from marine deposits and occur on terraces and alluvial fans. The typical soil profile is composed of sandy loam and sandy clay loam. Elkhorn soils are well drained with low runoff and no shallow restrictive features. One percent of this soil map unit has a hydric soil rating.

## **1.8 HYDROLOGY**

Most of the Study Area drains southwest and derives hydrology primarily from direct precipitation. However, the northern and eastern portions of the Study Area drain southeast and derive hydrology from runoff from Soquel Avenue, State Route 1, and lands north of State Route 1.

## 2 REGULATORY SETTING

### 2.1 WATERS OF THE UNITED STATES

Waters of the U.S. are regulated by USACE and the RWQCB in accordance with Section 404 and 401 the Clean Water Act, respectively. The definition of waters of the U.S. has been the subject of significant litigation and repeated regulatory revisions. The current definition of waters of the U.S. at 33 Code of Federal Regulations (CFR) Part 328 is the direct result of the May 25, 2023, U.S. Supreme Court (Court) decision in *Sackett v. Environmental Protection Agency* (EPA), 598 U.S. 143 S. Ct. 1322 (2023) (*Sackett*). In the *Sackett* ruling, the Court concluded that “the [Clean Water Act]’s use of ‘waters’ encompasses ‘only those relatively permanent, standing or continuously flowing bodies of water “forming geographic[al] features” that are described in ordinary parlance as “streams, oceans, rivers, and lakes.” ’ ” *Id.* at 1336 (quoting *Rapanos*, 547 U.S. at 739). The Court thereby eliminated all ephemeral waterbodies from the definition of waters of the U.S. The Court further concluded that wetlands are only waters of the U.S. “when wetlands have ‘a continuous surface connection to bodies that are “waters of the United States” in their own right, so that there is no clear demarcation between “waters” and wetlands.’ ” *Id.* at 1344 (citing *Rapanos*, 547 U.S. at 742, 755). Therefore, wetlands without a “continuous surface connection” to a relatively permanent water were eliminated from the definition of waters of the U.S. Finally, the Court concluded that wetlands do not qualify as waters of the U.S. solely because they are interstate. According to the Court, only open waters qualify as waters of the U.S. on the sole basis of being interstate. The *Sackett* decision has therefore reduced the authority of regulatory agencies under the Clean Water Act.

On September 8, 2023 (88 FR [Federal Register] 61964), the EPA and the Department of the Army amended the regulatory definition of waters of the U.S. under the Clean Water Act to conform with the *Sackett* ruling. The current definition of waters of the U.S. at 33 CFR § 328.3 reads as follows:

(a) Waters of the United States means:

(1) Waters which are:

- (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (ii) The territorial seas; or
- (iii) Interstate waters;

- (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
  - (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
  - (4) Wetlands adjacent to the following waters:
    - (i) Waters identified in paragraph (a)(1) of this section; or
    - (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
  - (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.
- (b) The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:
- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
  - (2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
  - (3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
  - (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
  - (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
  - (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

- (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
- (8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

### **2.1.1 Limit of Jurisdiction in Non-Tidal Waters**

Per 33 CFR § 328.4(c), the limit of Clean Water Act jurisdiction in non-tidal waters is either the “ordinary high water mark” (OHWM) or the wetland edge. Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(c)(1), 51 FR 41251, November 13, 1986). The OHWM is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR § 328.3(c)(4), 51 FR 41251, November 13, 1986).

### **2.1.2 Wetland Determinations**

Consistent with the *Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b), to be designated a wetland, the following three parameters must be met if normal circumstances are present:

- (1) a majority of dominant vegetation species are wetland-associated species;
- (2) hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- (3) hydric soils are present.

The criteria necessary to meet these three wetland parameters are outlined below.

#### **2.1.2.1 Vegetation**

Hydrophytic vegetation is defined as “the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present” (Environmental Laboratory 1987). The USACE definition of wetlands includes

"a prevalence of vegetation typically adapted for life in saturated soil conditions," with prevalence determined by the dominant plant species comprising the plant community (op. cit.).

The "50/20 rule" is generally used to determine dominant plant species at each sample point location. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species that individually comprise 20 percent or more of the total dominance measure for the stratum (HQUSACE [Headquarters, USACE] 1992). Dominant plant species observed at each sample point are classified according to their indicator status (probability of occurrence in wetlands) (Table 1). If more than 50 percent of the dominant vegetation on a site is classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), then the site meets the wetland vegetation parameter under the 50/20 rule.

Table 1. Classification of Wetland-Associated Plant Species

Plant Species Classification	Abbreviation	Probability of Occurring in Wetland
Obligate	OBL	Almost always occur in wetlands
Facultative Wetland	FACW	Usually occur in wetlands but may occur in non-wetlands
Facultative	FAC	Occur in wetlands and non-wetlands
Facultative Upland	FACU	Usually occur in non-wetlands but may occur in wetlands
Upland	UPL	Almost never occur in wetlands
Plants that are not listed	NL (UPL)	Assumed upland species

### 2.1.2.2 Hydrology

By definition, wetlands are seasonally inundated or saturated at or near (within 12 inches of) the soil surface. To be classified as a wetland, a site should have at least one primary indicator or two secondary indicators of wetland hydrology. Examples of primary indicators of wetland hydrology include surface soil cracks, water-stained leaves, and biotic crust. In addition to the primary indicators, there are a variety of secondary wetland hydrology indicators. Examples of secondary indicators include drainage patterns, saturation visible on aerial imagery, and dry-season water table.

### 2.1.2.3 Soils

A hydric soil is defined as a soil that is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (NRCS 2003). Indicators that a hydric soil is present include soil color (gleyed soils and soils with bright mottles and/or low matrix chroma), aquic or preaquic moisture regime, reducing soil conditions, sulfidic material (odor), soils listed on hydric soils list, iron and manganese concretions, organic soils (Histosols), histic epipedon, high organic content in surface layer in sandy soils, and organic streaking in sandy soils. A soil pit is excavated to the depth of refusal at each sample point. The soil is then examined for hydric soil indicators. The matrix color and mottle color (if present) of the soil are determined using the Munsell Soil Color Charts (Kollmorgen Instruments Co. 1990).

## 2.2 WATERS OF THE STATE

The RWQCB also is authorized under Section 13263 of the Porter-Cologne Act to regulate discharges to waters of the State through issuance of permits referred to as waste discharge requirements (WDRs). In Section 13050(e), the act defines waters of the State to mean any surface water or groundwater, including saline waters, within the boundaries of California. This definition may include wetlands and drainages that are outside federal jurisdiction.

The State Water Resources Control Board (SWRCB) further clarified the definition of wetlands that qualify as waters of the State through adoption of the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) (SWRCB 2021). Under the Procedures, the State defines wetlands as follows:

“An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.”

The Procedures further state that waters of the State include all waters of the U.S., including all “features that are consistent with any current or historic final judicial interpretation of ‘waters of the U.S.’ or any current or historic federal regulation defining ‘waters of the U.S.’ under the Clean Water Act.” USACE wetland delineation procedures are to be used to identify State-regulated wetlands, and the following wetland types are waters of the State:

- (1) natural wetland;
- (2) wetlands created by modification of a surface water of the State; and

- (3) artificial wetlands that meet certain criteria.

All artificial wetlands that are less than an acre in size are not waters of the State unless they were created by modification of a surface water of the State; approved as compensatory mitigation for impacts to other waters of the State; specifically identified in a water quality control plan as a wetland or other water of the state; or resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape.

## 2.3 CDFW 1602 JURISDICTION

CDFW regulates diversions and obstructions of the natural flows, and material changes or uses of the beds, channels, or banks, of rivers, streams, and lakes under Section 1602 of California Fish and Game Code (CFGF). The term stream, which includes creeks and rivers, is defined in 14 California Code of Regulations (CCR) Section 1.72 as follows: “A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” Per Section 1.56, the term lake “includes natural lakes or man-made reservoirs.”

Per *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600-1607 California Fish and Game Code* (Field Guide; California Department of Fish and Game (CDFG) 1994), this definition is not complete with respect to Sections 1601 or 1603 because it does not define the terms bed, channel, or bank, and does not define stream related features such as aquatic life, riparian vegetation, etc. The Field Guide clarifies the definition as follows.

- (1) The term stream can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS Maps), and watercourses with subsurface flow. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent wildlife.
- (2) Biologic components of a stream may include aquatic and riparian vegetation.
- (3) A stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed, bank, and/or levee.
- (4) The lateral extent of a stream can be measured in ways depending on a particular situation and the type of fish or wildlife resources at risk. The following criteria are applicable to the proposed project.

- a. The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream.
- b. Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark the lateral extent of a stream.
- c. A levee or other artificial stream bank could be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee (CDFG 1994).

### 3 METHODS

Aquatic resources in the Study Area were mapped using a Juniper Systems Geode Global Navigation Satellite System (GNSS) with sub-meter accuracy. All wetland data was recorded on Arid West Routine Wetland Determination Data Forms (Appendix B). The shapefiles obtained from the mapping effort were projected onto an aerial map using ArcGIS Pro, Version 3.3.1 (Appendix A, Figure 4). Munsell Soil Color Charts (Kollmorgen Instruments Co. 1990) were used to aid in identifying hydric soils in the field. The Jepson eFlora (Jepson Flora Project 2024) was used for plant nomenclature and identification. Plant wetland indicator status was provided by the National Wetland Plant List 2020 wetland ratings (USACE 2020).

Field surveys were conducted on April 4 and October 8, 2024, by Naomi Schowalter, Shea Grady, and Sarah Beilman of Integral Consulting Inc. Representative photographs of the Study Area are provided in Appendix C. The April 4 survey was a reconnaissance-level effort, and the formal delineation of aquatic resources was conducted on October 8. A total of nine sample points, including three paired and three unpaired sample points, were evaluated to determine whether the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. The paired sample points were established such that one point was located within the estimated wetland area and the other point was located outside the limits of the estimated wetland area.

## 4 RESULTS

A total of 0.043 acre (455 linear feet) of aquatic resources potentially jurisdictional pursuant to the Clean Water Act and Porter-Cologne Act were mapped in the Study Area, including 0.033 acre of seasonal wetlands, 0.010 acre (290 linear feet) of non-wetland waters, and 165 linear feet of culverted waters. Potential waters of the U.S./State in the Study Area are summarized in Table 2. A delineation map is provided in Appendix A, Figure 4, and an OMBIL Regulatory Module (ORM) upload sheet is provided in Appendix D.

Table 2. Potential Waters of the U.S./State

Feature ID	Cowardin Code	Acres	Linear Feet
W-1	PEM (palustrine, emergent)	0.005	N/A
W-2	PEM (palustrine, emergent)	0.015	N/A
W-3	PEM (palustrine, emergent)	0.002	N/A
W-4	PEM (palustrine, emergent)	0.011	N/A
OW-1	R6 (riverine, ephemeral)	0.010	290
C-1	R4 (riverine, intermittent)	N/A	11
C-2	R4 (riverine, intermittent)	N/A	154
TOTAL		0.043	455

### 4.1 WETLANDS

Four seasonal wetlands (W-1, -2, -3, and -4) totaling 0.033 acre were identified in the Study Area (Table 2). Dominant plant species in the wetlands included tall flatsedge (FACW), Italian rye grass (FAC), beardless rabbitsfoot grass (FACW), and pennyroyal (OBL). Hydric soil indicators included Redox Dark Surface (F6) and Sandy Redox (S5). Hydrology indicators included Saturation Visible on Aerial Imagery (C9), Shallow Aquitard (D3), and FAC-Neutral Test (D5). Surface water was noted in W-1, -2, and -4 during the April site visit (W-3 was not observed at this time).

Wetlands in the Study Area are associated with topographic depressions receiving channelized runoff from upslope surfaces. Geospatial data from Santa Cruz County (2024) indicates that W-1, W-2, and W-3 are part of the County's stormwater conduit system (Appendix A, Figure 5), and stormwater pipes drain to and from each wetland. However, no culverts were visible at W-1 during the field surveys, and the culvert between W-2 and W-3 was mostly filled with sediment. W-4 is not part of the County's stormwater conduit system but occurs at the terminus of a drainage ditch (OW-1) along the southern boundary of the Study Area.

## 4.2 OTHER WATERS

One other water (OW-1) was identified along the southern boundary of the Study Area, consisting of a 1.5-foot-wide constructed ditch. It is assumed that this ditch was constructed to prevent runoff from the Study Area from flooding the residential development to the south. Indicators of the OHWM included scour, sediment sorting, and shifts in vegetation characteristics. This ditch is anticipated to receive ephemeral flows in response to major precipitation events.

Another ditch was observed along the eastern portion of the Study Area that did not contain an OHWM (located at SP-7 on Appendix A, Figure 4). This ditch was constructed between two graded lots. A sample point was documented due to a low cover of tall flatsedge and pennyroyal observed in the ditch. It was concluded that this ditch is neither a wetland nor an other water.

## 4.3 CULVERTED WATERS

Two culverted waters were identified in the Study Area (C-1 and -2). C-1 is a 36-inch pipe that conveys flows from north of State Route 1 under the highway. Also, a drop inlet was observed along the southern edge of State Route 1 that conveys runoff from the highway directly into C-1. C-2 conveys flows from C-1 and W-2 to W-3. However, the inlet to C-2 is mostly filled with sediment, and the headwall is separated from the culvert. C-2 was estimated to be 18 inches wide. Both C-1 and C-2 are assumed to have intermittent flow based upon the standing water observed in W-2 during the April site visit.

## 5 JURISDICTION DISCUSSION

### 5.1 CLEAN WATER ACT

W-1, W-4, and OW-1 do not appear to qualify as waters of the U.S. under the current regulatory definition resulting from the *Sackett* ruling. OW-1 appears to have ephemeral flow and therefore does not meet the definition of a “tributary.” W-1 and W-4 do not appear to have any existing connectivity to waters of the U.S. W-1 is currently a closed depression without any visible culvert inlets or outlets. W-4 appears to end on the adjacent property without flowing into any other aquatic features or the storm drain system. Santa Cruz County’s stormwater conduit data does not display any stormwater facilities in the vicinity of W-4 (Appendix A, Figure 5). Therefore, W-1 and W-4 are not “adjacent” wetlands.

W-2 and W-3 are wetland ditches connected to Rodeo Creek Gulch via approximately 2,100 linear feet of stormwater pipes and ditches according to the County’s stormwater conduit data (Appendix A, Figure 5). While it is unclear whether this connection to Rodeo Creek Gulch is sufficient to qualify the features as adjacent wetlands, USACE could also evaluate these features as potential tributary waters. It seems likely that these features would qualify as tributaries based on being relatively permanent standing or continuously flowing bodies of water connected to Monterey Bay via Rodeo Creek Gulch. Standing/flowing water observed in W-2 during the April site visit (W-3 was not observed at this time) and surface water visible in multiple aerial photos indicate that these features meet the “relatively permanent” criterion. Therefore, W-2 and W-3 are expected to meet the current definition of waters of the U.S.

Since some of the aquatic resources in the Study Area appear to meet the definition of waters of the U.S. and the total area of aquatic resources in the Study Area is so low, there does not appear to be any benefit from requesting that USACE disclaim jurisdiction over isolated features through issuance of an AJD. A request for an AJD is likely to delay the permitting process while not resulting in reduced permit requirements. Therefore, we are requesting that USACE verify the delineation map in writing.

### 5.2 PORTER-COLOGNE ACT

All aquatic features identified in the Study Area are regulated by the RWQCB pursuant to the Porter-Cologne Act.

### 5.3 CDFW 1602 JURISDICTION

We do not believe that any of the aquatic features identified in the Study Area qualify as rivers, streams, or lakes regulated pursuant to CFGC Section 1602. The Study Area only contains

constructed ditches and associated wetlands. Evidence indicates that the ditches were constructed for the purpose of managing runoff from disturbed surfaces with low or no permeability rather than re-routing a natural watercourse. There are no records of historic stream channels in or near the Study Area that would have been diverted into the ditches. Additionally, the ditches are set within a heavily developed landscape and provide little value to wildlife resources. Therefore, CDFW does not appear to have regulatory authority pursuant to CFGC Section 1602. However, CDFW exercises a broad interpretation of their regulatory authority under CFGC Section 1602, and if CDFW is questioned regarding their jurisdictional authority, we expect them to take jurisdiction over most or all of the aquatic features in the Study Area. Since failing to provide CDFW with a Notification of Lake or Streambed Alteration may result in the issuance of a violation, project delays, and little cost savings (due to overlapping RWQCB jurisdiction), CDFW should likely be engaged.

## 6 CONCLUSION

A total of 0.043 acre (455 linear feet) of aquatic resources potentially jurisdictional pursuant to the Clean Water Act, Porter-Cologne Act, and CFGC Section 1602 were mapped in the Study Area. Of these aquatic features, 0.033 acre were seasonal wetlands, 0.010 acre (290 linear feet) were ephemeral other waters, and 165 linear feet were culverted waters. The mapped extent of all aquatic features and determinations regarding jurisdiction are subject to modification following the regulatory review process.

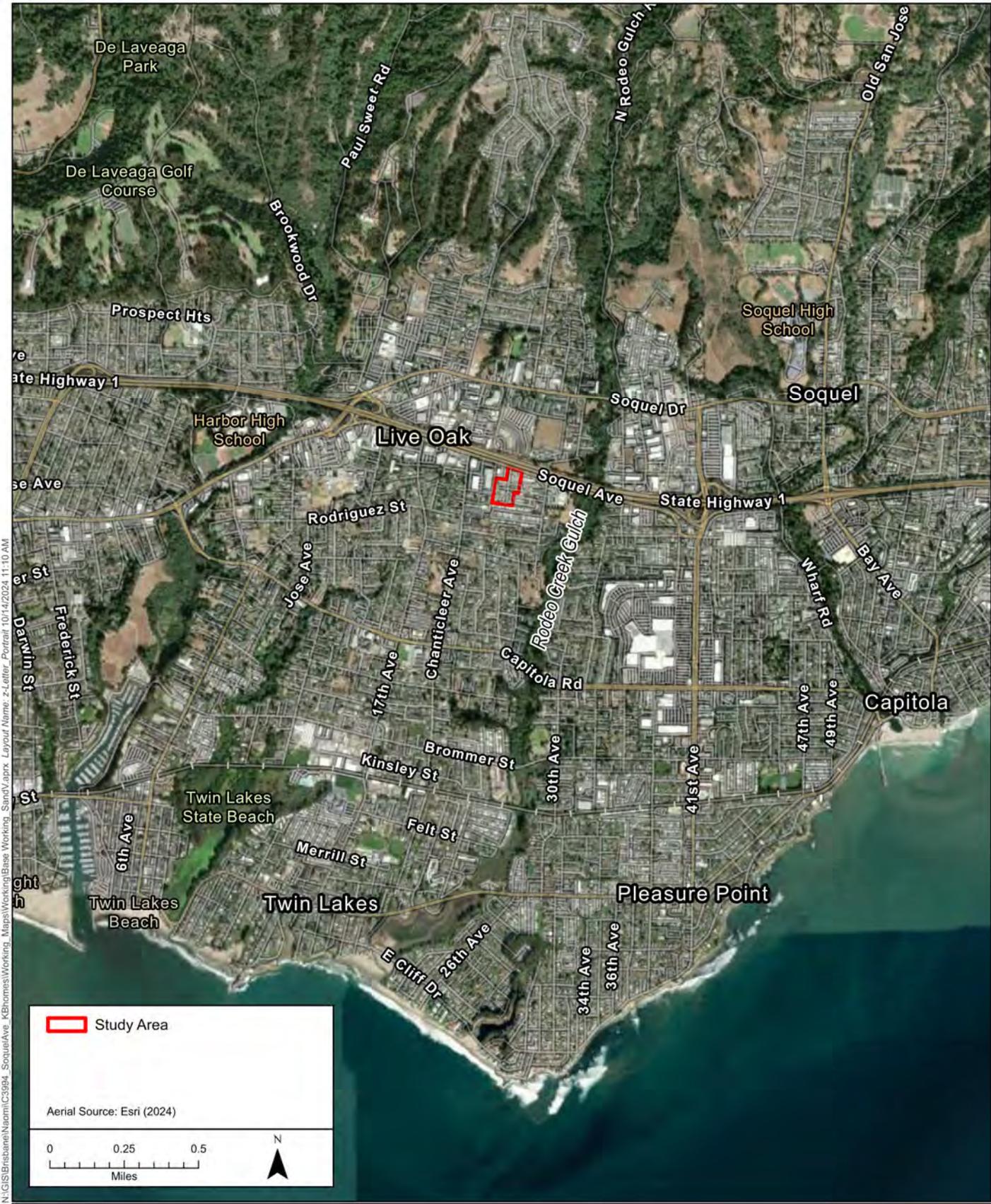
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## Appendix A. Figures

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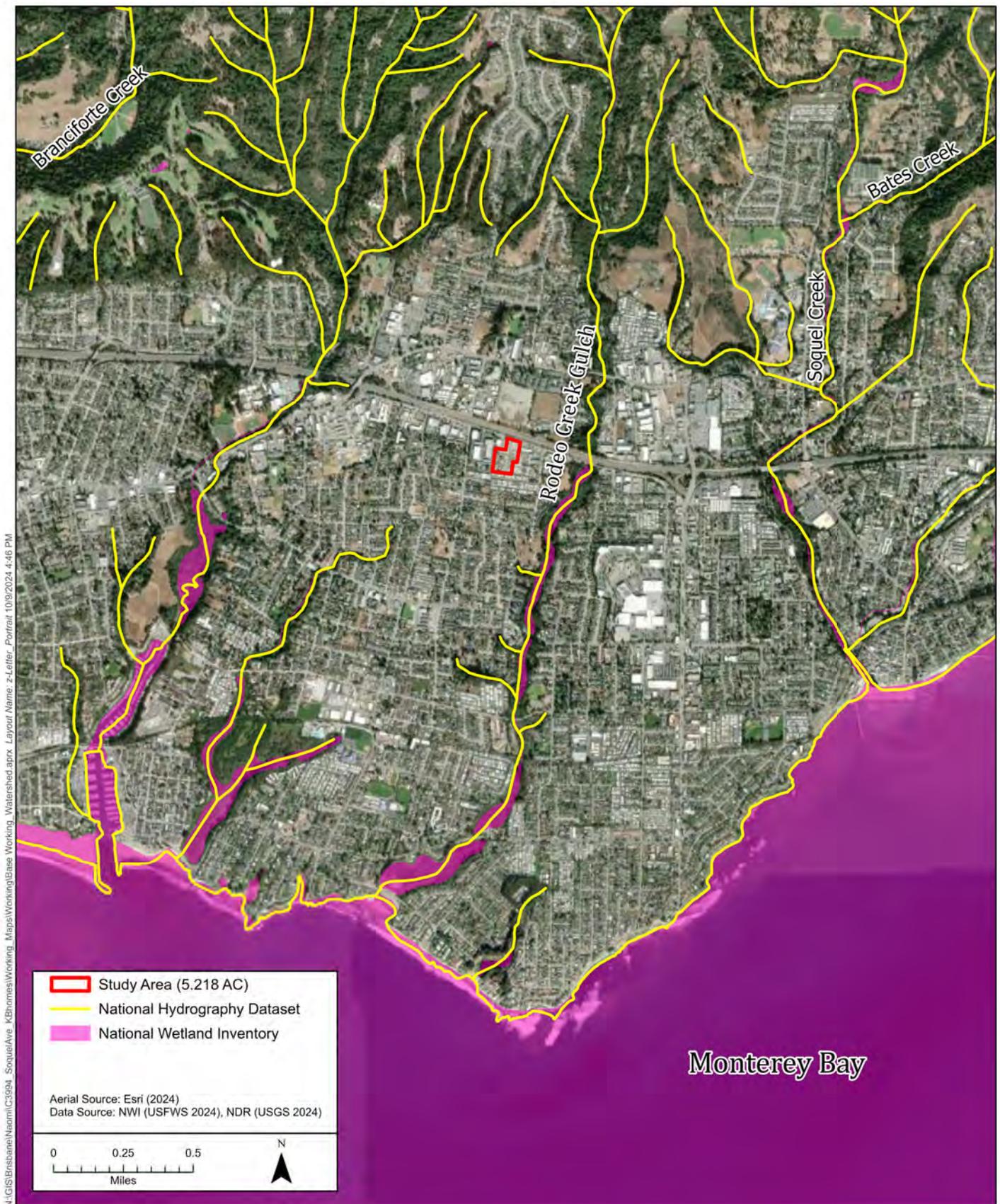
5940 Soquel Avenue  
Figure 1. Site and Vicinity Map



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**5940 Soquel Avenue**  
**Figure 2. USGS Topographic Map**



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Study Area (5.218 AC)  
 National Hydrography Dataset  
 National Wetland Inventory

Aerial Source: Esri (2024)  
 Data Source: NWI (USFWS 2024), NDR (USGS 2024)

0      0.25      0.5  
 Miles

N  
▲

Monterey Bay

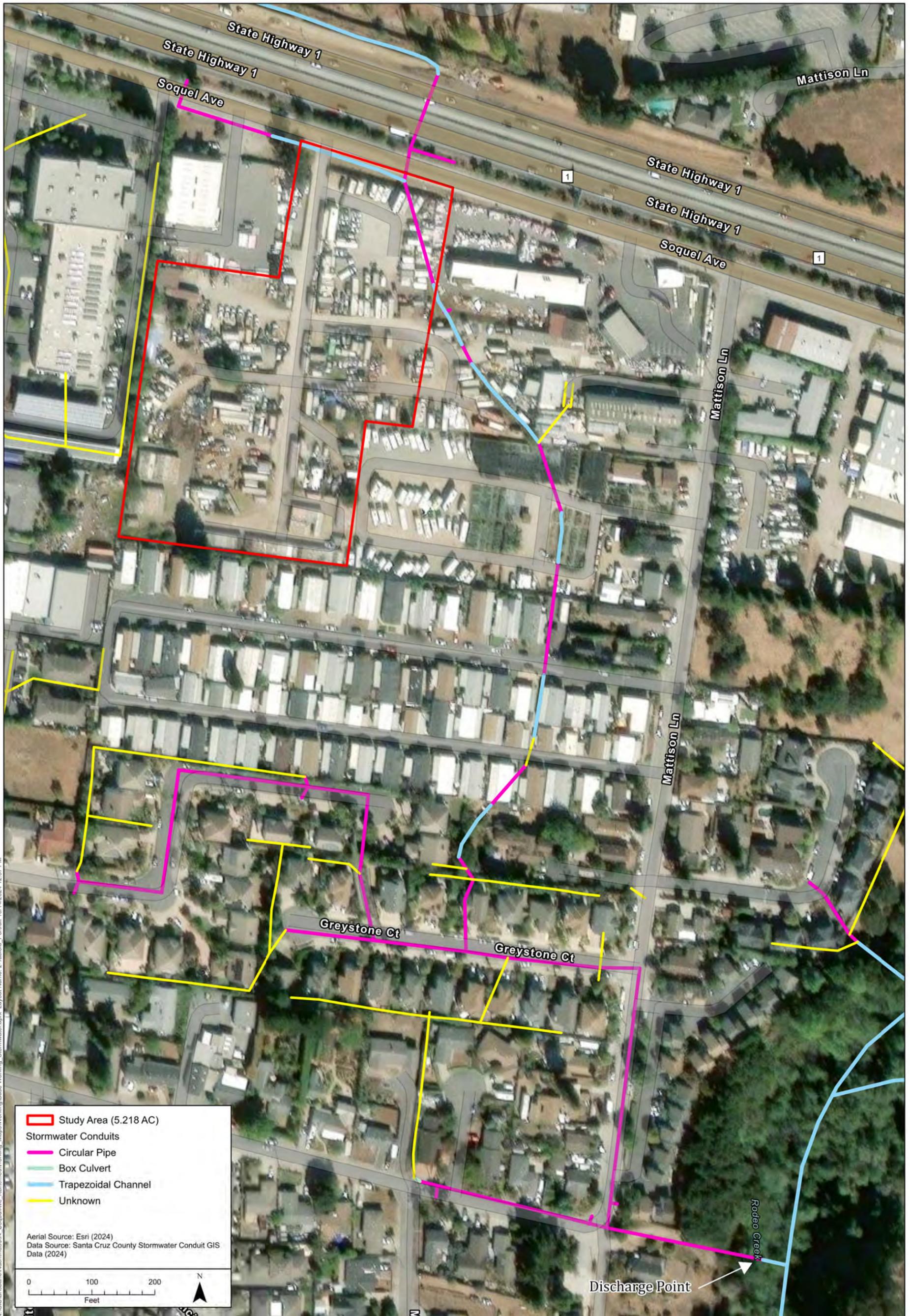


5940 Soquel Avenue  
Figure 3. Watershed Map

Exhibit D



5940 Soquel Avenue  
Figure 4. Delineation Map



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5940 Soquel Avenue  
 Figure 5. Stormwater Map

**Appendix B. Wetland Determination Data Forms**

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Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-1  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9825050 Long: -121.9762510 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation X, Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Remarks: Vegetation appears to have been weed wacked.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x 1 = <u>    </u> FACW species <u>    </u> x 2 = <u>    </u> FAC species <u>    </u> x 3 = <u>    </u> FACU species <u>    </u> x 4 = <u>    </u> UPL species <u>    </u> x 5 = <u>    </u> Column Totals: <u>    </u> (A) <u>    </u> (B) Prevalence Index = B/A = <u>    </u>
Sapling/Shrub Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
Herb Stratum (Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lolium perenne</u>	<u>80</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Rubus armeniacus</u>	<u>20</u>	<u>No</u>	<u>FAC</u>	
3. <u>Lactuca serriola</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>102</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
% Bare Ground in Herb Stratum <u>    </u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Grass composition difficult to determine with certainty due to weed wacking.

**SOIL**

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	10YR 2/1	99	7.5YR 4/4	1	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
---	---

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?      Yes _____ No _____    Depth (inches): _____ Saturation Present?        Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-2  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9826079 Long: -121.9773589 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Total % Cover of: <u>    </u> Multiply by: <u>    </u> OBL species <u>    </u> x 1 = <u>    </u> FACW species <u>    </u> x 2 = <u>    </u> FAC species <u>    </u> x 3 = <u>    </u> FACU species <u>    </u> x 4 = <u>    </u> UPL species <u>    </u> x 5 = <u>    </u> Column Totals: <u>    </u> (A) <u>    </u> (B) Prevalence Index = B/A = <u>    </u>
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
Herb Stratum (Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u><i>Polygonum viridis</i></u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	<u>X</u> Dominance Test is >50% <u>    </u> Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Rubus armeniacus</i></u>	<u>20</u>	<u>No</u>	<u>FAC</u>	
3. <u><i>Cyperus eragrostis</i></u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
4. <u><i>Mentha pulegium</i></u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>120</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Yes <u>X</u> No <u>    </u>
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
% Bare Ground in Herb Stratum <u>    </u> % Cover of Biotic Crust <u>    </u>				

Remarks:

**SOIL**

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 2/1	90	7.5YR 4/4	10	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-3  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9825965 Long: -121.9773732 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: <u>    </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>15</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>3.33</u>
Sapling/Shrub Stratum (Plot size: <u>    </u> )				
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
Herb Stratum (Plot size: <u>1 m</u> )				
1. <u>Hedera helix</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus armeniacus</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>15</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>    </u> )				
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
% Bare Ground in Herb Stratum <u>    </u>		% Cover of Biotic Crust <u>    </u>		

Remarks:

**SOIL**

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 2/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?      Yes _____ No _____    Depth (inches): _____ Saturation Present?        Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-4  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9825673 Long: -121.9768776 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>    1    </u> (A) Total Number of Dominant Species Across All Strata: <u>    1    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    100.0%    </u> (A/B)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x 1 = <u>    </u> FACW species <u>    </u> x 2 = <u>    </u> FAC species <u>    </u> x 3 = <u>    </u> FACU species <u>    </u> x 4 = <u>    </u> UPL species <u>    </u> x 5 = <u>    </u> Column Totals: <u>    </u> (A) <u>    </u> (B) Prevalence Index = B/A = <u>    </u>
Sapling/Shrub Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
Herb Stratum (Plot size: <u>    1 m    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lolium perenne</u>	60	Yes	FAC	
2. <u>Cyperus eragrostis</u>	15	No	FACW	
3. <u>Lonicera japonica</u>	15	No	FACU	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    90    </u> = Total Cover				
Woody Vine Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> = Total Cover				
% Bare Ground in Herb Stratum <u>    </u> % Cover of Biotic Crust <u>    </u>				

Remarks:

**SOIL**

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 2/1	99	7.5YR 4/4	1	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?      Yes _____ No _____    Depth (inches): _____ Saturation Present?        Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-5  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR): LRR C Lat: 36.9837067 Long: -121.9757287 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
Herb Stratum (Plot size: <u>1 m</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lolium perenne</u>	60	Yes	FAC	
2. <u>Cyperus eragrostis</u>	15	No	FACW	
3. <u>Mentha pulegium</u>	15	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
90 =Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		

Remarks:

**SOIL**

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 4/2	98	10YR 4/6	2	C	M	Sandy	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-6  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): \_\_\_\_\_  
 Subregion (LRR): LRR C Lat: 36.9837126 Long: -121.9757164 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
=Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>30</u> x 5 = <u>150</u> Column Totals: <u>85</u> (A) <u>370</u> (B) Prevalence Index = B/A = <u>4.35</u>	
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
=Total Cover					
Herb Stratum (Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. <u>Avena barbata</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>		
2. <u>Verbena bonariensis</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>		
3. <u>Cynodon dactylon</u>	<u>15</u>	<u>No</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
<u>85</u> =Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____	=Total Cover	
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____					

Remarks:

**SOIL**

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 2/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	
Type: _____		Yes _____	No <u>X</u>
Depth (inches): _____			
Remarks:			

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>				<b>Wetland Hydrology Present?</b>	
Surface Water Present?	Yes _____	No _____	Depth (inches): _____	Yes _____	No <u>X</u>
Water Table Present?	Yes _____	No _____	Depth (inches): _____		
Saturation Present?	Yes _____	No _____	Depth (inches): _____		
(includes capillary fringe)					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-7  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9831332 Long: -121.9760169 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> =Total Cover				
Sapling/Shrub Stratum (Plot size: <u>    </u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x 1 = <u>    </u> FACW species <u>    </u> x 2 = <u>    </u> FAC species <u>    </u> x 3 = <u>    </u> FACU species <u>    </u> x 4 = <u>    </u> UPL species <u>    </u> x 5 = <u>    </u> Column Totals: <u>    </u> (A) <u>    </u> (B) Prevalence Index = B/A = <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> =Total Cover				
Herb Stratum (Plot size: <u>1 m</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Lolium perenne</u>	80	Yes	FAC	
2. <u>Rubus armeniacus</u>	5	No	FACU	
3. <u>Cyperus eragrostis</u>	2	No	FACW	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>87</u> =Total Cover				
Woody Vine Stratum (Plot size: <u>    </u> )				
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
<u>    </u> =Total Cover				
% Bare Ground in Herb Stratum <u>    </u>		% Cover of Biotic Crust <u>    </u>		

Remarks:

**SOIL**

Sampling Point: SP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 2/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?      Yes _____ No _____    Depth (inches): _____ Saturation Present?        Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-8  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR): LRR C Lat: 36.9842809 Long: -121.9764301 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ =Total Cover				
<b>Herb Stratum (Plot size: <u>1 m</u>)</b> 1. <u>Cyperus eragrostis</u> <u>80</u> <u>Yes</u> <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ _____ =Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ =Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

**SOIL**

Sampling Point: SP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 2/1	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Other (Explain in Remarks)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This area was ponded during an April 2024 site visit.

Project/Site: 5940 Soquel Avenue City/County: Santa Cruz County Sampling Date: 10/8/2024  
 Applicant/Owner: KB Homes State: CA Sampling Point: SP-9  
 Investigator(s): Naomi Schowalter, Shea Grady Section, Township, Range: Sec. 9, T11S, R1W  
 Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%):       
 Subregion (LRR): LRR C Lat: 36.9842535 Long: -121.9764347 Datum: WGS 84  
 Soil Map Unit Name: Elkhorn sandy loam, 2 to 9 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes      No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>    </u>					Number of Dominant Species That Are OBL, FACW, or FAC: <u>    1    </u> (A) Total Number of Dominant Species Across All Strata: <u>    2    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    50.0%    </u> (A/B)
2. <u>    </u>					
3. <u>    </u>					
4. <u>    </u>					
=Total Cover					<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: <u>    </u> OBL species <u>    0    </u> x 1 = <u>    0    </u> FACW species <u>    0    </u> x 2 = <u>    0    </u> FAC species <u>    15    </u> x 3 = <u>    45    </u> FACU species <u>    0    </u> x 4 = <u>    0    </u> UPL species <u>    10    </u> x 5 = <u>    50    </u> Column Totals: <u>    25    </u> (A) <u>    95    </u> (B) Prevalence Index = B/A = <u>    3.80    </u>
Sapling/Shrub Stratum	(Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>    </u>					
2. <u>    </u>					
3. <u>    </u>					
4. <u>    </u>					
5. <u>    </u>					
=Total Cover					
Herb Stratum	(Plot size: <u>    1 m    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> Dominance Test is >50% <u>    </u> Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Bromus carinatus</u>		<u>10</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Lolium perenne</u>		<u>15</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>					
4. <u>    </u>					
5. <u>    </u>					
6. <u>    </u>					
7. <u>    </u>					
8. <u>    </u>					
=Total Cover					
Woody Vine Stratum	(Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>
1. <u>    </u>					
2. <u>    </u>					
=Total Cover					
% Bare Ground in Herb Stratum <u>    75    </u>		% Cover of Biotic Crust <u>    </u>			

Remarks:  
 Mostly covered in gopher mounds.

**SOIL**

Sampling Point: SP-9

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 2/1	100	10YR 2/1				Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
---	---

Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No _____    Depth (inches): _____ Water Table Present?      Yes _____ No _____    Depth (inches): _____ Saturation Present?        Yes _____ No _____    Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
This area was ponded during an April 2024 site visit.

## Appendix C. Representative Site Photographs

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W-4 and southwest corner of Study Area, facing southwest (April 4, 2024)



Eastern extent of W-4, facing southeast (April 4, 2024)



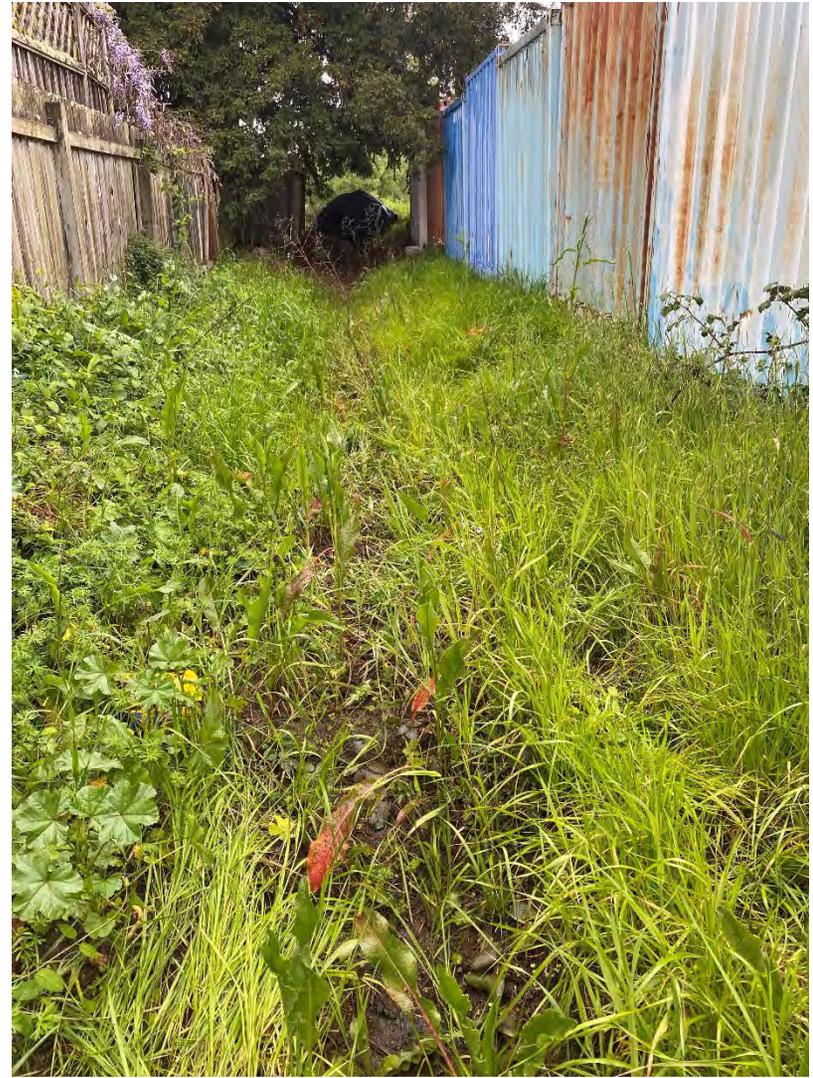
Ditch near SP-7, facing east (April 4, 2024)



Center of Study Area, facing south (April 4, 2024)



Eastern end of OW-1, facing west (April 4, 2024)



OW-1 near SP-4, facing west (April 4, 2024)



W-1, facing northeast (April 4, 2024)



W-2, facing west (April 4, 2024)



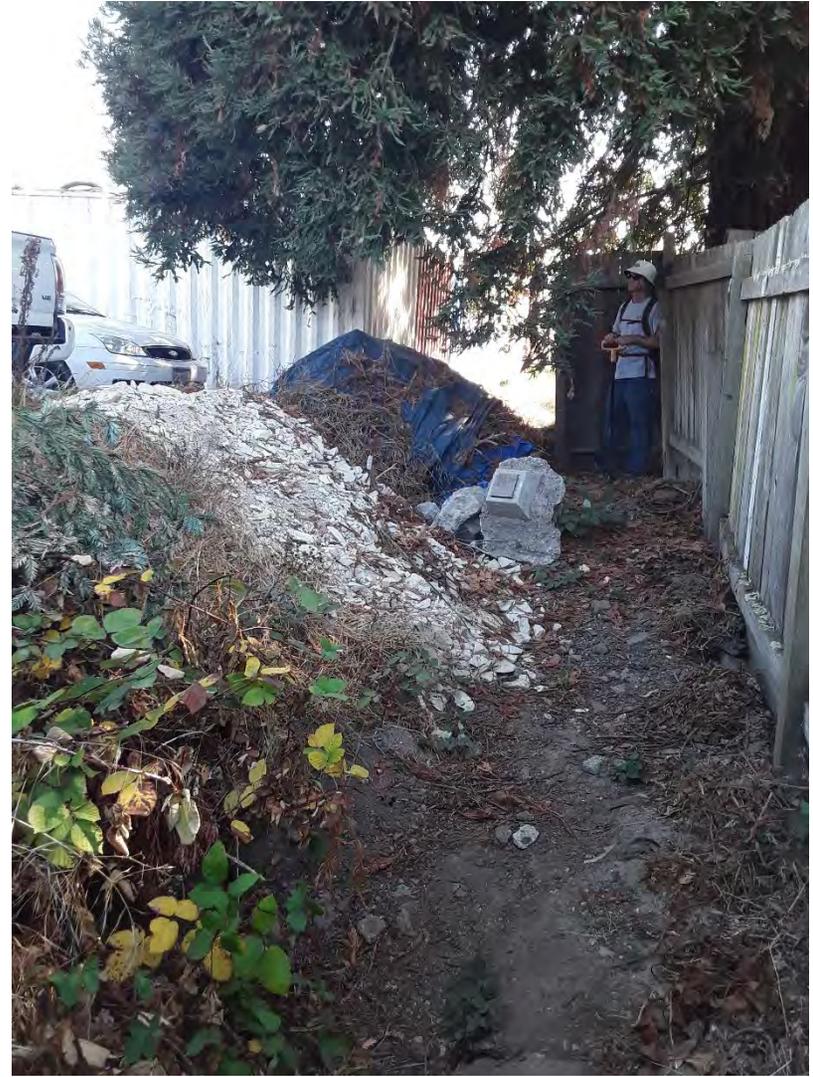
C-1 outlet, facing north (April 4, 2024)



Eastern end of OW-1, facing east (October 8, 2024)



Eastern end of OW-1, facing west (October 8, 2024)



Western end of OW-1, facing east (October 8, 2024)



W-4, facing west (October 8, 2024)



W-3, facing northwest (October 8, 2024)



W-3, facing southeast (October 8, 2024)



Ditch near SP-7, facing west (October 8, 2024)



Ditch near SP-7, facing east (October 8, 2024)



W-1, facing east from west end of wetland (October 8, 2024)



W-2, facing east from west end of wetland (38.7090218, -123.4478809)



East end of W-2, facing east; C-1 outlet and C-2 inlet visible (October 8, 2024)



C-2 inlet; headwall disconnected from pipe (October 8, 2024)

**Appendix D. OMBIL Regulatory Module (ORM) Upload Sheet**

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Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
W-1	CALIFORNIA	PEM		Area	0.00464657	ACRE	DELIN.CONC	36.98428567	-121.97642006
W-2	CALIFORNIA	PEM		Area	0.01513606	ACRE	DELIN.CONC	36.98421344	-121.97609202
W-3	CALIFORNIA	PEM		Area	0.00223954	ACRE	DELIN.CONC	36.98371391	-121.97573259
W-4	CALIFORNIA	PEM		Area	0.01052155	ACRE	DELIN.CONC	36.98260433	-121.97731535
OW-1	CALIFORNIA	R6		Area	0.01004731	ACRE	DELIN.CONC	36.98255229	-121.97669777
C-1	CALIFORNIA	R4		Linear		11 FOOT	DELIN.CONC	36.98419570	-121.97590398
C-2	CALIFORNIA	R4		Linear		154 FOOT	DELIN.CONC	36.98395620	-121.97582885

## **Appendix D. Resumes**

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# Sadie McGarvey

## Consultant

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Richmond, CA

[smcgarvey@integral-corp.com](mailto:smcgarvey@integral-corp.com)

## Education & Credentials

B.S., Wildlife Biology, emphasis in Wildlife Management and Conservation, Humboldt State University, Arcata, California, 2008

## Continuing Education

California Rapid Assessment Method (CRAM) wetlands and riparian areas practitioner training, May 2016

California Red-Legged Frog Workshop, April 2018

California Native Plant Society Poaceae Workshop, May 2018

## Professional Affiliations

Wildlife Society (Western Section and San Francisco Bay Area Chapter)

Women in Environment (President of SF Bay Area Chapter)

## Permits/Approvals

U.S. Fish and Wildlife Service Recovery Permit and California Department of Fish and Wildlife Memorandum of Understanding for Research on California Tiger Salamander and California Red-Legged Frog (permit number TE-06677C-2)

Ms. Sadie McGarvey has extensive experience as a field biologist and regulatory specialist, working in a variety of habitats and municipalities. She has a wide range of experience in biological fieldwork, regulatory compliance, and environmental permitting. Her professional experience includes California Environmental Quality Act (CEQA) level site assessments and reporting, due diligence reporting, regulatory compliance support for various development, reclamation, repair, transportation, and utilities projects throughout Northern California, construction compliance monitoring, vegetation and hydrology monitoring, vegetation mapping, wetland delineations and habitat assessments, and special-status species surveys and research. Ms. McGarvey assists clients with navigating environmental regulations and obtaining regulatory authorizations from the U.S. Army Corps of Engineers (USACE), state and regional Water Quality Control Boards, California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS). She ensures projects meet permitting and construction milestones while staying in compliance with regulatory authorizations and applicable laws.

## Relevant Experience

### NESTING BIRDS/RAPTORS

**Vallejo Storm Drain Replacement Work, Vallejo, California (2023)** — Conducted preconstruction surveys for **Swainson's hawk, burrowing owl**, and other nesting **birds/raptors** in conformance with CDFW-approved survey methodology. Observed regionally common raptors and songbirds (e.g., osprey, American crow, turkey vulture, common raven, white-crowned sparrow, and western gull).

**Various Residential Development Projects in East Contra Costa County (2010 – 2015)** — Conducted habitat assessments, presence/absence and preconstruction surveys, and biological construction monitoring for **burrowing owls** at several proposed and active development sites throughout East Contra Costa County.

**Trilogy at the Vineyards, Brentwood, California (2019 - 2022)** — Conducted presence/absence, preconstruction surveys, and biological construction monitoring for **burrowing owls** and **Swainson's hawk** in advance of trail construction and utility installation. Observed Swainson's hawk as well as regionally common raptors and songbirds (e.g., red-tailed hawk, American crow, black phoebe, western meadowlark, and downy woodpecker).

**Lagoon Valley Residential Development, Vacaville, California (2013 – 2015)** — Conducted presence/absence and preconstruction surveys for **Swainson's hawk, burrowing owl**, and surveys for nesting **birds/raptors** in conformance with CDFW-approved survey methodology.

**o Seely Avenue Residential Development Project, San Jose, California (2022 – 2024)** — Conducted habitat assessment and presence/absence survey for **burrowing owl** and general reconnaissance survey for **birds/raptors**. Observed regionally common raptors and songbirds (e.g.,

red-tailed hawk, red-shouldered hawk, American crow, California towhee, western bluebird, and yellow-rumped warbler).

**Woolsey Riparian Restoration Project, Windsor, California (2024)** — Conducted general reconnaissance survey and preconstruction survey for nesting **birds/raptors**. Observed regionally common raptors and songbirds (e.g., red-tailed hawk, turkey vulture, American crow, California towhee, and acorn woodpecker).

**Grayson Road Project, Pleasant Hill, California (2022 – 2025)** — Conducted general reconnaissance surveys for **birds/raptors** and preconstruction surveys for nesting birds/raptors in conformance with CDFW-approved survey methodology. Observed regionally common raptors and songbirds (e.g., red-tailed hawk, red-shouldered hawk, American robin, California towhee, and acorn woodpecker).

**Various Projects within the Rossmoor Active Senior Living Community, Walnut Creek, California (2017 – ongoing)** — Conducted general reconnaissance surveys for **birds/raptors** and preconstruction surveys for nesting birds/raptors. Observed regionally common raptors and songbirds (e.g., red-tailed hawk, red-shouldered hawk, turkey vulture, California towhee, acorn woodpecker, and Anna’s hummingbird).

**Leisure Town Residential Project, Vacaville, California (2024)** — Conducted habitat assessment and impact analysis for **burrowing owls** and **Swainson’s hawks**.

**Hecker Pass North Residential Subdivision Project, Gilroy, California (2021 – 2024)** — Conducted general reconnaissance surveys for birds/raptors and preconstruction surveys for nesting **birds/raptors** in accordance with USFWS and CDFW regulations and the Santa Clara Valley Habitat Plan. Conducted biological construction monitoring to ensure protection of active red-tailed hawk and acorn woodpecker nests. Observed regionally common raptors and songbirds (e.g., red-tailed hawk, red-shouldered hawk, acorn woodpecker, wild turkey, and western scrub jay).

**Proposed APC Ranch Conservation Bank, Paicines, California (2022 – 2024)** — Conducted presence/absence surveys for **Swainson’s hawks**, **burrowing owls**, and **birds/raptors** to support conservation bank entitlement. Observed California condors in addition to regionally common raptors and songbirds (e.g., red-tailed hawk, red-shouldered hawk, western scrub jay, downy woodpecker, and western bluebird).

**Proposed Artesa Winery, Gualala, California (2013 – 2015)** — Conducted protocol presence/absence surveys for **northern spotted owl**, foothill yellow-legged frog, and yellow warbler, and general reconnaissance surveys for **birds/raptors**.

## **SPECIAL-STATUS AMPHIBIANS**

**Proposed APC Ranch Conservation Bank, Paicines, California (2021 – ongoing)** — Conducted protocol dipnet, seine, and eDNA surveys for California tiger salamander and California red-legged frog to support conservation bank entitlement. Assist with capture, tail clipping, and release of CTS larvae (and western spadefoot toad larvae) to aid in genetic sampling effort by UCLA’s Shaffer Lab.

**Doolan Mitigation Site, Alameda County, California (2023 – ongoing)** — Conducted protocol visual-encounter surveys, as well as dipnet and seine surveys for CTS and CRLF. Conduct relocations of CTS and CRLF to site.

**Sonoma County Conservation Banks, Sonoma County, California (2013/2014, 2024 – ongoing)** — Conducted protocol drift fence surveys (2013, 2014), nocturnal visual encounter surveys (2024),



and dipnet and seine surveys (ongoing) for CTS to support conservation bank entitlement at various properties.

**Residential Development Project, Alameda County, California (2023 – ongoing)** — Conducted protocol visual-encounter surveys and conducted relocations for CTS and CRLF to avoid project-related impacts to state and federally listed species.

**Volunteer CTS Road Rescues, Sonoma County, California (2017 – ongoing)** — Conducted nighttime driving surveys of roads in Sonoma County known to be hotspots for CTS road mortalities during the fall migration. Imperiled individuals are relocated to the opposite side of the road in the direction they were originally travelling.

## PLANNING AND PERMITTING

**Port of San Francisco Sediment Remediation Project (Piers 37–43½), San Francisco, California** — Responsibilities include preparing the CEQA assessment for biological resources potentially impacted by the project. Conducted required natural resource surveys to identify biological resources present within the project site and conducted required analyses and reporting related to local, state, and federal jurisdiction over the project site and significance of project-related impacts to biological resources. Prepared a project-specific biological resource analysis (BRA) to analyze potential for significant impacts to biological resources that may result from the remediation project. Coordinate with client to establish project elements and variables that would result in impacts. Conducted biological construction monitoring for special-status marine mammals.

**Shell Pond Remediation Project, Contra Costa County, California** — On behalf of client, managed a 73-acre remediation project in Contra Costa County from 2014 to present. Tasks included coordination with multiple resource agencies (USACE, Regional Water Quality Control Board [Water Board], CDFW, Bay Conservation and Development Commission, and USFWS) to authorize proposed project components. Conducted wetland delineations, rare plant surveys, biological construction monitoring, and ongoing annual monitoring to ensure success of project.

**Calle La Cruz Pipeline Replacement Project, Carmel, California** — Prepared CEQA biological assessment for the installation of wastewater pipelines under the Carmel River Lagoon using horizontal directional drilling. Conducted required natural resource surveys, including a wetland delineation, to identify biological resources present within the project site and conducted required analyses and reporting related to local, state, and federal jurisdiction over the project site and significance of project-related impacts to biological resources. Prepared a project-specific BRA to analyze potential for significant impacts to biological resources that may result from the pipeline replacement project.

**Pleasanton Ridge Regional Park Access Project, Alameda County, California** — On behalf of East Bay Regional Park District, performed wetland delineations. Prepared a biological assessment of impacts to federally listed species for consultation between USACE and USFWS. Developed mitigation strategies and prepared a mitigation and monitoring plan for proposed onsite mitigation. Prepared documents for project entitlement including applications for USACE (nationwide permit), Water Board (clean water certification), and CDFW (streambed alteration agreement and incidental take permit). Worked with project team to revise project plans and impacts to ensure agency approval. Manage permit compliance including biologist construction



monitoring, surveys, and reporting (including the preparation of a special-status species relocation plan and invasive plant management plan).

## **Presentations / Posters**

S. McGarvey, P. Gill, Y. Cashell. 2025. Developing a New Compensatory Mitigation Crediting Process: SB790 and a Wildlife Connectivity Pilot Project. The Western Section of the Wildlife Society Annual Meeting, Visalia, California. February 5, 2025.

S. McGarvey. 2025. Mitigation Development Impacts: Creating Protected Breeding Habitat for California Red-legged Frog and California Tiger Salamander. The Western Section of the Wildlife Society Annual Meeting, Visalia, California. February 6, 2025.

Wollenberg, J., D. Doolittle, E. Saade, and S. McGarvey. 2024. Applications of eDNA monitoring for site assessment, management, and regulatory compliance. International Workshop on Environmental Geonomics, St. John, Newfoundland. June 13–14.





# Naomi A. Schowalter

## Consultant

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Ms. Naomi Schowalter has 11 years of experience in the environmental regulatory field. Prior to entering private consulting in 2021, she served as a natural resource specialist with the Bureau of Land Management, Bakersfield Field Office, and as a regulatory project manager with the U.S. Army Corps of Engineers (USACE), San Francisco District. She specializes in completion of wetland delineation reports and other documentation required to obtain state and federal permits for impacts to aquatic resources and special status species. Ms. Schowalter is a detail-oriented project manager adept at identifying streamlining opportunities for efficient environmental permitting, project planning, preparation of permit applications, and interaction with local, state, and federal agencies.

## Education & Credentials

M.S., Rangeland Management,  
University of California  
Berkeley, Berkeley, California,  
2011

B.S., Conservation and Resource  
Studies, University of California  
Berkeley, Berkeley, California,  
2008

## Continuing Education

USACE, Wetland Delineation,  
Sacramento, California, 2016

USACE, Wetland Ecology,  
Olympia, Washington, 2016

USACE, Introductory Regulatory,  
Sacramento, California, 2017

USACE, Regulatory Scope,  
Cultural Resources, and ESA,  
Sacramento, California, 2018

USACE, Regulatory  
Enforcement, Overland Park,  
Kansas, 2019

USACE, Advance Regulation and  
NEPA, Kansas City, Missouri,  
2020

California Rapid Assessment  
Method Training, Pt. Richmond,  
California, 2016

Aquatic Resources Mitigation,  
Workshop, Camp Pendleton,  
California, 2017

## Relevant Experience

### WETLANDS

**Sonoma 1 Install Centerline Rumble Strip, Sonoma County, California** — For a project involving improvements to almost 59 miles of State Route 1 in Sonoma County, conducted fieldwork to identify wetlands and other aquatic resources in the project area and wrote an aquatic resources delineation report. Used a Juniper Systems Geode global navigation satellite system (GNSS) with sub-meter accuracy to map aquatic resources in the field. Imported GNSS data to ArcGIS Pro software to create figures for the report and analyze and display GIS data.

**18545 Monterey Road, Morgan Hill, California** — For a project involving a 4-acre mixed-use development, independently conducted fieldwork to identify wetlands and other aquatic resources in the project area, wrote an aquatic resources delineation report, and obtained an approved jurisdictional determination from USACE. Used a Juniper Systems Geode GNSS with sub-meter accuracy to map aquatic resources in the field. Used ArcGIS Pro software to create figures for the report and display and analyze GIS data.

**State Route 12 Major Pavement Rehabilitation Project, Solano County, California** — For a project involving repairs and improvements to 6.4 miles of highway, conducted fieldwork to identify wetlands and other aquatic resources in the project area, wrote an aquatic resources delineation report, and created an addendum to the report when the project footprint changed. Used a Juniper Systems Geode GNSS with sub-meter accuracy to map aquatic resources in the field. Used ArcGIS Pro software to create figures for the report and display and analyze GIS data.

**5940 Soquel Avenue, Santa Cruz County, California** — For a project involving a 5-acre residential development, conducted fieldwork to identify wetlands and other aquatic resources in the project area and wrote an aquatic resources delineation report. Used a Juniper Systems Geode GNSS with sub-

## Achievements & Awards

2020 San Francisco USACE,  
Regulatory Division Employee of  
the Year

meter accuracy to map aquatic resources in the field. Used ArcGIS Pro software to create figures for the report and display and analyze GIS data.

**Marin 1 Drainage System Restoration Project, Marin County, California** — For a project involving the rehabilitation of 50 culverts along 32 miles of highway, identified portions of the project footprint missing from the existing aquatic resource delineation report, conducted fieldwork to identify previously unmapped wetlands and other aquatic resources, and wrote an aquatic resources delineation report addendum. Used a Juniper Systems Geode GNSS with sub-meter accuracy to map aquatic resources in the field. Used ArcGIS Pro software to create figures for the report and display and analyze GIS data.

### REGULATORY COMPLIANCE

**Lakeville-Ignacio IG01/004 Emergency Repairs, Sonoma County, California** — For a project involving emergency repairs to an electrical transmission tower in tidal marsh adjacent to the Petaluma River, obtained emergency authorizations from USACE, the Regional Water Quality Control Board (Water Board), and the Bay Conservation and Development Commission (BCDC) and then wrote the required post-activity report documenting compliance with permit requirements.

**Sienna Solar and Storage Project, San Bernadino County, California** — For a project involving an 1,855-acre utility-scale solar generation and energy storage facility, prepared a memorandum identifying regulatory constraints.

**5940 Soquel Avenue, Santa Cruz County, California** — For a project involving a 5-acre residential development, prepared a report identifying biological constraints to development.

**Buttonbush Solar Energy Project, Kern County, California** — For a project involving a 14,386-acre solar development project, prepared a memorandum identifying regulatory constraints.

**Big Rock 2 Cluster Solar and Storage Project, Imperial County, California** — For a project involving a 1,849-acre solar development project, prepared a memorandum identifying regulatory constraints.

### ECOLOGICAL RESTORATION

**State Route 1 and State Route 84 Structures and Scour Mitigation Project, San Mateo County, California** — For a project involving repairs to bridges along two highways, identified an offsite mitigation location on Midpeninsula Regional Open Space District (Midpen) lands, designed a mitigation project, drafted a mitigation and monitoring plan for onsite and offsite riparian restoration and enhancement activities, identified a permitting strategy for the mitigation project, and facilitated the development of a cooperative agreement between the California Department of Transportation and Midpen.

**State Route 84 Storm Damage Rehabilitation Project, San Mateo County, California** — For a project involving the repair of an eroded creek bank along a highway shoulder, drafted a mitigation and monitoring plan for onsite aquatic resource restoration and enhancement activities.

### PLANNING AND PERMITTING

**Boardwalk Access Program, San Francisco Bay Area, California** — For a project involving the replacement of existing electrical tower access boardwalks and installation of new boardwalks in tidal and nontidal aquatic resources across seven San Francisco Bay Area counties, wrote the USACE Clean Water Act (CWA) Section 404 and Rivers and Harbors Act (RHA) Section 10 nationwide permit preconstruction notification, U.S. Fish and Wildlife Service (USFWS) biological assessment, National

Marine Fisheries Service (NMFS) biological assessment, Magnuson-Steven Fishery Conservation and Management Act essential fish habitat assessment, U.S. Coast Guard advance approval concurrence request, Water Board application for CWA Section 401 water quality certification and Porter-Cologne Act waste discharge requirements, BCDC applications for administrative permits and a programmatic permit notification, and California Department of Fish and Wildlife (CDFW) notifications of streambed alterations. Also, supported consultation with the State Historic Preservation Officer. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**Potentia-Viridi Battery Energy Storage System Project, Alameda County, California** — For a project involving the installation of a 400-MW battery energy storage system, drafted an application for a Water Board CWA Section 401 water quality certification and Porter-Cologne Act waste discharge requirements. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**State Route 1 and State Route 84 Structures and Scour Mitigation Project, San Mateo County, California** — For a project involving repairs to bridges along two highways, corrected another consultant's mapping of regulated aquatic features and drafted applications for a USACE Regional General Permit and CDFW Lake or Streambed Alteration Agreements. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**18545 Monterey Road, Morgan Hill, California** — For a project involving a 4-acre mixed-use development, drafted applications for a USACE Regional General Permit, coverage under the Santa Clara Valley Habitat Plan (a habitat conservation plan and natural community conservation plan), credits under the Santa Clara Valley Habitat Plan In-Lieu Fee Program, and a Water Board CWA Section 401 water quality certification and Porter-Cologne Act waste discharge requirements. Prepared an alternatives analysis in accordance with Water Board requirements. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**State Route 84 Storm Damage Rehabilitation Project, San Mateo County, California** — For a project involving the repair of an eroded creek bank along a highway shoulder, corrected another consultant's mapping of regulated aquatic features and drafted applications for a USACE Regional General Permit, CDFW Lake or Streambed Alteration Agreement, and Water Board CWA Section 401 water quality certification and Porter-Cologne Act waste discharge requirements. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**State Route 12 Major Pavement Rehabilitation Project, Solano County, California** — For a project involving repairs and improvements to 6.4 miles of highway, applied for and received coverage under a USACE Regional General Permit. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**Estates at Ross Ranch, Windsor, California** — For a project involving a 31-lot residential development, drafted applications for a CDFW Lake or Streambed Alteration Agreement and Water Board waste discharge requirements, submitted a request for an Approved Jurisdictional Determination from USACE, and wrote an alternatives analysis in accordance with Water Board requirements. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**D-1537 L-137B MP 6.448 ECDA Dig Project, Arcata, California** — For a project involving repairs to a buried gas pipeline, prepared applications and received authorizations under a USACE Nationwide Permit, a Water Board General Certification of the Nationwide Permit, and a California Coastal Commission Coastal Development Permit. Used ArcGIS Pro software to create figures and display and analyze GIS data.



**Dublin Fallon 580 Project, Dublin, California** — For a project involving a 196-acre mixed-use development, wrote a CWA 404(b)(1) alternatives analysis. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**East Harbor Angled Boring Project, San Francisco, California** — For a project involving the installation of nine angled borings adjacent to and under the San Francisco Bay, wrote the USACE nationwide permit pre-construction notification and the Water Board certification of the 2017 nationwide permits notice of intent. Received USACE nationwide permit verification letter and Water Board notice of applicability in less than 2 months.

**Pittsburg-San Mateo Tower Maintenance Project, Alameda and San Mateo Counties, California** — For a project involving the repair of electrical transmission towers in the San Francisco Bay, wrote the biological assessment, CWA Section 404 and RHA Section 10 permit application, and CWA Section 401 and Porter-Cologne Act permit application. Used ArcGIS Pro software to create figures and display and analyze GIS data.

**Digital 299 Broadband Project, Humboldt, Trinity, and Shasta Counties, California** — For a project involving the installation of a new telecommunications cable spanning three counties, updated the delineation report and waters of the U.S./state impact assessment following changes to the project alignment and proposed construction methods. Managed the geospatial data for the project using ArcGIS Pro and developed a riparian data set. Wrote the CWA 404(b)(1) alternatives analysis for the project. Provided the project team with regulatory strategy support.

**Ignacio Mare Island Emergency Tower Replacement, Solano/Napa Counties, California** — As a regulatory project manager for USACE, San Francisco District, coordinated an emergency individual permit for the replacement of three deteriorated electric transmission towers located in protected tidal marshlands west of the lower Napa River. This permitting effort required emergency consultations with USFWS, NMFS, and state historic preservation officer, as well as the completion of an environmental assessment, public interest review, and CWA 404(b)(1) alternatives analysis in less than a month. Coordination with multiple state and federal agencies was required to finalize the permit action and manage compliance.

**Santa Clara Valley Habitat Plan In-Lieu Fee, Santa Clara County, California** — As a regulatory project manager for USACE, San Francisco District, headed the interagency review team tasked with creating an in-lieu fee program that dovetails with the Santa Clara Valley Habitat Plan, a habitat conservation plan and natural community conservation plan. This effort involved coordinating agency review of documents, negotiating document changes acceptable to all agencies and the project sponsor, and working with USACE attorneys to achieve legally defensible outcomes.

**City of Livermore Stream Maintenance Program, Livermore, California** — As a regulatory project manager for USACE, San Francisco District, developed a regional general permit for the City of Livermore's stream maintenance program. This permit was used over multiple years to provide expedited permitting of dozens of maintenance projects involving streams and flood control facilities located throughout the city.

## GIS ANALYSIS

**Sonoma 1 Install Centerline Rumble Strip, Sonoma County, California** — For a project involving improvements to almost 59 miles of State Route 1 in Sonoma County, conducted fieldwork to identify wetlands and other aquatic resources in the project area and wrote an aquatic resources delineation

report. Used a Juniper Systems Geode global navigation satellite system (GNSS) with sub-meter accuracy to map aquatic resources in the field. Imported GNSS data to ArcGIS Pro software to create figures for the report and analyze and display GIS data.

**State Route 84 Storm Damage Rehabilitation Project, San Mateo County, California** — For a project involving the repair of an eroded creek bank along a highway shoulder, imported CAD (.dwg) files to ArcGIS Pro to identify and map project impacts to San Gregorio Creek. Geospatial impact files generated in ArcGIS Pro were shared with other consultants to expedite the preparation of biological assessments.





# Shea Grady

## Assistant Scientist

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Mr. Shea Grady has a research background rooted in assessing anthropogenic impact on coastal and terrestrial habitats. He has extensive fieldwork experience with an emphasis on coastal and estuarine habitats. Mr. Grady has received training on the California Environmental Quality Act (CEQA) and NEPA from the Association of Environmental Professionals and on using the California Natural Diversity Database (CNDDDB) through the California Department of Fish and Wildlife (CDFW). Moreover, he has additional training and work experience in youth education, science communication, and data science.

## Education & Credentials

M.S., Interdisciplinary Marine & Estuarine Science, San Francisco State University, San Francisco, California, 2023

B.S., Biology, University of North Carolina Wilmington, Wilmington, North Carolina, 2020

## Continuing Education

National Estuarine Research Reserve, 40-Hour Wetland Delineation Training (2023)

OSHA 40-hour HAZWOPER Certification (2023)

First Aid/CPR/AED certification through American Red Cross (2023)

## Professional Affiliations

Member of the Association of Environmental Professionals

## Relevant Experience

### PLANNING AND PERMITTING

**Ala Wai Boat Harbor, Oahu, Hawaii** — As part of the permitting process for dock repairs needed to improve the navigational and landing capabilities of the Ala Wai Boat Harbor in Oahu, Hawaii, drafted a biological evaluation to document existing biological resources, potential threats to the surrounding resources, best management practices, and avoidance and minimization measures for project construction. The Ala Wai Harbor is notably an area of cultural and biological significance, and therefore considerable planning is necessary to avoid impact to biological resources.

**Lion's Park Living Shoreline, American Samoa** — As part of the permitting process to construct a living shoreline on the northwest corner of the Pala Lagoon, drafted a biological evaluation to document existing biological resources and potential threats to the surrounding resources of the lagoon. Pala Lagoon has been heavily subjected to sea level rise, and a living shoreline is being reengineered to counter the effects on communities that utilize the lagoon shoreline. The biological evaluation also included best management practices and avoidance and minimization measures needed for construction of the living shoreline to begin. Construction will involve installing dynamic revetments and mangrove islands. After permit acquisition, aided in design planning for proper mangrove planting and drafted a mangrove planting plan for this project.

**Doolan North Riparian Mitigation, Dublin, California** — Performed monthly hydrology and annual plant health monitoring for an active riparian restoration project in Dublin, California. Documented the presence of wildlife and hydrophytic plant establishment throughout the year during site visits. Currently supporting relocation efforts of California tiger salamander and California red-legged frog to this riparian area.

**Croak Road Monitoring, Dublin, California** — Drafts the monthly and annual monitoring reports to USFWS and CDFW for these wildlife monitoring efforts. Moreover, supports and conducts monitoring and relocation efforts of California tiger salamander and California red-legged frog for this project.

**Seely Road Survey, San Jose, California** — Supported an extensive nesting bird survey as due diligence for the anticipated purchase of this property. This property was a poorly maintained, overgrown farm with ample structure and trees for nesting birds.

**Culvert Repair, Hayward, California** — Monitored the emergency repair of a culvert that directs water into the San Lorenzo Creek, near the intersection of A Street and 4th Street. Ensured that contaminants and refuse, such as concrete and litter, were properly handled and disposed of during installation of a new culvert pipe and the laying and grouting of riprap around the pipe. Also, briefed repair teams on the importance of proper concrete handling and the environmental consequences of concrete spill.

**Nesting Bird Protection and Site Demolition, Petaluma, California** — Performed nesting bird surveys prior to the demolition of preexisting infrastructure at the Oyster Cove Mixed-Use Neighborhood project in Petaluma, California. Two nesting bird surveys were conducted, with the second one spotting an active bird nest on a building targeted for demolition. Provided insight on how to proceed with scheduled demolition without adding unnecessary danger to the bird nest. Furthermore, enforced a designated buffer zone for the bird nest until no signs of nest activity were observed and the nest was confirmed to be vacated.

**Eucalyptus Removal and Habitat Restoration Monitoring, Windsor, California** — Monitored the removal of eucalyptus throughout a restoration site within a vineyard in Windsor, California.

**Oyster Cove Mixed-Use Neighborhood, Petaluma, California** — Identified the extent of jurisdictional waters and the project's potential to impact jurisdictional waters by completing a baseline delineation of waters of the United States and state (wetlands and other waters), using the U.S. Army Corps of Engineers (USACE) routine methodology and the Arid West Supplement. The Oyster Cove Mixed-Use Neighborhood project is a development plan aimed towards providing housing to multiple different income groups and public recreation space to the City of Petaluma. For this project, drafted the 401/404 permits, biological assessments, and the 1600 Streambed Alteration Agreement needed to begin this project. Also took on project managerial roles such as devising the scope and schedule of work for the client, along with arranging for preconstruction bat and bird surveying for the client. Performed multiple nesting bird surveys.

**B Street Culvert Repairs, Hayward, California** — Served as a biological monitor for the emergency repairs of a collapsed culvert in Hayward, California. Upon monitoring, identified active presence of salmonids within the adjacent creek and took necessary measures to ensure no negative effects were placed on the fish. Also conducts the annual mitigation monitoring required for this project.

**Miller Creek Annual Monitoring, Marin County, California** — Conducts site visits to measure the presence of invasive species and establishment of hydroseeded native plants. Assesses health of planted native species and hydrology of a mitigation site located adjacent to Miller Creek in Marin County.

**Irwin Creek Annual Monitoring, Marin County, California** — Conducts site visits to measure the presence of invasive species, establishment of hydroseeded native plants, and hydrology of a mitigation site located adjacent to Miller Creek in Marin County.

**Five Canyons Annual Monitoring, Alameda County, California** — Conducts site visits to measure the presence of invasive species and establishment of hydroseeded native plants. Assesses health of planted native species and hydrology of a mitigation site located adjacent to Miller Creek in Marin County.

**Highway 1 Wetland Delineations, Sonoma, California** — Completed a baseline delineation of waters of the United States and waters of the state (wetlands and other waters), using USACE routine methodology and the Arid West Supplement, to identify potential jurisdictional waters along Highway 1 of Sonoma County.

**Tesla Road, Livermore, California** — Completed a baseline delineation of waters of the United States and waters of the state (wetlands and other waters), using USACE routine methodology and the Western Mountains, Valleys, and Coasts Supplement, to identify potential jurisdictional waters along a dried creek bed. Moreover, conducted additional field surveys for nesting birds and to build a general understanding of the area needed to complete a biological resources assessment.

**Meder Street Wetland Delineation, Santa Cruz, California** — Completed a baseline delineation of waters of the United States and waters of the state (wetlands and other waters), using USACE routine methodology and the Western Mountains, Valleys, and Coasts Supplement, to identify potential jurisdictional waters throughout the project site. Moreover, performed nesting bird surveys for this site.

### CLIMATE CHANGE

**Organic and Total Alkalinity, San Francisco Estuary, California** — Collected and titrated water samples from multiple habitats in the north San Francisco Bay estuary for measures of total and organic alkalinity. The organic contributors to total alkalinity are commonly assumed negligible in total alkalinity measures. Recent research reveals organic alkalinity is noticeable in estuaries, and when assumed absent, affects estuarine carbonate chemistry calculations when total alkalinity is used. By titrating for organic alkalinity, this research provided more comprehensive insight on spatial and temporal estuarine alkalinity and carbonate chemistry trends. This insight is needed for more accurate assessments of climate change, such as acidification, in estuaries.

### MARINE SCIENCE

**Water Quality Monitoring, Hudson River, New York** — Worked with small vessel crew to collect water samples upstream and downstream of vessels installing fiber-optic cable from Montreal, Canada, to New York City, New York, in the Hudson River.

**PCB Sampling and Sonde Maintenance, San Lorenzo Bay, California** — Supported the installation and continued maintenance of sondes throughout San Lorenzo Bay to collect data on sediment transport, general water quality parameters, and concentrations of PCBs. These efforts include point sampling of water quality and towing vessels for acoustic Doppler current profiler sampling.

### ECOLOGICAL RESTORATION

**Sediment Investigation, California** — Worked with teams to evaluate and restore *Zostera marina* (eelgrass) sites in various areas throughout the San Francisco Bay estuary. Assessments included sampling for zooplankton and megafauna at restoration sites to determine levels of species diversity and richness before and after site restoration.

**Oakland-Alameda Estuary Bridge Project, California** — This project aims to connect Oakland and Alameda via a pedestrian bridge to promote environmentally conscious and affordable transportation and to connect impacted communities. As Project Manager, facilitates biological resource assessment and to connect impacted communities. As Project Manager, facilitates biological resource assessment for the project. Responsible for assembling inter-agency meetings, performing background research on biological resources in the area, and ensuring concerns from local and state-level governments are

communicated properly to clients. Used tools, including the CNDDDB and California Native Plant Society Rare Plant Inventory, for biological assessment of the project area.

**Pier 39 Remediation Project, California** — The Pier 39 Remediation project aims to remediate contaminated soil around the Pier 39 (San Francisco) area by both capping soil and transporting soil to be decontaminated. Working with a team to determine an ideal and available site to receive contaminated soils. This includes analyzing historical records and biological resource reports for the presence of and work windows for special status species at potential sites and drafting memos for clients to update on project progress and concerns.

**Shell Pond Remediation, California** — The Shell Pond site is currently being remediated for contaminated estuarine soil. The present mode of remediation is through phytoremediation. Worked with teams to perform rare plant surveys at the site for Soft Bird's Beak (*Chloropyron molle*) and drafted memos to update the client on biological resources. Most recently, served as a biological monitor for salt marsh harvest mouse during the installation of pumps for flood control.

## HABITAT ASSESSMENT

**Doolan North Riparian Mitigation, Dublin, California** — Performed monthly hydrology and annual plant health monitoring for an active riparian restoration project in Dublin, California. Documented the presence of wildlife and hydrophytic plant establishment throughout the year during site visits. Currently supporting relocation efforts of California tiger salamander and California red-legged frog to this riparian area.

**Croak Road Monitoring, Dublin, California** — Drafts the monthly and annual monitoring reports to USFWS and CDFW for these wildlife monitoring efforts. Moreover, supports and conducts monitoring and relocation efforts of California tiger salamander and California red-legged frog for this project.

**Seely Road Survey, San Jose, California** — Supported an extensive nesting bird survey as due diligence for the anticipated purchase of this property. This property was a poorly maintained, overgrown farm with ample structure and trees for nesting birds.

**Eucalyptus Removal and Habitat Restoration Monitoring, Windsor, California** — Monitored the removal of eucalyptus throughout a restoration site within a vineyard in Windsor, California.

**Miller Creek Annual Monitoring, Marin County, California** — Conducts site visits to measure the presence of invasive species and establishment of hydroseeded native plants. Assesses health of planted native species and hydrology of a mitigation site located adjacent to Miller Creek in Marin County.

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site.

## **WILDLIFE MONITORING**

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**Seely Road Survey, San Jose, California** — Supported an extensive nesting bird survey as due diligence for the anticipated purchase of this property. This property was a poorly maintained, overgrown farm with ample structure and trees for nesting birds.

**Culvert Repair, Hayward, California** — Monitored the emergency repair of a culvert that directs water into the San Lorenzo Creek, near the intersection of A Street and 4th Street. Ensured that contaminants and refuse, such as concrete and litter, were properly handled and disposed of during installation of a new culvert pipe and the laying and grouting of riprap around the pipe. Also, briefed repair teams on the importance of proper concrete handling and the environmental consequences of concrete spill.

**Nesting Bird Protection and Site Demolition, Petaluma, California** — Performed nesting bird surveys prior to the demolition of preexisting infrastructure at the Oyster Cove Mixed-Use Neighborhood project in Petaluma, California. Two nesting bird surveys were conducted, with the second one spotting an active bird nest on a building targeted for demolition. Provided insight on how to proceed with scheduled demolition without adding unnecessary danger to the bird nest. Furthermore, enforced a designated buffer zone for the bird nest until no signs of nest activity were observed and the nest was confirmed to be vacated.

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## **PUBLIC INFRASTRUCTURE**

**Culvert Repair, Hayward, California** — Monitored the emergency repair of a culvert that directs water into the San Lorenzo Creek, near the intersection of A Street and 4th Street. Ensured that contaminants and refuse, such as concrete and litter, were properly handled and disposed of during installation of a new culvert pipe and the laying and grouting of riprap around the pipe. Also, briefed repair teams on the importance of proper concrete handling and the environmental consequences of concrete spill.

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## **WETLAND DELINEATION**

**Oyster Cove Mixed-Use Neighborhood, Petaluma, California** — Identified the extent of jurisdictional waters and the project's potential to impact jurisdictional waters by completing a baseline delineation of waters of the United States and state (wetlands and other waters), using the U.S. Army Corps of Engineers (USACE) routine methodology and the Arid West Supplement. The Oyster Cove Mixed-Use Neighborhood project is a development plan aimed towards providing housing to multiple different income groups and public recreation space to the City of Petaluma. For this project, drafted the 401/404 permits, biological assessments, and the 1600 Streambed Alteration Agreement needed to begin this project. Also took on project managerial roles such as devising the scope and schedule of work for the client, along with arranging for preconstruction bat and bird surveying for the client. Performed multiple nesting bird surveys.

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## Publications

Grady, S.H. 2023. Organic alkalinity in shallow habitats of San Francisco Estuary. Thesis. San Francisco State University, San Francisco, CA. 31 pp.





# Sarah Beilman

## Assistant Scientist

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Richmond, CA

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Ms. Sarah Beilman has 6 years of experience as an environmental scientist, working in various habitats along the coast of California. She has experience in a range of projects involving field and laboratory work that aimed to address important environmental concepts such as grazing and native biodiversity. Ms. Beilman's professional experience includes site assessments and reporting, due diligence reporting, construction compliance monitoring, vegetation and hydrology monitoring, vegetation mapping, wetland delineations, habitat assessments, and special-status species surveys and research. She assists on projects by contributing to reports required to obtain permits and authorization from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and state and regional Water Quality Control Boards.

## Education & Credentials

M.S., Environmental Science,  
California State University,  
Monterey Bay, California, 2024

B.S., Environmental  
Management and Protection,  
California Polytechnic State  
University, San Luis Obispo,  
California, 2019

## Continuing Education

Wetlands Regulation and  
Mitigation course, University of  
California, Davis (2024)

First Aid and CPR certified  
(2024)

## Professional Affiliations

Member of Women in  
Environment

## Relevant Experience

### PLANNING AND PERMITTING

**Santa Rosa Conservation/Turnkey Banks, Santa Rosa, California** — Prepared a long-term management plan for a 32-acre wetland mitigation site in Sonoma County, including client and subcontractor coordination and GIS analysis. Conducted preserve site visits to survey for rare plant species and assess and map vegetation for adequate management of grazing and invasive plants. Provided wetland delineation support through assessment of aerial imagery and previous jurisdictions.

**Hoey North Riparian Restoration, Gilroy, California** — Provided botanical support by collaborating with the client and subcontractors on the riparian landscape planting plans. Conducted site visits to record and monitor riparian planting success to document ongoing project compliance with regulatory approvals.

**Woolsey Road Riparian Restoration Project, Windsor, California** — Prepared a riparian restoration plan including GIS analysis to restore a disturbed segment of a creek channel. Completed vegetation surveys and biological construction monitoring to provide onsite biological resource training and document project compliance with approved regulations.

**Tri-Valley Residential Development and Mitigation Sites, Livermore, California** — Completed vegetation surveys and mapping to document habitats and assess potential occurrence of rare plant species on mitigation sites. Conducted rare plant surveys in habitats known to support listed species identified within the project vicinity. Prepared reports with GIS analysis to visualize the distribution of habitats and species.

## Publications

Coltharp, E., C. Knowd, E. Abelli-Amen, A. Abounayan, S. Alcaraz, R. Auer, S. Beilman, et al. 2020. Leaf hair tufts function as domatia for mites in *Quercus agrifolia* (Fagaceae). *Madroño* 67(4):165–169.



## Appendix E. Tables

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- Table 1. Plants Observed on the 5940 Soquel Avenue Property
- Table 2. Special-Status Plant Species Known to Occur in the Vicinity of the 5940 Soquel Avenue Property
- Table 3. Special-Status Wildlife Species Known to Occur in the Vicinity of 5940 Soquel Avenue Property

**Table 1. Plants Observed on 5940 Soquel Avenue Property**

Scientific Name	Common Name
<i>Acacia baileyana</i>	bailey acacia
<i>Acer rubrum</i>	red maple
<i>Aira caryophylla</i>	silver hairgrass
<i>Allium triquetrum</i>	three-cornered leek
<i>Arum italicum</i>	Italian arum
<i>Avena barbata</i>	slender oat
<i>Avena fatua</i>	wild oat
<i>Bromus sitchensis</i> var. <i>carinatus</i>	California brome
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	soft brome
<i>Bromus laevipes</i>	chinook brome
<i>Calendula arvensis</i>	field marigold
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Cirsium vulgare</i>	bull thistle
<i>Cortaderia jubata</i>	pampas grass
<i>Crassula ovata</i>	jade
<i>Cyperus eragrostis</i>	tall flatsedge
<i>Echium candicans</i>	pride of madeira
<i>Epilobium ciliatum</i>	slender willow herb
<i>Erharta erecta</i>	panic veldt grass

<i>Eriobotrya japonica</i>	loquat
<i>Eucalyptus globulus</i>	Tasmanian bluegum
<i>Festuca bromoides</i>	brome fescue
<i>Festuca myuros</i>	Rattail sixweeks grass
<i>Foeniculum vulgare</i>	fennel
<i>Fraxinus angustifolia</i>	raywood ash
<i>Fumaria capreolata</i>	white ramping fumitory
<i>Genista monspessulana</i>	French broom
<i>Geranium dissectum</i>	cutleaf geranium
<i>Hedera helix</i>	English ivy
<i>Helminthotheca echioides</i>	bristly ox tongue
<i>Hordeum murinum</i>	foxtail barley
<i>Hypochaeris glabra</i>	smooth cat's ear
<i>Hypochaeris radicata</i>	hairy cat's ear
<i>Juncus bufonius</i>	toad rush
<i>Lonicera japonica</i>	Japan honeysuckle
<i>Lysimachia arvensis</i>	scarlet pimpernel
<i>Lythrum hyssopifolia</i>	hyssop loosestrife
<i>Malva nicaeensis</i>	bull mallow
<i>Medicago polymorpha</i>	burclover
<i>Mentha aquatica</i>	water mint
<i>Verbena bonariensis</i>	purpletop vervain

<i>Opuntia</i> sp.	cactus
<i>Oxalis pes-caprae</i>	bermuda buttercup
<i>Parietaria judaica</i>	spreading pellitory
<i>Plantago coronopus</i>	cutleaf plantain
<i>Plantago lanceolata</i>	narrowleaf plantain
<i>Quercus agrifolia</i>	coast live oak
<i>Raphanus raphanistrum</i>	wild radish
<i>Raphanus sativus</i>	cultivated radish
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rubus ursinus</i>	California blackberry
<i>Rumex crispus</i>	curly dock
<i>Salix lasiolepis</i>	arroyo willow
<i>Sequoia sempervirens</i>	coast redwood
<i>Sonchus oleraceus</i>	common sowthistle
<i>Verbascum thapsus</i>	woolly mullein
<i>Vicia sativa</i>	spring vetch

**Table 2. Special-Status Plant Species Known to Occur in the Vicinity of the 5940 Soquel Avenue Property**

Common Name	Scientific Name	Status	Habitat Type/Components	Occurrence Information	Probability of Occurring on the Property
Anderson's manzanita	<i>Arctostaphylos andersonii</i>	CNPS Rank 1B.2	Broadleafed upland forest, chaparral, North Coast coniferous forest	CNPS 1 Quad Search	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Ben Lomond spineflower	<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Federally Endangered, CNPS Rank 1B.1	Lower montane coniferous forest (maritime ponderosa pine sandhills)	IPaC list	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Ben Lomond wallflower	<i>Erysimum teretifolium</i>	California and Federally Endangered, CNPS Rank 1B.1	Chaparral and lower montane coniferous forest	IPaC list	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
California bottle-brush grass	<i>Elymus californicus</i>	CNPS Rank 4.3	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest, riparian woodland	CNPS 1 Quad Search	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Dudley's lousewort	<i>Pedicularis dudleyi</i>	CNPS Rank 1B.2	Chaparral (maritime), cismontane woodland, North Coast coniferous forest, valley and foothill grassland	CNPS 1 Quad Search	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Large-flowered leptosiphon	<i>Leptosiphon grandiflorus</i>	CNPS Rank 4.2	Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland	CNPS 1 Quad Search	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Maple-leaved checkbloom	<i>Sidalcea malachroides</i>	CNPS Rank 4.2	Broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland	CNPS 1 Quad Search; CNDDDB Occurrence No. 4 (recorded in 1932 somewhere in the City of Santa Cruz; possibly extirpated)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Marsh micoseris	<i>Micoseris paludosa</i>	CNPS Rank 1B.2	Cismontane woodland, closed-cone coniferous forest, coastal scrub, valley and foothill grassland	Recorded in 1957 approximately 3 miles northwest of the Property (CNDDDB Occurrence No. 7)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Marsh sandwort	<i>Arenaria paludicola</i>	California and Federally Endangered, CNPS Rank 1B.1	Marshes and swamps (brackish, freshwater)	IPaC list	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.

Perennial goldfields	<i>Lasthenia californica</i> ssp. <i>Macrantha</i>	CNPS Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub	CNPS 1 Quad Search; CNDDDB Occurrence No. 42 (recorded in 1955 approximately 3 miles east of the Property)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	Federally Endangered, CNPS Rank 1B.1	Maritime chaparral, cismontane woodland (openings), coastal dunes, and coastal scrub	CNPS 1 Quad Search; multiple CNDDDB occurrences (the closest record for this species occurs approximately 1.8 miles northwest of the Property)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
San Francisco popcornflower	<i>Plagiobothrys diffuses</i>	California Endangered, CNPS Rank 1B.1	Coastal prairie, valley and foothill grassland	CNDDDB Occurrence No. 6 (recorded in 1991 and 1993 approximately 2.6 miles northeast of the Property)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Santa Cruz clover	<i>Trifolium buckwestiorum</i>	CNPS Rank 1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie	CNPS 1 Quad Search; CNDDDB Occurrence No. 14 (recorded approximately 1 mile northeast of the Property on an unknown date)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	Federally Threatened, California Endangered, CNPS Rank 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland	CNPS 1 Quad Search; multiple CNDDDB occurrences (the closest record for this species occurs approximately 0.7 mile north of the Property, dating from 1979 to 1998)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Scotts Valley polygonum	<i>Polygonum hickmanii</i>	California and Federally Endangered, CNPS Rank 1B.1	Valley and foothill grassland (mudstone, sandstone)	IPaC list	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Scotts Valley spineflower	<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Federally Endangered, CNPS Rank 1B.1	Meadows and seeps (sandy), valley and foothill grassland (mudstone, Pursima outcrops)	IPaC list	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
White-rayed pentachaeta	<i>Pentachaeta bellidflora</i>	Federally and California Endangered, CNPS Rank 1B.1	Cismontane woodland, valley and foothill grassland (often serpentinite)	CNPS 1 Quad Search; CNDDDB Occurrence No. 11 (recorded in 1933 at undefined location in the vicinity of Santa Cruz; possibly extirpated)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.
Woodland woollythreads	<i>Monolopia gracilens</i>	CNPS Rank 1B.1	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), valley and foothill grassland	CNPS 1 Quad Search; multiple CNDDDB occurrences (the closest record for this species is from somewhere in the City of Santa Cruz, dating from 1935)	<b>None.</b> The developed surfaces and ruderal/planted vegetation communities do not provide suitable habitat for this species.

**Table 3. Special-Status Wildlife Species Known to Occur in the Vicinity of 5940 Soquel Avenue Property**

Common Name	Scientific Name	Status	Habitat Type/Components	Occurrence Information	Probably of Occurring on the Property
Bank swallow	<i>Riparia riparia</i>	California Threatened	Sand banks and vertical embankments at least one meter in height	Species recorded in Santa Cruz area from pre-1890 to 1954 approximately 2 miles west of the Property (CNDDDB Occurrence No. 177)	<b>None.</b> There are no embankments on the Property.
California Black Rail	<i>Laterallus jamaicensis coturniculus</i>	California Threatened, California Fully Protected	Saline, brackish, and fresh emergent wetlands in the San Francisco Bay area and Delta, and coastal southern California	Species recorded in Santa Cruz area from 1903 to 1941 approximately 2 miles west of the Property (CNDDDB Occurrence No. 288)	<b>None.</b> There is no marsh habitat on the Property.
California condor	<i>Gymnogyps californianus</i>	California and Federally Endangered, California Fully Protected	Large trees or snags, rocky outcrops, cliffs, caves, open grasslands, oak savanna foothills, and beaches adjacent to coastal mountains.	IPaC list	<b>None.</b> The Property does not contain any habitat types utilized by this species.
California giant salamander	<i>Dicamptodon ensatus</i>	State Species of Special Concern	Cool, moist, forest habitat and rocky streams and springs	Species recorded along Arana Gulch is 1987, approximately 1.1 mile northwest of the Property (CNDDDB Occurrence No. 165)	<b>None.</b> There is no forest habitat, streams, or springs on the Property.
California least tern	<i>Sternula antillarum browni</i>	California and Federally Endangered, California Fully Protected	Beaches close to river mouths, estuaries, and costal embayments.	IPaC list	<b>None.</b> The Property does not contain any habitat types utilized by this species.
California red-legged frog	<i>Rana draytonii</i>	Federally threatened, State Species of Special Concern	Streams, ponds, and nearby upland areas with refugia, such as rocks, leaf litter, and animal burrows.	IPaC list	<b>None.</b> There are no CNDDDB occurrences within three miles of the Property, and the highly developed landscape provides little potential habitat for this species. No small mammal burrows are present on the Property.

California tiger salamander	<i>Ambystoma californiense</i>	California and Federally Threatened	Standing bodies of fresh water and nearby upland areas with small mammal burrows or underground hideaways.	IPaC list	<b>None.</b> There are no CNDDDB occurrences within three miles of the Property, and the highly developed landscape provides little potential habitat for this species. No small mammal burrows are present on the Property.
Coho salmon – central California coast ESU	<i>Oncorhynchus kisutch</i>	California and Federally Endangered	Relatively permanent coastal streams and associated waterbodies below natural and manmade barriers from Punta Gorda in northern California south to the San Lorenzo River in central California, as well as tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system	Species occurs in the San Lorenzo River, located approximately 2.5 miles west of the Property (CNDDDB Occurrence No. 4)	<b>None.</b> There are no streams or other waterbodies on the Property.
Eulachon – southern DPS	<i>Thaleichthys pacificus</i>	Federally Threatened	Rivers ranging from the Mad River in northern California to the Skeena River in northern British Columbia, Canada	Recorded around 1911 at the mouth of Soquel Creek, approximately 1.5 miles southeast of the Property (CNDDDB Occurrence No. 10)	<b>None.</b> There are no streams or other waterbodies on the Property.
Foothill yellow-legged frog, central coast DPS	<i>Rana boylei</i>	Federally Threatened, California Endangered	Foothill and mountain streams and a wide variety of vegetation types occurring near streams	Recorded from 1992 to 2021 along Soquel Creek, approximately 1.1 mile east of the Property (CNDDDB Occurrence No. 102)	<b>None.</b> There are no streams on the Property, and the area between the nearest stream and the Property lacks habitat for this species.
Least bell's vireo	<i>Vireo bellii pusillus</i>	California and Federally Endangered	Primarily willow-dominated riparian woodlands; may also use neighboring mulefat scrub, oak woodlands, and chaparral.	IPaC list	<b>None.</b> There are no plant communities on the Property that would support this species.

Marbled murrelet	<i>Brachyramphus marmoratus</i>	Federally Threatened, California Endangered	Near-shore marine waters and old-growth forests.	IPaC list	<b>None.</b> The Property is not forested.
Mount Hermon June beetle	<i>Polyphylla barbata</i>	Federally Endangered	Only found within the Zayante Sandhills of Santa Cruz County.	IPaC list	<b>None.</b> Sandhills do not occur on the Property.
Ohlone tiger beetle	<i>Cicindela Ohlone</i>	Federally Endangered	Grassland habitats on coastal terrace prairies	Record from 1990 to 2004, approximately 0.7 mile north of the Property (Occurrence No. 4)	<b>None.</b> The Property and surrounding lands are developed, lacking suitable grassland habitat for this species.
Pallid bat	<i>Antrozous pallidus</i>	State Species of Special Concern	Occurs in a wide variety of habitats, including grassland, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Day roosts are in caves, crevices, mines, and occasionally hollow trees and buildings; night roosts may be in more open areas, such as porches and open buildings.	Record from 1928 within proximity to the Property (CNDDDB Occurrence No. 258)	<b>Low.</b> The Property is unlikely to support this species given its lack of buildings or natural habitats. However, there are some trees within and adjacent to the site that may providing roosting habitat.
San Francisco garter snake	<i>Thamnophis sirtalis tetrataenia</i>	California and Federally Endangered, California Fully Protected	Aquatic and upland habitat (ponds, creeks, marshes, canals, and other water sources; grasslands with rodent burrows or rocks for shelter)	IPaC list	<b>None.</b> There are no CNDDDB occurrences within three miles of the Property, and the highly developed landscape provides little potential habitat for this species.

Santa Cruz black salamander	<i>Aneides niger</i>	State Species of Special Concern	Prefers cool, moist and shaded conditions along ravines and water courses. Uses rock slides, rotten logs, and surface debris for cover.	The closest record for this species occurs approximately 2 miles west of the Property (CNDDDB Occurrence No. 17) and dates to the 1970s	<b>None.</b> There are no water courses or appropriate cover for this species on or adjacent to the Property.
Steelhead - central California coast DPS	<i>Oncorhynchus mykiss</i>	Federally Threatened	Relatively permanent coastal streams and associated waterbodies below natural and manmade barriers from the Russian River (Sonoma Co.) south to Aptos Creek (Santa Cruz Co.), and the drainages of San Francisco Bay eastward to the Napa River (inclusive), excluding the Sacramento-San Joaquin River Basin	The closest record for this species occurs approximately 0.7 mile west of the Property (CNDDDB Occurrence No. 15) in Arana Gulch.	<b>None.</b> There are no streams or other waterbodies on the Property.
Tidewater goby	<i>Eucyclogobius newberryi</i>	Federally Endangered	Brackish water lagoons, estuaries, and marshes along the California coast.	The closest record occurs approximately 0.9 mile east of the Property (CNDDDB Occurrence No. 94) in Soquel Creek.	<b>None.</b> There are no aquatic habitats on the Property.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	State Species of Special Concern	Found in many habitat types. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	Record from 1934 and 1945 within close proximity to the Property (CNDDDB Occurrence No. 361)	<b>Low.</b> Roosting is unlikely to occur on the human-made structures at the Property since this species is extremely sensitive to disturbance of roosting sites and there is ongoing activity on the Property.
Western Pond Turtle	<i>Emys marmorata</i>	Proposed Federally Threatened, State Species of Special Concern	A variety of habitats adjacent to permanent or nearly permanent water	The closest record for this species occurs approximately 1.1 mile east of the Property along Soquel Creek (CNDDDB Occurrence No. 1079)	<b>None.</b> The Property is entirely developed and does not provide burrows or aquatic features necessary to support this species.

Western snowy plover	<i>Charadrius nivosus nivosus</i>	Federally Threatened, State Species of Special Concern	Coastal beaches, sand spits, dune- and bluff-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, salt pans at lagoons and estuaries, salt ponds levees, dry salt ponds, and estuarine sand and mud flats.	IPaC list	<b>None.</b> No habitat types utilized by this species occur on the Property.
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Federally Threatened, California Endangered	Extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, abutting slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation.	IPaC list	<b>None.</b> There are no extensive riparian thickets on the Property.
Yellow rail	<i>Coturnicops noveboracensis</i>	State Species of Special Concern	Occurs in densely vegetated marshes.	Record from 1903 and 1905 at an undefined location in the vicinity of Santa Cruz (CNDDDB Occurrence No. 42)	<b>None.</b> There are no marshes on the Property.
Zayante band-winged grasshopper	<i>Trimerotropis infantilis</i>	Federally Endangered	Restricted to sand parkland habitat found on ridges and hills within the Zayante sandhills ecosystem in Santa Cruz County.	Record in 1941 at an undefined location in the vicinity of Santa Cruz (CNDDDB Occurrence No. 6)	<b>None.</b> Sandhills are not present on the Property.



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

046-08

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

### NEGATIVE DECLARATION AND NOTICE OF DETERMINATION

**1. - Application Number: 07-0414**

County of Santa Cruz, Planning Department, for PAZ LLC

The project proposes a General Plan amendment, zone change, Riparian Exception, and Planned Unit Development (PUD) allowing a maximum development density of 20 dwelling units per usable acre on the project site. The PUD would also require any development proposal on the parcel to provide a minimum of forty (40) percent of the total number of units as affordable. Following project approval, future development of the project site would be by-right in that the use and density for the site are not discretionary. The site contains a maximum of 4.99 usable (developable) acres equating to a maximum of 99 dwelling units. The project would amend the General Plan from "Service Commercial/Light Industry (C-S)" to "Urban High Residential (R-UH)" with a PUD. The Urban High Residential would be amended to allow 20 units per net developable acre with a 2,000 square foot lot size requirement. In addition, the parcel would be rezoned from "Light Industrial (M-1)" to Multi-Family Residential - (RM-2)." The proposed project is located on the south side of Soquel Avenue at 5940 Soquel Avenue, between Chanticleer Avenue and Mattison Lane within the Live Oak planning area of unincorporated Santa Cruz County, California.

APN: 029-021-47

Todd Sexauer, Staff Planner

Zone District: Light Industrial (M-1)

ACTION: Negative Declaration with Mitigations

REVIEW PERIOD ENDS: October 29, 2008

This project will be considered at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

Findings:

This project, if conditioned to comply with required mitigation measures or conditions shown below, will not have significant effect on the environment. The expected environmental impacts of the project are documented in the Initial Study on this project attached to the original of this notice on file with the Planning Department, County of Santa Cruz, 701 Ocean Street, Santa Cruz, California.

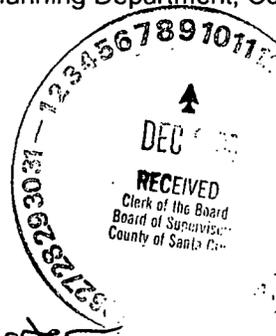
Required Mitigation Measures or Conditions:

None  
 Are Attached

Review Period Ends October 29, 2008

Date Approved By Environmental Coordinator October 31, 2008

*Claudia Slater*  
CLAUDIA SLATER  
Environmental Coordinator  
(831) 454-5175



THIS NOTICE HAS BEEN POSTED AT THE CLERK OF THE BOARD OF SUPERVISORS OFFICE FOR A PERIOD COMMENCING Dec. 15 20 08 AND ENDING Jan 14 20 09

If this project is approved, complete and file this notice with the Clerk of the Board:

### NOTICE OF DETERMINATION

The Final Approval of This Project was Granted by the Board of Supervisors on December 9, 2009. No EIR was prepared under CEQA.

THE PROJECT WAS DETERMINED TO NOT HAVE SIGNIFICANT EFFECT ON THE ENVIRONMENT

Date completed notice filed with Clerk of the Board: 12/9/08

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**Exhibit E**

(IX) Mitigation Measures

Environmental Impacts		Mitigation Measures		Responsibility for Compliance	Method of Compliance	Timing of Compliance
<b>Geology/Soils</b>						
GEO-1	Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving seismic ground shaking.	Residential structures shall be supported on post-tensioned slabs that are designed for expansive soils unless the geotechnical engineer specifies alternative designs. The slab foundations shall bear entirely on the properly prepared compacted structural fill or native soils. In no case shall a slab foundation bear upon more than one of these materials. A soils report shall be required to confirm the design criteria for the project site. The recommendations of the soils report shall be implemented to adequately mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design	
GEO-2	Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, subsidence, liquefaction, or structural collapse.	Constructing with post-tensioned slab foundations and following the recommendations of the geotechnical engineer will be required to mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design	
GEO-3	Result in soil erosion or the substantial loss of topsoil.	Prior to approval of a grading or building permit, the project must have an approved Erosion Control Plan, which will specify detailed erosion and sedimentation control measures (County Code Chapter 16.22.060). The plan will include provisions for disturbed areas to be planted with groundcover and to be maintained to minimize surface erosion.	County Planning Department	Building/Grading Permit	Prior to issuance of Building Permit	
GEO-4	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to property.	A geotechnical investigation and soils report shall be required to determine appropriate design criteria for the project site. The recommendations of the geotechnical investigation and soils report shall be implemented to adequately mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design	
<b>Hydrology/Water Supply/Water Quality</b>						
HYD-1	Deplete groundwater supplies or interfere substantially with groundwater recharge	A water main extension will be required for the City of Santa Cruz Water Department, along with fire, domestic, irrigation meters and fire hydrants. Connection fees will be required per number and type of residential unit. Connection fees for irrigation will be calculated based on fixture points and/or	City of Santa Cruz Water Department	Water Service	Prior to Construction	

Exhibit F

ATTACHMENT 3

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
<p>such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table.</p>	<p>gallon per minute demand. All public water facilities shall be installed within a designated utility easement per Santa Cruz Water Department Standard Specifications and Details.</p>			
<p><b>HYD-2</b> Degrade a public or private water supply. (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).</p>	<p>Potential siltation from the proposed project will be mitigated through implementation of an Erosion Control Plan (see Geology and Soils). A silt and grease trap, and a plan for maintenance, will be required to reduce this impact to a less than significant level.</p>	<p>County Planning Department</p>	<p>Building/Grading Permit</p>	<p>Ongoing</p>
<p><b>HYD-3</b> Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that could result in flooding, erosion, or siltation on or off-site.</p>	<p>The proposed project would comply with Chapter 16.22.070 (Runoff Control) of the County Code. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm:</p> <p>(a) To the extent that that onsite percolation is not sufficient, all runoff shall be detained or dispersed over non-erodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. (Any policies and regulations for any drainage zones where the project is located will also apply.) Detention facilities included in future development shall be designed not to exceed predevelopment flows in order to avoid downstream effects.</p> <p>(b) Any concentrated runoff that cannot be effectively dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge.</p> <p>(c) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary, to prevent the escape of sediment from the disturbed area.</p> <p>(d) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.</p>	<p>County Planning Department</p>	<p>Building/Grading Permit</p>	<p>During Construction and Ongoing</p>

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Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	In an effort to reduce runoff, implement techniques where feasible such as minimizing site disturbance, minimizing proposed impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc.			
HYD-4 Create or contribute runoff that would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) of polluted runoff.	All project runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site. All runoff from parking and driveway areas shall go through water quality treatment prior to discharge from the site (e.g., outslipping driveways to drain to landscaped areas for filtering prior to discharge from the site). If structural treatment is proposed, a recorded maintenance agreement will be required. This agreement shall be signed, notarized, and recorded, and a copy of the recorded agreement shall be submitted to the County DPW. The Developer shall provide permanent markings at each drainage inlet that reads "NO DUMPING-DRAINS TO BAY," or equivalent. The property owner will be responsible for maintaining these markings.	County Planning Department and Department of Public Works	Building/Grading Permit	Design and Construction
HYD-5 Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff.	All runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site.	County Planning Department	Building/Grading Permit	Design and Construction
HYD-6 Otherwise substantially degrade water supply or quality.	Silt and grease traps, and a plan for maintenance will be required to minimize the effects of urban pollutants. In addition, an Erosion Control Plan as specified in Section 16.22.060 of the County Code, and a Storm Water Pollution Prevention Plan will be required during construction. Because the proposed project would result in a land disturbance of one acre or more, a Construction Activities Storm Water General NPDES Permit shall be obtained from the State Water Resources Control Board. Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.	County Planning Department	Building/Grading Permit	Design and Construction, and ongoing
<b>Biological Resources</b>				
BIO-1 Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.	All work during installation of the drainage outfall shall occur from Soquel Avenue. Construction equipment is not allowed to enter Rodeo Creek Gulch during project construction. All drainage work adjacent to Rodeo Creek Gulch shall be completed outside of the breeding season for migratory birds (February 15 through August 15).	County Planning Department; California Department of Fish and Game	Building/Grading Permit	Design and Construction

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ATTACHMENT 3 1

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Visual Resources and Aesthetics				
<p>VIS-1</p> <p>Create a new source of light or glare that would adversely affect day or nighttime views in the area.</p>	<p>The following project conditions to reduce night lighting impacts shall be implemented:</p> <p>(a) It shall be an objective of lighting design to relate to the site and building design and reduce off-site impacts.</p> <p>(b) All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Light sources can be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into the building design.</p> <p>(c) All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light standards to a maximum height of 15 feet are allowed.</p> <p>Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.</p>	County Planning Department	Building/Grading Permit	Design and Construction
Cultural & Archeological Resources				
<p>CUL-1</p> <p>Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5.</p>	<p>No archaeological resources are known to occur or expected within the project area. However, the potential for archaeological resources exists within and adjacent to Rodeo Gulch. Therefore, construction of the drainage outfall proposed immediately south of Soquel Avenue shall occur entirely within the elevated roadway prism composed entirely of fill material.</p>	County Planning Department	Building/Grading Permit	Project Construction
<p>CUL-2</p> <p>Disturb any human remains, including those interred outside of formal cemeteries.</p>	<p>Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archaeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archaeological resource is determined and appropriate mitigations to preserve the resource on the site are established.</p>	County Planning Department	Building/Grading Permit	During Construction
Hazards and Hazardous Materials				
<p>HAZ-1</p> <p>Be located on a site</p>	<p>Based on the findings of the 2007 Phase I ESA, the following mitigation</p>			<p>County Planning</p> <p>Building/Grading</p> <p>During Construction</p>

Exhibit F

ATTACHMENT

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
<p>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.</p>	<p>measures shall be implemented:</p> <ul style="list-style-type: none"> <li>• Prior to renovation or demolition, sampling shall be conducted to assess if asbestos is contained in the construction materials of the building. The California Health and Safety Code requires owners of structures with asbestos containing material (ACM) to notify tenants and employees that the building has ACM.</li> <li>• All hazardous materials on the project site shall be stored in appropriate secondary containment to prevent spills or leaks.</li> <li>• Based on the surface staining near hazardous materials, the improper storage noted in the 1999 Phase I ESA, and the potential collection and drainage of motor fuel and oil by the sump formerly located on the project site, several soil borings and soil samples shall be taken to assess potential subsurface impacts.</li> <li>• All fluids shall be drained and batteries removed from non-functioning vehicles on the project site and disposed of properly to prevent leaking and spilling.</li> <li>• The waste oil tank shall be removed from the project site, if no longer in use, or, if the tank is not removed from the project site, it shall be stored in appropriate secondary containment to prevent further leaking and spilling.</li> <li>• The automobile parts cleaner shall be removed from the project site, if no longer in use, and the remaining solvent shall be disposed of properly.</li> </ul>	Department	Permit	
<b>Transportation/Traffic</b>				
<p>TRA-1 Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways.</p>	<p>The following mitigation shall be implemented:</p> <ol style="list-style-type: none"> <li>1. <i>Soquel Avenue/SR1 Southbound Ramps:</i> Intersection operations can be improved by modifying the eastbound lane configuration and signal timings. The eastbound approach would be re-striped to provide a dedicated left-turn lane and one through lane (from a shared left-turn/through lane and one through lane). The signal timings will be modified to provide protected phasing for the eastbound left-turn movement. No changes are proposed for other approaches. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection improvements.</li> <li>2. <i>Soquel Avenue/Chanticleer Avenue:</i> Peak-hour signal warrants are met at the Soquel Avenue/Chanticleer Avenue intersection during both peak hours. This intersection improvement is currently in the County's plan for improvements along Soquel Avenue. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection</li> </ol>	County Planning Department	Building/Grading Permit	Prior to Construction

Exhibit F

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Air Quality	<p>Violate any air quality standard or contribute substantially to an existing or projected air quality violation.</p> <p>Construction activities (e.g., excavation, grading, on-site vehicles) that directly generate 82 pounds per day or more of PM10 would result in a significant impact on local air quality if located nearby and upwind of sensitive receptors. Although project construction may result in a short-term, localized decrease in air quality due to generation of dust, the implementation of standard best management practices would reduce PM10 levels well below 82 pounds per day. The following mitigation measures will reduce construction-related emissions to a less than significant level.</p> <ul style="list-style-type: none"> <li>• All active construction areas shall be watered at least twice daily. Frequency will be based on the type of operation, soil, and wind exposure.</li> <li>• All grading activities will be prohibited during periods of high wind (over 15 mph).</li> <li>• Chemical soil stabilizers shall be applied to inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).</li> <li>• Non-toxic binders (e.g., latex acrylic copolymer) shall be applied to exposed areas after cut and fill operations and to hydroseed areas.</li> <li>• Haul trucks shall maintain at least 2'0" of freeboard.</li> <li>• All trucks hauling dirt, sand, or loose materials shall be covered.</li> <li>• Vegetative ground cover shall be installed in disturbed areas as soon as possible.</li> <li>• Inactive storage piles shall be covered.</li> <li>• Wheel washers shall be installed at the entrance to construction-sites for all exiting trucks.</li> <li>• Streets shall be swept if visible soil material is carried out from the construction site.</li> <li>• A publicly visible sign shall be posted that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance).</li> <li>• Limit the area under construction at any one time (MBUAPCD 2008).</li> </ul>	County Planning Department and Monterey Bay Unified Air Pollution Control District	Building/Grading Permit	During Construction
AQ-2	Expose sensitive receptors to substantial	County Planning Department and	Building/Grading Permit	During Construction

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Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
<p>pollutant concentrations.</p>	<p>construction. Dust from grading and emissions from heavy equipment would incrementally increase emissions over the short-term. There would be a long-term incremental decrease in air quality resulting from vehicle emissions generated by the proposed project. However, this impact is not considered to be significant with implementation of the above mitigation.</p>	<p>Monterey Bay Unified Air Pollution Control District</p>	<p>Permit</p>	
<p>Public Services and Utilities</p>				
<p>PSU-1 Result in the need for construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>The proposed project would comply with Chapter 16.22.070 (Runoff Control) of the County Code. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm:</p> <p>(a) To the extent that onsite percolation is not sufficient, all runoff shall be detained or dispersed over non-erodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. (Any policies and regulations for any drainage zones where the project is located will also apply.) Detention facilities included in future development shall be designed not to exceed predevelopment flows in order to avoid downstream effects.</p> <p>(b) Any concentrated runoff that cannot be effectively dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge.</p> <p>(c) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area.</p> <p>(d) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.</p> <p>(e) In an effort to reduce runoff, techniques such as minimizing site disturbance, minimizing proposed impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc., shall be implemented to the extent feasible.</p>	<p>County Planning Department and County Department of Public Works</p>	<p>Building/Grading Permit</p>	<p>During Construction 0676</p>
<p>PSU-2 Result in the need for construction of new water or wastewater treatment facilities or</p>	<p>The proposed project is located within the Rodeo Gulch impacted sewer basin in which the Santa Cruz County Sanitation District Board of Directors (Board) has placed development restrictions. No development shall occur until the development restriction is lifted or the following mitigation measures</p>	<p>County Department of Public Works</p>	<p>Building/Grading Permit</p>	<p>During Construction</p>

Exhibit F

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
<p>expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>are implemented.</p> <ul style="list-style-type: none"> <li>A sewer extension, pump station and area-wide study of the properties in the area that currently do not have sewer service. If the project engineer determines that the project parcel is the only parcel to be connected to a pump station, the pump station will be privately maintained and located on private property. Housing for any required on-site generator and controls shall match the architecture of the subdivision or complex. A response and maintenance manual shall be prepared by the developer, submitted to the Santa Cruz County Sanitation District for review and approval at the building permit phase.</li> <li>If it is necessary for the project to sewer via Mattison Lane, three segments of public sewer main downstream of the project site would experience capacity problems, and 816 linear feet of sewer shall be upgraded.</li> <li>If it is necessary for the project to sewer via Chanticleer Avenue, sewer capacity will become available following the planned upgrades for the 2009 construction season. Sewer connection via Chanticleer Avenue will not be available prior to completion of the upgrades.</li> <li>A sewer connection of \$3,000 per individual dwelling unit will be required unless any of the units qualify by the Board as a) low income senior rental units, or b) below average-income ownership units.</li> </ul>			

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