Clean Water • Healthy Environment • Flood Protection

Saratoga Creek Hazard Tree Removal and Restoration Project

Draft Initial Study and Mitigated Negative Declaration

Project Number 00762011

August 2019

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3614

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Senior Environmental Planner

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List of Acronyms

BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2E	carbon dioxide equivalents
CWA	Federal Clean Water Act
dBA	Decibels on the A-weighted scale
EIR	Environmental Impact Report
Leq	equivalent continuous sound level
LOS	level of service
MND	Mitigated Negative Declaration
N_2O	nitrous oxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OHWM	Ordinary High Water Mark
PG&E	Pacific Gas and Electric
Project	Saratoga Creek Hazard Tree Removal and Revegetation
PM	particulate matter
PPV	peak particle velocity
ROG	reactive organic gases
RWQCB	San Francisco Bay Regional Water Quality Control Board
SCP	Stevens Creek Pipeline
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District (or Valley Water)
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TPZ	Tree Protection Zone
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
Valley Water	Santa Clara Valley Water District
Vdb	Vibration decibels

Key Terminology

Beneficial Impact:
A project impact is considered beneficial if it would result in the enhancement or improvement of an existing physical condition in the environment – no mitigation is required when an impact is determined to be beneficial.

Best Management Practices:
Measures typically derived from standardized Valley Water operating procedures. These practices have been identified as methods, activities, procedures, or other management practices for the avoidance or minimization of potential adverse environmental effects. They have been designed for routine incorporation into project designs and represent the "state of the art" impact prevention practices.

Less-than-significant Impact:
This is indicated in the Initial Study checklist where the impact does not reach the standard of significance set for that factor and the project would therefore cause no substantial change in the environment (no mitigation needed).

Less-than-significant Impact with Mitigation*:*
This is indicated in the Initial Study checklist where the impact is determined to exceed the applicable significance criteria, but for which feasible mitigation measure(s) are available to reduce the impact to a level of less-than-significant.

Mitigation Measures:
Mitigation includes: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.[1]

No Impact:
This is indicated in the Initial Study where, based on the environmental setting, the stated environmental factor does not apply to the proposed project.

Potentially Significant Impact:
This is indicated in the Initial Study where the project impact may cause a substantial adverse change in the environment, but for which (1) no feasible mitigation is available to reduce the impact to a less-than-significant level, or (2) feasible mitigation has been identified but the residual impact remains significant after mitigation is applied.

Significance Criteria:
A set of criteria used by the lead agency to determine whether an impact would be considered significant. Valley Water relied upon the significance criteria set forth in the CEQA Guidelines and criteria based on the regulatory standards of local, state and federal agencies.

[1] Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Sections 21002, 21002.1, 21081, and 21100(c), Public Resources Code.

Section 1: Introduction

Organization of this Document

This document is organized to assist the reader in understanding the potential impacts that the Project may have on the environment and to fulfill the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*). Section 1 indicates the purpose under CEQA, sets forth the public participation process, and summarizes applicable state and federal regulatory requirements. Section 2 describes the location and features of the Project and Section 3 describes the environmental setting. Section 4 evaluates the potential impacts through the application of the CEQA Initial Study Checklist questions to Project implementation. Section 5 lists the contributors, and Section 6 supplies the references used in its preparation.

Purpose of the Mitigated Negative Declaration

The Santa Clara Valley Water District (Valley Water), acting as the Lead Agency, prepared a draft Mitigated Negative Declaration (MND) to provide the public, responsible agencies and trustee agencies with information about the potential environmental effects of the proposed Saratoga Creek Hazard Tree Removal and Restoration Project (proposed Project).

This MND was prepared consistent with CEQA, the CEQA Guidelines (Title 14, California Code of Regulations 15000 *et seq.*), and Valley Water procedures for implementation of CEQA (Environmental Management System - Environmental Planning Q520D01). CEQA requires that public agencies such as Valley Water identify the significant adverse impacts and beneficial environmental effects of their actions. Beneficial impacts should be encouraged and expanded where possible and adverse impacts should be avoided or minimized, or mitigated in cases where avoidance and minimization are not possible.

In addition to acting as the CEQA Lead Agency for its projects; Valley Water's mission includes objectives to conduct its activities in an environmentally sensitive manner as a steward of Santa Clara Valley watersheds. Valley Water strives to preserve the natural qualities, scenic beauty and recreational uses of Santa Clara Valley's waterways by using methods that reflect an ongoing commitment to conserving the environment.

Decision to Prepare a Mitigated Negative Declaration for this Project

The Initial Study (Section 4) for the Project identifies potentially significant effects on biological resources and hydrology and water quality. Mitigation measures have been proposed for the Project to reduce such effects to less-than-significant levels; and therefore, the proposed MND is consistent with CEQA Guidelines §15070 which indicates that an MND is appropriate when:

The Project Initial Study identifies potentially significant effects, but:

a. Revisions to the Project plan were made that would avoid, or reduce the effects to a point where clearly no significant effects would occur, and

b. There is no substantial evidence that the Project, as revised, may have a significant effect on the environment.

Public Review Process

This draft MND will be circulated to local and state agencies, interested organizations, and individuals who may wish to review and provide comments on the project description, the proposed mitigation measures or other aspects of the report. The publication will commence the 30-day public review period per CEQA Guidelines §15105(b) beginning on **August 16, 2019** and ending on **September 16, 2019**.

The draft MND and supporting documents are available for review at:

- Santa Clara Valley Water District
  Headquarters Building
  5700 Almaden Expressway
  San Jose, CA 95118

Copies of the report are available for review at:

- Saratoga Public Library
  13650 Saratoga Ave,
  Saratoga, CA 95070
- Posted on the Valley Water website:
  http://www.valleywater.org/PublicReviewDocuments.aspx, or
- Via written request for a copy from Valley Water.

Written comments or questions regarding the draft MND should be submitted to the name and address indicated below.

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San Jose, CA 95118-3614
Phone: (408) 630-3149
e-mail: tsexauer@valleywater.org

The proposed MND along with any comments will be considered by Valley Water prior to a decision on the Project.

Interagency Collaboration and Regulatory Review

The CEQA review process is intended to provide both trustee and responsible agencies with an opportunity to provide input into the Project. Trustee agencies are state agencies that have authority by law for the protection of natural resources held in trust for the public. Responsible agencies are those that have some responsibility or authority for carrying out or approving a project; in many instances these public agencies must make a discretionary decision to issue a local permit; provide right-of-way, funding or resources that are critical to the Project's proceeding. In this instance the California Department of Fish and Wildlife (CDFW), San Francisco Bay Regional Water Quality Control Board (RWQCB), U.S. Army Corps of Engineers (USACE), and the City of Saratoga are considered responsible agencies. Valley Water will work with the CDFW, RWQCB, USACE, and City of Saratoga to ensure that the proposed Project meets applicable policies and requirements.

This MND is intended to assist state and local agencies to carry out their responsibilities for permit review or approval authority over various aspects of the Project. The proposed Project would likely require Project-specific permitting and/or review as summarized in Table 1-1 below.

Table 1-1: Summary of Applicable Regulatory Requirements

Agency	Permit/Review Required
City of Saratoga	Tree Removal Permit Section 15-50.070 of the City of Saratoga Municipal Code
California Department of Fish and Wildlife	Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement (LSAA)
San Francisco Bay Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification
U.S. Army Corps of Engineers	Clean Water Act Section 404 Nationwide Permit 33 (Non-reporting)

Source: Valley Water, 2019.

Section 2: Project Description

Project Background

Valley Water owns several parcels that encompass much of Saratoga Creek between Cox Avenue and Prospect Road within the City of Saratoga, which is managed by Valley Water for both groundwater recharge and flood protection. The regional location is shown on Figure 2-1. Figure 2-2 shows the Project area and existing site access.

The portion of Saratoga Creek located within the Project area has vegetation characteristics similar to other riparian corridors in California as a whole, where native trees and shrubs are paired with introduced ornamental and invasive vegetation. Within blue gum eucalyptus (*Eucalyptus globulus*) groves, biological diversity is lost due to displacement of native plant communities and corresponding wildlife habitat. Abundance and diversity of understory vegetation is dependent on stand density. Understory establishment is inhibited by the production of allelopathic chemicals and by the physical barrier formed by high volumes of forest debris consisting of bark strips, limbs, and branches (Cal IPC, 2019).

The eastern creek bank is characterized by several blue gum eucalyptus groves, likely remnants of a wind break, or shelterbelt, planted to protect the stone fruit and walnut orchards that once thrived there. Eucalyptus trees in the groves are located along the top of the creek bank on a relatively steep slope above Saratoga Creek channel. Many of the oldest trees are estimated to be at least 90 years of age and stand over 100 feet in height. Figures 2-3a and 3b provide a map of the existing vegetation occurring within the Project area. Approximately 1.8 acres of blue gum eucalyptus grove is located within the Project area with 2.55 acres of native coast live oak woodland.

Valley Water has been releasing water from the Stevens Creek Pipeline (SCP) into Saratoga Creek as part of Valley Water's groundwater recharge program for approximately 40 years. The Stevens Creek Pipeline Saratoga Creek turnout is just upstream of State Highway 85, approximately 2,200 feet upstream of the Project area. Normal releases from the pipeline occur in the summer and are typically 8-10 cubic feet per second. Valley Water has the ability to shut off or modify releases depending on available water, groundwater levels, and percolation rates. When imported water is not being released, this reach of Saratoga Creek is naturally episodic, with flow timing and magnitude in direct response to rainfall runoff patterns. Surface water in the vicinity of the project area originates from drainages along the eastern slope of the Santa Cruz Mountains and runoff from adjacent urban/suburban developments. No other major tributaries join Saratoga Creek upstream of the project area; and historically, the creek was likely intermittent in years of normal or below normal rainfall. The eucalyptus trees, known for their high transpiration rates and rapid growth where sufficient water is available, have thrived for decades with the augmented water supply in Saratoga Creek

In 2014, drought stress in the eucalyptus stands became evident and trees that were previously healthy quickly succumbed to outbreaks of eucalyptus long-horned beetle (*Phoracantha* sp.) and wood decay fungi as their resilience to such pests was impacted by drought. In 2015, an investigation by West Coast Arborists highlighted the need for corrective action on many of the eucalyptus in the Project area (WCA 2015) and several dead trees were removed in the interest of public safety. Incidence of eucalyptus canopy die-back, branch failure, root failure, and tree mortality increased in the Project area during this time. Above average precipitation during 2017 and 2019 also contributed to increased bank erosion near those eucalyptus trees rooted on the lower banks in the Project area. Bank erosion in the root zone was cited in the West Coast Arborist report as a major consideration for risks associated with the eucalyptus (WCA 2015).

Between 2016 and 2018, wood decaying fungi were observed in eucalyptus throughout the Project area. In January 2018, nine dead eucalyptus were removed from the upstream portion of the Project area. In February 2018, the Forest Pathology and Mycology Lab at UC Berkeley

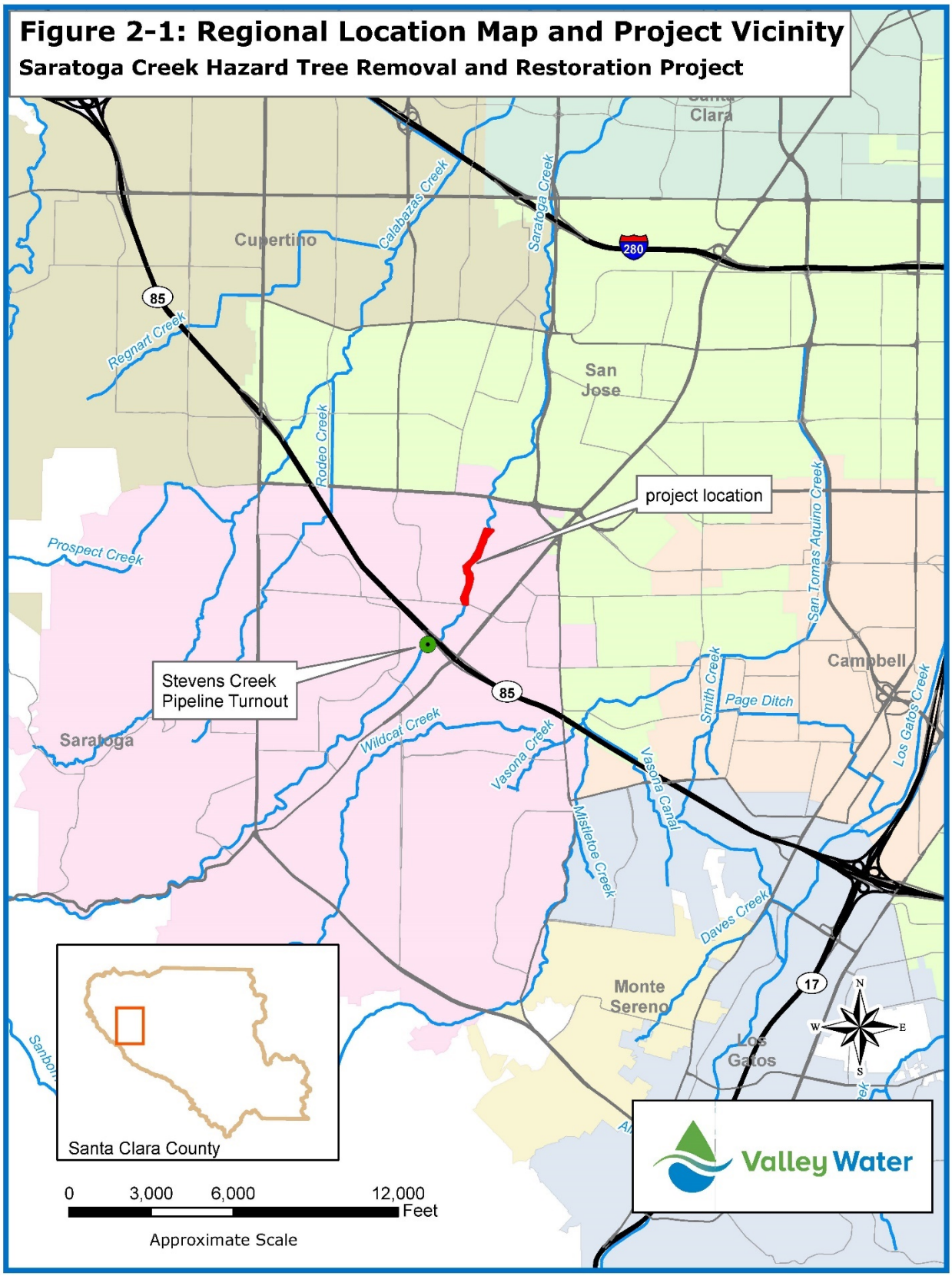
Figure 2-1: Regional Location Map and Project Vicinity
Saratoga Creek Hazard Tree Removal and Restoration Project
Clara
Cupertino
Calabazas Creek
Saratoga Creek
280
85
Regnart Creek
San Jose
Rodeo Creek
project location
Prospect Creek
San Tomas Aquino Creek
Stevens Creek Pipeline Turnout
Campbell
Smith Creek
Page Ditch
Los Gatos Creek
Saratoga
Wildcat Creek
Vasona Creek
Vasona Canal
Mistletoe Creek
Daves Creek
Monte Sereno
17
Los Gatos
N
W
E
S
Santa Clara County
0 3,000 6,000 12,000
Feet
Approximate Scale
Valley Water


Figure 2-2:
Project Area and Existing Access
Prospect High School
existing gated staff access
Brookview Dr
Westview Dr
Brookglen Dr
Saratoga Creek Dr
Cyril Pl
Raleigh Pl
Bellwood Dr
existing gated staff access
Hargrave Way
Brookside Club
Scott Property
Saratoga Glen Pl
existing gated staff access
Cox Ave
N
W
E
S
Legend
ProjectArea
Eucalyptus
SCVWD Owned
SCVWD Easement
Valley Water
0 150 300 600
Feet
Approximate Scale
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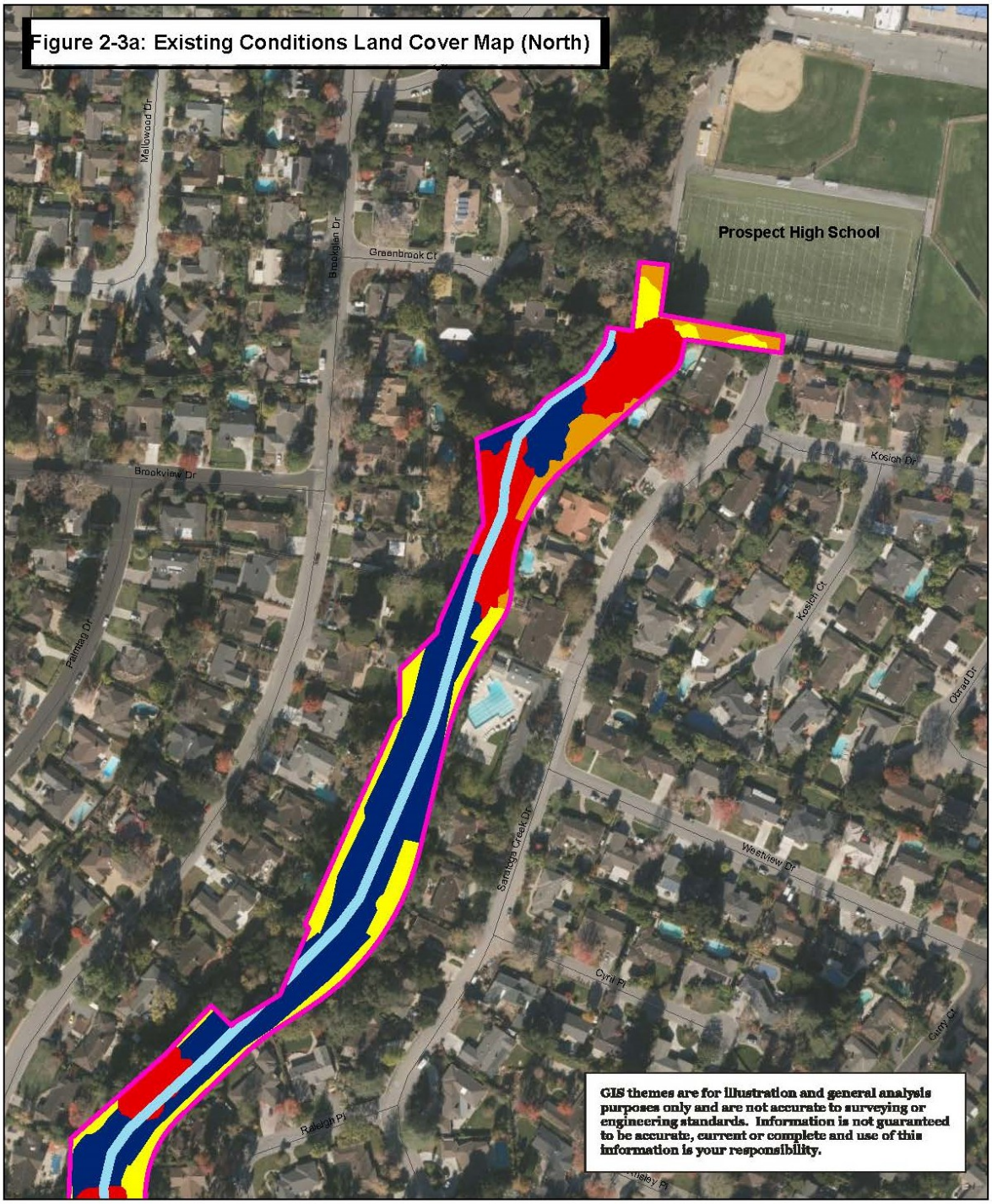
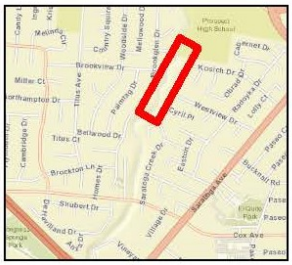
County of Santa Clara, The Sanborn Map Company



Saratoga Creek Hazard Tree Removal and Restoration Project
Existing Conditions Land Cover Map



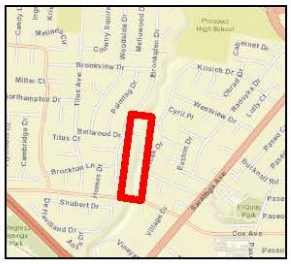
- Project Area (7.87 acres)
- Landscaped-Developed (1.50 acres)
- Intermittent Streambed (0.94 acres)
- Eucalyptus Grove (1.81 acres)
- Coast Live Oak Woodland (2.55 acres)
- Landscaped-Developed with Oak Canopy (0.90 acres)
- Removed Eucalyptus Grove (0.17 acres)

N
W E
S

0 75 150 300 Feet

1 inch = ~ 150 feet

Saratoga Creek Hazard Tree Removal and Restoration Project
Existing Conditions Land Cover Map



- Project Area (7.87 acres)
- Landscaped-Developed (1.50 acres)
- Intermittent Streambed (0.94 acres)
- Eucalyptus Grove (1.81 acres)
- Coast Live Oak Woodland (2.55 acres)
- Landscaped-Developed with Oak Canopy (0.90 acres)
- Removed Eucalyptus Grove (0.17 acres)

N
W E
S

0 75 150 300 Feet

1 inch = ~ 150 feet

detected wood decay fungi in all 10 random core samples submitted from the Project area and gave a tree risk rating of "High" to "Very High" for all 10 trees sampled given their proximity to targets in the fall line (UCB 2018). In April 2018, 26 hazardous eucalyptus were removed from one of the areas with obvious wood decay fungi. During a Level 1 tree risk assessment conducted in July 2018, several other eucalyptus trees in the Project area were found to be in "poor" condition, and several were given a "moderate to high" risk rating (HortScience/Bartlett Tree 2018).

Many of the eucalyptus trees in the project area are either dying, diseased, poorly structured, and/or leaning toward existing residential homes and Pacific Gas and Electric (PG&E) powerlines to the east. As further described below, the proposed project would involve removal of 104 eucalyptus trees and subsequent restoration of the Project area.

Project Goals

The goals of the Project, which would remove 104 hazard eucalyptus trees and two non-native invasive ash trees, and subsequently restore the entire Project reach, are:

- Ensure public safety from eucalyptus tree failures;
- Expand and enhance native mixed riparian habitat
- Reduce water consumption by the existing eucalyptus trees along Saratoga Creek;
- Reduce the risk of bank erosion or destabilization and associated potential for streambank hardening;
- Reduce fire risk in the area by reducing volume of ladder fuels on the ground and combustible material in the canopy adjacent to utility lines;
- Reduce the future need to repeatedly access Saratoga Creek and remove hazardous eucalyptus trees;
- Contribute to regional understanding of post-eucalyptus restoration science.

Project Objectives

To achieve these goals, the Project's more specific objectives are to:

- Remove 104 hazard eucalyptus trees from the Project area, over a three to four-year period
- Control eucalyptus stump re-sprouting and colonization by secondary invasive plant species
- Re-establish native, mixed riparian under- and overstory cover throughout the Project Area using a combination of active revegetation, passive revegetation, seeding, and weed control
- Maintain the native planting and natural recruits until they have established and do not require further supplemental irrigation
- Monitor the Project area for vegetation changes and creek bank stability issues

Project Scope of Work

Project Methods

Valley Water is proposing a phased removal of the 104 eucalyptus within the Project area over three to four-years (2019-2022) in a series of work areas as provided in Table 2-1. Nearly half of the eucalyptus may be accessible by mobile crane staged on the top of bank opposite the

eucalyptus groves. The remaining eucalyptus and two non-native invasive ash trees would be removed using traditional climbing techniques coupled with hand-based or equipment-based transport of debris out of the creek area. No more than 50 eucalyptus trees would be removed in any year.

Work Areas

The Project area is divided into three work areas based on the location of eucalyptus stands, the techniques that would be used to remove the eucalyptus, and site access. Work areas are summarized in Table 2-1 and mapped in Figures 2-4a–c.

Table 2-1: Work Areas within the Project Footprint

Work Area	Creek Station To/From	Location within Project Alignment	No. of Eucalyptus Trees in Work Area[1]	Tree Removal Method	Access[1]
A	346+60 to 352+30	Upstream stand closest to Cox Avenue	49	Crane, Hand, Equipment in channel	Ramp 1; AS1, AS4, and AS5
B	337+00 to 345+30	Mid-reach area adjacent to Brookside Club	32	Crane, Hand, Equipment in channel	Ramp 1; AS1 and AS2
C	322+90 to 327+70	Downstream stands near Prospect High School	23	Crane, Hand, Equipment in channel	Ramp 2; AS3

Notes:
1. Access routes and staging areas are described in more details in the following sections.
Source: Valley Water, 2019.

Dewatering

Although unlikely, creek dewatering may be necessary prior to equipment entering the creek for each phase of work. In-channel work would occur when the creek is naturally dry, and the only source of water in the channel would be from upstream managed releases. Releases from SCP would be shut off by Valley Water a few days prior to equipment entering the channel to allow time for residual water to percolate and drain from the Project area.

Valley Water would coordinate with the San Jose Water Company to preclude maintenance-related releases into Saratoga Creek from their facility 3.5 miles upstream of the Project area during the eucalyptus removal work periods. Maintenance-related releases may result in water reaching the Project site during tree removal efforts. However, if such releases must occur, they are typically small and are not expected to reach the Project area.

A small temporary cofferdam would be installed beneath the bridge at Cox Avenue to ensure that any San Jose Water Company maintenance releases do not reach the Project area during in-channel work. The total dry-back time for Saratoga Creek during the Project is anticipated to range from 60-90 calendar days per working season. The method for dewatering, should water be present, would be as follows:

1. Valley Water would use a simple bypass pumping operation to intercept surface flows in the existing waterway impounded at the cofferdam and pump the water around the work area in order for work to be conducted in a dry environment. Valley Water would procure a pump and discharge hose of a suitable size to ensure adequate capacity is available. The primary pump system would be an electric submersible pump powered by a generator. If this pump unexpectedly fails, a backup diesel or gasoline powered trash pump system would be utilized. Both systems would be tested prior to the start of in-channel work.

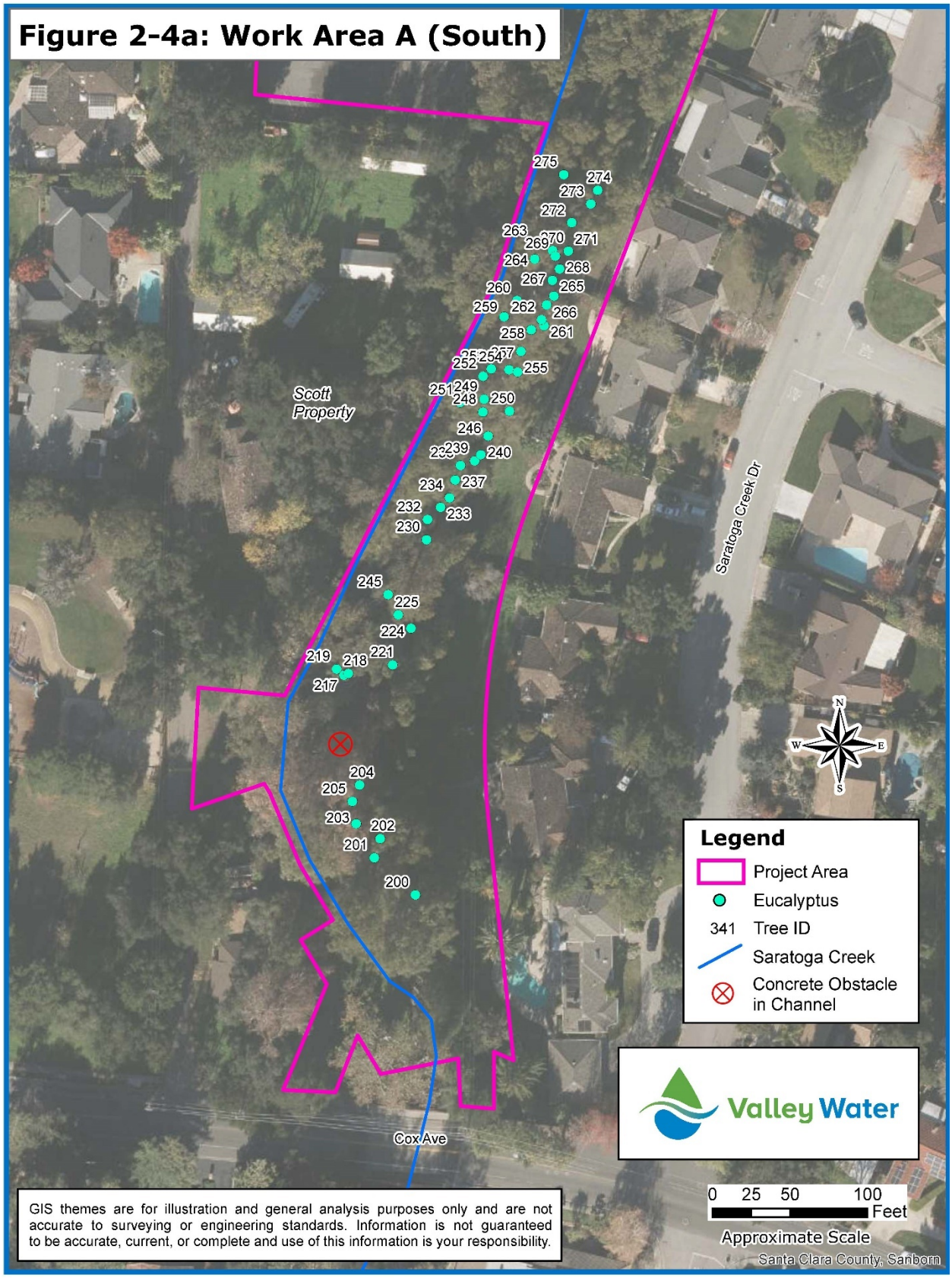


Figure 2-4a: Work Area A (South)
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225
224
221
219
218
217
204
205
203
202
201
200
Scott Property
Saratoga Creek Dr
Cox Ave
N
W
E
S
Legend
Project Area
Eucalyptus
341 Tree ID
Saratoga Creek
Concrete Obstacle in Channel
Valley Water
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.
0 25 50 100
Feet
Approximate Scale
Santa Clara County, Sanborn

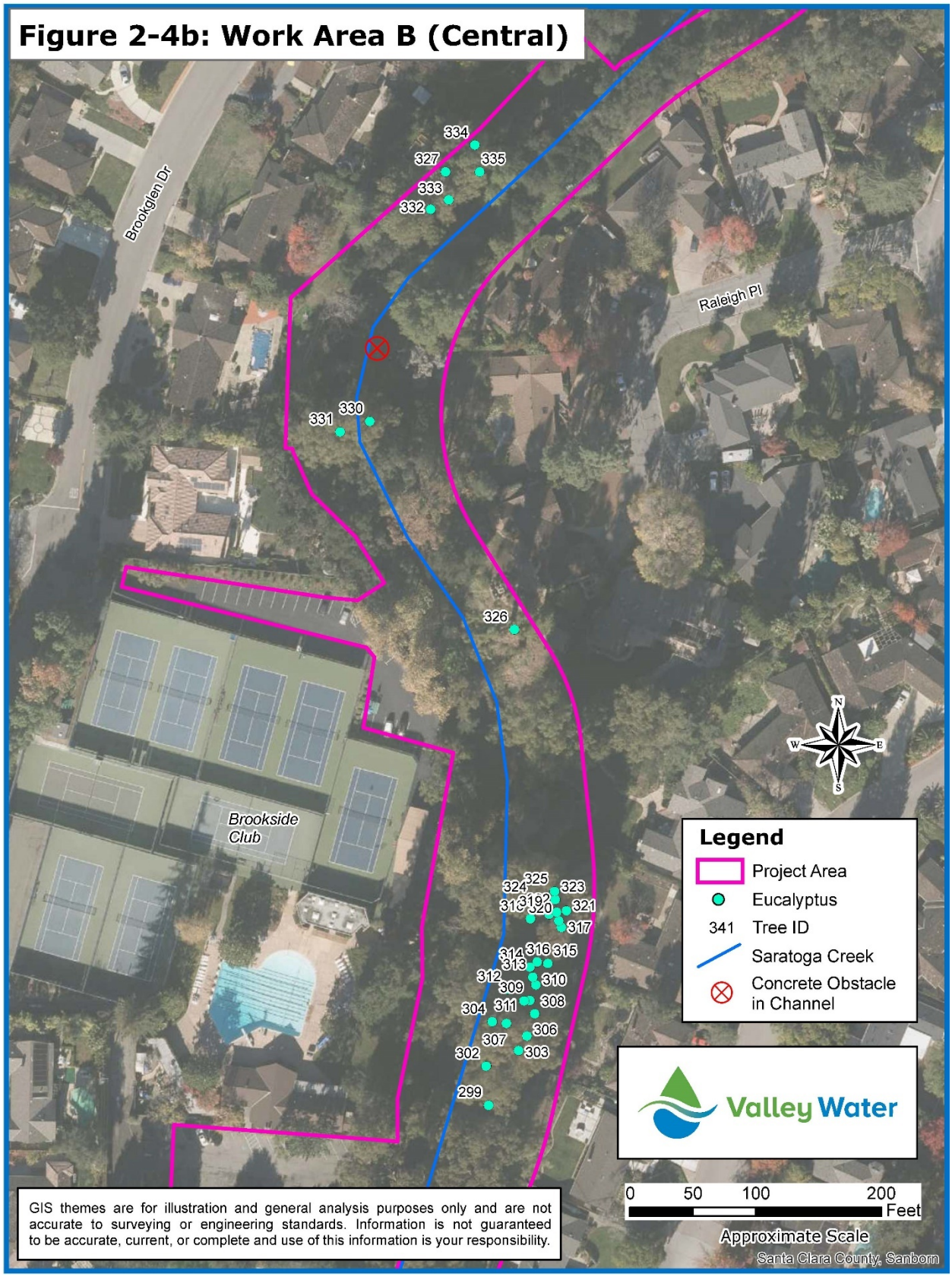
Figure 2-4b: Work Area B (Central)
Brookglen Dr
Raleigh Pl
Brookside Club
334
327
335
333
332
331
330
326
325
324
323
321
317
316
315
314
313
312
310
309
308
311
304
306
307
303
302
299
N
W
E
S
Legend
Project Area
Eucalyptus
341 Tree ID
Saratoga Creek
Concrete Obstacle in Channel
Valley Water
0 50 100 200
Feet
Approximate Scale
Santa Clara County, Sanborn
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.

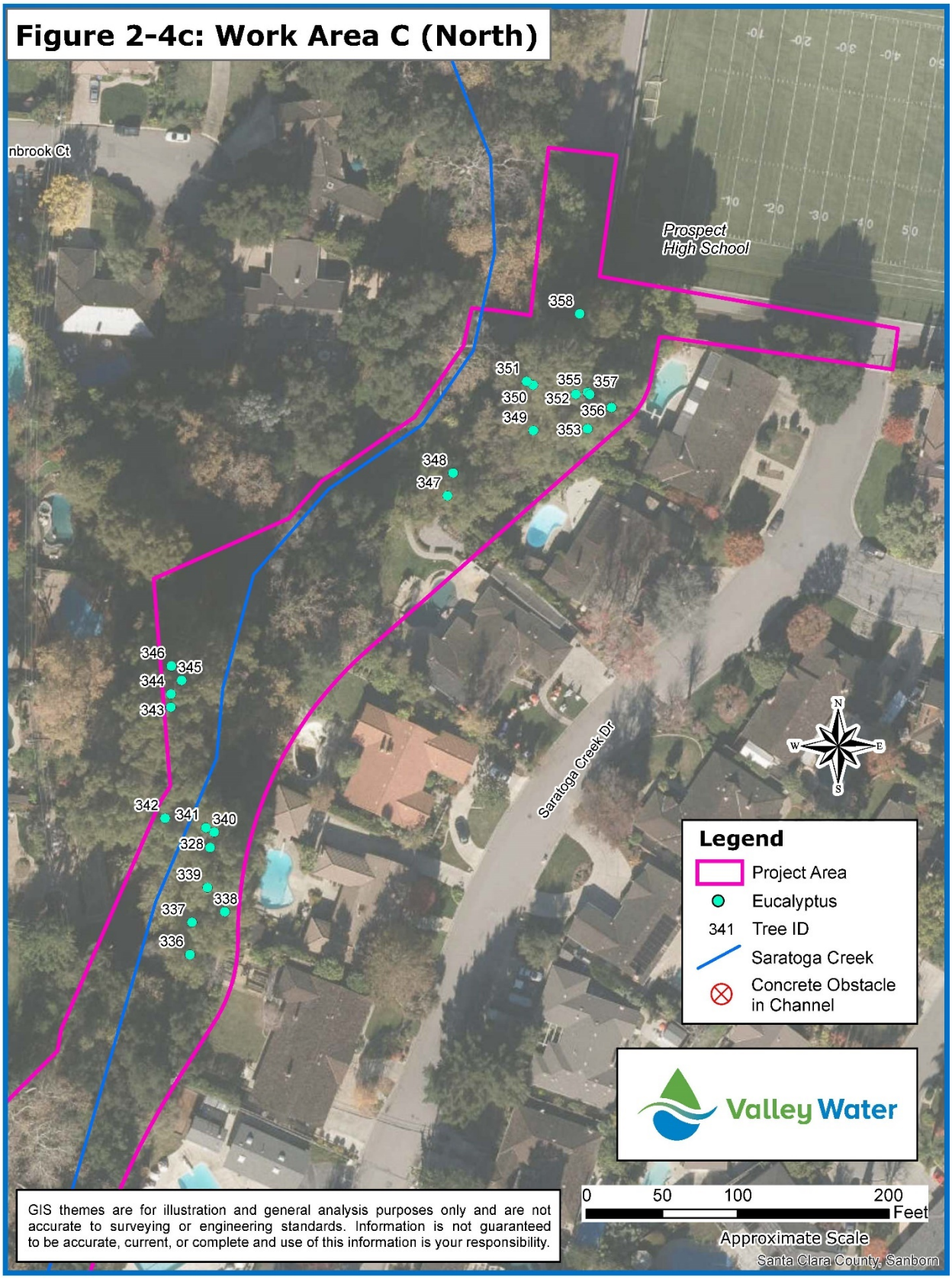
Figure 2-4c: Work Area C (North)
nbrook Ct
Prospect High School
Saratoga Creek Dr
358
351
355
357
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346
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344
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341
340
328
339
338
337
336
N
W
E
S
Legend
Project Area
Eucalyptus
341 Tree ID
Saratoga Creek
Concrete Obstacle in Channel
Valley Water
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.
0 50 100 200
Feet
Approximate Scale
Santa Clara County, Sanborn

2. In order to minimize the time dewatering is required, additional preparatory work prior to initiating the bypass procedure would include having all materials, equipment, and personnel on site.
3. Once pump bypass materials are on site, the contractor would construct a temporary cofferdam lined with visqueen at the upstream edge of the work site to prevent water from entering the work area. The District will then install the pump immediately upstream of the cofferdam and begin pumping. The discharge hose will extend around the work site to the downstream end of the work area.
4. The pump intake would be screened to prevent harm to any aquatic life present. Water diversion pipe flow velocity dissipaters would be installed downstream of the cofferdam to prevent scour of the creek bed.

Temporary Access Ramps and Staging Areas

Access to the Saratoga Creek channel for light equipment (i.e., rubber tracked excavators and loaders) would be required to remove cut logs and limbs from the creek bed for trees that cannot be reached by crane. Access ramps constructed of engineered fill would be required at two locations to provide this access. Ramp 1 would be constructed from the Brookside Club tennis parking lot and down the west creek bank (Figure 2-5a) to allow access to Work Area A in year 1. Additional access points (AS1, AS4 and AS5) would provide additional access for workers without the placement of fill; however, they would not provide for equipment access. A total of three coast live oak trees would be removed and one pruned within Work Areas A and B (Table 2-2). At access point AS2, engineered fill would be placed along the creek channel and banks to construct the ramp. One native oak tree is anticipated to be removed to create the temporary access ramp. Ramp 1 would be partially decommissioned at the end of the year 1 work season by removing all temporary fill material from the channel to allow fall and winter surface flows to flow unimpeded. The decommissioned access ramp area would be winterized to avoid erosion following removal of the temporary fill from the channel (i.e., the placement of fabric, straw, native understory seed mix to prevent erosion). Ramp 1 would be reconstructed to allow access to Work Area B in year 2, and fully decommissioned at the end of the year 2 work season and restored to preconstruction conditions.

Table 2-2: Project Area Access and Staging Areas

Access/ Staging Area[1]	Description	Approx. Size (ft^2)	Work Areas	Potential Vegetation Removal
AS1	Brookside Club main parking lot	10,000	A, B	No vegetation removal
AS2	Brookside Club tennis parking lot	8,500	A, B	Remove 1 coast live oak (10.5” dbh)
AS3	Prospect High School	5,000	C	Remove 2 nonnative ash (14” and 130” dbh) Prune 2 elderberry (6” and 8” dbh) Remove 4 coast live oak (3.5” 6.5”, 6.5”, and 11.5” dbh) Prune 1 coast live oak (8” limb)
AS4	Scott Property	3,000	A	Prune 1 coast live oak (two 12” limbs, < 25% canopy)
AS5	East Bank Cox Avenue	10,000	A	Remove 2 coast live oak (10” and 12” dbh)

Notes:
1. See Figures 2-5a and 5b for locations.
Source: Valley Water, 2019.

For AS3, Ramp 2 would be similarly constructed from the southwest corner of Prospect High School down the east bank of Saratoga Creek to allow access to Work Area C in year 3 (Figure 2- 5b). The ramp would also be constructed from engineered fill and run along the creek bank upstream as it descends to the creek channel. Aside from the eucalyptus trees, two non-

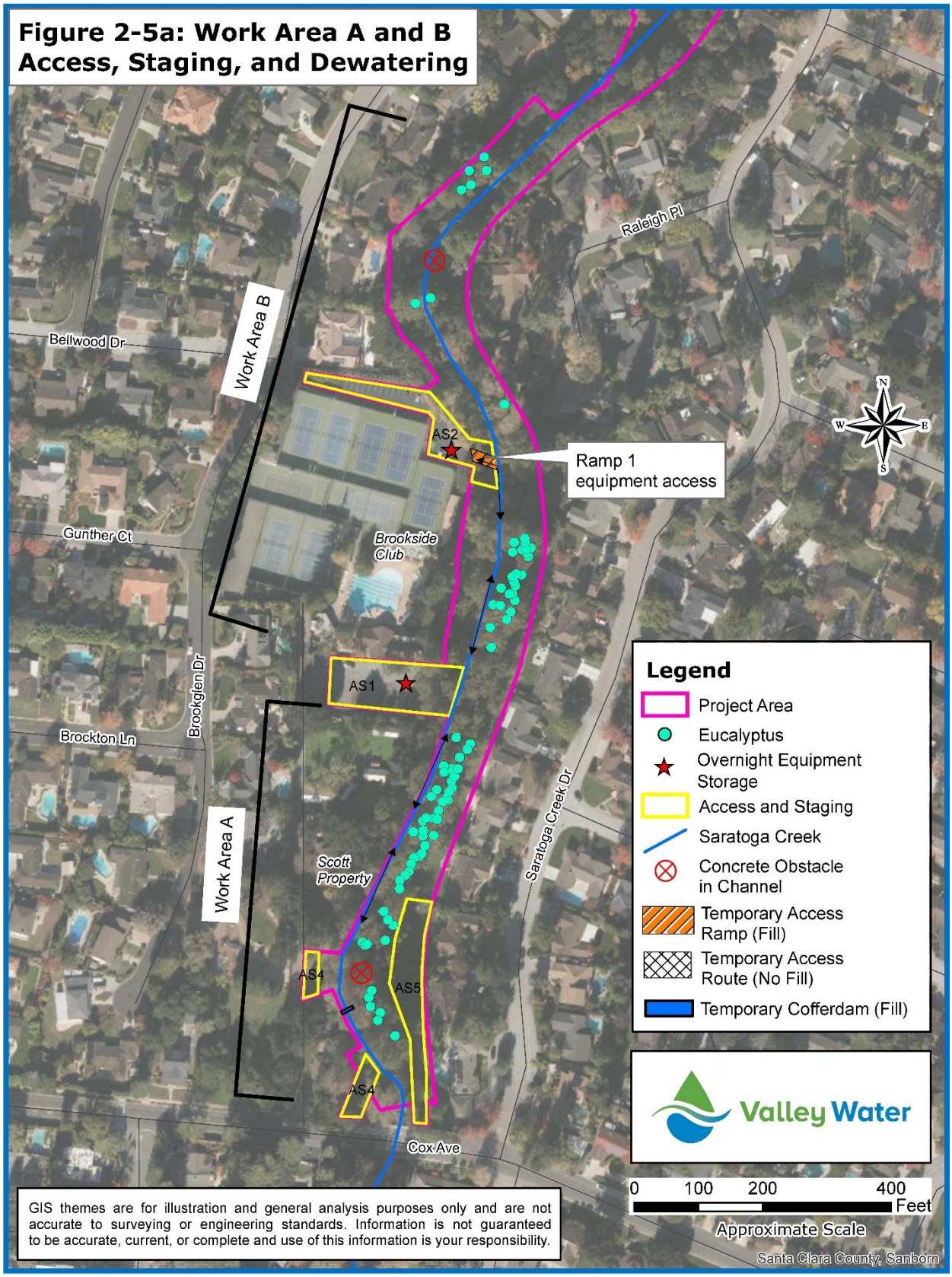
Figure 2-5a: Work Area A and B
Access, Staging, and Dewatering
Work Area B
Work Area A
Bellwood Dr
Gunther Ct
Brockton Ln
Brookglen Dr
Raleigh Pl
Saratoga Creek Dr
Cox Ave
Brookside Club
Scott Property
AS1
AS2
AS4
AS5
AS4
Ramp 1
equipment access
N
W
E
S
Legend
Project Area
Eucalyptus
Overnight Equipment Storage
Access and Staging
Saratoga Creek
Concrete Obstacle in Channel
Temporary Access Ramp (Fill)
Temporary Access Route (No Fill)
Temporary Cofferdam (Fill)
Valley Water
0 100 200 400
Feet
Approximate Scale
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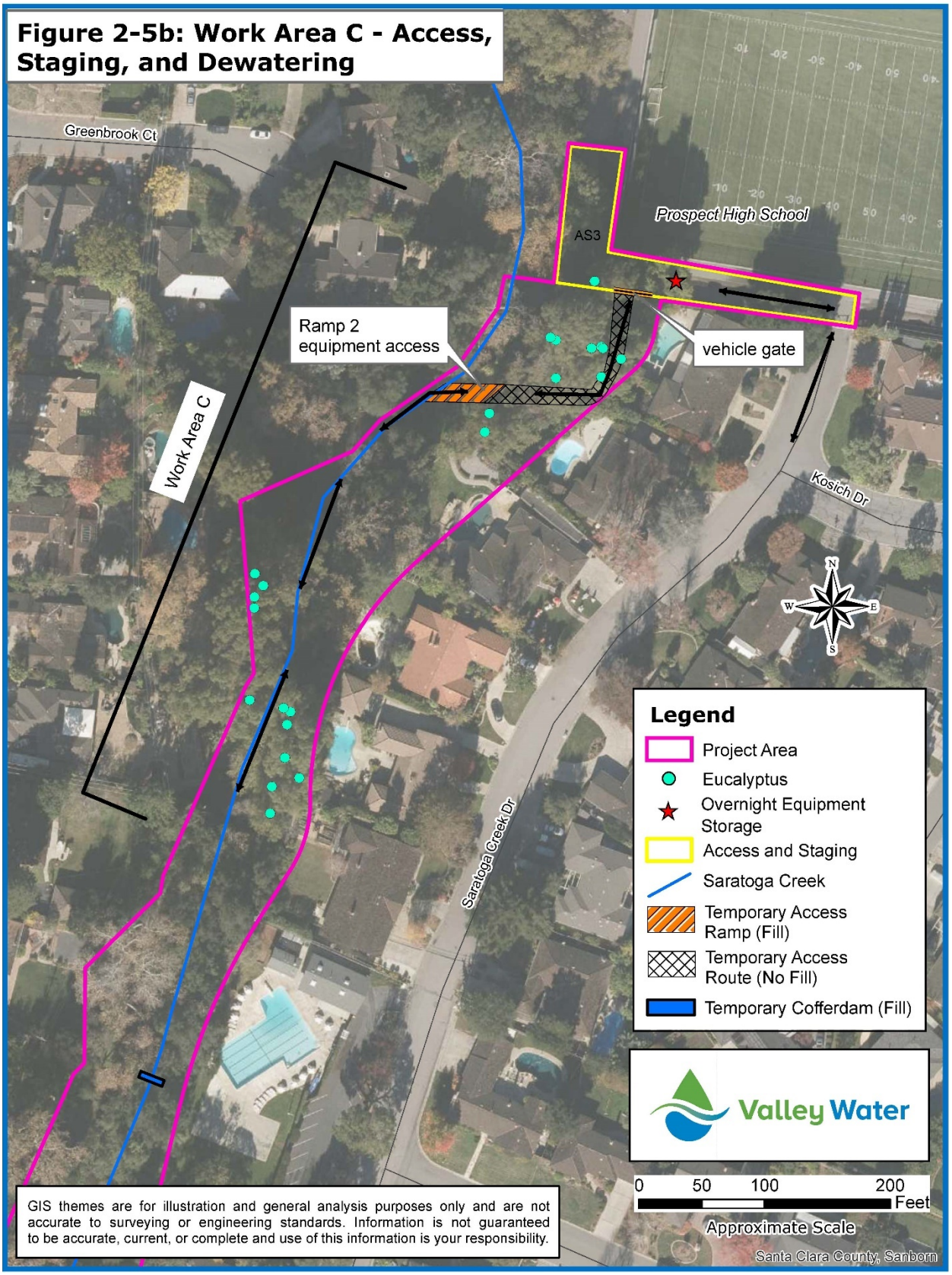
Figure 2-5b: Work Area C - Access, Staging, and Dewatering
Greenbrook Ct
Prospect High School
AS3
Ramp 2
equipment access
vehicle gate
Work Area C
Kosich Dr
Saratoga Creek Dr
N
W
E
S
Legend
Project Area
Eucalyptus
Overnight Equipment Storage
Access and Staging
Saratoga Creek
Temporary Access Ramp (Fill)
Temporary Access Route (No Fill)
Temporary Cofferdam (Fill)
Valley Water
0 50 100 200
Feet
Approximate Scale
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native ash trees, and four coast live oak trees would need to be removed to construct Ramp 2 (see Table 2-2). An additional coast live oak and two elderberry shrubs would be pruned. Ramp 2 would be removed and winterized (i.e., fabric, straw, native understory seed mix) after year 3 work.

Staging areas and developed access routes that would be used in one or more years are mapped in Figures 2-5a and 2-5b, and summarized in Table 2-2. Staging areas would be used for overnight and weekend storage of equipment outside of the creek within paved areas only. No storage of equipment would occur within unpaved areas.

Eucalyptus Removal and Debris Disposal

Eucalyptus trees would be removed using either traditional tree climbing techniques or crane-assisted removal. There is no access for a bucket truck or a place to park a street vehicle immediately beneath the eucalyptus stands. Debris would be removed from the creek area either by crane or using light equipment accessing the dry creek channel from one of two temporary ramps. This equipment would include tracked, low ground pressure machines including track loader, skid steer, small excavator, and/or mobile wood chipper.

During removal using either method, eucalyptus would be harvested initially down to within 36 inches from grade and all resulting stumps would be left intact (until post-removal activities are undertaken – see Post-Removal Treatments). No stump grinding or mechanical stump removal is planned for any of the eucalyptus removed from the Project area. The root mass would be retained and used to support the creek bank during the revegetation process.

At the staging areas, tree logs and debris would be loaded into trucks for disposal off-site. Branches and smaller logs may be chipped on site and loaded into a covered truck. Some chipped material may remain on-site for interim erosion protection.

Post-Removal Treatments

Once the eucalyptus trees and debris in each Work Area have been removed, further work would be required. The heavy layer of bark debris that has accumulated beneath the eucalyptus for decades would be gathered and removed. This effort would involve hand crews raking and gathering the bark with hand tools. Loads of bark would be removed from the channel by the same methods used for tree debris removal (crane, light equipment, or by hand). A minimum of six inches of finer eucalyptus mulch would be retained in eucalyptus removal areas to protect soils and the creek bank from erosion.

Eucalyptus stumps would be re-cut 12–24 inches above grade using chainsaws and treated immediately with a concentrated herbicide to prevent stump re-sprouting. The cut portions would be removed using the same methods previously described. Herbicide would be applied onto the tree cambium using spray bottles, brushes, or similar application equipment. Separating the tree removal activities from the cut stump treatments would help to ensure that each stump is treated effectively.

Site Preparation, Revegetation, and Habitat Restoration

Prior to revegetation, portions of the Project area that are currently fenced and/or planted with ornamental landscaping, or containing temporary structures, would require additional site preparation. Working with adjacent property owners, fences would be removed and relocated to the property line, ornamental landscaping cleared and grubbed, and temporary structures relocated or removed.

Following the removal of the 104 eucalyptus trees, two non-native invasive ash trees, and seven oak trees (necessary for equipment access) in the Project area, Valley Water would revegetate

the Project area to sufficiently stabilize the streambanks where trees have been removed (approximately 1.8 acres of eucalyptus), as well as provide for a broader enhancement with native mixed riparian habitat. Conditions onsite are currently degraded by the prevalence and density of non-native, invasive species, resulting in the lack of understory habitat. There is potential for up to 3.4 acres of revegetation and habitat enhancement within the Project area. This would be sufficient area to replace the number of removed eucalyptus, ash, and oak trees with an equivalent number of native trees and shrubs at a density that is appropriate for, and can be supported by, the physical conditions of the Project area. Replacement plantings for tree removal work undertaken in April of 2018, which is pursuant to Lake and Streambed Alteration Agreement (CDFW Notification No. 1600-2018-0066-R3), would also be incorporated into the revegetation Project design and account for an additional 26 trees to be planted in the Project area. Figures 2-6a and 6b provide the conceptual planting plan for Saratoga Creek from Cox Avenue to Prospect High School.

Each year of Project implementation after eucalyptus and debris are removed, disturbed areas would be hydro- or hand-seeded before the rainy season starts to, reduce the potential for bank erosion. Valley Water's recommended seed mix for erosion control in natural areas, or a variation thereof, would be used. This includes native grass/forb blends and sterile wheat grass and would facilitate the development of a native understory in the Project area. If rainfall is limited or delayed, seeded areas may be watered as feasible to promote seed germination and vegetated cover establishment. Desirable native plants that recruit naturally in the Project area after eucalyptus removal would be protected and retained as feasible. Several native plants, including poison oak, bee plant, and wild cucumber, have already established in the area where 26 eucalyptus were removed in April 2018. This location within the Project area would continue to provide valuable information regarding natural recruitment and applicability of various native plant species post-eucalyptus.

Other elements of the Project's revegetation effort would begin between one and two years following each phase of eucalyptus removal. Planting in each phase would be initiated once it has been demonstrated that eucalyptus stump sprouting and other invasive plant populations have been sufficiently controlled in the Project area (see Figures 2-6a and 6b). This delay would also allow soil chemistry and water absorption potential to recover from the effects of eucalyptus, and for native species to potentially recruit naturally. Once initiated, revegetation planting would occur annually in early winter.

The Project's conceptual revegetation plan as depicted in Figures 6a and 6b, consists of four primary planting zones. The plant species that are proposed to be planted or seeded in each of these zones are listed in Table 2-3. Revegetation in the Project area is complicated by water availability—surface water is episodic and groundwater is relatively deep; channel incision—streambanks are steep and there are no bar surfaces along the channel; uncertain soil conditions following eucalyptus removal; and constrained access that limits the potential for irrigation and maintenance. The planting zones have been selected to be as successful as possible under these challenges.

- "Toe of Slope" plantings would be located along the bottom of streambanks, on the outer-most edges of the Saratoga Creek channel, primarily downslope of where stands of eucalyptus are removed. This is the primary area where riparian hydrophytes, such as willows, are most likely to successfully establish in the Project reach, due to the proximity to surface and subsurface water availability. These planting zones would be linear and narrow to avoid conflicting with channel capacity and flood protection needs. The main objective of this planting zone is to stabilize streambanks in the Project reach, although it would also help improve aquatic habitat conditions and contribute to riparian habitat diversity.

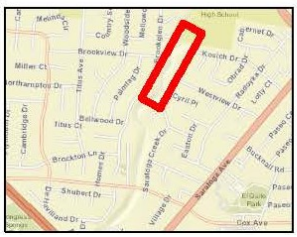
- "Slope" plantings would be located on the relatively steep banks of Saratoga Creek. Species proposed for this planting zone should grow well on steep slopes, but would not be as heavy and potentially destabilizing as native oaks and other mixed riparian trees at

Table 2-3: Restoration Area Planting Zone Species

Planting Area	Scientific Name	Common Name	Growth Form
Terrace	*Aesculus californica*	California buckeye	tree
	Platanus racemosa	western sycamore	tree
	Quercus agrifolia	coast live oak	tree
	Quercus lobata	valley oak	tree
	Sambucus nigra	blue elderberry	shrub
	Eriophyllum confertiflorum	yellow yarrow	shrub
	Garrya elliptica	silk tassel bush	shrub
	Heteromeles arbutifolia	toyon	shrub
	Rhamnus crocea	spiny redberry	shrub
	Rosa californica	California rose	shrub
	Symphoricarpos albus	snowberry	shrub
	Achillea millefolium	yarrow	herb
	Asclepias fascicularis	narrow-leaved milkweed	herb
	Clarkia spp. (purpurea, concinna, unguiculata)	clarkia	herb
	Epilobium canum	California fuchsia	herb
	Lupinus bicolor	bicolored lupine	herb
	Monardella villosa	coyote mint	herb
	Scrophularia californica	California bee plant	herb
	Bromus carinatus	California bromegrass	grass
	Elymus glaucus	blue wild rye	grass
	Melica spp. (californica, imperfecta, torreyana)	melica	grass
	Stipa spp. (lepida, pulchra)	needle grass	grass
Slope	*Aesculus californica*	California buckeye	tree
	Sambucus nigra	blue elderberry	tree
	Ribes sanguineum	red-flowering currant	shrub
	Rubus parviflorus	thimbleberry	shrub
	Rubus ursinus	California blackberry	shrub
	Symphoricarpos albus	snowberry	shrub
	Artemisia douglasiana	mugwort	herb
	Euthamia occidentalis	western goldenrod	herb
	Scrophularia californica	California bee plant	herb
	Symphyotrichum chilense	Pacific aster	herb
Toe of Slope	*Salix spp. (lasiolepis, laevigata, exigua)*	willows	tree
	Baccharis salicifolia	mulefat	shrub
	Carex barbarae	valley sedge	herb
	Cyperus eragrostis	tall flatsedge	herb
	Juncus spp. (balticus, effusus, patens, xiphioides)	rushes	herb

Source: Valley Water, 2019.

Saratoga Creek Hazard Tree Removal and Restoration Project
Conceptual Planting Plan



Planting Areas

- Native Understory (0.5 acres)
- Toe (0.1 acres)
- Slope (1.4 acres)
- Terrace (1.4 acres)

- Project Area

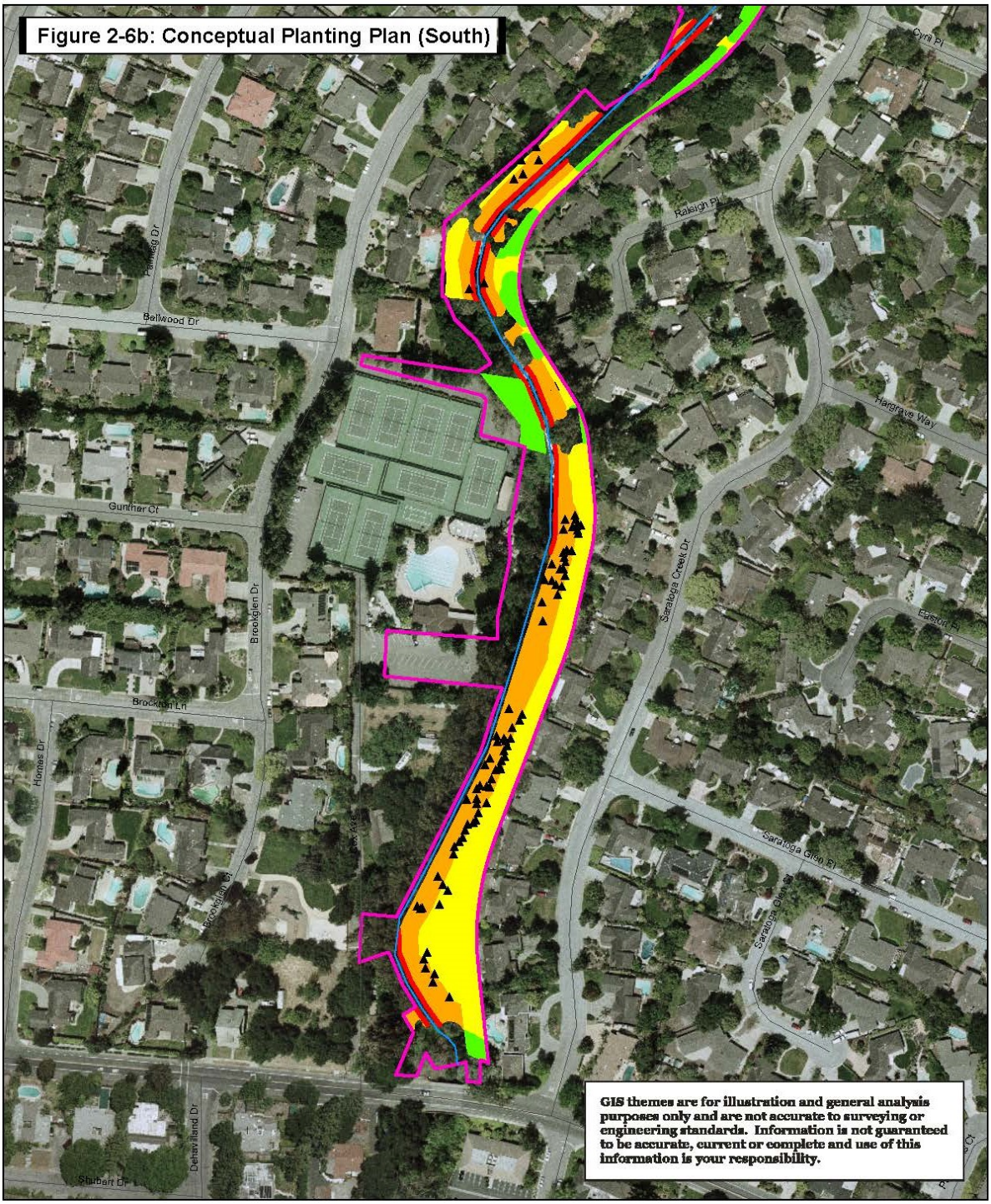
Existing Conditions

- Hazard Trees
- Saratoga Creek
- Approx. Channel Width

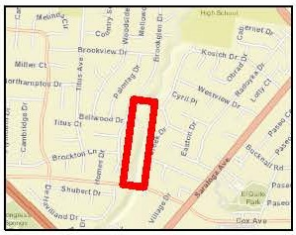
N
W E
S

0 75 150 300 Feet

1 inch = ~ 150 feet



Saratoga Creek Hazard Tree Removal and Restoration Project
Conceptual Planting Plan



Planting Areas
- Native Understory (0.5 acres)
- Toe (0.1 acres)
- Slope (1.4 acres)
- Terrace (1.4 acres)

Project Area

Existing Conditions
- Saratoga Creek
- Approx. Channel Width
- Hazard Trees

N W E S

0 75 150 300 Feet

1 inch = ~ 150 feet

maturity. The main objectives of this planting zone are to stabilize streambanks, provide tree canopy cover, and create understory habitat.

- "Terrace" plantings would be on the top of the Saratoga Creek banks, between the channel and adjacent residential properties. Species proposed for this planting zone are drought-tolerant since groundwater would be very deep relative to the terrace elevation. The main objectives of this planting zone are to provide tree canopy cover and create understory habitat, provide a buffer between the creek and residences, and connect with and expand the mixed riparian habitat that is upstream of the Project area. Native trees would be planted at an ecologically appropriate density for the target habitats, including oak savanna/grassland (SFEI 2015) and mixed riparian woodland. This planting density would necessarily be lower than that of the existing eucalyptus stands, where high planting density for windbreak purposes contributed to high competition for light and space, development of poor tree structure, and eventually tree disease, decline, and failure (HortScience 2018, WCA 2015).
- "Native understory" plantings or seeding would occur under and around the canopies of native trees that are retained along the terrace and slopes of the Project area. Species that may be used in this planting zone include the shrub, herb, and grass species listed for the Slope and Terrace planting zones that are more tolerant of low to moderate light conditions. The main objectives of this planting zone are to create understory habitat that benefits native wildlife, birds, and pollinators. The reestablishment of native understory vegetation proposed by the Project would assist Valley Water's Invasive Plant Management Program (IPMP) in its ongoing treatment efforts to control invasive understory vegetation within the Project reach of Saratoga Creek.

The species in Table 2-3 are all regionally native and have been selected because they are anticipated to establish and grow in the Project area conditions following eucalyptus removal. The list of species in Table 2-3 is not exhaustive nor would every species be planted. Selection of species from these palettes would be performed by a qualified restoration biologist based on site-specific criteria including slope and aspect of planting area, soil characteristics, and availability of appropriately local stock of plants or seed. Substitutions may be made if appropriate.

Since revegetation and habitat enhancement would occur one to two years after eucalyptus removal, the access and staging areas used for eucalyptus removal are not likely to be available for planting efforts. As such, it is anticipated that existing Valley Water gated access points (Figure 2-2) and those restored when existing misaligned property line fences are replaced, would be utilized to access the planting zones. New access ramps would not be established and vehicle access in the channel would not be used for planting. Because of the challenging physical conditions in the Project area, a temporary irrigation system may be installed during the plant establishment period, or hand watering would be provided, to facilitate plant survival and establishment.

A final revegetation design would be prepared for the Project that accounts for and/or includes:

- Results of soil nutrient and fertility testing
- Available access and rights for irrigation, maintenance, and monitoring
- Any necessary setbacks adjacent to infrastructure and/or under existing overhead powerlines
- Anticipated availability of native plant propagules
- Propagule types, planting densities, and planting locations appropriate for planting zone slope, soil conditions, access, etc.
- Sufficient acreage and planting density to replace the number of removed eucalyptus, ash, and oaks with an equivalent number of native trees and shrubs, and to satisfy the planting requirements for the 26 eucalyptus trees removed in April 2018

Maintenance and Monitoring

Revegetation maintenance and monitoring would occur in the Project area for a period of at least five years following planting. Ongoing maintenance and monitoring of the revegetation area would occur following the five-year revegetation maintenance and monitoring period. Monitoring would include:

- Observations of eucalyptus re-sprouting stumps
- Extent of other nonnative invasive plants
- Survival/growth of container plantings
- Percent native understory and overstory cover
- Qualitative assessment of streambank and soil stability, native plant health and vigor, irrigation/watering sufficiency, etc.

Monitoring methods and revegetation success criteria would be based on the final revegetation design and be documented in a Project monitoring plan.

Monitoring would be documented in monitoring reports and provide the basis for maintenance and adaptive management. Primary maintenance activities are expected to include: herbicide treatment of eucalyptus stump regrowth and other secondary weed species; watering and/or repair of irrigation system; replacement of container plantings and/or additional seeding; and protective caging around naturally recruited and container plantings. Adaptive management, including revisions to species, planting zones, and/or monitoring methods, may be necessary due to the challenging growing conditions in the Project area.

Schedule

The tree removal component of the Project would be phased over a period of three years with an option to extend into a fourth year if needed. The Project is currently anticipated to begin in late summer 2019. Project phasing is necessary due to seasonal restrictions for in-channel access, nesting birds, and when access through the high school is available (i.e., when school is not in session). Each phase would be focused on a particular Work Area:

Phase 1 = Work Area A (anticipated September–December 2019)
Phase 2 = Work Area B (anticipated July–December 2020)
Phase 3 = Work Area C (anticipated July–December 2021)
Phase 4 = Work Area C (Phase 3 extended into July–December 2022 if necessary)

Table 2-4 summarizes the anticipated schedule of activities during each phase. While it is possible that the Project can be completed in three years, additional time may be needed to allow time for securing permits, special equipment, and other unexpected delays. In-channel work would only be conducted while the creek is dry between July/August and October of each year (unless otherwise approved by applicable regulatory agencies) when there is minimal chance of local precipitation. This late summer start time also takes into consideration local nesting birds that may be using the eucalyptus trees earlier in the season. Temporary ramps that are below ordinary high water or could potentially impact water quality during the rainy season would be removed at the conclusion of each work season.

Work Hours

Work would be conducted between the hours of 7:30 a.m. to 5 p.m., Monday through Friday and 9 a.m. to 5 p.m. on Saturday.

Table 2-4: Anticipated Annual Schedule of Project Activities						
Activity	**Month**					
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Ramp construction	**Years 2, 3 (& 4, if needed)**					
Creek dewatering (if needed)						
Eucalyptus and thatch removal						
Cut-stump treatment						
Ramp removal						
Seeding, winterization						
Revegetation						

Section 3: Environmental Setting

Project Location

The Project occurs on a narrow reach of Saratoga Creek that runs through the highly-developed valley floor, approximately half-way between the Santa Cruz Mountains, where the creek originates, and San Tomas Aquino Creek, into which Saratoga Creek discharges. The Project area includes the east bank and portions of the west bank of Saratoga Creek, beginning immediately downstream of the Cox Avenue bridge and ending at the southwest corner of Prospect High School, within the City of Saratoga. The Project area is located within the limits of five Valley Water-owned parcels located within and adjacent to Saratoga Creek (see Table 3-1), and adjacent to several private and public parcels with easement used for access and managing flood control. The Project Vicinity Map and the location of the trees proposed for removal are shown on Figure 2-1, and Figures 2-5a and 2-5b, respectively.

Table 3-1: Parcels and Easements within the Proposed Project Alignment

Assessor Parcel Number	Acreage of Parcel	Ownership/Easement
386-22-001	0.08	Valley Water
386-22-010	2.68	Private
386-21-043	1.20	Valley Water
386-21-037	1.84	Valley Water
386-070-69	0.53	Private with Easement
386-07-070	0.50	Valley Water
386-09-015	0.45	Private with Easement
386-19-089	1.17	Valley Water
386-22-009	3.06	Private with Easement
386-10-038	33.03	Campbell Union School District
386-07-077	0.53	Valley Water

Source: Valley Water 2019.

Surrounding Land Uses

Surrounding land uses include primarily medium density single-family residential uses, as well as Prospect High School, which is located at the northeast portion of the Project area. Other uses in the Project area include the Brookside Club of Saratoga, Saratoga Woods Swim club, and the Brookglen Park.

Physical Environment

There are currently 104 standing, live eucalyptus trees in the Project area and all are proposed for removal. Several of the oldest trees are over 100 feet tall and trunk diameters in the stands range from 12 inches to 84 inches. The eucalyptus stands are unnaturally dense and there is little to no understory vegetation present. A heavy accumulation of thatch and debris has accumulated beneath the eucalyptus stands for decades, increasing the potential for wildfires. Many of the eucalyptus trees are either dying, diseased, poorly structured, and/or leaning toward existing residential homes and PG&E powerlines (Figure 3-1).

Some of the eucalyptus trees in the Project area are isolated from the creek by private fences, outbuildings, and landscaping. Existing Valley Water access points used to enter the Project area are personnel gates located on Valley Water easement behind the tennis courts at the Brookside Club of Saratoga, and adjacent to Prospect High School at the downstream Project limit (Figure 2- 2).

Figure 3-1: Photos Showing Existing Site Conditions

Photo 1. Example of eucalyptus grove in the Project area (looking upstream toward Cox Avenue). Dense eucalyptus on left (east) bank and mixture of native and nonnative cover on right (west) bank. Note leaning eucalyptus trees, dead branches and new sprouting.

Photo 2. Examples of proximity of eucalyptus to powerlines and residences. Note the diseased and dying trees, which are in the Project area.

Best Management Practices

Best Management Practices (BMPs) are practices that prevent, avoid, or minimize potentially adverse effects associated with construction and other activities. Valley Water routinely incorporates a wide range of BMPs into Project design as described in detail in its *Best Management Practices Handbook* (SCVWD 2014). The proposed Project would include many of Valley Water's standard BMPs, as summarized in **Table 3-2**. **Table 3-2** is intended to give an overview, focusing on the BMPs most relevant to the Project; additional measures from the BMP Handbook may also apply. Additional environmental measures developed to mitigate specific impacts associated with Project implementation and not avoidable through standard construction BMPs are identified in Section 4 of this Initial Study.

All BMPs for Project implementation activities would be incorporated into the construction documents (plans and specifications) so contractors employed on the proposed Project would be contractually required to adhere to them.

Table 3-2: Best Management Practices Incorporated into the Proposed Project

Number	Title	Description
Air Quality		
AQ-1	Use Dust Control Measures	The following Bay Area Air Quality Management District (BAAQMD) Dust Control Measures will be implemented: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered; 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited; 4. Water used to wash the various exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, etc.) will not be allowed to enter waterways; 5. All vehicle speeds on unpaved roads shall be limited to 15 mph; 6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used; 7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations), and this requirement shall be clearly communicated to construction workers (such as verbiage in contracts and clear signage at all access points); 8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications, and all equipment shall be checked by a certified visible emissions evaluator; 9. Correct tire inflation shall be maintained in accordance with manufacturer's specifications on wheeled equipment and vehicles to prevent excessive rolling resistance; and, 10. Post a publicly visible sign with a telephone number and contact person at the lead agency to address dust complaints; any complaints shall be responded to and take corrective action within 48 hours. In addition, a BAAQMD

		telephone number with any applicable regulations will be included.
AQ-2	Avoid Stockpiling Odorous Materials	Materials with decaying organic material, or other potentially odorous materials, will be handled in a manner that avoids impacting residential areas and other sensitive receptors, including: 1. Avoid stockpiling potentially odorous materials within 1,000 feet of residential areas or other odor sensitive land uses; and 2. Odorous stockpiles will be disposed of at an appropriate landfill.
Biological Resources		
BI-2	Avoid and Minimize Impacts on Native Aquatic Vertebrates	Native aquatic vertebrates (fish, amphibians and reptiles) are important components of stream ecosystems. Native aquatic vertebrates may or may not be able to rapidly re-colonize a stream reach if the population is eliminated from that stream reach. If native aquatic vertebrates are present when cofferdams, water bypass structures, and silt barriers are to be installed, an evaluation of the stream and the native aquatic vertebrates will be conducted by a qualified biologist. The qualified biologist will consider: 1. Which native aquatic species are present; 2. The ability of the species to naturally re-colonize the stream reach; 3. The life stages of the native aquatic vertebrates present; 4. The flow, depth, topography, substrate, chemistry and temperature of the stream reach; 5. The feasibility of relocating the aquatic species present; and 6. The likelihood the stream reach will naturally dry up during the work season. Based on consideration of these factors the qualified biologist may make a decision to relocate native aquatic vertebrates. The qualified biologist will document in writing the reasons to relocate native aquatic species, or not to relocate native aquatic species, prior to installation of cofferdams, water bypass structures or silt barriers. If the decision is made to relocate the native aquatic species, then the operation will be based on Valley Water's Fish Relocation Guidelines.
BI-3	Remove Temporary Fill	Temporary fill materials, such as for diversion structures or cofferdams, will be removed upon finishing the work or as appropriate. The creek channels and banks will be re-contoured to match pre-construction conditions to the extent possible. Low-flow channels within non-tidal streams will be contoured to facilitate fish passage and will emulate the preconstruction conditions as closely as possible, within the finished channel topography.
BI-4	Minimize Adverse Effects of Pesticides on Non-target Species	"Pesticides" refers to any herbicide, insecticide, rodenticide, algaecide, fungicide, or any combination of substances intended to prevent, destroy, or repel any pest. Pesticides will be handled, stored, transported, and used in compliance with any established directions and in a manner that minimizes negative environmental effects on non-target species and sensitive habitats. The proposed project plan for handling, storing, transporting and using pesticides must be reviewed and approved by <u>both</u> of the following subject matter experts:

		1. Valley Water's Pest Control Advisor (a State-certified Qualified Applicator) – the plan will be reviewed, and modified as deemed appropriate, for compliance with: Valley Water policy, label restrictions and any advisories published by the California Department of Pesticide Regulation, the Santa Clara County Division of Agriculture, and the U.S. EPA bulletin *Protecting Endangered Species, Interim Measures for Use of Pesticides in Santa Clara County* (USEPA 2000). 2. Qualified Valley Water Biologist (as defined in EMAP-30264) – the plan will be reviewed, and modified as deemed appropriate, for compliance with: Valley Water policy, approved environmental review documents, project permits, and avoidance of all known listed (Threatened or Endangered) and sensitive species. Information sources for determination of all known locations of species that may be harmed by pesticides include Valley Water's GIS system and California Natural Diversity Database (CNDDB). Either Valley Water's Pest Control Advisor or the Qualified Valley Water Biologist may modify the proposed pesticide plan, such as establishing buffer areas or prohibiting the use of pesticides outright, based on site-specific data, current regulatory requirements, and Valley Water policy. The purchase of all pesticides must be approved by Valley Water's Pest Control Advisor to ensure compliance with Valley Water's Control and Oversight of Pesticide Use policy and appropriate regulatory agency reporting requirements.
BI-5	Avoid Impacts to Nesting Migratory Birds	Nesting birds are protected by state and federal laws. Valley Water will protect nesting birds and their nests from abandonment, loss, damage, or destruction. Nesting bird surveys will be performed by a qualified biologist prior to any activity that could result in the abandonment, loss, damage, or destruction of birds, bird nests, or nesting migratory birds. Inactive bird nests may be removed with the exception of raptor nests. Birds, nests with eggs, or nest with hatchlings will be left undisturbed.
BI-6	Avoid Impacts to Nesting Migratory Birds from Pending Construction	Nesting exclusion devises may be installed to prevent potential establishment or occurrence of nests in areas where construction activities would occur. All nesting exclusion devices will be maintained throughout the nesting season or until completion of work in an area makes the devices unnecessary. All exclusion devices will be removed and disposed of when work in the area is complete.
BI-8	Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes	Whenever native species are prescribed for installation the following steps will be taken by a qualified biologist or vegetation specialist: 1. Evaluate whether the plant species currently grows wild in Santa Clara County; and, 2. If so, the qualified biologist or vegetation specialist will determine if any need to be local natives, i.e. grown from propagules collected in the same or adjacent watershed, and as close to the project site as feasible. Also, consult a qualified biologist or vegetation specialist to determine which seeding option is ecologically appropriate and effective, specifically: 1. For areas that are disturbed, an erosion control seed mix may be used consistent with the SCVWD Guidelines and Standards *for Land Use Near Streams, Design Guide 5, 'Temporary Erosion Control Options.*'

		2. In areas with remnant native plants, the qualified biologist or vegetation specialist may choose an abiotic application instead, such as an erosion control blanket or seedless hydro-mulch and tackifier to facilitate passive revegetation of local native species. 3. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable. 4. If a gravel or wood mulch has been used to prevent soil compaction per BI-11, this material may be left in place [if ecologically appropriate] instead of seeding. Seed selection shall be ecologically appropriate as determined by a qualified biologist, per *Guidelines and Standards for Land Use Near Streams, Design Guide 2: Use of Local Native Species*.
BI-9	Restore Riffle/Pool Configuration of Channel Bottom	The channel bottom shall be re-graded at the end of the work project to as close to original conditions as possible. In salmonid streams, restore pool and riffle configurations to emulate pre-project instream conditions, taking into account channel morphological features (i.e., slope), which affects riffle/pool sequence.
BI-10	Avoid Animal Entry and Entrapment	All pipes, hoses, or similar structures less than 12 inches diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2-inches diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or properly trained construction personnel before the pipe is buried, capped, used, or moved. If inspection indicates presence of sensitive or state- or federally-listed species inside stored materials or equipment, work on those materials will cease until a qualified biologist determines the appropriate course of action. To prevent entrapment of animals, all excavations, steep-walled holes or trenches more than 6-inches deep will be secured against animal entry at the close of each day. Any of the following measures may be employed, depending on the size of the hole and method feasibility: 1. Hole to be securely covered (no gaps) with plywood, or similar materials, at the close of each working day, or any time the opening will be left unattended for more than one hour; or 2. In the absence of covers, the excavation will be provided with escape ramps constructed of earth or untreated wood, sloped no steeper than 2:1, and located no farther than 15 feet apart; or 3. In situations where escape ramps are infeasible, the hole or trench will be surrounded by filter fabric fencing or a similar barrier with the bottom edge buried to prevent entry.
BI-11	Minimize Predator-Attraction	Remove trash daily from the worksite to avoid attracting potential predators to the site.
Cultural Resources		
CU-1	Accidental Discovery of Archaeological Artifacts, Tribal Cultural Resources, or Burial Remains	If historical or unique archaeological artifacts, or tribal cultural resources, are accidentally discovered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Work at the location of the find will halt immediately within 100 feet of the find. A “no work” zone shall be established utilizing appropriate flagging to delineate the boundary of this zone. A Consulting Archaeologist will visit the discovery site as soon as practicable for identification and

		evaluation pursuant to Section 21083.2 of the Public Resources Code and Section 15126.4 of the California Code of Regulations. If the archaeologist determines that the artifact is not significant, construction may resume. If the archaeologist determines that the artifact or resource is significant, the archaeologist will determine if the artifact or resource can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the archaeologist will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines. If a tribal cultural resource cannot be avoided, the Action Plan will include notification of the appropriate Native American tribe, and consultation with the tribe regarding acceptable recovery options. If burial finds are accidentally discovered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified and the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent. No further excavation or disturbance within 100 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs.
Hazards and Hazardous Materials		
HM-1	Comply with All Pesticide Application Restrictions and Policies	Pesticide products are to be used only after an assessment has been made regarding environmental, economic, and public health aspects of each of the alternatives by Valley Water's Pest Control Advisor (PCA). All pesticide use will be consistent with approved product specifications. Applications will be made by, or under the direct supervision of, State Certified applicators under the direction of, or in a manner approved by the PCA. Refer to Q751D02, Control and Oversight of Pesticide Use.
HM-2	Minimize use of Pesticides	In all cases, where some form of pest control is deemed necessary by the PCA; evaluate alternative pest control methods and pesticides. Refer to Q751D02: Control and Oversight of Pesticide Use.
HM-3	Post Areas Where Pesticides Will Be Used	Posting of areas where pesticides are to be used shall be performed in compliance with Q751D02: Control and Oversight of Pesticide Use. Posting shall be performed in compliance with the label requirements of the product being applied. In addition, Valley Water shall provide posting for any products applied in areas used by the public for recreational purposes, and areas readily accessible to the public, regardless of whether the label requires such notification (the posting method may be modified to avoid destruction of bait stations or scattering of rodenticide), including: 1. Sign postings shall notify staff and the general public of the date and time of application; the product's active ingredients, and common name; and, the time of allowable re-entry into the treated area. 2. A Valley Water staff contact phone number shall be posted on the sign. 3. Signs shall not be removed until after the end of the specified re-entry interval.

		4. Right-to-know literature on the product shall be made available upon request to anyone in the area. 5. Notification will take into account neighbors with specific needs prior to treatment of an adjacent area to ensure such needs are met. Such requests are maintained by Valley Water under Q751D02.
HM-4	Comply with All Pesticide Usage Requirements	All projects that propose ongoing use of pesticides will comply with all provisions of Q751D02: Control and Oversight of Pesticide Use, including, but not necessarily limited to the following: 1. All pest control methods will be performed only after a written Pest Control Recommendation for use has been prepared by Valley Water's PCA in accordance with requirements of the California Food and Agricultural Code. 2. F751D01 – Pest Control Recommendation & Spray Operators Report will be completed for each pesticide application.
HM-5	Comply with Restrictions on Herbicide Use in Upland Areas	Consistent with provisions of Q751D02: Control and Oversight of Pesticide Use, application of pre-emergence (residual) herbicides to upland areas will not be made within 72 hours of predicted significant rainfall. Predicted significant rainfall for the purposes of this BMP will be described as local rainfall greater than 0.5 inch in a 24-hour period with greater than a 50% probability of precipitation according to the National Weather Service.
HM-6	Comply with Restrictions on Herbicide Use in Aquatic Areas	Consistent with provisions of Q751D02: Control and Oversight of Pesticide Use, only herbicides and surfactants registered for aquatic use will be applied within the banks of channels within 20 feet of any water present. Furthermore, aquatic herbicide use will be limited to June 15th through October 31st with an extension through December 31 or until the first occurrence of any of the following conditions; whichever happens first: 1. local rainfall greater than 0.5 inches is forecasted within a 24-hour period from planned application events according to the National Weather Service; or 2. when steelhead begin upmigrating and spawning in the 14 steelhead creeks, as determined by a qualified biologist (typically in November/December). If rain is forecast then application of aquatic herbicide will be rescheduled.
HM-7	Restrict Vehicle and Equipment Cleaning to Appropriate Locations	Vehicles and equipment may be washed only at approved areas. No washing of vehicles or equipment will occur at job sites.
HM-8	Ensure Proper Vehicle and Equipment Fueling and Maintenance	No fueling or servicing will be done in a waterway or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators). 1. For stationary equipment that must be fueled or serviced on-site, containment will be provided in such a manner that any accidental spill will not be able to come in direct contac with soil, surface water, or the storm drainage system. 2. All fueling or servicing done at the job site will provide containment to the degree that any spill will be unable to enter any waterway or damage riparian vegetation. 3. All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will be prevented. 4. All equipment used in the creek channel will be inspected for leaks each day prior to initiation of work. Maintenance,

		repairs, or other necessary actions will be taken to prevent or repair leaks, prior to use. 5. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be done in a channel or flood plain.
HM-9	Ensure Proper Hazardous Materials Management	Measures will be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means. 1. Prior to entering the work site, all field personnel will know how to respond when toxic materials are discovered. 2. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage. 3. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and not be allowed to enter surface waters or the storm drainage system. 4. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. 5. Quantities of toxic materials, such as equipment fuels and lubricants, will be stored with secondary containment that is capable of containing 110% of the primary container(s). 6. The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations will be conducted in accordance with applicable State and federal regulations. 7. In the event of any hazardous material emergencies or spills, personnel will call the Chemical Emergencies/Spills Hotline at 1-800-510-5151.
HM-10	Utilize Spill Prevention Measures	Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water following these measures: 1. Field personnel will be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills; 2. Equipment and materials for cleanup of spills will be available on site, and spills and leaks will be cleaned up immediately and disposed of according to applicable regulatory requirements; 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means; 4. Spill prevention kits will always be in close proximity when using hazardous materials (e.g., at crew trucks and other logical locations), and all field personnel will be advised of these locations; and, 5. The work site will be routinely inspected to verify that spill prevention and response measures are properly implemented and maintained.
HM-12	Incorporate Fire Prevention Measures	1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site. 3. An extinguisher shall be available at the project site at all times when welding or other repair activities that can generate sparks (such as metal grinding) is occurring.

		4. Smoking shall be prohibited except in designated staging areas and at least 20 feet from any combustible chemicals or vegetation.
Hydrology and Water Quality		
WQ-1	Conduct Work from Top of Bank	For work activities that will occur in the channel, work will be conducted from the top of the bank if access is available and there are flows in the channel.
WQ-2	Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms	Field personnel will use the appropriate equipment for the job that minimizes disturbance to the stream bottom. Appropriately tired vehicles, either tracked or wheeled, will be used depending on the situation. Tracked vehicles (bulldozers, loaders) may cause scarification. Wheeled vehicles may cause compaction. Heavy equipment will not operate in the live stream.
WQ-4	Limit Impacts from Staging and Stockpiling Materials	1. To protect on-site vegetation and water quality, staging areas should occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all equipment and materials (e.g., road rock and project spoil) will be contained within the existing service roads, paved roads, or other pre-determined staging areas. 2. Building materials and other project-related materials, including chemicals and sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains. 3. No runoff from the staging areas may be allowed to enter water ways, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). 4. The discharge of decant water to water ways from any on-site temporary sediment stockpile or storage areas is prohibited. 5. During the wet season, no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained silt fencing or other means of erosion control. During the dry season; exposed, dry stockpiles will be watered, enclosed, covered, or sprayed with non-toxic soil stabilizers.
WQ-5	Stabilize Construction Entrances and Exits	Measures will be implemented to minimize soil from being tracked onto streets near work sites: 1. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by a 4-inch thick layer of 1 to 3-inch diameter gravel on unsurfaced access roads. 2. Access will be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the water body bed and banks, and the surrounding land uses.
WQ-9	Use Seeding for Erosion Control, Weed Suppression, and Site Improvement	Disturbed areas shall be seeded with native seed as soon as is appropriate after activities are complete. An erosion control seed mix will be applied to exposed soils down to the ordinary high water mark in streams. 1. The seed mix should consist of California native grasses, (for example *Hordeum brachyantherum*; *Elymus glaucus*; and annual *Vulpia microstachyes*) or annual, sterile hybrid seed mix (e.g., Regreen™, a wheat x wheatgrass hybrid).

		2. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable, or have other appropriate erosion control measures in place.
WQ-11	Maintain Clean Conditions at Work Sites	The work site, areas adjacent to the work site, and access roads will be maintained in an orderly condition, free and clear from debris and discarded materials on a daily basis. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. For activities that last more than one day, materials or equipment left on the site overnight will be stored as inconspicuously as possible, and will be neatly arranged. Any materials and equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.
WQ-15	Prevent Water Pollution	Oily, greasy, or sediment laden substances or other material that originate from the project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway. The project will not increase the turbidity of any watercourse flowing past the construction site by taking all necessary precautions to limit the increase in turbidity as follows: 1. where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases will not exceed 5 percent; 2. where natural turbidity is greater than 50 NTU, increases will not exceed 10 percent; 3. where the receiving water body is a dry creek bed or storm drain, waters in excess of 50 NTU will not be discharged from the project. Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream of the discharge site. Natural watercourse turbidity measurements will be made prior to initiation of project discharges, preferably at least 2 days prior to commencement of operations.
WQ-16	Prevent Storm Water Pollution	To prevent storm water pollution, the applicable measures from the following list will be implemented: 1. Soils exposed due to project activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall. In creeks, the channel bed and areas below the Ordinary High Water Mark are exempt from this BMP. 2. The preference for erosion control fabrics will be to consist of natural fibers; however, steeper slopes and areas that are highly erodible may require more structured erosion control methods. No non-porous fabric will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff, but only if there are no indications that special-status species would be impacted by the application.

		3. Erosion control measures will be installed according to manufacturer's specifications. 4. To prevent storm water pollution, the appropriate measures from, but not limited to, the following list will be implemented: • Silt Fences • Straw Bale Barriers • Brush or Rock Filters • Storm Drain Inlet Protection • Sediment Traps or Sediment Basins • Erosion Control Blankets and/or Mats • Soil Stabilization (i.e. tackified straw with seed, jute or geotextile blankets, etc.) • Straw mulch. 5. All temporary construction-related erosion control methods shall be removed at the completion of the project (e.g., silt fences). 6. Surface barrier applications installed as a method of animal conflict management, such as chain- link fencing, woven geotextiles, and other similar materials, will be installed no longer than 300 feet, with at least an equal amount of open area prior to another linear installation.
Traffic and Transportation		
TR-1	Incorporate Public Safety Measures	Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.

Section 4: Environmental Evaluation

Initial Study Checklist

In accordance with CEQA, the following Initial Study Checklist is an analysis of the Project's potential environmental effects to determine whether an Environmental Impact Report is needed. Answers to the checklist questions provide factual evidence and Valley Water rationale for determinations of the potential significance of impacts resulting from the proposed Project.

The Initial Study checklist shows that the proposed Project may have potentially significant effects on biological resources and hydrology and water quality. Mitigation measures have been proposed for the Project to reduce potential effects to less-than-significant levels; and therefore, the proposed Mitigated Negative Declaration is consistent with CEQA Guidelines §15070. Descriptions of the BMPs and/or mitigation measures to be incorporated in the proposed Project are included.

ENVIRONMENAL CHECKLIST FORM

1. Project Title:	Saratoga Creek Hazard Tree Removal and Restoration Project
2. Lead Agency Name and Address:	Santa Clara Valley Water District 5750 Almaden Expressway San Jose CA 95118
3. Contact Person and Phone Number:	Todd Sexauer (408) 630-3149
4. Project Location:	Saratoga Creek between Cox Avenue and Prospect High School in the City of Saratoga
5. Project Sponsor's Name and Address:	Santa Clara Valley Water District 5750 Almaden Expressway San Jose CA 95118
6. General Plan Designation:	Medium Density Residential (M-10)
7. Zoning:	Single-Family Res. 1-10,000 (R-1-10,000)
8. Description of the Project:	Removal of 104 diseased hazard eucalyptus trees and two non-native invasive ash trees from Saratoga Creek followed by creek restoration with native riparian species.
9. Surrounding Land Uses and Setting:	Medium Density Residential and Community Facility Sites such as Prospect High School
10. Other public agencies whose approval is required:	o City of Saratoga - Tree Removal Permit under Section 15-50.070 of the City of Saratoga Municipal Code o California Department of Fish and Wildlife – Section 1602 Lake and Streambed Alteration Agreement o Regional Water Quality Control Board – Section 401 Water Quality Certification o U.S. Army Corps of Engineers – Section 404 Nationwide Permit 33 (Temporary Construction, Access, and Dewatering)
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1?	The Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Region was notified of the proposed Project by Valley Water on May 13, 2019. No request for consultation was received by Valley Water pursuant to Public Resources Code Section 21080.3.1.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	☐
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	☐

Signature

8/14/19
Date

Todd Sexauer
Senior Environmental Planner
Valley Water

1. AESTHETICS

Except as provided in Public Resources Code Section 21099,

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

ENVIRONMENTAL SETTING

The Project site is located in the City of Saratoga within a highly-urbanized residential neighborhood dominated by single-family residences, including tennis and swim clubs, and a neighborhood park. The creek alignment within the Project area begins at Cox Avenue and ends at Prospect High School near the athletic fields. The majority of Saratoga Creek along the Project alignment is not visible from public rights-of-way due to adjacent residences fronting both sides of the Project alignment. Residences fronting the Project area are located on Saratoga Creek Drive, Raleigh Place, and Brookglen Drive. Aside from views of the mature eucalyptus trees above the single-story ranch homes, only limited public views of Saratoga Creek are available along the Project alignment. Views of Saratoga Creek within the Project area are available primarily from the Cox Avenue Bridge, Brookglen Park, and from the Prospect High School athletic fields. The City of Saratoga General Plan Open Space and Conservation Element does not identify the Project area as a scenic vista or as a protected view shed. In addition, none of the Project area roadway segments have been identified as scenic roadways in section 3.30.050 of the Santa Clara County Municipal Code. Also, no Heritage Trees identified in the City of Saratoga Heritage Tree Inventory Guidebook 2017 are located within the Project area (City of Saratoga, 2017).

Discussion

a) No Impact. According to the City of Saratoga General Plan, no scenic vista has been identified in the Project area. Therefore, the removal of 104 mature blue gum eucalyptus trees and two non-native ash trees that are visible from Cox Avenue, Brookglen Park, Saratoga Creek Drive and Brookglen Drive would not impact a scenic vista. It should be noted that the Project also proposes to revegetate areas within the Project alignment where tree removal is being proposed with native riparian species to include coast live oak, valley oak, and western sycamore. Therefore, the proposed Project would not impact a scenic vista.

b) No Impact. The nearest officially designated and unofficially designated state scenic highways to the Project area are State Route 9 and Interstate 280, respectively. In addition, no rock outcroppings or historic buildings would be impacted by the proposed Project. The

proposed Project alignment is located several miles from both Highway 9 and Interstate 280; and therefore, would not be visible. Therefore, no significant impacts to trees, rock outcroppings, or historic buildings would occur within a state scenic highway.

c) Less Than Significant Impact. The Project proposes the removal of 104 blue gum eucalyptus trees and two non-native ash trees from the east bank of Saratoga Creek, which is located in a highly-urbanized area. Although the proposed removal of the trees would change in the vegetational structure within the reach of Saratoga Creek between Cox Avenue and Prospect High School, it would not degrade the existing visual character of the creek and its surroundings from public viewsheds. The remaining trees are native endemic riparian trees that provide a more diverse visual character than the existing homogenous stand of taller blue gum eucalyptus. Specifically, the coast live oak, valley oak, and western sycamore trees would become the focal point of the riparian corridor rather than the much taller and denser blue gum eucalyptus trees. In addition, the Project also proposes to restore the Project area with additional native endemic riparian trees and shrubs that would mature and ultimately provide additional cover. A tree removal permit would be acquired from the City of Saratoga for the proposed tree removal efforts. Site restoration would be reviewed by the City of Saratoga to ensure consistency with City tree removal and replacement requirements. Compliance with the City's tree ordinance requirements would further minimize any impact on visual character. Therefore, impacts would be less than significant.

d) No Impact. The proposed Project to remove hazardous eucalyptus trees, two non-native ash trees, and to restore native riparian habitat, would not include nighttime work that would require a new source of light. Work would be conducted between the hours of 7:30 a.m. to 5 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturday. Once the trees are removed and the Project area is revegetated, revegetation maintenance and monitoring activities would also not create a new source of light or glare. Therefore, no impact would occur.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

2. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting

The Project area contains Saratoga Creek and the associated riparian vegetation. Surrounding areas are built up lands developed primarily with single-family residential units. According to the Santa Clara County Important Farmland map (Department of Conservation 2016), the Project site and the surrounding land uses are designated as "Urban and Built-up Land."

Discussion

a) No Impact. No prime farmland, unique farmland, or farmland of statewide importance is located within the Project. Area. Therefore, no conversion to prime farmland, unique farmland, or farmland of statewide importance would occur from Project implementation. No impact from Project implementation would occur.

b) No Impact. According to the Santa Clara County Williamson Act Contract Map 2015/2016 (Department of Conservation 2016), the Project site is not under a Williamson Act contract. The Project area is mapped as Urban Built-up land. The affected properties are part of a natural creek system that supports both native and non-native riparian vegetation, which is located in a highly-urbanized area. Therefore, the proposed Project would not result in farmland conversion, conflict with a Williamson Act contract, or conflict with existing agricultural zoning. As a result, the proposed Project would have no impact on land zoned for agricultural use or land under a Williamson Act Contract.

c) No Impact. The Project site is located in a highly-urbanized area within the City of Saratoga. No forest land as defined in Public Resources Code §4526 or timberland as zoned by Government Code §51104(g) is located within the Project area. Therefore, no impact would occur to forest land or timberland.

d) No Impact. No forest land occurs on the Project site or in the immediate vicinity. Although the site contains blue gum eucalyptus trees that would be removed, blue gum eucalyptus trees are not considered a commercial species under the California Forest Practices Rules and

would not be considered forest land (CalFire 2017). The surrounding area is highly urbanized. No impact is anticipated.

e) No Impact. See discussions under "a" and "c" above. No impact would occur.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of applicable air quality plans?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The Project area is located within the San Francisco Bay Air Basin, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Regional and local air quality in the basin is impacted by topography, dominant airflows, atmospheric inversions, location, and season.

Both state and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants including carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Reactive organic gases (ROG) are formed from combustion of fuels and evaporation of organic solvents. ROG is an ozone precursor and a prime component of the photochemical reaction that forms ozone. NO_x refers to the compounds of NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. NO_x is a primary component of the photochemical smog reaction. Fine suspended particulate matter ($PM_{2.5}$) has an aerodynamic diameter of 2.5 microns or less, and particulate matter (PM_{10}) which refers to coarse particles that are larger than 2.5 microns but smaller than 10 microns.

Toxic air contaminants (TACs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A wide range of sources from industrial plants to motor

vehicles emit TACs. TACs are generally regulated through state and local risk management programs designed to eliminate, avoid, or minimize the risk of adverse health effects from exposure to TACs. One TAC of concern for the proposed Project is diesel particulate matter (DPM). TACs are regulated by the California Air Resources Board (CARB) with various airborne toxic control measures (ATCMs). These ATCMs are aimed at minimizing the risk of exposure.

Sensitive Receptors

Those who are considered sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. Therefore, sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. The nearest sensitive receptors include single family residential homes that are located approximately 40 feet from the proposed limits of construction, as well as Prospect High School, which has classrooms/buildings located approximately 600 feet northeast of the Project area, south of Prospect Road.

Attainment Status

The CARB is required to designate areas of the state as attainment, nonattainment or unclassified for all state standards. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An unclassified designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. Environmental Protection Agency (USEPA) also designates areas as attainment, nonattainment, or classified. The San Francisco Bay Area is classified as non-attainment under the state and federal 8-hour ozone standard; non-attainment for both the annual arithmetic mean and the 24-hour standard for course particulate matter standard (PM_{10}) under the state standard; and non-attainment for fine particulate matter ($PM_{2.5}$) under the annual arithmetic mean under the state standard and non-attainment under the federal 24-hour standard.

Regulatory Framework

The USEPA and CARB regulate direct emissions from motor vehicles. The BAAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Clean Air Act.

The federal Clean Air Act (CAA) of 1970 authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The CAA Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the CAA, state and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

California Clean Air Act.

In 1988, the California Clean Air Act required that all air districts in the state endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for carbon monoxide, ozone, sulfur dioxide and nitrogen dioxide by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual

reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan (CAP) shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

Bay Area Air Quality Management District.

In June 2010, the BAAQMD adopted significance thresholds for agencies to use to assist with environmental review of projects under CEQA. These thresholds were designed to establish the level at which the BAAQMD believed air pollutant emissions would cause significant impacts under CEQA. A decision by the California Supreme Court in late 2015 confirmed that local agencies may rely on BAAQMD's thresholds when analyzing project impacts on air quality.

As outlined in the current BAAQMD Air Quality Guidelines (BAAQMD 2017), the first step in determining the significance of construction-related criteria air pollutants and precursors is to compare the attributes of a proposed project with the applicable Screening Criteria listed in Chapter 3 of the Air Quality Guidelines. If all of the Screening Criteria are met by a proposed project, then the lead agency would not need to perform a detailed air quality assessment of its project's air pollutant emissions, and the lead agency may conclude that the proposed project would not result in a significant impact to air quality.

This preliminary screening provides the Lead Agency with a conservative indication of whether the proposed Project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors shown in Table 4-1.

Table 4-1: Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors

Pollutant/Precursor	Daily Average Emissions (lbs./day)
ROG	54
NO_x	54
PM_{10}	82*
$PM_{2.5}$	54*

Notes:
* Applies to construction exhaust emissions only.
CO = carbon monoxide; lbs./day = pounds per day
NO_x = oxides of nitrogen
$PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less.
PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
ROG = reactive organic gases
Source: BAAQMD 2017.

BAAQMD Screening Criteria. For construction-related impacts, if all of the following BAAQMD Screening Criteria are met, the construction of a proposed project would result in a less-than-significant impact from criteria air pollutant and precursor emissions.

1. The project is below the applicable screening level size shown in Table 3-1 of the BAAQMD CEQA Guidelines; and
2. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
   a. Demolition;
   b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);

c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

Discussion

This air quality impact analysis considers vegetation removal and associated revegetation impacts to air quality associated with the proposed Project against the BAAQMD thresholds of significance. Equipment, trucks, worker vehicles, and ground-disturbing activities associated with access ramp construction, vegetation removal, and revegetation efforts, would generate temporary emissions of criteria air pollutants and precursors.

a) ***No Impact.*** The most recently adopted BAAQMD air quality plan is the *Spare the Air – Cool the Climate 2017 Clean Air Plan* (2017 Plan). The 2017 Plan, focuses on two closely-related goals: protecting impacted communities and promoting social equity, and protecting the climate. Consistency with the BAAQMD 2017 Plan can be determined if the Project does the following: 1) supports the goals of the 2017 Plan; 2) includes applicable control measures from the 2017 Plan; and 3) would not disrupt or hinder implementation of any control measures from the 2017 Plan. Consistency with the mobile source measures, land use and local impact measures, and energy measures is described below:

- *Mobile Source and Transportation Control Measures*. The BAAQMD identifies control measures as part of the 2017 Plan to reduce ozone precursor emissions from stationary, area, mobile, and transportation sources. The Transportation Control Measures are designed to reduce emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The proposed Project would remove 104 hazard eucalyptus trees and two non-native ash trees followed by creek restoration activities, and would not result in an increase in operational VMT once construction is complete. Therefore, the proposed Project would not conflict with the transportation and mobile source control measures from the 2017 Plan.

- *Land Use and Local Impacts Measures*. The Clean Air Plan includes Land Use and Local Impacts Measures (LUMs) to achieve the following: promote mixed-use, compact development to reduce motor vehicle travel and emissions; and ensure that planned growth is focused in a way that protects people from exposure to air pollution from stationary and mobile sources of emissions. The proposed Project would not conflict with the LUMs identified in the Clean Air Plan.

- *Energy and Climate Measures*. The Clean Air Plan also includes Energy and Climate Measures, which are designed to reduce ambient concentrations of criteria pollutants and reduce emissions of CO_2. Implementation of these measures is intended to promote energy conservation and efficiency in buildings, promote renewable forms of energy production, reduce the “urban heat island” effect by increasing reflectivity of roofs and parking lots, and promote the planting of (low-VOC-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants. The energy measures of the Clean Air Plan are not applicable to the proposed Project.

As discussed above, implementation of the proposed Project would not disrupt or hinder implementation of the applicable measures outlined in the 2017 Plan, including Mobile Source and Transportation Control Measures, Land Use and Local Impact Measures, and

Energy and Climate Measures. Therefore, implementation of the proposed Project would have no impact.

b) ***Less than Significant Impact.*** Project emissions would be short-term construction emissions and would be considered less than significant as described below. In addition, all of the BAAQMD Screening Criteria outlined above would be met.

Construction Emissions

During ramp construction, tree removal, and creek restoration, short-term degradation of air quality may occur due to the release of particulate emissions generated by minor grading, tree cutting and removal, hauling, creek restoration and other activities. In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction and tree removal activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly. These emissions would be temporary and limited to the immediate area surrounding construction activities.

The proposed Project would result in temporary emissions from access ramp construction, vegetation removal, and revegetation efforts. Temporary air emissions would result from exhaust emissions form the construction equipment, (e.g., loader, excavators, chain saws, etc.) utilized during Project implementation, including motor vehicles of the construction crews. Although construction emissions are expected to be well below the BAAQMD screening criteria discussed above, construction emissions were calculated using CalEEMod.2016.3.2 to document the anticipated emissions (Appendix A). Pounds per day of construction-related emissions are presented in Table 4-2: Short-term Temporary Project Emissions during Tree Removal/Restoration.

Table 4-2: Short-term Temporary Project Emissions during Tree Removal/Restoration

Emission Sources	Pollutants (pounds/day)			
	ROG	NOx	PM_{10}	$PM_{2.5}$
Tree Removal /Restoration Emissions	1.59	16.30	1.28	0.96
Total	*1.59*	*16.30*	*1.28*	*0.96*
BAAQMD Thresholds of Significance	54.0	54.0	82.0	54.0
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**

Source: Valley Water 2019.

As noted in Table 4-2, the CalEEMod analysis indicates that construction related emissions for criteria pollutants ROG, NO_x, PM_{10} and $PM_{2.5}$ would not exceed the BAAQAMD significance thresholds. As a result, potential impacts associated with emissions from ramp construction, tree removal, and revegetation efforts would be less than significant. In addition, BMP AQ-1 (Use Dust Control Measures) and AQ-2 (Avoid Stockpiling Odorous Materials), would further reduce short-term air quality impacts. No operational emissions would be produced following revegetation establishment.

Operational Emissions

Operational emissions impacts are long-term air emission impacts associated with area sources and mobile sources involving any change related to the proposed Project. Once tree ramp construction, tree removal, ramp removal, and creek restoration is complete and the proposed Project is operational, maintenance activities would be similar to the existing conditions; and therefore, the proposed Project is not expected to result in the

generation of additional operational emissions beyond the current baseline. Therefore, the proposed Project would result in no impact to operational emissions.

Localized Carbon Monoxide

The proposed Project would not generate additional vehicle trips over existing conditions for maintenance once the proposed Project is operational. In addition, the proposed Project would not conflict with the Santa Clara Valley Transportation Authority's Congestion Management Plan or other agency plans. Therefore, the proposed Project would not result in localized CO concentrations that exceed State or federal standards, which would be considered a less than significant impact.

c) ***Less than Significant Impact*****.** Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter (DPM) and substantial pollutant concentrations are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to DPM. Exposure from diesel exhaust associated with construction activity could contribute to both cancer and chronic non-cancer health risks.

During construction, various diesel-powered vehicles and equipment would be in use. In 1998, the ARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identifies potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks, whereas health risks are based on a 70-year risk duration. Additionally, construction-related emissions sources are mobile and transient in nature, and are generated within the Project area. The nearest sensitive receptors include medium density residential homes located approximately 40 feet from the Project area, as well as Prospect High School, which has buildings located approximately 600 feet northeast of the Project area, south of Prospect Road.

The Project would be phased over a period of three years, with ramp construction, tree removal, and creek restoration occurring over a six-month period beginning in July and ending in December. This Project construction period is considered short relative to the 70-year health risk exposure analysis period, especially given that each receptor would only be exposed during a small period during the overall construction activities. In addition, as shown in Table 4-2, Project construction PM_{10} exhaust emissions (the primary source of construction TAC emissions) would be 1.28 pounds per day, which is below the BAAQMD's threshold for PM_{10} exhaust emissions. Implementation of BMP AQ-1 (Dust Control Measures), would further reduce health risks from construction emissions of diesel particulate by limiting the amount of idling that would occur. Therefore, impacts to sensitive receptors from DPM and TACs would be less than significant.

d) ***Less than Significant Impact*****.** Odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably and overall is considered subjective. Once operational, the proposed Project does not include any activities that would generate objectionable odors. However, during construction activities within the Project area, odors may occur related to decaying organic material disturbed during the excavation or construction equipment. These odors are expected to be short-term and dispersed over a wide area. In addition, BMP AQ-2 (Dust Control Measures) would require that odorous materials are handled in a manner that avoids impacting the surrounding receptors (e.g. single family homes or Prospect High School). Therefore, the

proposed Project would not create objectionable odors affecting a substantial number of people and the impact would be considered less than significant.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

AQ-1: Dust Control Measures
AQ-2: Avoid Stockpiling of Odorous Materials

MITIGATION MEASURES

None required.

4. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The following evaluation of potential impacts to biological resources within the Project area is based on a Biological Site Assessment prepared by the Valley Water, Environmental Mitigation and Monitoring Unit that was prepared in June 2019 to evaluate potential impacts to sensitive biological resources associated with the proposed Project (Appendix B).

ENVIRONMENTAL SETTING

Saratoga Creek, historically known as Campbell Creek, originates on the northeastern slopes of the Santa Cruz Mountains along Castle Rock Ridge and flows through the cities of Saratoga, San

Jose, and Santa Clara and then joins with San Tomas Aquino Creek, which drains into the San Francisco Bay at Guadalupe Slough. It is part of the West Valley Watershed. The approximate 15-mile channel includes the tributaries of Bonjetti Creek and Booker Creek and drains an area of approximately 16.5 square miles before its confluence with San Tomas Aquino Creek.

Vegetation Communities

The proposed Project alignment that is located along Saratoga Creek, consists of a riparian corridor that is constrained by encroaching residential development with a notable channel incision. This Project area generally consists of three vegetation communities: Eucalyptus Grove, Coast Live Oak Woodland Alliance, and Landscaped/Developed.

Coast Live Oak Woodland Alliance

The Project site contains 2.55 acres of native riparian Coast Live Oak Woodland Alliance with a tree canopy consisting of coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), elderberry (*Sambucus nigra* spp. *caerulea*), and western sycamore (*Platanus racemosa*). The understory throughout this reach primarily consists of non-native species including English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), poison hemlock (*Conium maculatum*), periwinkle (*Vinca major*), and non-native grasses to include Smilo grass (*Stipa miliacea*), wild oats (*Avena* spp.), and barley (*Hordeum* spp.). Remnant native understory species include mugwort (*Artemisia douglasiana*), poison oak (*Toxicodendron diversilobum*), and California blackberry (*Rubus ursinus*).

Eucalyptus Grove

The Project site contains 1.81 acres of non-native Eucalyptus Grove dominated by mature blue gum eucalyptus (*Eucalyptus globulus*) trees with a predominantly non-native and sparsely vegetated understory. The eastern creek bank is characterized by several blue gum eucalyptus groves, likely remnants of a wind break, or shelterbelt, planted to protect the stone fruit and walnut orchards that once thrived in the adjacent areas. Eucalyptus trees in the grove are located along the top of the creek bank on a relatively steep slope above Saratoga Creek channel, displacing the native riparian vegetation. Many of the oldest trees are estimated to be at least 90 years of age and stand over 100 feet in height.

The eucalyptus trees in the Project area once thrived where surface and subsurface water was abundant closest to the creek channel. Supplemental flows of raw water released for percolation from the Stevens Creek Pipeline contributed to natural runoff and allowed the creek to flow year-round for over 40 years. The eucalyptus trees, a deep-rooted and water loving species, took advantage of the readily available creek water, growing tall and healthy for decades. Several years of drought has stressed the eucalyptus trees causing many of them to become weakened and diseased primarily by sulphur shelf fungus (*Laetiporus gilbertsonii*) and white rot (*Armillaria mellea*).

Landscaped/Developed

The remaining Project area is composed of Landscaped/Developed areas. Little to no native vegetation occurs in this area nearest to the adjacent residential uses. The area classified as Landscape/Developed currently contains fencing, lawns, horticultural plantings, hardscaping, and several small temporary outbuildings.

Sensitive Natural Communities

Natural communities with state rankings of S1-S3 are considered sensitive by CDFW, and were tracked in the California Natural Diversity Database (CNDDB) until the mid-1990s when funding was halted. CNDDB provides location and natural history information on occurrences of special-status plants, animals, and sensitive natural communities.

For the purposes of this discussion, sensitive natural communities are defined as:

- Natural communities with State Ranks of S1-S3 considered to be Sensitive Natural Communities by CDFW;
- Natural communities and associated buffers protected pursuant to applicable plans, policies, and regulations; and
- Critical Habitats designated by United States Fish and Wildlife Service (USFWS).

Coast Live Oak Woodland Alliance.

The Project site contains approximately 2.55 acres of Coast Live Oak Woodland Alliance (State Rank S4) that consists of a mix of native riparian species, predominately coast live oak, valley oak, elderberry, and western sycamores. The Coast Live Oak Woodland present in the Project area is not considered to be a Sensitive Natural Community by CDFW, but is considered riparian vegetation. Project activities that would result in impacts to the streambed and the associated riparian habitat are regulated by CDFW.

Intermittent Streambed.

The 0.94 acre of Intermittent Streambed of Saratoga Creek contained within the Project area is considered sensitive by various natural resource agencies to include CDFW, USACE, and RWQCB. The channel bottom within the Project reach is dominated by cobbles with little to no vegetation. The channel under the ordinary high water mark (OHWM) is considered to be waters of the U.S. under the federal Clean Water Act and waters of the state under the Porter Cologne Water Quality Control Act. As a result, Project activities are regulated by the USACE, CDFW, and the RWQCB. In addition, work activities that would substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of, any river, stream, or lake, are subject to regulation under Section 1600 of the California Fish and Game Code (CFGC).

Special-status Species

Valley Water biologists conducted a review of existing data sources, followed by a site reconnaissance to determine onsite conditions. The following existing data sources were reviewed:

- California Native Plant Society (CNPS) Rare Plant Inventory using the 9-quad search function (CNPS 2018)
- Processed and unprocessed data layers of the CNDDB using a search radius of 2 miles around the Project area (CNDDB 2018 & 2019)
- USFWS Information for Planning and Consultation tool (IPaC)
- Santa Clara County Breeding Bird Atlas (Bousman, W.G. 2007)
- Nesting Bird Reports submitted to CDFW in 2018 in compliance with LSAA #1600-2018-0066-R3

For purposes of this analysis, “special-status” animals are those that are:

- listed under the Federal Endangered Species Act (FESA) as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- listed under the California Endangered Species Act (CESA) as threatened, endangered or a candidate threatened or endangered species;
- designated by the CDFW as a California species of special concern;
- listed in the California Fish and Game Code as a fully protected species (fully protected birds are designated in §3511, mammals in §4700, reptiles and amphibians in §5050, and fish in §5515); and

- protected under the federal Migratory Bird Treaty Act and Sections 3503 and 3503.5 of the California Fish and Game Code.

For the purpose of this analysis, "special-status" plants include those:

- listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- listed under CESA as threatened, endangered, rare, or a candidate species; or
- ranked by the CNPS as rare, endangered or on the watch list in Ranks 1A, 1B, 2A, 2B or 4.3.

Following the review of the above listed existing data sources and biological surveys performed by Valley Water botanists and Valley Water wildlife biologists, the following list of special-status species was developed (Table 4-3). A total of six special-status plants, one amphibian, one reptile, six birds, and three mammals have been identified to potentially occur within the Project area. However, all six special-status plants were determined to be *Absent* in the Project area, the California red-legged frog (*Rana draytonii*) and western pond turtle (*Actinemys marmorata pallida*) are *Not Expected to Occur* in the Project area, the three special-status birds are considered *Absent as Breeders* in the Project area, Townsend's big-eared bat *(Corynorhinus townsendii)* is considered *Absent as Rooster,* western red bat *(Lasiurus blossevillii)* is considered *Absent as Maternity Rooster,* and the San Francisco dusky-footed woodrat *(Neotoma fuscipes annectens)* is considered *Absent* from the Project area. Three raptor species, specifically red-tailed hawk, red-shouldered hawk, and coopers hawk, are considered *Potential as Breeder.* The reasoning for these conclusions is provided in Table 4-3 and as described further below.

Regulatory Framework

Biological resources within the Project area are protected by numerous federal and state regulations, including the CWA, Federal Endangered Species Act, Migratory Bird Treaty Act, California Endangered Species Act, Native Plant Protection Act, and CFGC. Regulations for biological resources are also established at the local level by the City of Saratoga.

Federal Endangered Species Act (FESA). The FESA (16 U.S. Government Code (USC) Sec. 1531 et seq.) protects fish and wildlife species that are listed as threatened or endangered and their habitats. Endangered refers to species, subspecies, or distinct population segments that are in danger of extinction in all or a significant portion of their range. Threatened refers to species, subspecies, or distinct population segments that are considered likely to become endangered in the future. The FESA is administered by the USFWS for terrestrial and freshwater species and by the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service (NMFS) for marine species and anadromous fishes. The FESA prohibits "take" of any fish or wildlife species listed by the federal government as endangered or threatened.

Migratory Bird Treaty Act (MBTA). The MBTA (16 USC Sec. 703–712 et seq.) enacted the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate take of migratory birds. The MBTA is administered by USFWS. It establishes seasons and bag limits for hunted species, and renders taking, possession, import, export, transport, sale, purchase, and barter of migratory birds, their occupied nests, and their eggs illegal except where authorized under the terms of a valid federal permit. Activities for which permits may be issued include scientific collecting; falconry and raptor propagation; "special purposes," which include rehabilitation, education, migratory game bird propagation, and miscellaneous other activities; control of depredating birds; taxidermy; and waterfowl sale and disposal. More than 800 species of birds are protected under the MBTA. Specific definitions of migratory bird are discussed in each of the international treaties; in general, however, species protected under the MBTA are those that migrate to complete different stages of their life history or to take advantage of different habitat opportunities during different seasons.

Table 4-3: Potential Occurrence of Special-status Species within the Project Area			
Common and Scientific Name	Status	Habitat Requirements	Potential Occurrence in Project Area
Amphibians and Reptiles			
California Red-legged Frog (*Rana draytonii*)	FT, CSC	Permanent or semi-permanent aquatic breeding areas and upland dispersal habitats.	Not Expected to Occur; Suitable habitat is absent and there are no known occurrences of CRLF on the valley floor in the general area.
Western Pond Turtle (*Actinemys marmorata pallida*)	CSC	Ponds, lakes, perennial and intermittent streams, and wetlands with vegetation, basking habitat, and upland areas for reproduction.	Not Expected to Occur**;** Suitable habitat is absent and WPT are not known to inhabit Saratoga Creek.
Birds			
White-tailed Kite (*Elanus leucurus*)	FP	Coastal and valley lowlands. Forage in open grasslands, meadows, agricultural, and marsh habitats. Nest high in dense tree stands near foraging habitat.	Absent as Breeder; Suitable nesting substrates are present but the necessary adjacent foraging habitat is absent.
Red-tailed Hawk *(Buteo jamiacensis)*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	Potential as Breeder**;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
Red-shouldered Hawk *(Buteo lineatus)*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	Potential as Breeder**;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
Cooper's Hawk *(Accipiter cooperii)*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	Potential as Breeder**;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
Yellow-breasted Chat (*Icteria virens*)	CSC	Riparian habitats with a mature overstory, an understory of willows with dense underbrush.	Absent as Breeder; No suitable nesting habitat within the Project area.
Yellow Warbler (*Setophaga petechia*)	CSC	Riparian habitats, often with an overstory of mature cottonwoods/sycamores, a mid-story willow and box elder, and a substantial understory of vines, blackberries, and forbs.	Absent as Breeder; No suitable nesting habitat within the Project area.
Mammals			
Western Red Bat *(Lasiurus blossevillii)*	CSC	Roosts primarily in trees, less often shrubs. Roost sites often in edge habitats.	Absent as Maternity Rooster**;** Migratory species. Does not raise young in Santa Clara County. Overwinters in the county generally from November to February.
Townsend's Big-eared Bat *(Corynorhinus townsendii)*	CSC	Roosts in caves, mines, tunnels, buildings, or other human-made structures.	Absent as Rooster**;** No suitable roosting habitat within the Project area.
San Francisco Dusky-footed Woodrat (*Neotoma fuscipes annectens*)	CSC	Forest habitats of moderate canopy and moderate to dense understory.	Absent; No lodges or sign of activity in or within 500 meters upstream and downstream of the Project area.
Plants			
Santa Clara Red Ribbons (*Clarkia concinna ssp. Automixa*)	CRPR 4.3	Chaparral, Cismontane woodland	Absent**;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.

Table 4-3: Potential Occurrence of Special-status Species within the Project Area

Common and Scientific Name	Status	Habitat Requirements	Potential Occurrence in Project Area
Lewis' clarkia (*Clarkia lewisii*)	CRPR 4.3	Broad-leafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub	Absent**;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
Western Leatherwood (*Dirca occidentalis*)	CRPR 1B.2	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland; mesic areas	Absent; Focused surveys were performed in February 2019, during the blooming period. The species was determined to be absent.
Loma Prieta hoita (*Hoita strobilina*)	CRPR 1B.1	Chaparral, Cismontane woodland, Riparian woodland; usually serpentinite or mesic areas	Absent**;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
Arcuate Bush-mallow (*Malacothamnus arcuatus*)	CRPR 1B.2	Chaparral, Cismontane woodland	Absent**;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
White-flowered Rein Orchid (*Piperia candida*)	CRPR 1B.2	Broad-leafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes in serpentine areas	Absent**;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.

Notes: FP = State of California Fully Protected Species
SE = State Endangered Species
CSC = California Species of Special Concern
CFGC = California Fish and Game Code 3503.5
FT = Federally Threatened Species
FE = Federally Endangered Species
CRPR = California Native Plant Society, California Rare Plant Rank:
1B.1 – Plants rare, threatened, or endangered in California and elsewhere - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
1B.2 - Plants rare, threatened, or endangered in California and elsewhere - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
4.3 – Watch List: Plants of limited distribution - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)
Source: Valley Water, 2019.

The Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act (16 USC Sec. 668 et seq.) makes it unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, or their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbance. Exceptions may be granted by the USFWS for scientific or exhibition use, or for traditional and cultural use by Native Americans. However, no permits may be issued for import, export, or commercial activities involving eagles.

California Endangered Species Act (CESA). CESA protects wildlife and plants listed as threatened and endangered by the California Fish and Game Commission, as well as species identified as candidates for such listing. It is administered by the CDFW. CESA requires state agencies to conserve threatened and endangered species (Sec. 2055) and thus restricts all persons from taking listed species except under certain circumstances. CESA defines take as any action or attempt to "hunt, pursue, catch, capture, or kill." Under certain circumstances, CDFW may authorize limited take, except for species designated as fully protected (see discussion of fully protected species under California Fish and Game Code below). The requirements for an application for an incidental take permit under CESA are described in Section 2081 of the California Fish and Game Code and in final adopted regulations for implementing Sections 2080 and 2081.

California Species of Special Concern. A Species of Special Concern (SSC) is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

CDFW uses the administrative designation of Species of Special Concern to achieve conservation and recovery of these animals before they meet the CESA criteria for listing. This administrative designation carries no formal legal status; however, the following analysis also considers Project impacts to designated Species of Special Concern.

California Fish and Game Code. The California Fish and Game Code provides protection from take for a variety of species, separate from and in addition to the protection afforded under CESA. The Code defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Species identified in the Code as fully protected may not be taken except for scientific research. Fully protected species are listed in various sections of the Code. For instance, fully protected birds in general are protected under Section 3511, nesting birds under Sections 3503.5 and 3513, and eggs and nests of all birds under Section 3503. Birds of prey are addressed under Section 3503.5. All other birds that occur naturally in California and are not resident game birds, migratory game birds, or fully protected birds are considered non-game birds and are protected under Section 3800. Section 3515 lists protected fish species and Section 5050 lists protected amphibians and reptiles. Section 4700 identifies fully protected mammals.

The California Fish and Game Code section 1602 requires an entity to notify CDFW before commencing an activity that will: (1) Substantially divert or obstruct the natural flow, or

substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or (2) Deposit or dispose of debris, waste or other material where it may pass into any river, stream, or lake. Because the Project proposes to temporarily place fill material within the streambed and bank of Saratoga Creek during access ramp construction, the Project would be subject to a 1602 of the CFGC.

City of Saratoga

Tree Regulations. Article 15-50 of the City of Saratoga Municipal Code, defines the purpose of the tree regulations as follows:

The City Council finds:

- that the City is primarily a residential community;
- that the economics of property values is inseparably connected with the rural attractiveness of the area, much of which is attributable to the wooded hillsides and the native and ornamental trees located throughout the City;
- that the preservation of such trees is necessary for the health, safety and welfare of the residents of the City in order to preserve scenic beauty, prevent erosion of topsoil, protect against flood hazards and the risk of landslides, counteract pollutants in the air, maintain the climatic balance and decrease wind velocities."

The following tree regulations apply to the proposed Project. Section 15-50.050 of the City of Saratoga municipal code states, "Except as otherwise provided in Section 15-50.060, it is unlawful for any person to remove, damage, prune, or encroach upon, or cause to be removed, damaged, pruned, or encroached upon any protected tree, located on any private or public property in the City without first having obtained a tree removal, pruning or encroachment permit issued pursuant to this Article and authorizing the proposed action. A protected tree shall consist of any of the following:

(a) Any native tree having a DBH of six inches or greater

(b) Any other tree having a DBH of ten inches or greater.

(c) Any street tree, as defined in Section 15-50.020(v), regardless of size.

(d) Any heritage tree, as defined in subsection 15-50.020(n) regardless of size.

(e) Any tree required to be planted or retained as a condition of any approval granted under this Chapter or Chapter 14 of this Code.

(f) Any tree required to be planted as a replacement, as provided in Section 15-50.170 of this Article."

Discussion

a) ***Less than Significant Impact with Mitigation Incorporated.*** Following a review of existing data sources, the following special-status animals have the potential to occur within the Project vicinity: California red-legged frog; western pond turtle; yellow warbler (*Setophaga petechia*); yellow-breasted chat (*Icteria virens auricollis*); white-tailed kite (*Elanus leucurus*); red-tailed hawk (*Buteo jamiacensis*); red-shouldered hawk *(Buteo lineatus);* Cooper's hawk *(Accipiter cooperii);* Townsend's big-eared bat; western red bat; and San Francisco dusky-footed woodrat. Surveys confirmed that there are no special-status plants in the Project area. Potential impacts of the proposed Project on these species are described below.

Special-status Animal Species

Amphibians and Reptiles

California Red-legged Frog. California red-legged frog (CRLF) chiefly inhabits ponds, although it also uses marshes, streams, lagoons, and other waterways throughout most of its range (Thomson et al. 2016). In the central and northern part of its range (e.g. Santa Clara County), breeding primarily takes place in ponds, less frequently in quiet pools and streams (Fellers 2005). Following the assessment of the onsite aquatic habitat, it was determined that due the lack of deep pools, lack of backwaters, lack of emergent vegetation, and the anthropogenic water regime throughout this reach, suitable breeding habitat is absent within the Project area. The habitat assessment also considered the year-round occupation of aquatic habitat by juveniles, and occupation by adults outside of the breeding season. It was determined that the likelihood of CRLF presence within the aquatic habitat is very unlikely due to very shallow water depths and the lack of emergent vegetation within the Project area that would yield substantial risk of predation for frogs combined with the anthropogenic water regime. Use of upland habitat by CRLF is strongly correlated with the proximity of suitable aquatic habitat. Since the suitability of the aquatic habitat present is very low it was determined that the likelihood of occurrence of CRLF presence within the upland habitat would be very unlikely.

In addition, no amphibians known to occupy similar habitat such as Sierran tree frog (*Pseudacris sierrae*) or California toad (*Anaxyrus boreas halophilus*) were observed within the Project alignment. These amphibians are very common in other creeks throughout Santa Clara County and are typically found co-inhabiting areas with CRLF.

Therefore, the primary concern of impacting CRLF comes from the possibility that itinerant frogs may move through the Project area despite the lack of suitable habitat. Processed and unprocessed California Natural Diversity Data Base (CNDDB) data layers were reviewed to determine where the closest CRLF occurrences are located. The closest record (Occurrence # 211) was of a juvenile ~3.1 miles upstream in the Saratoga Hills. This location is far outside the one-mile (1.6-kilometer) search radius provided as a general guideline by USFWS when performing site assessments (USFWS 2005). As a result, it has been determined that the CRLF is not expected to occur within the Project area.

In addition, no CRLF or signs of their presence were observed during site surveys conducted by Valley Water staff. It should also be noted that no CRLF were detected by the CDFW-approved Biologists who conducted focused surveys in compliance with Notification No. 1600-2018-0066-R3 in early 2018. Therefore, impacts associated with the proposed Project to CRLF would be considered less than significant. In addition, Valley Water would implement BMP BI-2 which would avoid/minimize Project impact on native aquatic vertebrates including amphibians and reptiles, BMP BI-10 which avoid animal entry and entrapment, and BMP BI-11 which requires removal of trash daily at the work site to avoid attracting predators to the site; these BMPs would further avoid or reduce any impact on CRLF.

Western Pond Turtle. The Western Pond Turtle (WPT) is generalized in its habitat requirements, occurring in a broad range of permanent aquatic water bodies, but also occupies seasonal streams (Bury and Germano 2008). In streams, they are found in greatest concentrations in pool habitats (Bury 1972) where optimal habitat features such as deep waters with low velocity and suitable refugia (Reese and Welsh 1998) are commonly found. Adequate basking sites are also key components of optimal habitat (Ernst and Lovich 2009). Despite its common name and its strong association with aquatic habitats, this species relies heavily on terrestrial habitats for several crucial elements of its existence (Ernst and Lovich 2009). This includes nesting, hibernation, estivation, and refuge from flooding or drying events. The habitat suitability within the Project area was assessed to determine the likelihood of the presence of WPT. This reach of creek is very shallow overall, and only a few shallow

(not deep) pools were observed within the Project alignment. Overall the Project alignment is shaded by existing tree canopy, which significantly reduces suitable basking sites for WPT. The only potential available food source observed during site visits was algae. No fish, aquatic invertebrates, or aquatic plants were observed. It was also noted that minimal vegetative cover along the creek was present. Therefore, due to very shallow water depths and lack of vegetative cover yielding substantial risk of predation for turtles, lack of optimal habitat features, low availability of food, and the anthropogenic water regime, it was determined that the WPT is not expected to occur within the onsite aquatic habitat.

Use of upland habitat by turtles is strongly correlated with proximity of suitable aquatic habitat. Since the suitability of the aquatic habitat present is very low it was determined that the likelihood of occurrence of WPT presence within the upland habitat is very unlikely. Because the presence of WPT within the habitats onsite is determined to be very unlikely, the primary concern of impacting WPT would come from a wandering turtle moving through the Project area. However, there are no records within the processed and unprocessed CNNDB data layers of WPT occurring in Saratoga Creek. Nor have Valley Water Biologists ever observed WPT in Saratoga Creek over the years conducting numerous biological surveys other Valley Water activities. Therefore, the WPT is not expected to occur within the Project area.

In addition, no southern western pond turtles or signs of their presence were observed during the surveys conducted for the proposed Project. It should also be noted that no WPT were detected by the CDFW-approved biologists who conducted focused surveys in compliance with Notification No. 1600-2018-0066-R3 in early 2018. Therefore, impacts associated with the proposed Project to WPT would be considered less than significant. In addition, Valley Water would implement BMP BI-2 which would avoid/minimize Project impacts on native aquatic vertebrates including amphibians and reptiles, BMP BI-10 which avoid animal entry and entrapment, and BMP BI-11 which requires removal of trash daily at the work site to avoid attracting predators to the site; these BMPs would further avoid or reduce any impact on WPT.

Birds: Non-Raptors

Nesting Birds. Nesting birds are protected under the MBTA and CFGC 3503. Although site surveys were conducted outside of the nesting season, several species of bird were documented during earlier site visits in 2018 as nesting in the Project Area. These species included mourning dove (*Zenaida macroura marginella*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus bairdi*), Steller's jay (*Cyanocitta stelleri*), bushtit (*Psaltriparus minimus*), California towhee (*Melozone crissalis*), and dark-eyed junco (*Junco hyemalis*). The removal of eucalyptus trees during the nesting season (January 15th – September 1st) could result in potentially significant impacts to nesting birds. While BMP BI- 4 (Minimize Adverse Effects of Pesticides on Non-target Species), BMP BI-5 (Avoid Impacts to Nesting Migratory Birds), and BI-6 (Avoid Impacts to Nesting Migratory Birds from Pending Construction) provide general guidance to minimize and avoid Project impacts on nesting birds, undertaking construction during nesting season could result in harm of migratory birds or destruction of their eggs, which would be considered a significant impact. Mitigation Measure BI-1 is proposed to further reduce this potentially significant impact. This mitigation measure requires that Valley Water avoid construction during nesting season to the extent possible, perform nesting bird survey no more than 7 days prior to Project activities during nesting season, implement specified buffer zone distances if an active nest is found, and ensure that Project staff, contractors and other work crews are trained to implement these avoidance measures. Implementation of Mitigation Measure BI-1 would reduce potentially significant impacts to a less than significant level.

The following birds are considered special-status species.

Yellow Warbler. The yellow warbler is listed by CDFW as a California Species of Special Concern for nesting. Although the onsite riparian vegetation may provide suitable foraging

habitat for the yellow warbler, no suitable nesting habitat was found to be present on or adjacent to the Project area. In addition, this species was not observed during site reconnaissance surveys. Therefore, due to a lack of suitable onsite nesting habitat, and the absence of the species during onsite surveys, impacts would be considered less than significant.

Yellow-breasted Chat. The yellow-breasted chat is listed by CDFW as a California Species of Special Concern for nesting. Although the onsite riparian vegetation may be considered suitable foraging habitat for the yellow-breasted chat, no suitable nesting habitat was found to be present on or adjacent to the Project area. In addition, this species was not observed during site reconnaissance surveys. Therefore, due to a lack of suitable onsite nesting habitat, and the absence of the species during onsite surveys, impacts would be considered less than significant.

Birds: Raptors

Red-tailed Hawk. Raptor nests are protected year-round under CFGC 3503.5. Red-tailed hawks are adapted to urban settings and potentially could nest in the Project area. Although no red-tailed hawks were observed onsite, an inactive red-tailed hawk nest was observed onsite at the top of hazard tree #317 during surveys conducted by a Valley Water biologist on September 27 and November 14, 2018. Following a subsequent onsite survey, it was confirmed that the onsite raptor nest was not active during the entire 2018 nesting season. If it is confirmed by Valley Water biologists that the nest remains inactive, Valley Water would request permission from CDFW to dismantle the nest in compliance with CFGC 3503.5 and no significant impacts would occur. However, if it is determined that the nest has become active prior to the start of tree removal efforts, the tree and nest would be avoided until the young have fledged and a 300-foot no-work buffer zone surrounding the nest would be established in compliance with Mitigation Measure BI-1. In addition, removal of eucalyptus trees during the nesting season (January 15th – September 1st) could result in potentially significant impacts to nesting red-tailed hawk. Implementation of BMP BI-5, BMP BI-6, and Mitigation Measure BI-1 would reduce impacts to the red-tailed hawk to a less than significant level.

Red-shouldered Hawk. Raptor nests are protected year-round under CFGC 3503.5. Red-shouldered hawks are adapted to urban settings and potentially could nest in the Project Area. Although no red-shouldered hawks were observed onsite during surveys conducted by a Valley Water biologist on September 27 and November 14, 2018, the removal of eucalyptus trees during the nesting season (January 15th – September 1st) could result in potentially significant impacts to nesting red-shouldered hawks. Implementation of BMP BI-5, BMP BI-6, and Mitigation Measure BI-1 would reduce the potentially significant impacts on red-shouldered hawk to a less than significant level through pre-construction surveys and the establishment of a 300-foot no-work buffer zone around active nests.

Cooper's Hawk. Raptor nests are protected year-round under CFGC 3503.5. Cooper's hawks are adapted to urban settings and potentially could nest in the Project Area. Although no Cooper's hawks were observed onsite during surveys conducted by a Valley Water biologist on September 27 and November 14, 2018, the removal of eucalyptus trees during the nesting season (January 15th – September 1st) could result in potentially significant impacts to nesting Cooper's hawks. Implementation of BMP BI-5, BMP BI-6, and Mitigation Measure BI-1 would reduce potentially significant impacts on Cooper's Hawk to a less than significant level through pre-construction surveys and the establishment of a 300-foot no-work buffer zone around active nests.

White-tailed Kite. The white-tailed kite is listed by CDFW as a Fully Protected Species. Although suitable nesting substrates are present within the Project area, the necessary adjacent foraging habitat is absent to support nesting; therefore, no suitable nesting habitat

was found to be present within or adjacent to the Project area. In addition, no white-tailed kites were observed onsite during surveys conducted by a Valley Water biologist on September 27 and November 14, 2018; and therefore, no impact on white-tailed kite is expected.

Mammals

Western Red Bat. The Western red bat is a CDFW Species of Special Concern. Western red bat is a foliage roosting species that potentially could use the eucalyptus trees as day roost sites. Western red bats are known to raise young in Santa Clara County (D. Johnston, pers. comm. 2019, Johnston; D. S., and S. Whitford. 2009). This migratory species is known to overwinter in the San Francisco Bay area, generally present from November to February (Johnston, D. S., and S. Whitford. 2009; Cryan, P. M., 2003). The Project work is scheduled to occur between July 1st and December 31st each year when this species is migrating between their summer ranges and winter ranges. Therefore, direct impacts to maternity or winter day roosting bats are not anticipated. Temporal loss of winter day roost sites resulting from the removal of the eucalyptus was evaluated. Since western red bats are solitary winter roosting species (i.e. not colonial roosting species), the removal of the eucalyptus would not cause a substantial adverse effect on the local populations that do overwinter in Santa Clara County. Therefore, impacts to this species would be considered less than significant.

Townsend's Big-eared Bat. Townsend's big-eared bat is a CDFW Species of Special Concern. Townsend's big-eared bat is a cave-dwelling species, but is also known to use old, mostly-abandoned buildings with darkened and enclosed cave-like attics in addition to other anthropogenic structures (Barbour and Davis 1969). No structures were identified in or adjacent to the Project area that would be considered suitable roosting locations for Townsend's big-eared bat. Therefore, impacts to this species would be considered less than significant.

San Francisco Dusky-footed Woodrat. The San Francisco dusky-footed woodrat (SFDF) is a CDFW Species of Special Concern. Detection of the presence of the SFDFs is relatively simple due to their behavior of constructing large nests (Ingles 1965), which are typically the focal point of their home range (Linsdale and Tevis 1951). SFDWs are a non-migratory species, (CWHR 2008) and since no nests are present within the Project area, the concern of SFDWs occurring would come from the establishment of new territories by dispersing SFDWs. There are high costs associated with female dispersal and their reproduction favors female philopatry since they require nests for successful rearing of young. Female woodrats, unlike males, usually spend their entire life in their area of birth (Kelly 1989). Therefore, a pioneering male would be the only potential inhabitant of the area. The maximum dispersal distance known for SFDWs is 1,423 feet (Penrod, Cabanero et al. 2004).

The site reconnaissance-level surveys conducted by Valley Water biologists concluded that no SFDW nests or other signs of their presence occur inside or within 1,640 feet of the Project alignment. In addition, no SFDWs or sign of their presence were detected by the CDFW approved biologists who performed several focused surveys within a portion of the Project alignment in compliance with Notification No. 1600-2018-0066-R3 in early 2018 for previous tree removal work. For the reasons discussed above, the San Francisco dusky-footed woodrat is considered to be absent within the Project alignment. Therefore, the proposed Project would result in no impact to the SFDW.

Special-status Plant Species

No special-status plant species have been identified within the Project area as of June 2019, and it has been determined that they are unlikely to occur based on a review of existing data sources and recent site reconnaissance by Valley Water botanists (see Table 4-3). The majority of Project-related impacts would occur under the canopy of non-native eucalyptus trees, which for the most part has precluded the establishment of understory vegetation due to allelopathic interactions. Additionally, the limited Project impact areas occurring beneath

the native overstory (temporary ramps/access points) are in areas with disturbed soils and abundant non-native understory. To confirm special-status plants are absent, focused botanical surveys were conducted during the appropriate blooming periods for each of the six species (see Appendix B). All six special-status plant species were determined to be absent from the Project area. Therefore, no impact to special-status plants is expected to occur from Project implementation, and no mitigation measures would be required.

b) ***Less than Significant with Mitigation Incorporated***. The Project area contains approximately 1.81 acres of Eucalyptus Grove, 2.55 acres of Coast Live Oak Woodland Alliance, and 0.94 acre of Intermittent Streambed, all of which are contained within the riparian corridor. Impacts of the proposed Project on these land cover types are described below.

Riparian Trees

The Project proposes the permanent removal of 1.81 acres of Eucalyptus Grove followed by the planting of native riparian species, all within the riparian corridor of Saratoga Creek. The Project would not only alleviate the safety concerns of the hazardous trees, it would also restore the impacted areas of non-native eucalyptus and ash trees with up to 3.4 acres of native riparian vegetation. As summarized in Table 4-4 and as discussed in the Project Description, the removed eucalyptus and ash trees would be replaced with an equivalent number of native trees and shrubs. Planting with native riparian species would occur the following season, once the eucalyptus stumps are no longer sprouting and dead. Implementation of BMP BI-8. (Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes) would reduce bank erosion and facilitate the development of a native understory in the Project area. The reestablishment of native riparian vegetation in the former Eucalyptus Grove is expected to take a minimum of five years upon removal.

Table 4-4: Impacts to Riparian Vegetation Communities and Streambed

	Coast Live Oak Woodland Alliance (No. Impacted Trees)	**Intermittent Streambed (Acres of Channel Area)**	**Eucalyptus Grove/Ash Trees (No. of Impacted Trees)**
Temporary	0 trees	0.94 acre	0 trees
Permanent	7 coast live oak trees	0 acres	106 trees
Total	***7 trees and shrubs***	***0.94 acre***	***106 trees***
Proposed Project Feature	**Project Feature:** Plant 7 oak trees and shrubs	**BMP BI-9:** Streambed will be restored following tree removal	**Project Feature:** Plant 106 trees (plus 26 trees for previously authorized project) (see Section 2.0 Project Description)

Source: Valley Water, 2019.

The Project would also remove seven, native coast live oak trees within the Coast Live Oak Woodland Alliance to allow for the construction of the temporary access ramps (see Tables 4-4 and 4-5). Following completion of each stage of tree removal and the removal of the access ramp, revegetation within the Coast Live Oak Woodland Alliance with native species would occur. The seven removed oak trees would be replaced with an equivalent number of either coast live oaks *Quercus agrifolia* or valley oaks *Q. lobata*.

Although there would be a temporal loss of habitat prior to site restoration, impacts associated with eucalyptus removal and the reestablishment of native riparian vegetation within the Project area are considered to be ecologically beneficial. Considering the beneficial impact to the habitat in the long term, the Project would not result in a substantial adverse impact on riparian habitat or other sensitive natural community. In addition, Valley Water would comply with applicable requirements in the Saratoga tree ordinance as discussed in e) below and the

Section 1602 LSAA with CDFW. Therefore, the Project would not result in a substantial adverse impact on riparian habitat or other sensitive natural community; the impact is considered to be less than significant.

Table 4-5: Vegetation Impacts for Equipment Access

Species	Access Point	Pruning/ removal	DBH (inches)	Canopy cover Removed (sq ft)	Work area
Native Species (Coast Live Oak Woodland Alliance)					
Coast live oak	AS5	remove	10	150	A
Coast live oak	AS5	remove	12	200	A
Coast live oak	AS4	prune	12 limbs (2)	500	A
Coast live oak	AS2	remove	10.5	250	B
Coast live oak	AS3	remove	3.5	20	C
Coast live oak	AS3	remove	6.5 (multi stem)	50	C
Coast live oak	AS3	remove	6.5	50	C
Coast live oak	AS3	remove	11.5	600	C
Coast live oak	AS3	prune	8 limb	75	C
Elderberry	AS3	prune	6	6	C
Elderberry	AS3	prune	8 (multi stem)	13	C
Non-native Species					
Ash	AS3	remove	14	750	C
Ash	AS3	remove	130 (multi stem)	2000	C
Source: Valley Water, 2019.					

Intermittent Streambed

The Project would result in temporary impacts to 0.94 acre of Intermittent Streambed for construction access. Most of this impact would result from driving equipment along the streambed for the three work seasons. In addition, the Project would require the placement of 195 cubic yards of fill along with minor grading to construct two temporary equipment access ramps and place 2 cofferdams during dewatering (if required). All fill material would be removed from the Project area following the completion of each phase of tree removal and/or prior to the onset of winter rains. Following construction, the streambed topography and geometry would be restored to pre-Project conditions to the extent possible consistent with BMP BI-3. Therefore, impacts to Intermittent Streambed is considered to be less than significant.

c) ***No Impact.*** The reach of Saratoga Creek within the Project area contains 0.94 acre of intermittent streambed/open water. An aquatic resource delineation was conducted for the Project area on August 13, 2018 (see Appendix C). The delineation was conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" (USACE 1987). Version 2.0 of the Arid West Regional Supplement (USACE 2008), and "A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States" (Lichvar and McColley 2008).

A total of 1.26 acres of waters of the state and waters of the U.S was mapped within the project study area (Appendix C). However, it should be noted that a small portion of the 1.26-acre area is now located outside of the project limits due to further refinement of the Project area. It was found that the Project reach of Saratoga Creek only conveys flow episodically, and is classified as an intermittent streambed. The intermittent streambed is single-thread, with coarse channel substrates, and 16-20 feet wide and 2-3 feet deep at the OHWM. A review

of the National Wetland Inventory (NWI) mapping for this reach of Saratoga Creek shows the area as freshwater forested/shrub wetland, which is typically limited to estuarine and palustrine wetlands (FGDC 2013). The Federal Geographic Data Committee (2013) notes that forested shrub wetlands can occur on the floodplains of riverine systems, but this reach of Saratoga Creek does not support floodplains upon which such wetland could establish. As such, the classification in NWI does not reflect the existing site conditions. However, the aquatic delineation report found that below the OHWM the channel is mostly unvegetated, with just one white alder (*Alnus rhombifolia*; FACW), or sparse cover of species such as dotted smartweed (*Persicaria punctata*; OBL), tall flat sedge (*Cyperus eragrostis*; FACW), watercress (*Nasturtium officinale*; OBL), and rabbit's-foot grass (*Polypogon monspeliensis*; FAC). As such, the aquatic resources delineation report concluded that no features in the survey area are present that exhibit riverine or wetland characteristics. The more recent aquatic resources delineation report's conclusion reflects the Project site conditions more accurately than the NWI's general mapping/classification. Therefore, no impact would occur to state or federally protected wetlands.

d) ***Less than Significant Impact****.* Wildlife corridors are distinct, commonly linear features who primary function is to connect two or more significant (or core) habitat areas (Beier and Loe 1992). Although Saratoga Creek originates in the west in the Santa Cruz Mountains, which is considered a significant habitat area, it does not connect to another significant habitat area. Once the creek reaches the valley floor it is surrounded by urban and residential development until it terminates at its confluence with San Tomas Aquino Creek, a suburban area of the city of Santa Clara. Saratoga Creek is not inhabited by anadromous (migratory) fish species and is an ephemeral creek, typically dry in the summer months while the work would be occurring. Thus, impacts to migratory wildlife, anadromous fish, or resident fish are not expected to occur. Resident wildlife may avoid Project areas with temporarily high human activity and noise, but as soon as the hazard tree removals have been completed, wildlife movement in the Project area will return to its original condition. Further, the Project will restore the native riparian habitat in the Project area, potentially improving the ability for wildlife movement. Therefore, impacts to habitat connectivity and wildlife movement are considered to be less than significant.

e) ***Less than Significant Impact*****.** The Project proposes the removal of 104 non-native hazardous blue gum eucalyptus trees, and seven native coast live oak trees, and two non-native invasive ash trees for heavy equipment access (see Table 4-5). Two additional coast live oak trees would also require pruning. Section 15-50.050 of the City of Saratoga municipal code identifies these trees as requiring a permit for their removal. The tree regulations state that the removal of "any native tree having a DBH of six inches or greater" and "any other tree having a DBH of ten inches or greater" require a permit from the City of Saratoga. All of the trees proposed for removal fall under one of these two categories (see Table 4-5). Therefore, Valley Water would apply for tree removal permits for from the City of Saratoga prior to the commencement of work on the site and would comply with the City's permit requirements. Thus, the Project would not conflict with any tree ordinance; impacts relating to conflict with local policies and ordinances protecting biological resources are considered less than significant. In addition, as described above, the Project impacts on riparian habitat/sensitive natural community would be less than significant. The revegetation, and ultimately the replacement with native tree canopy, would result in a beneficial impact in the long-term.

f) ***No Impact.*** There is no adopted habitat conservation plan or natural community conservation plan that would apply to the proposed Project. Therefore, the proposed Project would not conflict with the provisions of an adopted plan; there will be no impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

BI-2: Avoid and Minimize Impacts on Native Aquatic Vertebrates
BI-3: Remove Temporary Fill
BI-4: Minimize Adverse Effects of Pesticides on Non-target Species
BI-5: Avoid Impacts to Nesting Migratory Birds
BI-6: Avoid Imparts to Nesting Migratory Birds from Pending Construction
BI-8: Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes
BI-11: Minimize Predator-Attraction

MITIGATION MEASURES

MM BI-1: ***Nesting Birds.*** The following measures shall be implemented to avoid and minimize Project impacts on nesting birds:

- To the extent possible vegetation removal shall be conducted outside of the nesting season (January 15th – September 1st).
- A qualified biologist shall train all Project staff, contractors, and other work crews regarding the following: 1) signs of nesting behavior and identification of active nests; 2) the requirement to stop work if any active nests are found or suspected until a qualified biologist inspects the area; and 3) compliance with avoiding the no-work buffer zones.
- During the nesting season, nesting bird surveys shall be performed by a qualified biologist no more than 7 days prior to the start of Project activities. If a lapse in Project related work of 7 days or longer occurs, a subsequent nesting bird survey shall be conducted.
- If an active nest is found, a 50-foot no-work buffer zone shall be implemented surrounding the nest, with exception of raptors, herons, and egrets, which shall have a 300-foot no-work buffer zone surrounding the nest.

5. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The Santa Clara Valley floor is characterized by numerous stream channels. Over thousands of years, alluvial flooding events have resulted in the deposition of sediments along stream banks, resulting in the gradual formation of natural levees. These areas have yielded the greatest concentrations of archaeological resources within the Santa Clara Valley and represent some the most potentially sensitive areas for inadvertent discoveries (Hylkema 2010). Many archaeological

deposits have also been capped or obscured over time by alluvial deposition, and it is notable that many of the archaeological sites and isolated finds recorded throughout the valley have only come to light through ground disturbing activities associated with urban development or infrastructure projects.

The Santa Clara Valley represents the ancestral lands of the Ohlone Indians, whose descendants continue to thrive in the region today. Prehistorically, the Santa Clara Valley offered a wide range of ecological niches, including marine, tidal marsh, freshwater marsh, grassland prairie, oak grassland savanna, riparian, chaparral, mixed hardwood, and evergreen forest communities (Bocek 1990). Franciscan chert and sandstone were readily available for the manufacture of flaked stone and groundstone tools, while other materials such as obsidian were obtained from neighboring groups through trade. Acorns, a staple for the Ohlone and many other Native Californians, were particularly important because they could be stored through the winter months during times of resource scarcity. They were ground with stone pestles and mortars, which are among the most frequently recorded archaeological finds in California.

Spanish exploration and missionization in the mid-to-late 18th century had a profound impact on the Ohlone and on the natural landscape of Santa Clara Valley. By 1805, most of the Ohlone within the valley had been brought within the mission system. Ultimately, the Ohlone population was severely decimated through exposure to European diseases and malnutrition (Field, et al. 2007; Milliken 2007). The native landscape of the Santa Clara Valley also was transformed, and agricultural development within the 19th century had profound effects upon the valley's ecosystem and the drainages that were integral to it. Though some creeks still flow within their original channel alignments, the filling of mashes and vernal pools, the excavation of artificial channels, and the construction of artificial levees has altered the landscape to the extent that many archaeological sites have been inadvertently exposed while others have been subsumed by these modern landscapes (Appendix D).

Discussion

a) ***No Impact.*** The proposed tree removal and creek restoration would involve minimal earth disturbing activities on the banks of Saratoga Creek during the temporary ramp construction and site revegetation to facilitate equipment access. No historic period cultural constituents were identified in any areas of the survey corridor. In addition, no structures are located within the Project alignment. As no historical resources are known or expected to occur, implementation of the Project would result in no impact to historical resources.

b) ***Less than Significant Impact.*** Record search results revealed no previously recorded cultural resources in the Project area or within a surrounding 0.25-mile radius. The Native American Heritage Commission (NAHC) did not find any resources listed on the Sacred Lands Inventory within the Project area. In addition, no artifacts, midden, or other evidence of prehistoric habitation was noted during the pedestrian survey, and only modern trash was observed (Appendix D). Therefore, the potential for the discovery of archaeological resources is considered low. All Project excavation activities would comply with BMP CU-1 (Accidental Discovery of Archeological Artifacts, Tribal Cultural Resources, or Burial Remains) as included in the Environmental Setting in Section 3 (Table 3-2), which would require that work at the location of the find will be halted immediately within 100 feet of the find and a "no work" zone shall be established utilizing appropriate flagging to delineate the boundary of this zone. A Consulting Archaeologist will visit the discovery site as soon as practicable for identification and evaluation pursuant to Section 21083.2 of the Public Resources Code and Section 15126 of the California Code of Regulations. If the archaeologist determines that the artifact is not significant, the archaeologist will determine if he artifact or resource can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the archaeologist will develop within 48 hours an Action Plan which will include provisions to minimize impacts and,

if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines.

Implementation of BMP CU-1 would avoid or minimize any potential impacts to archaeological resources; the impact would therefore be less than significant.

c) ***Less than Significant Impact.*** Record search results revealed no previously recorded cultural resources in the Project area or within a surrounding 0.25-mile radius. The Native American Heritage Commission (NAHC) did not find any resources listed on the Sacred Lands Inventory within the Project area. In addition, no intact prehistoric or historic period features or artifacts were observed during the pedestrian survey of the Project area (Appendix D). As such, the potential for encountering human remains during construction would be very low. Though unlikely, human remains could be discovered during tree removal activities and site restoration. Valley Water will comply with standard precautionary measures for the accidental discovery of unknown finds consistent with BMP CU-1 (Accidental Discovery of Archeological Artifacts, Tribal Cultural Resources, or Burial Remains). In the event human remains or burial sites are discovered, the County Coroner will be immediately notified and no further excavation or disturbance of the site would be allowed within 100 feet unless otherwise authorized by the County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs. With the implementation of BMP CU-1, impacts to unknown human remains would be less than significant impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

CU-1: Accidental Discovery of Archaeological Artifacts, Tribal Cultural Resources, or Burial Remains

MITIGATION MEASURES

No mitigation measures required.

6. ENERGY

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

ENVIRONMENTAL SETTING

California's energy system includes electricity, natural gas, and petroleum. According to the California Energy Commission (CEC), California's energy system generates 71 percent of the electricity, 10 percent of the natural gas, and 31 percent of the petroleum consumed or used in the state. The rest of the state's energy and energy sources are imported, and includes electricity from the Pacific Northwest and the Southwest; natural gas purchases from Canada, the Rocky Mountain states, and the southwest; and petroleum imported from Alaska and foreign sources (CEC, 2019a; 2019b; and 2019c). Construction and operation of the Project would require the use of transportation fuels, primarily in the form of gasoline and diesel.

Discussion

a) ***No Impact.*** The Project proposes to remove 104 hazard eucalyptus trees and two non-native invasive ash trees from Saratoga Creek and restore the area with native riparian vegetation. This Project would be phased over a period of three to four years. Once the trees are removed and the site restored, only ongoing site maintenance would occur. The Project would not use excessive amounts of fuel (i.e., gasoline and diesel fuel) that would constitute wasteful, inefficient, or unnecessary consumption of energy. Only the required amount of fuel necessary to complete the proposed work would be used. Therefore, the Project would not result in significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project tree removal and restoration efforts.

b) ***No Impact.*** The Project would not include the development or demolition of any buildings. Therefore, no impact related to compliance with applicable energy and energy efficiency/conservation standards or codes, such as the California Building Standards or California Energy Code, would result. In addition, given the nature of the Project, it would have no impact related to conflicting with or obstructing California's Renewable Portfolio Standard.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures required.

7. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Regulatory Setting

The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive San Fernando earthquake in 1971. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The Project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (California Department of Conservation, California Division of Mines and Geology, 2018). The Project alignment does not cross or come within an Alquist-Priolo Special Studies zone, thus indicating the site is not very close to any known active faults(s) and the lack of observed historical faulting in the site vicinity. The Project area is located approximately 4.2 miles northeast of the San Andreas fault zone.

Regional Geologic Setting

The San Francisco Bay region is one of the most seismically active areas in North America and is dominated by the San Andreas Fault system. This fault system movement is distributed across a complex system of generally strike-slip right-lateral parallel and sub-parallel faults including San Andreas, San Gregorio, Hayward and Calaveras. A major earthquake at any of these sites could produce a strong ground shaking in the study area.

Liquefaction – Liquefaction is the transformation of saturated, loose, fine grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment. According to the liquefaction hazard maps prepared for the USGS, the liquefaction probability in the Project area for a magnitude 7.8 earthquake on the San Andreas Fault would be between 0 and 5 percent (Holzer, T.L., et al., 2008).

Alquist-Priolo Fault Zone – The Project site is not located within the State-designated Alquist-Priolo Earthquake Fault Zone, where site-specific studies addressing the potential for surface fault rupture are required, and no known active faults traverse the site. The nearest Alquist-Priolo Earthquake Fault Zones are associated with the San Andreas Fault Zone, which is located approximately 4.2 miles southwest of the Project site. The closest fault to the City of Saratoga is the San Andreas (California Department of Conservation, 2018).

Seismicity - The Project site and the entire San Francisco Bay Area is in a seismically active region subject to strong seismic ground shaking. Ground shaking is a general term referring to all

aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions.

Soils – According to the Natural Resources Conservation Service (NRCS) web soil survey, soils along the Saratoga Creek Project alignment are comprised of Urban Land-Still complex, 0 to 2 percent slopes, (NRCS, 2019). The Urban Land Still complex is found on alluvial fans and flood plains. Urban land Still complex consists of well drained soils comprised of alluvium derived from metamorphic and sedimentary rock and/or alluvium derived from metavolcanics.

Lateral Spreading - Liquefaction-induced lateral spreading has been defined as the "lateral displacement of large surficial blocks of soil as a result of liquefaction in a subsurface layer." Lateral spreading refers to more moderate movements of gently sloping ground due to soil liquefaction. Liquefaction-induced lateral spreading occurs on mild slopes of 0.3 to 5 percent underlain by loose sand and shallow water. The geologic conditions conducive to lateral spreading are frequently found along streams and other waterfronts in recent alluvial or deltaic deposits, as well as in loosely packed, saturated, sandy fills. According to the Santa Clara County Soil Survey, the depth to groundwater is greater than 80 inches with well drained soils. In addition, the reach of Saratoga Creek located within the Project area is used for groundwater recharge. Therefore, the conditions for lateral spreading to occur are not expected within the Project area.

Paleontological Resources

The UCMP database was searched for fossil locations in Santa Clara County. The results of the UCMP record search identified numerous vertebrate fossil sites in Tertiary to Quaternary age deposits in Santa Clara County. Fossils of comparable age have also been recovered from the Santa Clara Formation, which is located approximately three miles south of the Project. According to the Geologic Map of Palo Alto 15-Minute Quadrangle, California, the Project area is primarily underlain by alluvium (Qa) (Recent; USGS 1963). Because alluvium is a recent formation that is primarily composed of surficial sediments, it is not expected to produce paleontological resources.

Discussion

a-i) ***No Impact*.** Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace. The Project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (California Department of Conservation, California Division of Mines and Geology, 2018). According to the County Geologic Hazard Zones, the Project site is located more than four miles from a fault rupture hazard zone. In addition, no housing or structures are proposed to be located on the Project site. The Project area is located approximately 4.2 miles northeast of the San Andreas fault zone. Therefore, the proposed Project would result in no impact from a fault rupture.

a-ii) ***Less than Significant Impact***. The major faults in the region that could cause ground shaking within the Project area include the San Andreas fault, Hayward fault, and the Calaveras fault, which are located 4.2 miles, 12.3 miles, and 15.7 miles from the Project area, respectively. Although, seismic shaking may occur within the Project area, the proposed Project consists of hazard tree removal and site revegetation. Temporary ramp construction would not be significantly impacted by seismic shaking. In addition, workers within the Project area during ramp construction, tree removal and revegetation activities are not anticipated to be affected by strong ground shaking based on the distance to the nearest faults. Therefore, this is considered a less than significant impact.

a-iii) ***Less than Significant Impact*.** According to Holzer, T.L., et al. (2008), there would be a 0 to 5 percent probability of liquefaction occurring within the Project area as a result of a magnitude 7.8 earthquake on the San Andreas Fault. In addition, no structures are proposed for the Project area with the exception of two temporary earthen access ramps. Therefore,

impacts associated with seismic-related ground failure including liquefaction would be considered less than significant.

a-iv) ***No Impact*.** The topography of the Project area and surrounding area is level and is not located within a landslide hazard zone. Therefore, the proposed Project would result in no impact from landslides.

b) ***Less than Significant Impact*.** Approximately 30 cubic yards of temporary fill material would be placed in the creek below the OHWM for construction of the proposed ramp located behind the Brookside Club. In addition, it is estimated that approximately 20 cubic yards of temporary fill material would be placed in the creek below the OHWM for construction of the proposed ramp near the Prospect High School athletic field. Additional grading would occur above the OHWM. Because the Project would be phased over a period of three years (2019, 2020, and 2021), the construction access ramps would be removed by mid-October each year.

Construction of the proposed temporary access ramps, hazard tree removal, and revegetation efforts may destabilize the soil and increase the erosion potential from water and wind. As provided in Section 3, the proposed Project would implement Valley Water Hydrology and Water Quality BMPs including: WQ-1 (Conduct Work from Top of Bank); WQ-2 (Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms); WQ-4 (Limit impacts of from Staging and Stockpiling of Materials) and WQ-5 (Stabilize construction and entrances and exits), which requires implementation of measures to minimize soil from being tracked near work sites; WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement), which requires that disturbed areas are seeded with native seed as soon as is appropriate after activities are complete; WQ-11 (Maintain clean conditions at work sites), which requires that the work sites and access roads are maintained in an orderly condition; WQ-15 (Prevent water pollution), which requires oily, greasy, or sediment laden substances or other material that originates from Project operations to not be allowed to enter or be placed where it may enter a waterway; and WQ-16 (Prevent Storm Water Pollution), which requires that measures be implemented to prevent storm water pollution. Therefore, the proposed Project would have a less than significant impact on soil erosion and the loss of top soil.

c) ***No Impact*.** According to the Soil Survey of Santa Clara County, the Project area is not located on a soil that is considered unstable or would become unstable with implementation of the proposed Project. Therefore, the project would result in no impact.

d) ***No Impact*.** Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Expansive soils are common throughout California and can cause damage unless properly treated during construction. According to the Santa Clara County Soil Survey, site soils consist of loam to very fine sandy loam. No expansive clay soils are known to occur within the Project area. In addition, the Project does not propose the construction of any permanent structures that would be impacted by expansive soils. Therefore, no impact associated with expansive soils is anticipated.

e) ***No Impact*.** The proposed Project does not include the installation of septic tanks or alternative wastewater disposal systems. Therefore, the proposed Project would not result in soils incapable of adequately supporting the use of septic tanks or other waste water disposal systems and would result in no impact from the proposed Project.

f) ***No Impact.*** According to the UCMP database search, the Project site is not known to contain paleontological resources. The Project site is underlain by recent alluvium that is not known to produce paleontological resources. In addition, tree removal and site restoration would involve only minor earth disturbing activities, so it is highly unlikely that Project

implementation would encounter unknown paleontological resources. Therefore, the proposed Project would result in no impact to paleontological resources.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

WQ-1: Conduct Work from Top of Bank
WQ-2: Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms
WQ-4: Limit impacts of from Staging and Stockpiling of Materials
WQ-5: Stabilize construction and entrances and exits
WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement
WQ-11: Maintain clean conditions at work sites
WQ-15: Prevent water pollution
WQ-16: Prevent Storm Water Pollution

MITIGATION MEASURES

No mitigation measures required.

8. GREENHOUSE GAS EMISSIONS

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

ENVIRONMENTAL SETTING

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2 degrees Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect. GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming.

While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

Regulatory Framework

Assembly Bill 32. The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent from business as usual emission levels projected for 2020, or about 10 percent from today's levels.

On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020. In October 2010, ARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million $MTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

Bay Area Air Quality Management District. The BAAQMD has not adopted thresholds for construction related GHG emissions. However, the BAAQMD has included in its CEQA Guidelines stationary and operational-related thresholds for the emission of GHG shown in Table 4-6.

Table 4-6: BAAQMD Greenhouse Gas Thresholds of Significance

Project Type	Construction-Related	Operational-Related[3]
Projects other than Stationary Sources[1]	None	Compliance with Qualified GHG Reduction Strategy or 1,100 MT of CO2e/yr. or 4.6 MT CO2e/SP/yr. (residents+employees)
Stationary Sources[1]	None	10,000 $MTCO_2eq/yr.$

Notes:
1. According to the BAAQMD CEQA Guidelines, a stationary source project is one that includes land uses that would accommodate processes and equipment that emits GHG emissions and would require a BAAQMD permit to operate. Projects other than stationary sources are land use development projects including residential, commercial, industrial, and public uses that do not require a BAAQMD permit to operate.
2. SP = service population (residents + employees)
3. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change.

Source: BAAQMD, CEQA Air Quality Guidelines, May 2017.

Discussion

a) ***Less than Significant Impact.*** Tree removal, ramp construction, and revegetation activities would produce combustion emissions from various sources. During tree removal, ramp construction, and site revegetation, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically use fossil-based fuels to operate. The combination of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site tree removal and revegetation activities would vary daily as construction levels change.

The BAAQMD does not have adopted thresholds of significance for construction related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Based on modeling conducted for the proposed Project, the GHG emissions would be approximately 113 metric tons of CO_2 during the three-year tree removal period. The proposed Project would not generate additional operational emissions as maintenance activities would be similar to existing conditions. Implementation of BMP AQ-1 (Dust Control Measures) would further reduce GHG emissions during construction activities. Therefore, the proposed Project would result in a less than significant impact to GHGs.

b) ***No Impact.*** City of Saratoga. The City of Saratoga is in the process of updating their General Plan, however, no Climate Action Plan or climate action planning policies have currently been adopted.

AB 32 Scoping Plan. The proposed Project is compared with the AB 32 Scoping Plan (scoping plan) in order to determine compliance with any applicable plan, policy, or regulation adopted to reduce emissions of GHGs. The scoping plan contains a variety of strategies to reduce the state's emissions. The strategies in AB 32 are not applicable to the proposed Project as the Project includes the removal of diseased eucalyptus trees and subsequent restoration of a portion of Saratoga Creek, and would not result in additional operational emissions. Since no strategies are applicable to the Project, the proposed Project would not conflict with the AB 32 scoping plan.

Therefore, the proposed Project would not conflict with the City of Saratoga General Plan or the AB 32 Scoping Plan, and no impact is anticipated.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

AQ-1: Use Dust Control Measures

MITIGATION MEASURES

No mitigation measures required.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, storage or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The Project area is located within the channel bottom and adjacent riparian area of Saratoga Creek behind existing single family residential properties between Cox Avenue and Prospect High School. Some additional areas containing fencing and landscaping also fall within the Project area.

Hazardous Materials

The Project area is not on a state-listed hazardous materials clean-up site. According to the California State Water Resources Control Board (SWRCB) Geotracker website (SWRCB 2019), there are no hazardous sites within or adjacent to the Project area. The nearest site is the Desert Petroleum site (T0608500557), an underground storage tank located at 12600 Saratoga Avenue, approximately 1,500 feet east of the Project site. The site is cleaned up and the case has been closed.

According to the Department of Toxic Substances Control (DTSC) EnviroStor database, the Orchard Farm Shopping Center located at 6150 Bollinger Road, at Miller Avenue in San Jose, CA, approximately 1.5 miles from the Project area, which is a state response or national priority list site. The site was operating as a dry-cleaning facility and now has land use restrictions on it due to soil contamination. Activities are prohibited that disturb the remediation and monitoring system without approval (DTSC 2019).

Fire Hazard Severity Zone

Per the California Department of Forestry and Fire Protection maps of Very High Fire Hazard Severity Zones for Santa Clara County, the Project area is located within the Local Responsibility Area and is not considered a very high fire hazard severity zone (CalFire 2007). The Project area is located within the Santa Clara County Central Fire Protection District.

Sensitive Receptors

Sensitive receptors located in the Project vicinity include the single-family residential housing, and Prospect High School. These parcels are directly adjacent to the Project area.

Emergency Evacuation Route

Per the County of Santa Clara Emergency Operations Plan, there are no designated emergency evacuation routes within the Project area.

Airport

The nearest airport to the Project area is the Norman Y. Mineta San Jose International Airport, located at 1701 Airport Boulevard, San Jose, CA 95110. This airport is located approximately 6.2 miles from the Project area.

Discussion

a) ***Less than Significant Impact*.** The proposed Project would construct two equipment access ramps, remove 104 hazard eucalyptus trees and two non-native invasive ash trees within Saratoga Creek, and restore the area with native riparian species. After tree removal and site restoration, there would be no routine transportation or disposal of hazardous materials for operation or maintenance. While gasoline and diesel fuel would typically be used by construction vehicles, Valley Water would implement the following BMPs: BMP HM-7 (Restrict Vehicle and Equipment Cleaning to Appropriate Locations) and HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance), which would require that vehicles and equipment are washed only at approved areas and that no fueling or servicing of vehicles is done in a waterway or immediate floodplain; BMP HM-9 (Ensure Proper Hazardous Materials Management), which includes measures to ensure that hazardous materials are properly handled and the quality of water resources is protected; and BMP HM-10 (Utilize Spill Prevention Measures), which includes measures to prevent the accidental release of chemicals, lubricants, and non-storm drainage water measures as noted in the Environmental Setting in Section 3 (Table 3-2) to minimize the potential of construction-related fuel hazards. Also, herbicides would be used in the Project area during revegetation efforts. The following BMPs would also be implemented to avoid/minimize adverse impacts associated with herbicide use: BMP HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas); and BMP HM-6 (Comply with Restriction on Herbicide Use in Aquatic Areas). In addition, use, storage, transport and disposal of hazardous materials (including any hazardous wastes) during construction activities would be performed in accordance with existing local, state, and federal hazardous materials regulations. Therefore, implementation of the proposed Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. Therefore, this is considered a less than significant impact.

b) ***Less than Significant Impact*.** As described in Response (a) above, Project operation/maintenance would not require routine use of hazardous materials; therefore, no hazards or hazardous materials impacts related to long-term operation of the proposed Project are anticipated. However, construction and maintenance activities would include the use of limited quantities of ordinary equipment fuels and fluids, and small amounts of herbicide for invasive plant control. These materials would not be used in sufficient quantities to pose a substantial threat to human or environmental health. Such materials would be kept at construction staging areas or offsite with maintenance crews, and would be secured when not in use. As described in Response a) above, in order to avoid or minimize potential of accidental release of hazardous materials, Valley Water would implement BMPs HM-7 (Restrict Vehicle and Equipment Cleaning to Appropriate Locations) and HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance); BMP HM-9 (Ensure Proper Hazardous Materials Management); BMP HM-10 (Utilize Spill Prevention Measures); BMP

HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas); and BMP HM-6 (Comply with Restriction on Herbicide Use in Aquatic Areas). In the unlikely event of a spill, fuels and or herbicides would be controlled and disposed of in accordance with applicable regulations. Therefore, the proposed Project would not create a significant hazard to the public or environment. This impact is considered less than significant.

c) ***Less Than Significant Impact*****.** The athletic field at Prospect High School is located immediately adjacent to the northern end of the Project area, while buildings/classrooms are located approximately 450 feet north of the Project area. As described in Response a) and b) above, operation of the proposed Project would not require the routine use, transport or disposal of hazardous materials. During access ramp construction and tree removal activities, gas and diesel fuel would typically be used by construction vehicles. Also, herbicides would be used in the Project area during revegetation efforts. Therefore, with implementation of Valley Water BMPs HM-7 (Restrict Vehicle and Equipment Cleaning to Appropriate Locations), HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance, HM-9 (Ensure Proper Hazardous Materials Maintenance), HM-10 (Utilize Spill Prevention Measures), BMP HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas); and BMP HM-6 (Comply with Restriction on Herbicide Use in Aquatic Areas), the potential for the release of hazardous material from accidental spills and/or leaks during construction would be minimized. Therefore, this impact would be considered less than significant.

d) ***Less than Significant Impact*****.** Per the DTSC EnviroStor database, the Orchard Farm Shopping Center located approximately 1.5 miles from the Project area, was operating as a dry-cleaning facility and now has land use restrictions on it due to soil contamination. Activities are prohibited that disturb the remediation and monitoring system without approval (DTSC 2019). There are no sites, including sites compiled pursuant to Government Code section 65962.5, in the Project vicinity. Therefore, implementation of the proposed Project is not anticipated to result in impacts from hazardous materials, which would be considered a less than significant impact.

e) ***No Impact*****.** The Norman Y. Mineta San Jose International Airport is located approximately 6.2 miles northeast of the Project area. According to the Comprehensive Land Use Plan for the Norman Y. Mineta San Jose International Airport (County of Santa Clara 2016), the Project area is outside of the Airport Influence Area and would not result in a safety hazard to people working within the Project area. Therefore, the proposed Project would not result in a substantial safety hazard for people residing or working in the Project area, which would result in no impact.

f) ***Less than Significant Impact*****.** According to the County of Santa Clara Emergency Operations Plan, there are no designated emergency evacuation routes within the Project area. The proposed Project would result in minimal vehicle trips related to worker commute traffic; haul trips for the import and export of fill material, logs, and brush from the Project area; and the movement of construction equipment to the Project site. As described in Subsection 16: Transportation/Traffic, the proposed Project would not result in substantial traffic delays, as traffic flow would be maintained within the Project area. Valley Water would coordinate with surrounding uses (e.g. Prospect High School and residential uses) to ensure that access for emergency vehicles is maintained at all times during construction activities. Therefore, implementation of the proposed Project is not anticipated to impede emergency access to the Project area and/or surrounding area, which would be considered a less than significant impact.

g) ***Less than Significant Impact*****.** The Project area is dominated by single-family residential uses. Per the California Department of Forestry and Fire Protection maps of Very High Fire Hazard Severity Zones for Santa Clara County, the Project area is located within the Local Responsibility Area and is not considered a very high fire hazard severity zone (Cal FIRE

2016). However, the proposed Project would implement Valley Water BMP HM-12 (Incorporate Fire Prevention Measures) as noted in the Environmental Setting in Section 3, which requires that equipment be equipped with spark arrestors, fire suppression equipment is available to the workers, and that smoking is prohibited in order to prevent surrounding vegetation from igniting during construction activities. Therefore, the proposed Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, which would be considered a less than significant impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

HM-5: Comply with Restrictions on Herbicide Use in Upland Areas
HM-6: Comply with Restriction on Herbicide Use in Aquatic Areas
HM-7: Restrict Vehicle and Equipment Cleaning to Appropriate Locations
HM-8: Ensure Proper Vehicle and Equipment Fueling and Maintenance
HM-9: Ensure Proper Hazardous Materials Management
HM-10: Utilize Spill Prevention Measures
HM-12: Incorporate Fire Prevention Measures

MITIGATION MEASURES

No mitigation measures required.

10. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Santa Clara Subbasin

The Santa Clara Subbasin covers a surface area of 297 square miles and forms a northwest-trending, elongated valley bounded by the Santa Cruz Mountains to the west and the Diablo Range to the east (see Figure 4-1). The Santa Clara Subbasin is a trough-like depression filled with Quaternary alluvium deposits of unconsolidated gravel, sand, silt and clay that eroded from adjacent mountain ranges by flowing water, and deposited into the valley. The alluvium comprises interfingering alluvial fans, stream deposits and terrace deposits.

Groundwater movement in the Santa Clara Subbasin generally follows topographical and surface water patterns, flowing to the north/northwest toward the interior of the subbasin and San Francisco Bay. Groundwater also moves toward areas of intense pumping at the local scale. Groundwater occurs at different depths in the unconfined aquifer throughout the subbasin, and under artesian conditions in the Santa Clara Plain confined aquifer (SCVWD 2016).

Saratoga Creek Watershed

The Project area is located in the Saratoga Creek watershed within the West Valley Watersheds area. The West Valley Watersheds comprise an 85-square-mile area of several small watersheds, including San Tomas Aquino Creek (of which Saratoga Creek is a major tributary), Calabazas Creek, and the Sunnyvale East and Sunnyvale West channels. These watersheds are primarily characterized by channelized creeks on the valley floor and more natural streams in the hillsides, such as Saratoga Creek, which supports a native rainbow trout population. Agricultural and flood control drainage efforts in the 19th century connected all of the West Valley waterways to Guadalupe Slough at the southern end of San Francisco Bay. Valley Water does not own or operate any reservoirs in the West Valley Watersheds area.

Flooding

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the majority of the Project area is located within the 100-year floodplain (i.e., an area in which there is a one percent chance per annum of a one hundred-year storm event) (FEMA 2009).

Regulatory Framework

Clean Water Act and Porter Cologne Water Quality Control Act

Water quality is regulated under the federal Clean Water Act (CWA) and California Porter Cologne Water Quality Control Act. The Project area is located in the San Francisco Bay Region of the Regional Water Quality Control Board and is subject to the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin. Any proposed dredge and fill activities within waters of U.S. including wetlands would require a CWA Section 404 permit from the U.S. Army Corps of

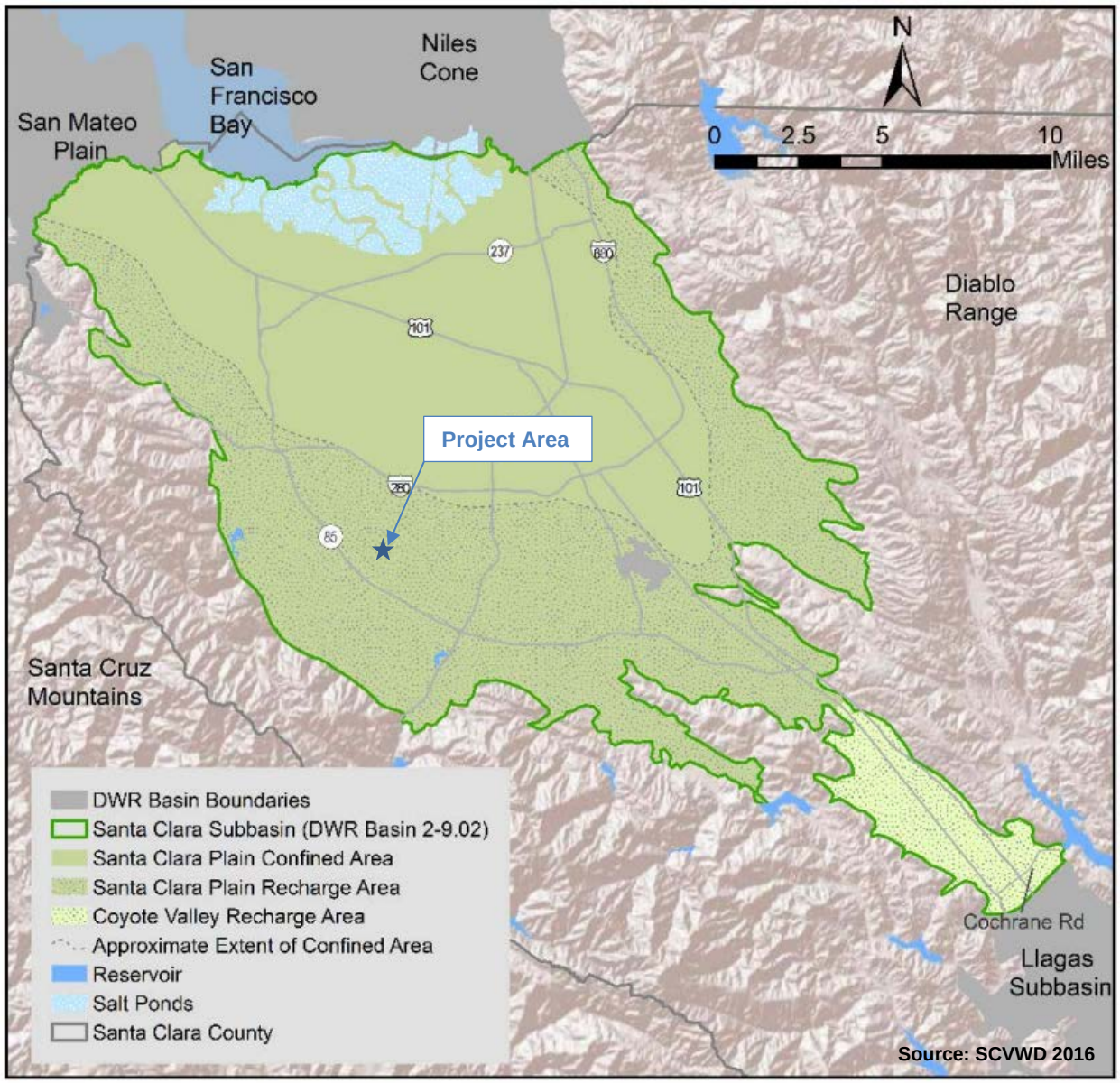


Figure 4-1: Santa Clara Subbasin

Engineers (USACE). Section 404 of the CWA prohibits discharge of dredged or fill materials into the waters of U.S. without a permit from USACE. If a Section 404 permit is required, a project proponent may apply for an individual permit or rely on a general permit. Section 404 of the CWA authorizes USACE to issue general permits on a regional, programmatic, or nationwide basis. General permits are designed to apply to categories of discharge activities that are similar in nature and will cause only minor adverse environmental effects. When a Section 404 permit is required, Section 401 of the CWA requires that an applicant for a federal license or permit (which includes a Section 404 permit) to provide the federal agency with a certification from the state stating that the discharge will comply with the state's water quality plan. The State Water Resources Control Board (SWRCB) has certified a number of nationwide permits (NWPs) for all of California. The regional boards are responsible for issuing 401 certification for all NWPs not certified by SWRCB.

The Porter Cologne Act, which is codified in the State Water Code, establishes the responsibilities and authorities of the nine Regional Water Quality Control Boards and the State Water Resources

Control Board (SWRCB) whose primary responsibility is for the coordination and control of water quality. Each Regional Board is directed to prepare a water quality control plan (aka "Basin Plan") that includes the following components: beneficial uses which are to be protected, water quality objectives which protect those uses, and an implementation plan which accomplishes those objectives. The state law also authorizes the SWRCB and RWQCBs to issue and enforce permits containing requirements for the discharge of waste to surface waters and land. The federal Clean Water Act (Public Law 92-500, as amended) provides for the delegation of certain responsibilities in water quality control and water quality planning to the states. Where the Environmental Protection Agency (EPA) and the SWRCB have agreed to such delegation, the Regional Boards implement portions of the Clean Water Act, such as the National Pollution Discharge Elimination System (NPDES) program.

National Pollution Discharge Elimination System

The NPDES controls the discharge of pollutants to water bodies from point and non-point sources. In the Bay Area, the program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), which was expanded in 1990 to include permitting of storm water discharges from construction sites that disturb more than one acre. Because the proposed Project would disturb more than one acre of land during construction activities, Valley Water would need to comply with the requirements of the NPDES General Permit for construction activities.

The general permit for construction activities requires that an applicant file a public notice of intent (NOI) with the applicable RWQCB and prepare and implement a storm water pollution and prevention plan (SWPPP). The SWPPP would include a site map, description of storm water discharge activities, and best management practices that would be employed to prevent water pollution. The SWPPP BMPs would be used to control soil erosion and discharges of other construction-related pollutants that could contaminate nearby water resources.

Discussion

a) ***Less than Significant Impact*****.** Activities required to complete the Project, including minor grading and fill placement for access ramp construction, tree removal, dewatering, and temporary placement of fill material, have the potential to expose soils and mobilize sediments in storm water. Additionally, hazardous materials such as fuels, oils, grease, and lubricants from construction equipment could be accidentally released during temporary fill placement, tree removal, and creek restoration efforts. Accidental discharge of these materials into Saratoga Creek could adversely affect water quality and/or result in violation of water quality standards. The proposed Project would include numerous BMPs to avoid and minimize any water quality related impacts.

BMP BI-3 (Remove Temporary Fill), which provides that diversion structures and/or cofferdams are removed upon finishing the work or as appropriate, would remove any temporary impact from the fill. The proposed Project also incorporates the following BMPs to avoid or minimize water quality impact associated with storage and release of hazardous materials: HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas) and HM-6 (Comply with Restrictions on Herbicide Use in Aquatic Areas), which control oversight of herbicide use; HM-7 (Restrict Vehicle and Equipment Cleaning to Appropriate Locations) and HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance), which requires that vehicles and equipment are washed only in approved areas and that no fueling or servicing of vehicles occurs in a waterway or immediate floodplain; and HM-9 (Ensure Proper Hazardous Materials Management) and HM-10 (Utilize Spill Prevention Measures), which includes measures that ensure that hazardous materials are properly handled and the quality of water resources is protected and that spill prevention measures are incorporated to prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water. Finally, the proposed Project also incorporates the following water quality BMPs including: WQ-1 (Conduct Work from Top of Bank), which requires that work activities be conducted from top

of bank if there are flows in the channel; WQ-2 (Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms), which is intended to use the appropriate equipment for the job that minimizes disturbance to the stream bottom; WQ-4 (Limit Impacts from Staging and Stockpiling Materials), which requires implementation of measures to minimize soil from being tracked onto streets near work sites; WQ-5 (Stabilize Construction Entrances and Exits), which requires measures are implemented to minimize soil from being tracked into streets near work sites; WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement), which requires disturbed areas are seeded with native seed as soon as it is appropriate after activities are complete; WQ-11 (Maintain Clean Conditions at Work Sites), which requires that the work sites and access roads are maintained in an orderly condition; WQ-15 (Prevent Water Pollution), which requires oily, greasy, or sediment laden substances or other material that originates from Project operations not be allowed to enter or be placed where it may enter a waterway; and WQ-16 (Prevent Storm Water Pollution), which requires that measures be implemented to prevent storm water pollution. Implementation of these BMPs would minimize impacts on water quality.

The National Pollutant Discharge Elimination System General Permit (GP) for Construction (Order 2009-009-DWQ) requires construction sites over one acre that do not qualify for a waiver to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). As project construction would exceed one acre of ground disturbance, Valley Water would prepare and implement a SWPPP and file a Notice of Intent with the RWQCB to obtain coverage under the GP. The SWPPP would incorporate BMPs to control sedimentation and runoff. A spill prevention and countermeasure plan would be incorporated into the SWPPP.

Although unlikely during the dry season, creek dewatering may be necessary prior to equipment entering the creek for each phase of work. In-channel work would occur when the creek is naturally dry, and the only source of water in the channel would be from upstream managed releases. Releases from SCP would be shut off by Valley Water a few days prior to equipment entering the channel to allow time for residual water to percolate and drain from the Project area.

Valley Water would coordinate with the San Jose Water Company to preclude maintenance-related releases into Saratoga Creek from their facility 3.5 miles upstream of the Project area during the eucalyptus removal work periods. If such releases must occur, they are typically small and are not expected to reach the Project area. However, a small temporary cofferdam would be installed beneath the bridge at Cox Avenue to ensure that any San Jose Water Company maintenance releases do not reach the Project area during in-channel work. Much of the potential surface water impounded by the cofferdam is expected to infiltrate. However, a bypass pipeline would be installed to ensure that no water reaches the Project area as described in Section 2 above. The total dry-back time for Saratoga Creek during the Project is anticipated to range from 60-90 days per working season. Implementation of best management practices and compliance with the construction general permit would reduce potentially significant impacts to water quality to a less than significant level.

b) ***Less than Significant Impact.*** No groundwater supplies would be used or impacted by the proposed Project. The reach of Saratoga Creek within the Project area is used for groundwater recharge via water from the Stevens Creek Pipeline during the dry season. Groundwater recharge in this reach of Saratoga Creek would not occur during Project activities. Because the project area is composed of a small fraction of the Santa Clara Plain Recharge Area (Figure 4-1), the short-term temporary hold on groundwater recharge within the Project area would not interfere substantially such that the project would impede the overall sustainable groundwater management of the basin. Therefore, impacts would be considered less than significant.

c-i) ***Less than Significant Impact.*** Construction activities associated with the proposed Project could temporarily increase the potential for erosion from the construction of temporary access ramps. In addition, the removal of 104 large hazard eucalyptus trees and two non-native ash trees from the channel banks of Saratoga Creek could also expose bare soil resulting in an increased potential for erosion or siltation within the Project area. BMPs outlined in the discussion under (a) above would be implemented during Project activities to reduce impacts from erosion and siltation. For example, BMP WQ-5 requires measures to minimize soil from being tracked onto streets near work sites; BMP WQ-9 requires disturbed areas to be seeded with native seed as soon as is appropriate after activities have been completed and requires erosion control seed mix to be applied to exposed soils. BMP WQ-16 requires stormwater pollution and erosion control measures during construction. With these measures, the impact would be less than significant.

c-ii) ***No Impact.*** The proposed Project would not increase the amount of impervious surface area. Following hazard tree removal, all temporary fill material from ramp construction would be removed, and the site revegetated with native riparian species. Therefore, no increase in the amount of surface runoff would occur; and no impact would result.

c-iii) ***No Impact.*** See response to C-ii above. No increase in storm water runoff would occur as a result of the proposed Project. No impact would occur.

c-iv) ***Less than Significant Impact.*** A total of 100 cubic yards of temporary fill would be placed in Saratoga Creek, 30 cubic yards of which would be placed below the OHWM for construction of the proposed ramp located behind the Brookside Club. It is estimated that approximately 75 cubic yards of fill would be placed in the creek, 20 cubic yards of which would be placed below the OHWM for construction of the proposed ramp near the Prospect High School soccer field. An additional 20 cubic yards of temporary fill would be placed below the OHWM for the construction of two cofferdams. The fill would be placed no earlier than July 1st and removed no later than October 15th. Because all work is proposed to be completed outside of the rainy season for each of the four years of tree removal (2019, 2020, 2021, and 2022), the temporary fill material is not expected to impede or redirect flows. However, if water begins to flow during tree removal work, the temporary cofferdam would be used to redirect creek water around the work area. Therefore, impacts would be less than significant.

d) ***Less than Significant Impact.*** Although the topography in the Project area is fairly level, the Project occurs within and immediately adjacent to Saratoga Creek. Construction activities would occur primarily within the banks and channel bottom of Saratoga. Because the Project is located within Saratoga Creek, it is located within a flood hazard area. However, all work within the channel would occur outside of the rainy season when flooding is expected to occur. No fill structures or potential pollutants would remain in the project area during the rainy season that could be released during site inundation. Therefore, impacts would be considered less than significant.

Based on the distance of the Project area from the San Francisco Bay and the relatively flat topography, the Project area would not be exposed to inundation by seiche, tsunami or mudflow. According to the Department of Conservation Tsunami Inundation Maps (Department of Conservation 2009), the Project area is not located in a tsunami inundation zone. Therefore, potential pollutants used during tree removal and site restoration within the Project area would not be subject to inundation by a tsunami; and therefore, no impact would occur.

e) ***No Impact.*** The proposed Project would remove 104 hazard eucalyptus trees and two non-native invasive ash trees, and restore the creek banks within the Project area with native riparian trees and shrubs. The Project would not conflict with either the San Francisco Bay Basin Water Quality Control Plan or the Groundwater Management Plan for the Santa Clara Subbasin. No impact would occur.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

BI-3: Remove Temporary Fill
HM-5: Comply with Restrictions on Herbicide Use in Upland Areas
HM-6: Comply with Restrictions on Herbicide Use in Aquatic Areas
HM-7: Restrict Vehicle and Equipment Cleaning to Appropriate Locations
HM-8: Ensure Proper Vehicle and Equipment Fueling and Maintenance
HM-9: Ensure Proper Hazardous Materials Management
HM-10: Utilize Spill Prevention Measures
WQ-1: Conduct Work from Top of Bank
WQ-2: Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms
WQ-3: Limit Impact of Pump and Generator Operations and Maintenance
WQ-4: Limit Impacts from Staging and Stockpiling Materials
WQ-5: Stabilize Construction Entrances and Exits
WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement
WQ-11: Maintain Clean Conditions at Work Sites
WQ-15: Prevent Water Pollution
WQ-16: Prevent Storm Water Pollution

MITIGATION MEASURES

No mitigation measures required.

11. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The Project alignment is located within the City of Saratoga, within the limits of five Valley Water-owned parcels located within and adjacent to Saratoga Creek. The Project site begins immediately downstream of the Cox Avenue Bridge and ends at the southwest corner of the Prospect High School athletic field.

Development adjacent to the Project area did not begin until the late 1950s. The Project area is currently surrounded by suburban development including dozens of private residences, a private swim and racquet club, and high voltage power lines, all of which could be jeopardized by a falling eucalyptus branch or entire tree.

Surrounding Sensitive Receptors. The site is surrounded by sensitive receptors to include single-family residential, and Prospect High School, which has an athletic field located adjacent to the Project area.

Surrounding Land Used Designations. According to the City of Saratoga General Plan, surrounding land use designations in the Project area include: Medium Density Residential (M-10; single-family 4.35 du/net acre or 13.5 people/acre) to the east and west, Medium Density Residential 12.5 (M-12.5; single-family 3.48 du/net acre or 10.8 people/acre) to the west,

Community Facility Sites (CFS; Prospect High School) to the north, and Professional Administrative (PA) to the south.

According to the City of Saratoga Zoning Map, surrounding areas are zoned: R-1-10,000 (Single Family Residential 1-10,000 and with Single Story Overlay) to the east and west, R-1-12,500 (Single Family Residential 1-12,500) to the west, and PA (Professional and Administrative) to the south.

Discussion

a) ***No Impact.*** The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and an outlying area. The Project area is located in a primarily single-family residential area within the City of Saratoga. The proposed Project would remove 104 hazard eucalyptus trees and two non-native invasive ash trees, and revegetate the Project area with native riparian vegetation. As such, the proposed Project would not divide an established community and would have no impact.

b) ***No Impact*****.** The proposed Project would not change the existing land use within the Project area or result in the development of land uses that would be incompatible with surrounding land uses. The proposed Project would remove hazardous exotic trees from Saratoga Creek and restore it with native riparian vegetation. Existing land uses would remain unchanged and the post-project conditions would not conflict with existing or future designated uses of surrounding land uses. Therefore, the proposed Project would result in no impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures required.

12. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations. According to the Geologic Map of Santa Clara County, which shows mineral deposits within the City of Saratoga, the Project area

does not contain any mineral resources. Neither the State Geologist nor the State Mining and Geology Board has classified any areas except the Communications Hill area in the City of San Jose as containing mineral deposits that are of statewide significance or for which the significant requires further evaluation.

Discussion

a) ***No Impact*.** Since the Project area does not contain any mineral resources, the proposed hazard tree removal and site revegetation would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state within the Project area. Therefore, the proposed Project would have no impact on mineral resources.

b) ***No Impact*.** Since the Project area does not contain any mineral resources, the proposed hazard tree removal and site revegetation would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan within the Project area. Therefore, the proposed Project would have no impact on mineral resources.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures required.

13. NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete

vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be measured precisely with instruments. The analysis of a project defines the noise environment of the Project area in terms of sound intensity and the Project's effect on adjacent sensitive land uses.

Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) are 10 times more intense than 1 dB; 20 dB are 100 times more intense than 1 dB; and 30 dB are 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dBA for each doubling of distance in a hard-site environment. Line source (noise in a relatively flat environment with absorptive vegetation) decreases 4.5 dBA for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (Leq) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for communities in the State of California are the Leq and Community Noise Equivalent Level (CNEL) or the day-night average level (Ldn) based on dBA. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly Leq for noises occurring from 7 p.m. to 10 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10 p.m. to 7 a.m. (defined as sleeping hours). Ldn is similar to the CNEL scale, but without the adjustment for events occurring during the evening hours. CNEL and Ldn are within 1 dBA of each other and are normally exchangeable.

It should also be noted that Day-Night Average Sound Level (DNL) is the standard federal metric for determining cumulative exposure of individuals to noise, and is also used by the City of Saratoga. DNL is the 24-hour average sound level in decibels. The average is derived from noise measurements taken during a 24-hour period. DNL adds a 10 dB noise penalty to each aircraft operation occurring during nighttime hours (10 p.m. to 7 a.m.). DNL includes that penalty to compensate for people's heightened sensitivity to noise during this period.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (Lmax), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-

term noise impacts are specified in terms of maximum levels denoted by Lmax, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L10 noise level represents the noise level exceeded 10 percent of the time during a stated period. The L50 noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L90 noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the Leq and L50 are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise level of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Surrounding Land Uses

The Project alignment containing Saratoga Creek is located in the northeastern portion of the City of Saratoga within a highly urbanized single-family residential neighborhood. Other uses adjacent to the Project alignment include the Brookside Club (swim and tennis) and the Saratoga Woods Swim Club. In addition, the Brookglen Park (neighborhood park) is located on the west bank of Saratoga Creek just north of Cox Avenue. Prospect High School is located on the east bank of Saratoga Creek at the north end of the Project alignment.

Existing Noise Levels

The primary source of noise in the Project vicinity is from vehicular traffic on the surrounding roads including Cox Avenue, Saratoga Avenue, Prospect Road, California State Route 85, and Lawrence Expressway. According to the noise contour mapping provided in the Updated City of Saratoga General Plan Noise Element, noise levels in the Project area range from below 55 dB DNL in the northern portion of the Project alignment, to 65 dB DNL in the southern portion of the Project alignment, which represents the 24-hour average sound level with a 10 dB “penalty” for noise occurring at night (City of Saratoga, 2014).

Sensitive Receptors

In the Project vicinity, noise sensitive land uses include residential properties along the entire alignment and Prospect High School located immediately northeast of the Project site. The residential properties are located approximately 40 feet from the nearest residence, and classrooms/buildings located approximately 600 feet northeast of the Project area.

Regulatory Framework

City of Saratoga Municipal Code Noise Ordinance

The applicable noise standards governing the proposed tree removal and restoration activities are the noise criteria listed in the City’s Municipal Code. Section 7-30.040 sets out noise standards for all uses and developments in the City. Section 7-30.060 - Exceptions for specific activities is permitted to exceed the standards set forth in Section 7-30.040 for construction activities, the use of chainsaws, and the use of wood chippers.

Section 7-30.060 (a) states, “Construction, alteration, repair, and grading activities shall not exceed 100 dBA measured at any point 25 feet or more from the source of noise. Such activities may be conducted between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday and

between the hours of 9:00 a.m. and 5:00 p.m. on Saturday. Construction activities shall be prohibited on Sundays and weekday holidays…"

Section 7-30.060 (c) states, "Powered garden tools shall not exceed 78 dBA at any point 25 feet or more from the source of noise. Such tools may be utilized during the following days and times: (2) Gasoline powered chainsaws may be utilized between 8:00 a.m. and 5:00 p.m. Monday through Friday and between 10:00 a.m. and 5:00 p.m. on Saturdays and Sundays."

Section 7-30.060 (d) states, "Wood chippers shall not exceed 100 dBA at any point 25 feet or more from the source of noise. Wood chippers may be utilized between 8:00 a.m. and 5:00 p.m. Monday through Friday and Saturdays between 10:00 a.m. and 5:00 p.m. Use of wood chippers shall not be allowed on Sundays."

City of Saratoga General Plan Noise Element.

The City of Saratoga Noise Element contains goals, policies, and implementing actions to regulate noise levels within the City. Policy 2.7 states that "noise generated by equipment, animals and amplified sound shall meet adopted standards." The City of Saratoga General Plan does not contain specific policies for construction activities.

Discussion

a) ***Less Than Significant Impact.*** As described in the Regulatory Framework, the City's noise ordinance provides the following specific day/hour restrictions and noise standards for construction/grading activities and the use of chainsaws and wood chippers under Municipal Code Section 7-30.060: 100 dBA measured at any point 25 feet from the noise source for construction activities, and restricts hours of construction to 7:30 a.m. to 6 p.m., Monday through Friday and 9 a.m. to 5 p.m. on Saturday. Construction activities are prohibited on Sundays and weekday holidays; 78 dBA at any point 25 feet or more from the source of noise for chainsaws. Chainsaws may be utilized between 8:00 a.m. and 5:00 p.m. Monday through Friday and between 10:00 a.m. and 5:00 p.m. on Saturdays and Sundays; 100 dBA at any point 25 feet or more from the source of noise for wood chippers; wood chippers may be used between 8:00 a.m. and 5:00 p.m. Monday through Friday, and Saturdays between 10:00 a.m. and 5:00 p.m.; use of wood chippers shall not be allowed on Sundays.

As described in the Project Description, construction activities for the proposed Project would occur from 7:30 a.m. to 5 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturday as needed. However, if chainsaws or wood chippers are utilized during Project activities, such equipment would only be operated within the allowable hours specified in the City of Saratoga Noise Ordinance. Once tree removal and revegetation is completed, future maintenance activities would be undertaken similar to those that are currently occurring. Thus, the proposed Project would not expose persons to or generate noise levels in excess of standards established in the local ordinance.

Over a three-year period (with an option to extend to a fourth year), ramp construction and tree cutting activities would begin August 1 (July 1 in years 2 and 3) and end on October 31. Access ramp removal and site restoration would take place from October 1 through December 31 of each year. Therefore, these impacts would be considered short-term and temporary. Although noise levels would be higher during access ramp construction and removal, tree cutting, and restoration, than existing ambient noise levels in the Project area, noise levels would return to existing ambient levels when the Project is complete. Noise generated during tree removal and site restoration activities would not exceed the noise standards under Section 7-30 of the City's Municipal Code. Therefore, Project-generated noise impacts are considered to be less than significant.

b) ***Less than Significant Impact.*** Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived

as a problem outdoors, where the motion may be discernable. However, without the effects associated with the shaking of a building, there is less adverse reaction.

The proposed Project would not use pile driving equipment or heavy equipment that would generate discernable vibrations, but would use smaller construction equipment to include loaders and excavators. Although a large mobile crane would be used, it would operate from a stationary position and not generate discernable vibrations. Therefore, groundborne vibration associated with the proposed Project would be less than significant.

c) ***No Impact.*** The Norman Y. Mineta San Jose International Airport is located approximately seven miles northeast of the Project area. According to the Comprehensive Land Use Plan for the Norman Y. Mineta San Jose International Airport, the Project area is well outside of the noise contours for the airport (Santa Clara County Airport Land Use Commission, 2016); and therefore, would not expose people working within the Project area to excessive noise levels. Therefore, no impact would occur from Project implementation.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures required.

14. POPULATION AND HOUSING

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

ENVIRONMENTAL SETTING

The Project area is located in the City of Saratoga. The Project area consists primarily of suburban medium density residential uses, swim and tennis clubs, and Prospect High School.

Discussion

a) ***No Impact.*** The proposed Project would not include any new housing, commercial or industrial space, result in the conversion of adjacent land uses, or provide access to previously inaccessible areas. The proposed Project was initiated to remove 104 hazardous trees from the Project area and to revegetate the area with native riparian species. Therefore, the proposed Project would not directly or indirectly induce substantial population growth. Thus, the proposed Project would have no impact.

b, c) ***No Impact.*** The proposed Project would not include the demolition of existing housing or displace existing housing or residents, which would necessitate the construction of replacement housing elsewhere. Therefore, the proposed Project would have no impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Fire Protection

The Project area is located within the City of Saratoga and is served by Santa Clara County Central Fire Protection District (CCFD). The CCFD has grown to include 15 fire stations, an administrative headquarters, a maintenance facility, five other support facilities, 19 pieces of apparatus and 3 command vehicles, to cover 128.3 square miles (267 square km) and a population of over 226,700.

Police Protection

The Santa Clara County Sheriff's Office provides law enforcement to the City of Saratoga. The Sheriff's Office serves the communities of Saratoga, Cupertino, Los Altos Hills, and the unincorporated areas of the County with a service population of 197,000.

Schools

The Saratoga Union School District serves students in grades K-8 and presently operates three elementary schools and one middle school. Our student population consists of approximately 1050 elementary school aged students and 850 middle school students.

Most of the Project area is located within the Campbell Union High School District, which encompasses five comprehensive high schools: Branham, Del Mar, Leigh, Prospect and Westmont.

A portion of the Project area is located within the Los Gatos-Saratoga Union High School District, which serves students in grades 9-12. The Los Gatos-Saratoga Union High School District operates both the Los Gatos High School and the Saratoga High School.

Parks

The City of Saratoga Recreation Department operates 17 parks according to the City of Saratoga General Plan Open Space/Conservation Element. The City of Saratoga controls approximately 87 acres of parkland, of which 63 acres have been improved for park purposes (City of Saratoga 2007). In addition, the City of Saratoga has since opened Quarry Park, a 64-acre located at 22000 Congress Springs Road.

Other Public Facilities

No other public facilities are located in the Project area.

Discussion

a, b) ***No Impact*.** Project activities would not contribute to an increased need for fire or police protection services, since the proposed Project would not contribute to population growth or other long-term land use modifications. Therefore, the proposed Project would have no impact to fire and police protection services.

c) ***No Impact***. Classrooms at the Prospect High School are located within 600 feet of the Project area. However, the proposed Project would result in short-term construction activities and is not anticipated to result in long-term effects to existing school facilities, nor would it contribute to any change in population, or other land use modifications that would impact the Campbell Union High School District, Los Gatos-Saratoga Union High School District, or the Saratoga Union School District. Therefore, would be no impacts associated with the need to expand any school facilities.

d) ***No Impact*.** The proposed Project would not result in substantial impacts associated with new or physically altered park facilities in order to maintain adequate recreational facilities for residents. Therefore, no impact would occur as a result of Project implementation.

e) ***No Impact*.** Since the proposed activity would not contribute to population growth or other long-term land use modifications, the proposed Project is not anticipated to affect other public facilities. Therefore, no impact would occur as a result of Project implementation.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

16. RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The Project area is located along Saratoga Creek from Cox Avenue to Prospect High School in the City of Saratoga. Brookglen Park, a 0.7-acre neighborhood park, is located immediately to the west of the Project alignment. According to the Countywide Trails Master Plan Map, the San Tomas Aquino/Saratoga Creeks Trail is located to the north of Prospect Road (County of Santa Clara 1995). However, no existing or proposed trails are located in the Project vicinity (City of Saratoga 2007; County of Santa Clara 1995).

Discussion

a) ***No Impact*.** Brookglen Park is located immediately west of the Project area. The park would not be utilized for Project activities and tree removal, and revegetation efforts would not directly impact park users during Project implementation. However, park users may be temporarily disturbed by ramp construction, tree removal, and revegetation efforts in the southern portion of the Project alignment. This disturbance would be short-term and intermittent and would not be expected to drive potential park users to other recreational facilities causing substantial physical deterioration.

The proposed Project would not result in a substantial increase in the use of existing recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, this would be considered a less than significant impact.

b) ***No Impact*.** The proposed Project does not include construction or expansion of recreational facilities and would have no impact.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

17. TRANSPORTATION

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

ENVIRONMENTAL SETTING

Existing Roadway Network

Regional roadway access to Saratoga is provided by three major freeways: State Route (SR) 85, Interstate 280 (I-280), and SR 17. Only SR 85 provides direct access to Saratoga via interchanges at Saratoga Avenue and South De Anza Boulevard (in Cupertino). Access to SR 17 is provided by Saratoga-Los Gatos Road, which is designated as SR 9, and via SR 85. Lawrence Expressway also serves regional traffic and links Saratoga to Santa Clara and Sunnyvale.

State Route 85 (SR 85) is six-lane freeway linking U.S. Highway 101 (US 101) in Mountain View to US 101 in south San Jose. The median lane in both directions is designated for use by High Occupancy Vehicles (HOVs) and motorcycles during peak periods. HOVs include carpools, vanpools and buses. Full-access via ramps is provided at Saratoga Avenue between Fruitvale and Cox Avenues.

Saratoga Avenue is a two- to six-lane street linking Saratoga-Los Gatos Road (SR 9) with Scott Boulevard in the City of Santa Clara. In Saratoga, this street includes two lanes between SR 9 and Fruitvale Avenue, and four lanes north of this point to the City limits.

Prospect Road is a two- to four-lane east-west roadway extending between Stevens Creek County Park and Saratoga Avenue. Several north-south collector streets connect to Prospect Road through Cupertino including Blaney Avenue, Miller Avenue, and Johnson Avenue. The majority of Prospect Road forms the boundary between Saratoga and the Cities of San Jose and Cupertino. A short segment of this road includes five through lanes between Saratoga Avenue and Lawrence Expressway.

Cox Avenue is an east-west street extending between Saratoga-Sunnyvale Road and Quito Road. The majority of this street includes two travel lanes, with a four-lane segment between Saratoga Avenue and Paseo Presado. As part of the City's neighborhood traffic management speed table to discourage speeding. Between Prospect Road and Saratoga-Los Gatos Road, Cox Avenue is the only east-west street providing a direct connection across Saratoga between Saratoga-Sunnyvale Road and Quito Road (City of Saratoga 2010).

Regulatory Framework

The City of Saratoga General Plan Circulation and Scenic Highway Element maintains Level of Service (LOS) D as the minimal acceptable operation level for intersections that are under the City's jurisdiction. LOS A (indicating free flow operations with little or no delay experienced by motorists), to LOS F (indicating congested and oversaturated conditions where traffic flows exceed design capacity and result in long queues and delays). The City does not regulate the temporary construction impacts on local intersections.

Section 15064.3 of the CEQA Guidelines considers a Project's transportation impacts by evaluating the vehicle miles travelled (VMT) that are attributable to the Project rather than looking at LOS. However, the City of Saratoga has not yet adopted this policy and has no currently adopted VMT thresholds of significance. Additionally, this metric only applies to operational VMT generated by the Project, and not construction VMT.

Discussion

a) ***Less than Significant Impact*****.** Construction activity associated with the proposed Project would generate short-term increase in vehicle trips from construction workers and haul trucks transporting materials to and from the Project site on area roadways. Additional trips would occur during access ramp construction to deliver and ultimately haul off the approximately 195 cubic yards of temporary fill material, during tree removal, and creek restoration. It is anticipated that no more than 30 additional vehicle trips per day would occur during tree removal activities. Daily vehicle trips would likely be lower during site restoration.

Access to Project site during tree removal and creek restoration would be accomplished using existing roads including State Route 85, Saratoga Avenue, Cox Avenue, Saratoga Creek Drive, and the driveway access to the Brookside Club. The Project-generated traffic would be temporary and therefore would not result in any long-term degradation in traffic operating conditions (i.e., permanent increases in congestion) on any roadway segments or intersections in the Project vicinity. The minimal number of vehicle trips would not substantially add to local congestion in the Project area. Therefore, although Project-generated traffic would contribute to localized congestion near the Project site, impacts to the performance of the circulation system and travel demands would be temporary and short-term in nature.

Construction-related truck traffic during the a.m. (8:00 to 9:00 a.m.) and p.m. (4:00 to 6:00 p.m.) peak hours would coincide with peak-period traffic volumes on area roadways; and therefore, have the greatest potential to impede traffic flow. Project-related hauling and deliveries would be dispersed throughout the day, which would lessen the effect on peak-hour traffic on the roadway segments and intersections in the Project vicinity with the exception of worker commute trips, which would typically occur during the a.m. and p.m. peak hour.

Due to the minimum number of trips per day that the Project is expected to generate, and the temporary nature of the trips that would be generated, impacts are expected to be less than significant.

b) ***Less than Significant*** **Impact.** The Project would not conflict or be inconsistent with Section 15064.3 of the CEQA Guidelines, which considers a Project's transportation impacts by evaluating the vehicle miles travelled (VMT) that are attributable to the Project. The Project would only generate a temporary increase in VMT during access ramp construction and removal, tree removal, and creek restoration. Following Project implementation and completion of the plant establishment period, no additional maintenance would be required beyond what is already occurring. Therefore, no permanent increase in VMT would occur as a result of the proposed Project. Therefore, impacts would be considered less than significant.

c) ***Less than Significant Impact.*** The proposed Project would not include new design features (e.g., new facilities or obstructions within public roadways) or alterations of existing features (e.g., road realignment). No incompatible uses or hazardous design features are associated with operation of the proposed Project. However, construction of the proposed Project would result in heavy vehicles and equipment accessing the Project area via local roadways, including Cox Avenue, Saratoga Avenue, and Saratoga Creek Drive. The presence of large, slow-moving equipment among the general-purpose traffic on roadways in the Project area could result in temporary safety hazards. However, given the limited amount of equipment needed to implement the proposed Project, traffic safety hazards would not be substantially increased. In addition, implementation of BMP TR-1, which requires fencing, barriers, lights, flagging, guards and/or signs (as appropriate) to provide warning to the public of construction activities, would minimize the effects from construction traffic within the Project area Therefore, the proposed Project would result in a less than significant impact from an increase in traffic hazards.

d) ***Less than Significant Impact***. During construction, Valley Water would coordinate with surrounding uses (e.g. Prospect High School, Brookside Club, and residential uses) to ensure that access for emergency vehicles is maintained at all times during tree removal and restoration activities. Therefore, the proposed Project would have a less than significant impact on emergency access.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

TR-1: Incorporate Public Safety Measures

MITIGATION MEASURES

No mitigation measures are required.

18. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Regulatory Framework

Effective July 1, 2015, Assembly Bill 52 (AB 52) requires (1) a lead agency to provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency, and (2) if a tribe requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe. Topics that may be addressed during consultation include tribal cultural resources, the potential significance of Project impacts, type of environmental document that should be prepared, and possible mitigation measures and Project alternatives.

AB 52 creates a new category of resources, i.e., tribal cultural resources.

Section 21074(a) of the Public Resource Code defines Tribal Cultural Resources as:

1. Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a Historical Resource under CEQA, a Tribal Cultural Resource may also require additional consideration as a Historical Resource. Tribal Cultural Resources may or may not exhibit archaeological, cultural, or physical indicators.

Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes federally and non-federally recognized tribes.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies carry out consultation with tribes at the commencement of the CEQA process to identify Tribal Cultural Resources. Furthermore, because a significant effect on a Tribal Cultural Resource is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures.

Summary of Tribal Consultation

AB 52 consultation requirements went into effect on July 1, 2015 for all projects that have not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration, or published a Notice of Preparation of an Environmental Impact Report. To date, Valley Water has received one written request from the Muwekma Oholone Indian Tribe of the San Francisco Bay Area Region to receive notifications as specified in Public Resources Code Sections 21080.3.1. Therefore, Valley Water emailed a Project notification letter to Charlene Nijmeh, Chairwoman of the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Region on May 13, 2019, which provided a brief description and location of the proposed Project (see Appendix E). A hard copy of the notification letter was also sent via the U.S. Postal Service the same day. A follow-up phone call was placed with Chairwoman Nijmeh on May 30, 2019, but no message was left due to a full mailbox. A second email was sent and a phone message was left on June 12, 2019, the end of the 30-day notification period. No request for consultation was received within the 30-day response period. Therefore, AB 52 consultation was not required for the Project.

Discussion

a) ***No Impact*.** According to the cultural resources investigation, there are two historic period houses in the Project vicinity, but they have not been evaluated for the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR) and are not included on any local register of historical resources. Therefore, there will be no impact to the Tribal Cultural Resources that are listed or eligible for listing on the NRHP, CRHR, or the local register of historical resources.

b) ***Less than Significant Impact*.** The cultural resources study conducted for the proposed Project did not suggest presence of Tribal Cultural Resources within the Project area. Therefore, no known Tribal Cultural Resources have been identified (as defined in Section 21074) within the Project area and the proposed Project would not cause a substantial adverse change in the significance of a known Tribal Cultural Resource. In the event that unknown Tribal Cultural Resources are encountered during construction activities, Valley Water would implement BMP CU-1 (Accidental Discovery of Archaeological Artifacts, Tribal Cultural Resources, or Burial Remains) as included in the Environmental Setting in Section 3 (Table 3-2), which would require that work at the location of the find will be halted immediately within 100 feet of the find and a "no work" zone shall be established utilizing appropriate flagging to delineate the boundary of this zone. A Consulting Archaeologist will visit the discovery site as soon as practicable for identification and evaluation pursuant to Section 21083.2 of the Public Resources Code and Section 15126 of the California Code of Regulations. If the archaeologist determines that the artifact or resource is significant, the

archaeologist will determine if the artifact or resource can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the archaeologist will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines. If a tribal cultural resource cannot be avoided, the Action Plan will include notification of the appropriate Native American Tribe, and consultation with the tribe regarding acceptable recovery options.

Impacts resulting from the destruction of tribal cultural resources would therefore be considered less than significant.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

CU-1: Accidental Discovery of Archaeological Artifacts, Tribal Cultural Resources, or Burial Remains

MITIGATION MEASURES

No mitigation measures are required.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Valley Water manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 1.9 million residents. Valley Water manages ten dams and surface water reservoirs, three water treatment plants, and more than 275 miles of streams.

Water

The San Jose Water Company provides potable water service to residential, commercial, industrial, and institutional customers within the City of Saratoga. The San Jose Water Company is a water utility processed, distribution, wholesale and retail company that is based in San Jose, California. It served 228,000 connections that serves over 1 million residents.

Wastewater

The Project area is served by the West Valley Sanitation District (WVSD). The WVSD provides sanitary sewer services to an area of approximately 28.2 square miles, encompassing the City of Campbell, Town of Los Gatos, City of Monte Sereno, two-thirds of the City of Saratoga, and unincorporated areas to the west of these cities. The WVSD owns, operates, and maintains the collection system within its bounds, and contracts with the San Jose-Santa Clara Regional Wastewater Facility for wastewater treatment and disposal. The WVSD also provides contract storm water management and storm drain maintenance services to the cities of Campbell, Saratoga, Monte Sereno and Los Gatos.

Storm Water Drainage

Surface water runoff from Project area roadways is collected by storm drains located along area roadways surrounding the Project site. The area storm drain system is maintained by the City of Saratoga Department of Public Works. Several storm drain outfalls located within the Project alignment along Saratoga Creek between Cox Avenue and Prospect High School discharge collected surface water into the creek (City of Saratoga 2015). Flood protection is provided by Valley Water for the City of Saratoga.

Solid Waste

The nearest landfills to the Project area include Guadalupe Landfill located at 15999 Guadalupe Mines Road, San Jose, California, which is located approximately 7.5 miles to the southeast of the Project area, and the Kirby Canyon Recycling and Disposal Facility located at 910 Coyote Creek Golf Drive, Morgan Hill, CA, which is located approximately 18 miles southeast of the Project area. The Guadalupe Sanitary Landfill has a permitted capacity of 28,600,000 cubic yards and approximately 11,055,000 cubic yards of remaining capacity. The landfill is permitted to accept 2,600 tons per day. The Guadalupe Sanitary Landfill is permitted to accept up to 1,300 tons per day. The Kirby Canyon Landfill has a maximum permitted capacity of 36,400,000 cubic yards with approximately 16,191,600 cubic yards of remaining capacity (CalRecycle 2019).

Discussion

a) ***No Impact*.** Temporary irrigation using a water truck is proposed to water the revegetation area plantings for a period of 3 to 5 years. However, adequate sources of water are currently available, and no new or expanded water treatment facilities would be required to provide the minimal amount of irrigation water needed to sustain restoration plantings. In addition, the proposed hazard tree removal and restoration Project would not require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the proposed Project would have no impact.

b) **Less than Significant Impact.** Construction of equipment access ramps for hazard tree removal would require potable or reclaimed water for dust suppression. However, the amount

of water required would be minimal and would be distributed to the Project area via water trucks. After hazard tree removal is completed, and the Project site has been revegetated with native riparian species, temporary irrigation would be required during the plant establishment period of three to five years. A water truck would routinely connect into the irrigation system providing water for irrigation during the plant establishment period. All water use at the site would be temporary. Therefore, no new or expanded water supply entitlements would be required to serve the proposed Project, which would be considered a less than significant impact.

c) ***No Impact*.** The proposed Project does not include uses (e.g., residential, commercial, etc.) that would result in wastewater discharge requiring treatment at the San Jose/Santa Clara Regional Wastewater Facility. Therefore, the proposed Project would not result in a determination by any wastewater treatment provider, which serves or may serve the proposed Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. As a result, the proposed Project would therefore have no impact on wastewater treatment facilities.

d) ***Less Than Significant Impact*.** Implementation of the proposed Project would generate solid waste associated with tree removal activities, including cut logs, limbs, branches and duff. Most of the vegetation that is to be removed would be ground up into mulch and aged for re-use at a local landfill. The Project is not expected to produce substantial amounts of additional solid waste that cannot be recycled. Given that most, if not all, of the cut logs and limbs would be processed into mulch for re-use at a local landfill, less than significant impact to the remaining landfill capacity would occur. Therefore, the proposed Project would be consistent with state and local standards and would not impair the attachment of solid waste reduction goals. In addition, the proposed Project would not generate additional waste once completed. Impacts related to solid waste disposal are therefore considered less than significant.

e) **Less than Significant Impact.** The proposed Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste, including recycling programs. Thus, impacts in this regard would be less than significant.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

Not applicable.

MITIGATION MEASURES

No mitigation measures are required.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope, or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The State of California and Santa Clara County Fire Hazard Severity Zone (FHSZ) maps are based on an evaluation of fire history, existing and potential fuel, flame length, blowing embers, terrain, weather, and the likelihood of buildings igniting (CalFire, 2016). According to CalFire, the Project site is located in an area designated as a non-very high fire hazard severity zone; and no areas of very high fire hazard severity are near the Project site (CalFire, 2008). Further, the Project site is not in an area of slope, prevailing winds, or areas subject to exacerbated wildfire risks or post-fire slope instability.

Discussion

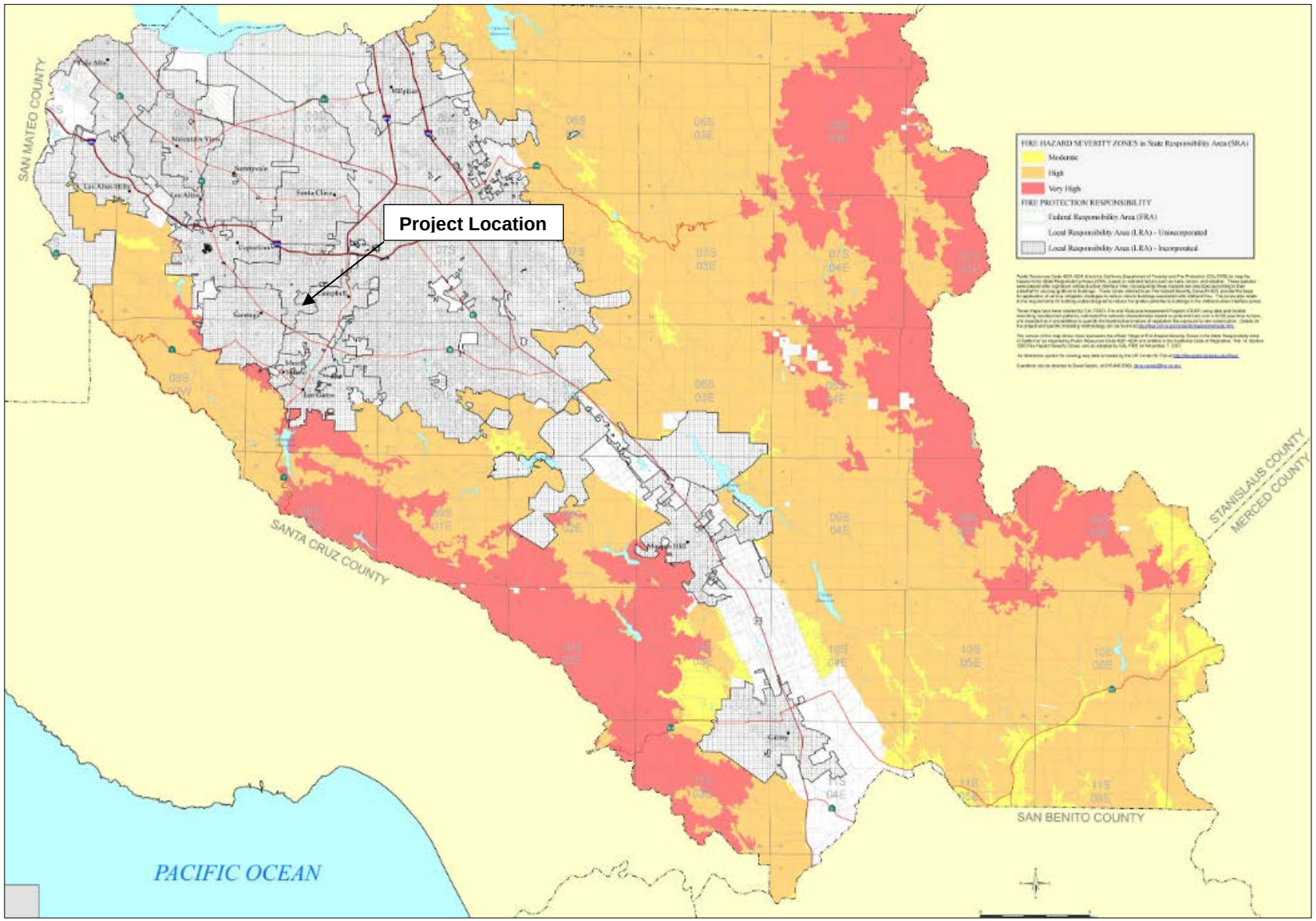
a-d) ***No Impact.*** The Project is not located in or near a state responsibility areas or lands classified as very high fire hazard severity zones. Figure 4-2 provides the Project location in relation to the wildfire hazard zones within the state responsibility areas. Since the proposed Project would only involve construction of access ramps, removal of trees, and restoration of native riparian species, the proposed Project would not substantially impair an emergency response or evacuation plan, exacerbate fire risks, or expose people or structures to significant risks. Implementation of BMP HM-12 would require Valley Water to incorporate fire prevention measures which would further reduce wildfire risks.

BEST MANAGEMENT PRACTICES (See details in Table 3-2)

HM-12: Incorporate Fire Prevention Measures

MITIGATION MEASURES

No mitigation measures would be required.



Source: Cal fire, 2007

Figure 4-2: Wildfire Hazard Zones in State Responsibility Areas

21. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) ***Less than Significant with Mitigation Incorporated*.** The above analysis finds that the Project would not result in significant impacts on cultural resources. While the Project would result in potentially significant impacts on biological resources, implementation of applicable biological BMPs and mitigation measures as proposed in this Initial Study/Mitigated Negative Declaration would ensure that the proposed Project would not substantially degrade the quality of the environment; substantially reduce the habitat, population, or range of a plant or animal species; cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community; or reduce the number or restrict the range or a rare or endangered plant or animal.

b) ***Less than Significant with Mitigation Incorporated.*** As defined by Section 15355(b) of the CEQA Guidelines, the cumulative impact from several projects is "the change in the environment which results from the incremental impact of the Project when added to other closely related past, present, and reasonably foreseeable probable future projects" and that "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." In addition to Project specific impacts, this evaluation considered incremental impact of the Project when added to the removal of a total of 26 hazard eucalyptus trees from the same reach of Saratoga Creek under Notification No. 1600-2018-0066-R3 in 2018. While the above analysis finds that the Project would result in potentially significant impacts on biological resources, the proposed mitigation would reduce the Project impacts in these areas to a level of less-than-significant and to a level where the Project's contribution to a cumulative impact would not be cumulatively considerable.

c) ***Less than Significant***. The above analysis shows that the Project would not result in significant impacts in the resource areas relating to aesthetics, noise, recreation,

utilities/service systems, air quality, GHG emissions, land use/planning, transportation, noise, and wildlife. While the analysis finds that the Project would result in some adverse impacts to biological resources and hydrology/water quality, the proposed mitigation would sufficiently reduce those impacts to a level of less-than-significant. Therefore, this Project would not cause substantial adverse effects to human beings directly or indirectly.

Section 5: Report Preparation

This section lists those individuals who contributed to the preparation of this Initial Study/Mitigated Negative Declaration.

Valley Water

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APPENDIX A

CALIFORNIA EMISSIONS ESTIMATOR MODEL (CalEEMod)

Saratoga Creek Hazard Tree and Restoration Project

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Residential	0.00	Dwelling Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Saratoga Creek Hazard Tree and Restoration Project - Santa Clara County, Annual

Project Characteristics -

Land Use - The combined parcel acreage is 4.79 acres.
The square feet is 209,000
The population of the project site is 0 because it is open space for Saratoga Creek.

Construction Phase - This is a hazard tree removal and creek restoration project. No construction will occur other than construction of two temporary earthen access ramps for creek access of equipment.

Off-road Equipment - These will be used for tree removal and ramp construction.

Grading - Temporary impact for access ramp construction.

Vehicle Trips - This is a hazard tree removal project. No residential operational trips would occur.

Woodstoves - This is a hazard tree removal and creek restoration project. No wood stoves or fireplaces will be used.

Water And Wastewater -

Construction Off-road Equipment Mitigation -

Trips and VMT - Trucks will be hauling out logs and large limbs from the site to an offsite yard for disposal.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	107.00
tblConstructionPhase	NumDays	0.00	132.00
tblConstructionPhase	NumDays	0.00	132.00
tblConstructionPhase	PhaseEndDate	8/4/2019	12/31/2019
tblConstructionPhase	PhaseEndDate	8/4/2019	12/31/2021
tblConstructionPhase	PhaseEndDate	8/4/2019	12/31/2020
tblConstructionPhase	PhaseStartDate	8/5/2019	7/1/2021
tblConstructionPhase	PhaseStartDate	8/5/2019	7/1/2020
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblGrading	AcresOfGrading	66.00	0.08
tblGrading	AcresOfGrading	66.00	0.08
tblGrading	MaterialExported	0.00	116.00

tblGrading	MaterialExported	0.00	116.00
tblGrading	MaterialImported	0.00	116.00
tblGrading	MaterialImported	0.00	116.00
tblOffRoadEquipment	HorsePower	231.00	247.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.29	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	23.00	2.00
tblTripsAndVMT	HaulingTripNumber	23.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	8.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	0.00
tblVehicleTrips	HW_TTP	31.00	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0764	0.8866	0.5030	1.0300e-003	0.0318	0.0404	0.0722	3.9700e-003	0.0372	0.0412	0.0000	92.4086	92.4086	0.0284	0.0000	93.1173
2020	0.0463	0.5575	0.2785	6.7000e-004	2.6800e-003	0.0222	0.0248	7.1000e-004	0.0204	0.0211	0.0000	58.8113	58.8113	0.0183	0.0000	59.2695
2021	0.0851	0.8718	0.6359	1.2900e-003	0.0566	0.0393	0.0959	0.0291	0.0371	0.0662	0.0000	112.8304	112.8304	0.0254	0.0000	113.4644
Maximum	**0.0851**	**0.8866**	**0.6359**	**1.2900e-003**	**0.0566**	**0.0404**	**0.0959**	**0.0291**	**0.0372**	**0.0662**	**0.0000**	**112.8304**	**112.8304**	**0.0284**	**0.0000**	**113.4644**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0764	0.8866	0.5030	1.0300e-003	0.0162	0.0404	0.0566	2.2900e-003	0.0372	0.0395	0.0000	92.4085	92.4085	0.0284	0.0000	93.1172
2020	0.0463	0.5575	0.2785	6.7000e-004	2.6500e-003	0.0222	0.0248	7.0000e-004	0.0204	0.0211	0.0000	58.8112	58.8112	0.0183	0.0000	59.2695
2021	0.0851	0.8718	0.6359	1.2900e-003	0.0292	0.0393	0.0685	0.0141	0.0371	0.0512	0.0000	112.8303	112.8303	0.0254	0.0000	113.4643
Maximum	**0.0851**	**0.8866**	**0.6359**	**1.2900e-003**	**0.0292**	**0.0404**	**0.0685**	**0.0141**	**0.0372**	**0.0512**	**0.0000**	**112.8303**	**112.8303**	**0.0284**	**0.0000**	**113.4643**

Saratoga Creek Hazard Tree and Restoration Project - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.23**	**0.00**	**22.28**	**49.42**	**0.00**	**13.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-5-2019**	**11-4-2019**	0.5915	0.5915
2	**11-5-2019**	**2-4-2020**	0.3666	0.3666
4	**5-5-2020**	**8-4-2020**	0.1144	0.1144
5	**8-5-2020**	**11-4-2020**	0.3006	0.3006
6	**11-5-2020**	**2-4-2021**	0.1863	0.1863
8	**5-5-2021**	**8-4-2021**	0.1812	0.1812
9	**8-5-2021**	**9-30-2021**	0.2951	0.2951
		Highest	0.5915	0.5915

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Site Preparation	8/5/2019	12/31/2019	5	107	
2	Phase 2	Site Preparation	7/1/2020	12/31/2020	5	132	
3	Phase 3	Site Preparation	7/1/2021	12/31/2021	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1	Graders	1	8.00	187	0.41
Phase 3	Concrete/Industrial Saws	1	8.00	81	0.73
Phase 1	Cranes	1	4.00	247	0.40
Phase 2	Graders	1	8.00	187	0.41
Phase 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 1	Excavators	2	6.00	97	0.37
Phase 1	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 3	Rubber Tired Dozers	1	1.00	247	0.40
Phase 3	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Phase 3	Graders	1	8.00	187	0.41

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1	5	8.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2	2	5.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3	5	13.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0284	0.0000	0.0284	3.0600e-003	0.0000	3.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0749	0.8852	0.4910	9.9000e-004		0.0404	0.0404		0.0372	0.0372	0.0000	89.3266	89.3266	0.0283	0.0000	90.0331
Total	**0.0749**	**0.8852**	**0.4910**	**9.9000e-004**	**0.0284**	**0.0404**	**0.0688**	**3.0600e-003**	**0.0372**	**0.0402**	**0.0000**	**89.3266**	**89.3266**	**0.0283**	**0.0000**	**90.0331**

3.2 Phase 1 - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.1000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0771	0.0771	0.0000	0.0000	0.0772
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5500e-003	1.1600e-003	0.0120	3.0000e-005	3.3900e-003	2.0000e-005	3.4200e-003	9.0000e-004	2.0000e-005	9.2000e-004	0.0000	3.0049	3.0049	8.0000e-005	0.0000	3.0070
Total	**1.5600e-003**	**1.4700e-003**	**0.0120**	**3.0000e-005**	**3.4100e-003**	**2.0000e-005**	**3.4400e-003**	**9.0000e-004**	**2.0000e-005**	**9.3000e-004**	**0.0000**	**3.0820**	**3.0820**	**8.0000e-005**	**0.0000**	**3.0841**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0128	0.0000	0.0128	1.3800e-003	0.0000	1.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0749	0.8852	0.4910	9.9000e-004		0.0404	0.0404		0.0372	0.0372	0.0000	89.3265	89.3265	0.0283	0.0000	90.0330
Total	**0.0749**	**0.8852**	**0.4910**	**9.9000e-004**	**0.0128**	**0.0404**	**0.0532**	**1.3800e-003**	**0.0372**	**0.0385**	**0.0000**	**89.3265**	**89.3265**	**0.0283**	**0.0000**	**90.0330**

3.2 Phase 1 - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.1000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0771	0.0771	0.0000	0.0000	0.0772
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5500e-003	1.1600e-003	0.0120	3.0000e-005	3.3900e-003	2.0000e-005	3.4200e-003	9.0000e-004	2.0000e-005	9.2000e-004	0.0000	3.0049	3.0049	8.0000e-005	0.0000	3.0070
Total	**1.5600e-003**	**1.4700e-003**	**0.0120**	**3.0000e-005**	**3.4100e-003**	**2.0000e-005**	**3.4400e-003**	**9.0000e-004**	**2.0000e-005**	**9.3000e-004**	**0.0000**	**3.0820**	**3.0820**	**8.0000e-005**	**0.0000**	**3.0841**

3.3 Phase 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0452	0.5564	0.2702	6.4000e-004		0.0221	0.0221		0.0204	0.0204	0.0000	56.4905	56.4905	0.0183	0.0000	56.9473
Total	**0.0452**	**0.5564**	**0.2702**	**6.4000e-004**	**4.0000e-005**	**0.0221**	**0.0222**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**56.4905**	**56.4905**	**0.0183**	**0.0000**	**56.9473**

3.3 Phase 2 - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.9000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0763	0.0763	0.0000	0.0000	0.0764
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	7.9000e-004	8.2600e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.2445	2.2445	6.0000e-005	0.0000	2.2459
Total	**1.1100e-003**	**1.0800e-003**	**8.3200e-003**	**2.0000e-005**	**2.6400e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.3208**	**2.3208**	**6.0000e-005**	**0.0000**	**2.3222**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0452	0.5564	0.2702	6.4000e-004		0.0221	0.0221		0.0204	0.0204	0.0000	56.4905	56.4905	0.0183	0.0000	56.9472
Total	**0.0452**	**0.5564**	**0.2702**	**6.4000e-004**	**2.0000e-005**	**0.0221**	**0.0222**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**56.4905**	**56.4905**	**0.0183**	**0.0000**	**56.9472**

3.3 Phase 2 - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.9000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0763	0.0763	0.0000	0.0000	0.0764
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-003	7.9000e-004	8.2600e-003	2.0000e-005	2.6200e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.2445	2.2445	6.0000e-005	0.0000	2.2459
Total	**1.1100e-003**	**1.0800e-003**	**8.3200e-003**	**2.0000e-005**	**2.6400e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.3208**	**2.3208**	**6.0000e-005**	**0.0000**	**2.3222**

3.4 Phase 3 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0497	0.0000	0.0497	0.0273	0.0000	0.0273	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0825	0.8697	0.6162	1.2300e-003		0.0393	0.0393		0.0370	0.0370	0.0000	107.1220	107.1220	0.0252	0.0000	107.7527
Total	**0.0825**	**0.8697**	**0.6162**	**1.2300e-003**	**0.0497**	**0.0393**	**0.0890**	**0.0273**	**0.0370**	**0.0644**	**0.0000**	**107.1220**	**107.1220**	**0.0252**	**0.0000**	**107.7527**

3.4 Phase 3 - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.7000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0753	0.0753	0.0000	0.0000	0.0754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6400e-003	1.8300e-003	0.0196	6.0000e-005	6.8000e-003	4.0000e-005	6.8500e-003	1.8100e-003	4.0000e-005	1.8500e-003	0.0000	5.6331	5.6331	1.3000e-004	0.0000	5.6363
Total	**2.6500e-003**	**2.1000e-003**	**0.0197**	**6.0000e-005**	**6.8200e-003**	**4.0000e-005**	**6.8700e-003**	**1.8100e-003**	**4.0000e-005**	**1.8600e-003**	**0.0000**	**5.7084**	**5.7084**	**1.3000e-004**	**0.0000**	**5.7117**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0224	0.0000	0.0224	0.0123	0.0000	0.0123	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0825	0.8697	0.6162	1.2300e-003		0.0393	0.0393		0.0370	0.0370	0.0000	107.1219	107.1219	0.0252	0.0000	107.7526
Total	**0.0825**	**0.8697**	**0.6162**	**1.2300e-003**	**0.0224**	**0.0393**	**0.0617**	**0.0123**	**0.0370**	**0.0493**	**0.0000**	**107.1219**	**107.1219**	**0.0252**	**0.0000**	**107.7526**

3.4 Phase 3 - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	2.7000e-004	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0753	0.0753	0.0000	0.0000	0.0754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6400e-003	1.8300e-003	0.0196	6.0000e-005	6.8000e-003	4.0000e-005	6.8500e-003	1.8100e-003	4.0000e-005	1.8500e-003	0.0000	5.6331	5.6331	1.3000e-004	0.0000	5.6363
Total	**2.6500e-003**	**2.1000e-003**	**0.0197**	**6.0000e-005**	**6.8200e-003**	**4.0000e-005**	**6.8700e-003**	**1.8100e-003**	**4.0000e-005**	**1.8600e-003**	**0.0000**	**5.7084**	**5.7084**	**1.3000e-004**	**0.0000**	**5.7117**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Residential	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Residential	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Residential	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

BIOLOGICAL SITE ASSESSMENT, SARATOGA CREEK HAZARD TREE REMOVAL AND RESTORATION PROJECT

MEMORANDUM

TO: Todd Sexauer

FROM: Shawn Lockwood; Laura Garrison

SUBJECT: Biological Site Assessment; Saratoga Creek Hazard Tree Removal and Restoration Project

DATE: 06-18-19

Introduction

This Biological Site Assessment (BSA) provides the baseline environmental and regulatory setting, as related to biological resources, for the Santa Clara Valley Water District's (Valley Water's) proposed Saratoga Creek Hazard Tree Removal and Restoration Project (Project). The purpose of this BSA is to identify sensitive biological resources that may be present in the Project area, to evaluate potential Project impacts on those resources, and recommend measures that could be implemented by the Project to avoid and minimize impacts to biological resources. This BSA is intended to support biological resource permit applications and compliance with the biological resource elements of the California Environmental Quality Act (CEQA).

For this BSA sensitive biological resources are defined as:

- Plants or animals that are listed as rare, threatened, endangered, fully-protected, or species of special concern, pursuant to Federal or State law.
- Nesting birds and raptor nests in or near the Project area, pursuant to Federal or State law.
- Natural communities indicated as rare or threatened by California Department of Fish and Wildlife (CDFW).
- Wetlands, streams, and the riparian vegetation surrounding them.
- Critical Habitats designated by United States Fish and Wildlife Service (USFWS).

This BSA was performed by Valley Water Wildlife Biologist Shawn Lockwood and Valley Water Botanist Laura Garrison (hereinafter "we").

Project Summary

The Project is along Saratoga Creek between Cox Avenue and Prospect High School in Saratoga, California (Figure 1). Numerous drought-stressed and diseased blue gum *Eucalyptus* trees (*Eucalyptus globulus)* have been determined to be hazardous and need to be removed to mitigate the safety hazard. Currently 104 trees remain that will need to be removed. A phased approach would be used over the next three years (2019-2021). The project area is divided into work areas based on access, techniques used to conduct tree removal, and location in the creek area. Nearly half of the trees in the grove may be accessible by mobile crane and the remainder will be removed using traditional climbing techniques coupled with hand-based or equipment-based transport of debris out of the creek area. Access for light equipment (i.e., rubber tracked excavators and loaders) would be required to remove the cut logs and limbs from the creek bed for those trees that are not accessible by crane for removal. To facilitate the equipment access, a previous assessment identified approximately six coast live oak (*Quercus agrifolia*) and two elderberry (*Sambucus nigra* spp. *caerulea)* that need to be removed. Two temporary access ramps constructed of imported fill material will be required to expedite the removal

of *Eucalyptus* debris from the creek. This work will only be conducted while the creek is dry between August and October of each year when there is minimal chance of precipitation. If water is present during these months, the creek will be dewatered prior to equipment entering the creek. The late summer start time is also considerate of local nesting birds that may be using the *Eucalyptus* trees earlier in the season.

Revegetation efforts would initiate within 2 to 3 years following each phase of tree removal once it has been demonstrated that nonnative species have been sufficiently removed. All native revegetation plantings would be installed prior to January 15 once nonnative species have been controlled within the revegetation areas. After *Eucalyptus* and associated slash have been removed, the site will be seeded with a blend of native grasses and forbs that are appropriate for the site conditions (i.e., ephemeral creek channel and uplands). During retreatment of the site, native trees and shrubs that naturally recruit in the work area will be similarly protected. Retreatment efforts are anticipated to include *Eucalyptus* sprouting from stumps as well as any secondary weeds that begin to establish following *Eucalyptus* removal. In areas where multiple *Eucalyptus* are removed, native trees and shrubs appropriate for the physical conditions of the area, will be planted. Because most of the *Eucalyptus* are on or along the top of the streambanks, species such as coast live oak and California buckeye (*Aesculus californica*) will be used for tree revegetation, and species such as elderberry, coyote brush *(Baccharis pilularis*), snowberry (*Symphoricarpos albus* var. *laevigatus*), California blackberry (*Rubus ursinus*), and native grasses and herbs used for shrub and understory revegetation. In areas where a single *Eucalyptus* is removed, native understory species may be planted, and the tree canopy of surrounding native trees will be allowed to fill in the area naturally. In areas of notable bank erosion, stakes of native willows (*Salix* spp.*)* may be planted along the toe of the bank.

Identification of Hazardous Trees and Work to Date

Historically this reach of Saratoga Creek was an ephemeral creek, but Valley Water has been augmenting seasonal flows for the last 40 years by releasing water from imported sources as part of the groundwater recharge program. These augmented flows have allowed the *Eucalyptus* to thrive and grow into large mature trees, some of which stand over 100 feet in height. During the recent drought period in California, surface water flows experienced significant reduction and augmented flows for groundwater recharge were largely unavailable. Thus, this reach of typically wet creek went dry for extended periods between 2012 and 2015. This change in water availability had noticeable effects on the health and vigor of the *Eucalyptus* groves and drought-stressed trees became evident in 2015. Early symptoms included minor canopy die-back, increased occurrence of foliar damage by *Eucalyptus* tortoise beetle (*Trachymela sloanei*) and lerp psyllid (*Glycaspis brimblecombei*), outbreaks of *Eucalyptus* long-horned borer (*Phoracantha* sp.), and increased mortality and windthrow of younger trees. Several dead and declining *Eucalyptus* were either removed or limbed by Valley Water in 2015 in the interest of public safety (J. Chapman, pers. comm. 2018).

With the return of normal winter precipitation rates in 2016, several of the previously declining trees began to show signs of recovery. Epicormic trunk sprouting became common on trees that had experienced significant canopy decline during the drought. Branch failure and windthrow continued to increase at this time and several fallen trees showed considerable root decay. Fruiting bodies of several wood decay fungi came evident on scattered trees throughout the entire reach during this time. Sulphur shelf (*Laetiporus gilbertsonii*), Western jack-o-lantern (*Omphalotus olivascens*), and split gill fungus (*Schizophyllum commune*) have all been observed on *Eucalyptus* in the reach. In addition, sulphur shelf basidiocarps were noted growing from stumps of previously removed trees, indicating advanced internal

decay in affected trees. Between 2016 and 2017, Valley Water either removed or limbed several dead and declining *Eucalyptus* in the interest of public safety. Due to the logistical constraints of access, all trees were removed by climbers with chainsaws and the trees were cut down to manageable sizes to be removed on foot (J. Chapman, pers. comm. 2018).

In 2017, Valley Water's arborist performed Level 2 Tree Risk Assessments identifying and tagging over 100 trees for removal. Due to the proximity of one of the *Eucalyptus* groves to high voltage distribution lines, in 2017 Valley Water contacted Pacific Gas and Electric (PG&E) to establish a collaborative approach to address the logistical constraints of access. To protect their facilities, PG&E agreed to a cost-sharing approach and helped coordinate the use of an oversized crane with specialized workers to perform some of the more difficult tree removals. In 2018, prior to starting the removal of these hazardous trees with PG&E, Valley Water filed a Notice of Exemption with Santa Clara County since the work qualified for a Categorical Exemption (Class 4) under CEQA. Additionally, Valley Water obtained a Lake or Streambed Alteration Agreement (LSAA) through CDFW, which allowed the removal of 30 trees. Work was performed under this LSAA (#1600-2018-0066-R3) and during the 2018 work window 26 trees were successfully removed. Additionally, numerous tagged trees were removed by PG&E, removed by other parties, or fell naturally after the removal of the 26 trees mentioned above.

Methods for Biological Resources Assessment

Our assessment to determine if sensitive biological resources occur within the Project area or its general proximity consisted of a two-step approach. The first step was a desktop reconnaissance, where we reviewed and interpreted the existing information that was available. This was followed by field reconnaissance, where we conducted biological surveys using the results of the desktop reconnaissance.

Desktop Reconnaissance

As part of our background review we reviewed the following resources:

- California Native Plant Society (CNPS) Rare Plant Inventory using the 9-quad search function (CNPS 2018)
- Processed and unprocessed data layers of California Natural Diversity Database (CNDDB) using a search radius of 2 miles (wildlife) or 5 miles (plants) around the Project area (CNDDB 2018)
- USFWS Information for Planning and Consultation tool (IPaC) (USFWS 2018)
- eBird – online database of bird distribution and abundance (Cornell Lab of Ornithology 2018)
- Santa Clara County Breeding Bird Atlas (Bousman, W.G. 2007)
- Google Earth Timeline tool (Google Inc. 2018)
- Nesting Bird Reports submitted to CDFW in 2018 in compliance with LSAA #1600-2018-0066-R3

After we gathered all the available information we used our professional expertise to interpret and refine the results from our database queries. Our process for refining these lists is described below.

The CNPS search resulted in a list of 80 special-status plant species (Attachment A) with potential to occur in the *Cupertino, California* USGS quadrangle and the eight surrounding quadrangles (*Palo Alto, Mountain View, Milpitas, Mindego Hill, San Jose West, Big Basin, Castle Rock Ridge, Los Gatos, California*). After an analysis of the documented habitat requirements and occurrence records for each species, we eliminated 74 species because of a lack of suitable habitat, lack of suitable edaphic conditions, the Project is outside of the species elevation range, species are not known from the Santa

Clara Valley area, and/or all potential habitat for the species with the Project area was deemed too disturbed to support that species.

The CNDDB search resulted in a list of 8 species within a 2-mile search radius surrounding the Project area (Figure 2). We eliminated obscure bumble bee (*Bombus calignosus),* because it did not meet our definition of a sensitive biological resource. We eliminated two additional species, California giant salamander (*Dicamptodon ensatus*) and Santa Cruz black salamander (*Aneides flavipunctatus niger*), because the exact locations they were collected between 1913 and 1967 were unknown (1-mile accuracy in CNDDB), the surrounding areas have been heavily developed since the dates of collection, and suitable habitat is not present within the Project area. We eliminated one species, woodland woolythreads *(Monolopia gracilens)*, because serpentine soils are absent within the Project area.

The USFWS IPaC search resulted in a list of 8 species (Attachment B). Because the Project area is located outside of the species ranges and/or does not provide suitable habitat we eliminated the following six species: bay checkerspot butterfly (*Euphydryas editha bayensis*), San Bruno elfin butterfly (*Callophrys mossii bayensis)*, delta smelt (*Hypomesus transpacificus*), Ridgway's rail (*Rallus longirostris obsoletus*), California least tern (*Sterna antillarum browni*), and marbled murrelet (*Brachyramphus marmoratus*). Additionally, we eliminated California tiger salamander (*Ambystoma californiense*) because a review of Google Earth timeline tool showed that the areas surrounding the Project area have been converted from open habitat and rural/agricultural land uses to urban hardscape of residential. Thus, there is no longer suitable upland or aquatic habitat within or surrounding the project area. Furthermore, there were no historic records of CTS in CNDDB within 2 miles of the Project area. No USFWS Critical Habitat units intersect with the Project.

In addition, we added western pond turtle (*Actinemys marmorata pallida*; WPT) and Townsend's big-eared bat *(Corynorhinus townsendii)* since CDFW listed these species as existing wildlife resources that could be adversely affected by the work Valley Water did in the Project area in 2018 (LSAA #1600-2018-0066-R3) and met our criteria of sensitive biological resources defined above.

This process resulted with the refined list of special-status species that warranted further habitat assessments and surveys to determine the likelihood of species presence within the Project area (Table 1).

Table 1 - Refined List of Special-status Species Resulting from the Desktop Assessment

Common Name	Scientific Name	Status	Source
Plants			
Santa Clara red ribbons	*Clarkia concinna ssp. automixa*	CRPR 4.3	CNPS, CNDDB
Lewis' clarkia	*Clarkia lewisii*	CRPR 4.3	CNPS
western leatherwood	*Dirca occidentalis*	CRPR 1B.2	CNPS, CNDDB
Loma Prieta hoita	*Hoita strobilina*	CRPR 1B.1	CNPS, CNDDB
arcuate bush-mallow	*Malacothamnus arcuatus*	CRPR 1B.2	CNPS, CNDDB
white-flowered rein orchid	*Piperia candida*	CRPR 1B.2	CNPS
Wildlife			
California red-legged frog	*Rana draytonii*	FT, CSC	USFWS-IPaC
Western pond turtle	*Actinemys marmorata pallida*	CSC	LSAA #1600-2018-0066-R3
Cooper's Hawk (nesting)	*Accipiter cooperii*	CFGC	CNDDB
Townsend's big-eared bat (roosting)	*Corynorhinus townsendii*	CSC	LSAA #1600-2018-0066-R3
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	CSC	CNDDB

CCH = California Consortium of Herbaria; CFGC = California Fish and Game Code 3503.5; CRPR = California Rare Plant Rank; CSC = California Species of Special Concern; FT = Federally Threatened; SE = State Endangered

Field Reconnaissance

On September 10, 2018, Valley Water Botanist Laura Garrison and Plant Ecologist Zooey Diggory conducted an initial reconnaissance survey of the project area. At this time, preliminary areas of suitable habitat were identified for future focused surveys (Table 2). Additionally, habitats onsite were assessed to determine if any Sensitive Natural Communities[1] were present within the Project area.

On February 12 and 21, 2019, Valley Water Botanist Laura Garrison and Biologist Sarah Gidre performed a protocol-level survey for western leatherwood (*Dirca occidentalis*) in the Project area. This involved walking the entire Project area in transects up to 5m apart, and using binoculars to survey inaccessible portions of the site (steep bank slopes). All plant species in bloom, or otherwise recognizable, were identified to a level necessary to determine their regulatory status. During the survey an inventory of plant species observed was recorded and is available upon request. The survey was conducted in accordance with California Native Plant Society's *Botanical Survey Guidelines* (CNPS 2001) and California Department of Fish and Game's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009). Appropriate phenology of western leatherwood during the survey period was confirmed by visiting the nearest known population to the Project site (Fremont Older Open Space Preserve, CNDDB occurrence 58), which was in early bloom on Jan 31, 2019 and nearing the end of bloom on March 14, 2019.

On June 7, 2019, Valley Water Biologist Josh Weinik performed a protocol-level survey for the remaining five special status plant species with potential to occur in the Project area (Santa Clara red ribbons, Lewis' clarkia, Loma Prieta hoita, arcuate bush mallow, and white-flowered rein orchid). This involved walking the entire Project area in transects up to 5m apart, and using binoculars to survey inaccessible portions of the site (steep bank slopes). All plant species in bloom, or otherwise recognizable, were identified to a level necessary to determine their regulatory status. During the survey an inventory of plant species observed was recorded and is available upon request. The survey was conducted in accordance with California Native Plant Society's *Botanical Survey Guidelines* (CNPS 2001) and California Department of Fish and Game's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009).

On September 27 and November 14, 2018, Valley Water Wildlife Biologist Shawn Lockwood conducted biological surveys to identify any special-status wildlife species or signs of their presence within in the Project area and within 500 meters upstream and downstream of the Project area (Figure 3). Meandering transects were walked throughout the project area, frequently stopping to use binoculars to scan ahead and increase the likelihood of identifying elusive species from a distance before they sought cover. The tagged hazardous trees were viewed with binoculars from numerous vantage points to increase line of sight to potential raptors nests or cavities that could provide owl nesting or bat roosting habitat. All structures that remotely resembled a woodrat lodge were closely inspected to determine if it was an active woodrat lodge. All animal tracks along the creek banks were inspected to identify any signs of turtle or frog.

Additionally, an aquatic resource delineation was conducted for the Project on August 13, 2018, by Valley Water Plant Ecologist Zooey Diggory with field assistance from Valley Water Biologist Jennifer

[1] Natural Communities with ranks of S1-S3 are considered sensitive by CDFW.

Watson. The delineation was conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" (USACE 1987), Version 2.0 of the Arid West regional supplement (USACE 2008), and "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (Lichvar and McColley 2008). For more detailed information see the Aquatic Resource Delineation Report prepared for this Project (SCVWD 2018).

Canopy Mapping

To support the CEQA analysis and the restoration planning for the Project, we mapped and quantified tree canopies for trees that were rooted within Valley Water's fee and easement parcels within the Project area. Two canopy types were identified from this mapping effort, *Eucalyptus* grove[2] and coast live oak woodland[3]. The *Eucalyptus* grove category solely consisted of the blue gum *Eucalyptus* groves. The coast live oak woodland category consisted of a mix of native riparian species, predominantly coast live oak, valley oak (*Quercus lobata*), elderberry, and western sycamore (*Platanus racemosa*). Since the satellite imagery basemaps that were available in ArcGIS were from 2017 and did not show the existing conditions which are a result of tree removals performed in 2018, we imported Google Earth satellite imagery from August 2018 (Google Inc. 2018) into ArcGIS. Next, we created polygons by tracing the outer drip lines of the two canopy types. The canopy polygons were field-verified by Valley Water arborists and then revised accordingly. Lastly, we used the ArcGIS Calculate Geometry tool to compute acreages of each type.

Results

The Project reach of Saratoga Creek has a very narrow riparian corridor that is constrained by surrounding suburban development and notable channel incision. This reach of creek generally consists of two plant communities: *Eucalyptus* groves with a predominantly nonnative and sparse understory and coast live oak woodland consisting of scattered to moderately dense native trees with a predominantly nonnative understory. The native overstory in these locations predominantly consists of coast live oak, valley oak, elderberry, and western sycamore. The understory throughout this reach is mostly nonnative, with dominant species including English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), poison hemlock (*Conium maculatum*), periwinkle (*Vinca major*), and nonnative grasses (including *Stipa miliacea, Avena* spp*., Hordeum* spp.). Remnant native understory species include mugwort (*Artemisia douglasiana*), poison oak (*Toxicodendron diversilobum*), and California blackberry.

The results of the canopy mapping are depicted in Figure 4 and presented below in Table 3. While removal of *Eucalyptus* trees will reduce the amount of available tree canopy between the time the trees are removed and the revegetation establishes, most of the tree canopy, which is dominated by coast live oak woodland will be retained. In the long-term, the Project's revegetation will replace *Eucalyptus* canopy with native tree canopy, benefiting both the recruitment of native understory vegetation and wildlife that depend on these species for foraging and habitat.

Table 3 – Canopy Acreages

Canopy Type	Total Area
Eucalyptus Groves	2.25 acres
Coast Live Oak Woodland	2.82 acres

[2] *Eucalyptus (globulus, camaldulensis*) Semi-Natural Woodland Strands (Sawyer et. al. 2009)
[3] *Quercus agrifolia* Woodland Alliance (Rank S4; Sawyer et. al. 2009)

No special-status plant species were identified within the Project area. The likelihood of their occurrence is very low because the banks and terraces have been highly altered and the *Eucalyptus* canopy precludes understory establishment. Additionally, the small areas with Project impacts that would be within the native overstory (temporary ramps/access points) are in areas with artificial fill, disturbed soils, and/or abundant nonnative understory. In the long-term, removal of the *Eucalyptus* groves, which preclude understory vegetation beneath them, followed by the revegetation with native tree canopy, will allow for establishment of native understory. This will likely benefit special-status plants if present in the future.

On February 12 and 21, 2019, Valley Water Botanist Laura Garrison and Biologist Sarah Gidre performed a protocol-level survey for western leatherwood in the Project area. No individuals were observed. On June 7, 2019, Valley Water Biologist Josh Weinik performed a protocol-level survey for the remaining five special status plant species with potential to occur in the Project area (Santa Clara red ribbons, Lewis' clarkia, Loma Prieta hoita, arcuate bush mallow, and white-flowered rein orchid). No individuals were observed.

No Sensitive Natural Communities defined as rare or threatened by CDFW (i.e. ranked S1-S3) were identified within the Project area. Two community types were identified within the Project area, *Quercus agrifolia* Woodland Alliance and *Eucalyptus (globulus, camaldulensis*) Semi-Natural Woodland Strands. Neither of which are state ranked S1-S3, therefore are not considered to be sensitive by CDFW. However, both of these community types are within the riparian zone, which is considered to be sensitive under CEQA and is regulated by CDFW.

No California red-legged frog *(Rana draytonii*; CRLF) or signs of their presence were observed during the surveys performed for this BSA. In addition, no CRLF were detected by the CDFW-approved Qualified Biologists who performed several focused surveys in compliance with LSAA #1600-2018-0066-R3 in 2018. CRLF chiefly inhabits ponds, although it also uses marshes, streams, lagoons, and other waterways throughout most of its range (Thomson et al. 2016). In the central and northern part of its range (i.e. Santa Clara County), breeding primarily takes place in ponds, and less frequently in quiet pools and streams (Fellers 2005). We assessed the aquatic habitat onsite and determined that due to the lack of deep pools, lack of backwaters, lack of emergent vegetation, and the anthropomorphic water regime throughout this reach, suitable breeding habitat is absent within the Project area. We considered the use of aquatic habitat by juveniles year-round and by adults outside of the breeding season. Due to the very shallow water depths and lack of emergent vegetation yielding substantial risk of predation for frogs, combined with the anthropogenic water regime, CRLF are not expected to occur within the aquatic habitat. Use of upland habitat by CRLF is strongly correlated with the proximity of suitable aquatic habitat. Since the suitability of the aquatic habitat present is very low, CRLF are not expected to occur within the upland habitat. Additionally, we did not observe any sympatric amphibians such as Sierran treefrog (*Pseudacris sierrae*) or California toad (*Anaxyrus boreas halophilus*) within the Project area. These anurans are very common in other creeks throughout Santa Clara County and in Mr. Lockwood's experience assisting with CRLF research (sampling 1,200 + CRLF of all life stages over 10 years) these species are typically found coinhabiting areas with CRLF. Because CRLF are not expected to occur within the habitats onsite, the primary concern of impacting CRLF would come from an itinerant frog moving through the Project area. We reviewed CNDDB's processed and unprocessed data layers to determine where the closest CRLF occurrence was. The closest record (Occurrence # 211) was of a juvenile observed in 1997 ~3.1 miles upstream in the Saratoga Hills. This is far outside the 1.6-kilometer (1 mile) search radius provided as a general guideline by USFWS when performing site assessments (USFWS 2005). Overall, CRLF are not expected to occur within the Project area; therefore, the Project is

not expected to have any impacts to CRLF. In the long-term, the Project will enhance the quality of the riparian community and improve the quality of upland habitat onsite if CRLF were to immigrate into this reach of the creek in the future.

No WPT or signs of their presence were observed during the surveys performed for this BSA. In addition, no WPT were detected by the CDFW-approved Qualified Biologists who performed several focused surveys in compliance with LSAA #1600-2018-0066-R3 in 2018. This species is generalized in its habitat requirements, occurring in a broad range of permanent aquatic water bodies, but also occupies seasonal streams (Bury and Germano 2008). In streams, they are found in greatest concentrations in pool habitats (Bury 1972) where optimal habitat features such as deep waters with low velocity and suitable refugia (Reese and Welsh 1998) are commonly found. Adequate basking sites are also key components of optimal habitat (Ernst and Lovich 2009). Despite its common name and its strong association with aquatic habitats, this species relies heavily on terrestrial habitats for several crucial elements of its existence (Ernst and Lovich 2009). This includes nesting, hibernation, estivation, and refuge from flooding or drying events. We assessed habitat suitability within the Project area to determine the likelihood of the presence of WPT. This reach of creek is very shallow overall, and we only identified a few shallow pools within the Project area. Overall the creek is shaded, which significantly reduces suitable basking sites. The only potential available food we observed was algae, and we did not observe any fish, aquatic invertebrates, or aquatic plants during our surveys. We also noted that there was minimal vegetative cover along the creek. Due to the very shallow water depths and lack of vegetative cover yielding substantial risk of predation for turtles, lack of optimal habitat features, low availability of food, and the anthropogenic water regime, WPT are not expected to occur within the aquatic habitat onsite. Use of upland habitat by turtles is strongly correlated with proximity of suitable aquatic habitat. Since the suitability of the aquatic habitat present is very low, SWPT are not expected to occur within the upland habitat. Because SWPT are not expected to occur within the habitats onsite, the primary concern of impacting WPT would come from an itinerant turtle moving through the Project area. There are no records of WPT in Saratoga Creek in the processed and unprocessed data layers in CNNDB. Nor have Valley Water Biologists ever observed WPT in Saratoga Creek over the years, despite performing countless biological surveys for various Valley Water activities. Overall, WPT are not expected to occur within the Project area; therefore, the Project is not expected to have any impacts to WPT. In the long-term, the Project will enhance the quality of the riparian community. One specific enhancement pertaining to WPT would be the creation of more basking areas through the removal of the dense Eucalyptus groves and replacement with a native tree canopy (i.e. creating a less dense and more open natural canopy that would allow for more sunlight to reach the creek). This would improve the quality of both upland and aquatic habitat onsite if WPT were to immigrate into this reach of the creek in the future.

The BSA surveys were performed outside of the bird nesting season; however, several species were documented nesting in the Project area in the 2018 nesting season. Species included mourning dove (*Zenaida macroura marginella*), Anna's hummingbird *(Calypte anna),* acorn woodpecker (*Melanerpes formicivorus bairdi),* Steller's jay *(Cyanocitta stelleri),* bushtit (*Psaltriparus minimus),* California towhee (*Melozone crissalis),* and dark-eyed junco *(Junco hyemalis)*. After assessing the habitats onsite, we determined the riparian habitat may be suitable for itinerant or non-nesting yellow warbler (*Setophaga petechia),* yellow-breasted chat *(Icteria virens auricollis),* or white-tailed kite (*Elanus leucurus),* none of which were identified during our desktop reconnaissance. However, suitable habitats are not present within or adjacent to the Project area that would support nesting of these species. Suitable nesting habitat is present for the following raptor species: red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus elegans*), and Cooper's hawk. One inactive raptor nest was observed during the

surveys performed for this BSA. Due to our estimation of its diameter we believe it to be an old red-tailed hawk nest. The nest is located at the top of hazard tree #317. The nest appears to be in disrepair due to the base of the nest drooping. We know that this nest was not active in 2018. We did not observe any cavities in the *Eucalyptus* that could provide roosting or nesting habitat for owls. We observed a handful of cavities in native trees, that will not be impacted, that were large enough to support roosting or nesting of smaller owl species such as western screech-owl *(Megascops kennicottii),* but no signs of owl (e.g. white wash or pellets) were observed in these areas. No special-status species of bird are expected to nest in the Project area. Therefore, no impacts to special-status bird species are expected. We expect birds to nest within the Project area each year. Due to this, the Project team intends to perform all work outside of the nesting season by starting in September of each year. If the work needed to start earlier in the year for reasons yet unknown, nesting bird surveys and implementation of protective buffer zones around active nests would be implemented to avoid impacts to nesting birds. In the long-term, the Project will enhance the quality of the riparian community and improve the quality of the habitat for birds within this reach of the creek.

No bats or sign of their presence were observed during the diurnal field reconnaissance-level surveys we conducted for this BSA. In addition, no bats or sign of their presence were detected by the CDFW-approved Qualified Biologists who performed several focused diurnal surveys in compliance with LSAA #1600-2018-0066-R3 in 2018. However, detecting presence of bats during the day is difficult and we presume that some bat species may be present in the Project vicinity seasonally to year-round. We considered which bat species could be directly impacted by removal of *Eucalyptus* trees. Typically, *Eucalyptus* do not contain internal cavities suitable for cavity roosting bats. Therefore, removal of the *Eucalyptus* is not likely to directly impact cavity roosting bats. *Eucalyptus* could provide roosting habitat for foliage roosting bat species. We reviewed the ecology of the two foliage roosting bat species that are known to seasonally occur in Santa Clara County, hoary bat (*Lasiurus cinereus*; CDFW Watch List) and western red bat (*Lasiurus blossevillii*; California Species of Special Concern). Except for a single record of hoary bat raising young in San Jose, neither hoary bat or western red bat are known to raise young in Santa Clara County (D. Johnston, pers. comm. 2019, Johnston; D. S., and S. Whitford. 2009). These migratory species are known to overwinter in the San Francisco Bay area, generally present from November to February (Johnston, D. S., and S. Whitford. 2009; Cryan, P. M., 2003). The Project work is scheduled to occur between September 1st and October 15th each year when these species are migrating between their summer ranges and winter ranges. Therefore, direct impacts to maternity or winter day roosting bats are not anticipated. We considered the temporal loss of winter day roost sites resulting from the removal of the *Eucalyptus*. Both hoary bats and western red bats are solitary winter roosting species (i.e. not colonial roosting species), therefore we concluded the removal of the *Eucalyptus* should not cause a substantial adverse effect on the local populations that do overwinter in Santa Clara County. Additionally, our assessment focused on the special-status bat species identified in our desktop reconnaissance, Townsend's big-eared bat. Townsend's big-eared bat is a cave-dwelling species, but is also known to use old, mostly-abandoned buildings with darkened and enclosed cave-like attics in addition to other anthropogenic structures (Barbour and Davis 1969). We did not identify structures in or adjacent to the Project area that would be considered suitable roosting locations for Townsend's big-eared bat, therefore no impacts to the species are expected to occur. Overall, the Project is not expected to have substantial adverse effects on bats. In the long-term, the Project will enhance the quality of the riparian community and the quality of habitat for bats onsite.

No San Francisco dusky-footed woodrats (*Neotoma fuscipes annectens*), woodrat lodges, or other signs of their presence were observed during the field reconnaissance-level surveys we conducted for this BSA. In addition, no woodrats or sign of their presence were detected by the CDFW-approved Qualified

Biologists who performed several focused surveys in compliance with LSAA #1600-2018-0066-R3 in 2018. Detection of presence of this species is relatively easy due to their behavior of constructing large lodges (Ingles 1965), which are typically the focal point of their home range (Linsdale and Tevis 1951). Woodrats are a non-migratory species (CWHR 2008) and since there are no lodges present within the Project area, the concern of woodrats occurring would come from the establishment of new territories by dispersing woodrats. There are high costs associated with female dispersal and their reproduction favors female philopatry since they require nests for successful rearing of young. Female woodrats, unlike males, usually spend their entire life in their natal area (Kelly 1989). Therefore, our concern would come from a pioneering male. The maximum dispersal distance known for woodrats is 434 meters (Penrod, Cabanero et al. 2004). Due to the woodrat ecology discussed above, we determined the San Francisco dusky-footed woodrat is likely absent within the Project area and dispersal distance of the Project because we did not identify any woodrat nests inside or within 500 meters of the Project area. Therefore, no impacts to woodrats are expected. In the long-term, the Project will enhance the quality of the riparian community and improve the quality of habitat onsite if woodrats were to immigrate into this reach of the creek in the future.

In the Project reach, Saratoga Creek exhibits an OHWM and is classified as an intermittent streambed and so is considered a water of the U.S. and of the State (SCVWD 2018). No other aquatic resources were identified in the Project area. The streambed and adjacent riparian vegetation will be temporarily impacted during construction by the construction of temporary access ramps and moving of equipment and removed trees through the creek channel. These construction impacts can be minimized through Valley Water's standard best management practices that are used on all projects. In the long-term, the Project will enhance creek and riparian corridor conditions by contributing to bank stability and increasing the extent of native tree canopy and understory vegetation.

Our results pertaining to special-status species are summarized in Table 4 below.

Table 4 – Resulting List of Special-status Species and Their Potential Occurrence After Field Reconnaissance

Common and Scientific Names	Status	Habitat Requirements	Potential Occurrence in Project Area
Santa Clara red ribbons *Clarkia concinna ssp. automixa*	CRPR 4.3	Chaparral, Cismontane woodland	**Absent;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
Lewis' clarkia *Clarkia lewisii*	CRPR 4.3	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub	**Absent;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
western leatherwood *Dirca occidentalis*	CRPR 1B.2	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland; mesic areas	**Absent;** Focused surveys were performed in February 2019, during the blooming period. The species was determined to be absent.
Loma Prieta hoita *Hoita strobilina*	CRPR 1B.1	Chaparral, Cismontane woodland, Riparian woodland; usually serpentinite or mesic areas	**Absent;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
arcuate bush-mallow *Malacothamnus arcuatus*	CRPR 1B.2	Chaparral, Cismontane woodland	**Absent;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
white-flowered rein orchid *Piperia candida*	CRPR 1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; sometimes in serpentine areas	**Absent;** Focused surveys were performed in June 2019, during the blooming period. The species was determined to be absent.
California red-legged frog *Rana draytonii*	FT CSC	Permanent or semi-permanent aquatic breeding areas and upland dispersal habitats.	**Not Expected to Occur** Suitable habitat is absent and there are no known occurrences of CRLF on the valley floor in the general area.
western pond turtle *Actinemys marmorata pallida*	CSC	Ponds, lakes, perennial and intermittent streams, and wetlands with vegetation, basking habitat, and upland areas for reproduction.	**Not Expected to Occur;** Suitable habitat is absent and WPT are no known occurrences in the Project area.
white-tailed kite* *Elanus leucurus*	FP	Coastal and valley lowlands. Forage in open grasslands, meadows, agricultural, and marsh habitats. Nest high in dense tree stands near foraging habitat.	**Absent as Breeder**; Suitable nesting substrates are present but the necessary adjacent foraging habitat is absent.
red-tailed hawk* *Buteo jamiacensis*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	**Potential as Breeder;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
red-shouldered hawk* *Buteo lineatus*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	**Potential as Breeder;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
Cooper's hawk *Accipiter cooperii*	CFGC	Nest and forage in a wide array of habitats including riparian areas, woodlands, and residential areas.	**Potential as Breeder;** Suitable nesting habitat is present and these species will nest in residential areas such as the Project area.
yellow-breasted Chat * *Icteria virens*	CDC	Riparian habitats with a mature overstory, an understory of willows with dense underbrush.	**Absent as Breeder**; No suitable nesting habitat within the Project area.
yellow warbler* *Setophaga petechia*	CSC	Riparian habitats, often with an overstory of mature cottonwoods/sycamores, a midstory willow and box elder, and a substantial understory of vines, blackberries, and forbs.	**Absent as Breeder**; No suitable nesting habitat within the Project area.
Western red bat* *Lasiurus blossevillii*	CSC	Roosts primarily in trees, less often shrubs. Roost sites often in edge habitats.	**Absent as Maternity Rooster;** Migratory species. Does not raise young in Santa Clara County. Overwinters in the county generally from November to February.
Townsend's big-eared bat *Corynorhinus townsendii*	CSC	Roosts in caves, mines, tunnels, buildings, or other human-made structures.	**Absent as Rooster;** No suitable roosting habitat within the Project area.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	CSC	Forest habitats of moderate canopy and moderate to dense understory.	**Absent**; No lodges or sign of activity in or within 500 meters upstream and downstream of the Project area.

*= Species added after field reconnaissance

CFGC = California Fish and Game Code; CRPR = California Rare Plant Rank; CSC = California Species of Special Concern; FP = Fully Protected; FT = Federally Threatened; SE = State Endangered

Recommended Mitigation Measures

To ensure impacts to sensitive biological resources are substantially minimized if not completely avoided during Project activities, we propose implementation of the following Mitigation Measures (MM) for native riparian habitat, intermittent streambed, and nesting birds. As described in the Project Description, the removal of the nonnative *Eucalyptus* trees will be followed by the planting of natives; therefore, this impact is considered to be beneficial and no MM are proposed. The Project is not expected to impact the following special-status species: CRLF, WPT, woodrats, Townsend's big-eared bat, western red bat, or any of the special status plant species with potential to occur in the Project area. Therefore, we did not propose any MM for these species. The Project is not expected to have a substantial adverse effect on local populations of non-listed bat species, so we did not propose any MM for bats in general.

Native Riparian Habitat (MM BIO-1)

- Outside of the hazard tree areas minimize temporary impacts (i.e. pruning for equipment access) to the extent possible.
- A qualified biologist should train all project staff, contractors, and other work crews regarding the necessity to avoid the native riparian areas and the boundaries of the Project area will be clearly demarcated in the field for worker awareness.
- The six coast live oak trees and two elderberry shrubs that will need to be removed for access purposes should be replaced at a 1:1 ratio.

Intermittent Streambed (MM BIO-2)

Site topography and geometry shall be restored to pre-project conditions to the extent possible.

Nesting Birds (MM BIO-3)

- To the extent possible work should be conducted outside of the nesting season (Jan 15th – Sep 1st).
- A qualified biologist shall train all project staff, contractors, and other work crews regarding signs of nesting behavior and identification of active nests, the requirement to stop work if any active nests are found or suspected until a qualified biologist inspects the area, and compliance with avoiding the no-work buffer zones.
- During the nesting season, nesting bird surveys shall be performed by a qualified biologist no more than 7 days prior to the start of Project activities. If a lapse in Project related work of 7 days or longer occurs, another nesting bird survey should be conducted.
- If an active nest is found, a 50-foot no-work buffer zone shall be implemented surrounding the nest, with exception of raptors, herons, and egrets, which should have a 300-foot no-work buffer zone.

Conclusion

Valley Water will need to acquire necessary permits for the Project, which is tentatively scheduled to begin in September of 2019. The Project will include work that is within the waters of the U.S., waters of the State, and the jurisdiction of California Fish and Game Code 1602. Therefore, Valley Water will be applying for a Clean Water Act (CWA) Section 404 Permit, CWA Section 401 Certification, and a LSAA (biological resource permits). Valley Water will also need to request permission from CDFW to dismantle the historic raptor nest in Tree #317 to comply with California Fish and Game Code Section 3503.5.

In the long-term, after revegetation has become established, the Project would have a substantial beneficial effect on the riparian habitat and species that live within this habitat through the removal of the nonnative *Eucalyptus* groves and subsequent revegetation with native riparian species.

As it pertains to CEQA, we have determined that with the implementation of the recommended MM and compliance with the measures that will be prescribed in the Project's biological resource permits, the Project's impacts to biological resources can be avoided or reduced to less-than-significant levels.

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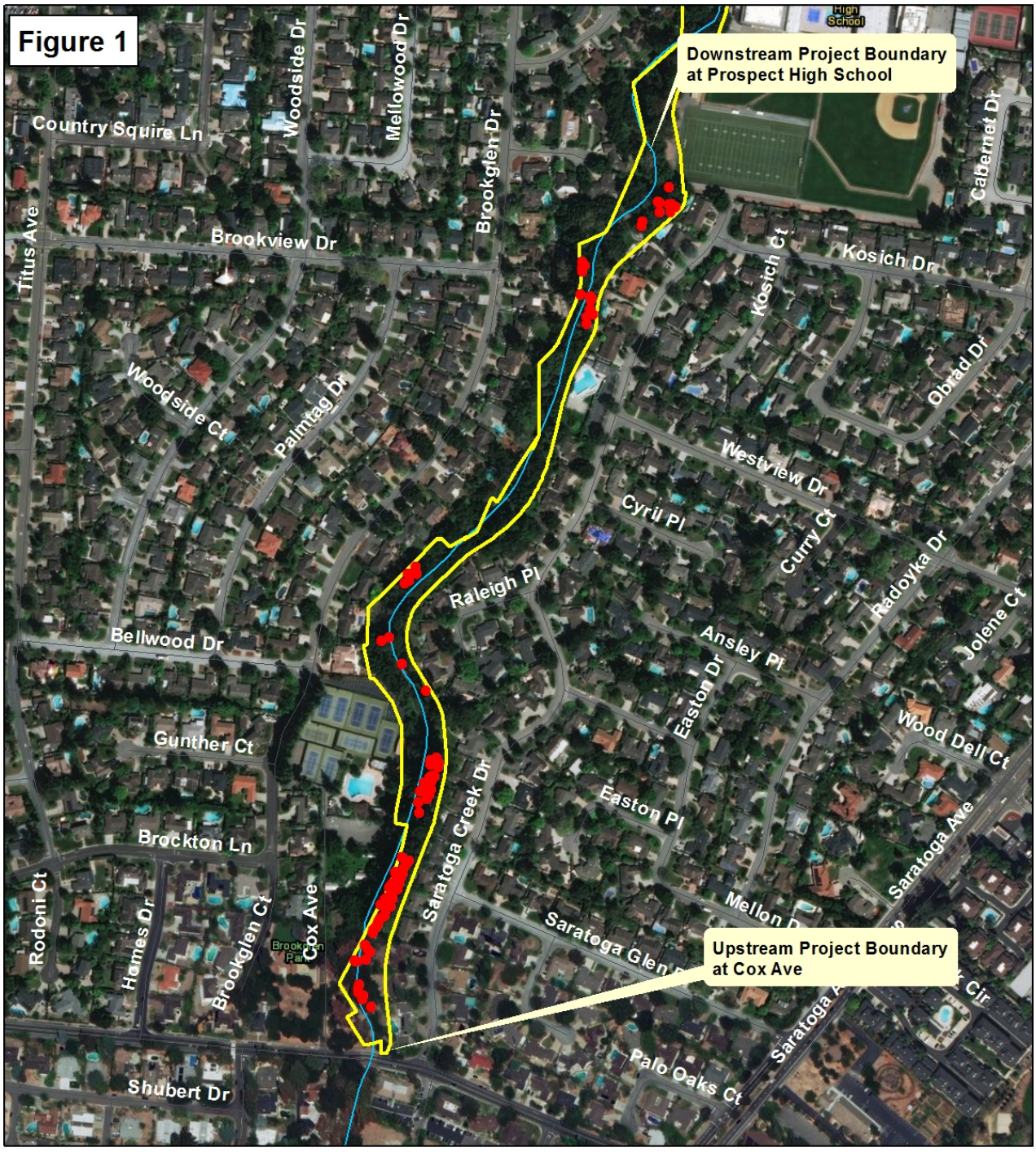
Figure 1: Map depicting general project area and locations of hazard *Eucalyptus* trees.



Project Area - Saratoga Creek Hazard Tree Removal and Restoration Project

Figure 2: Map showing the results of the 2-mile radius spatial query of CNDDB.

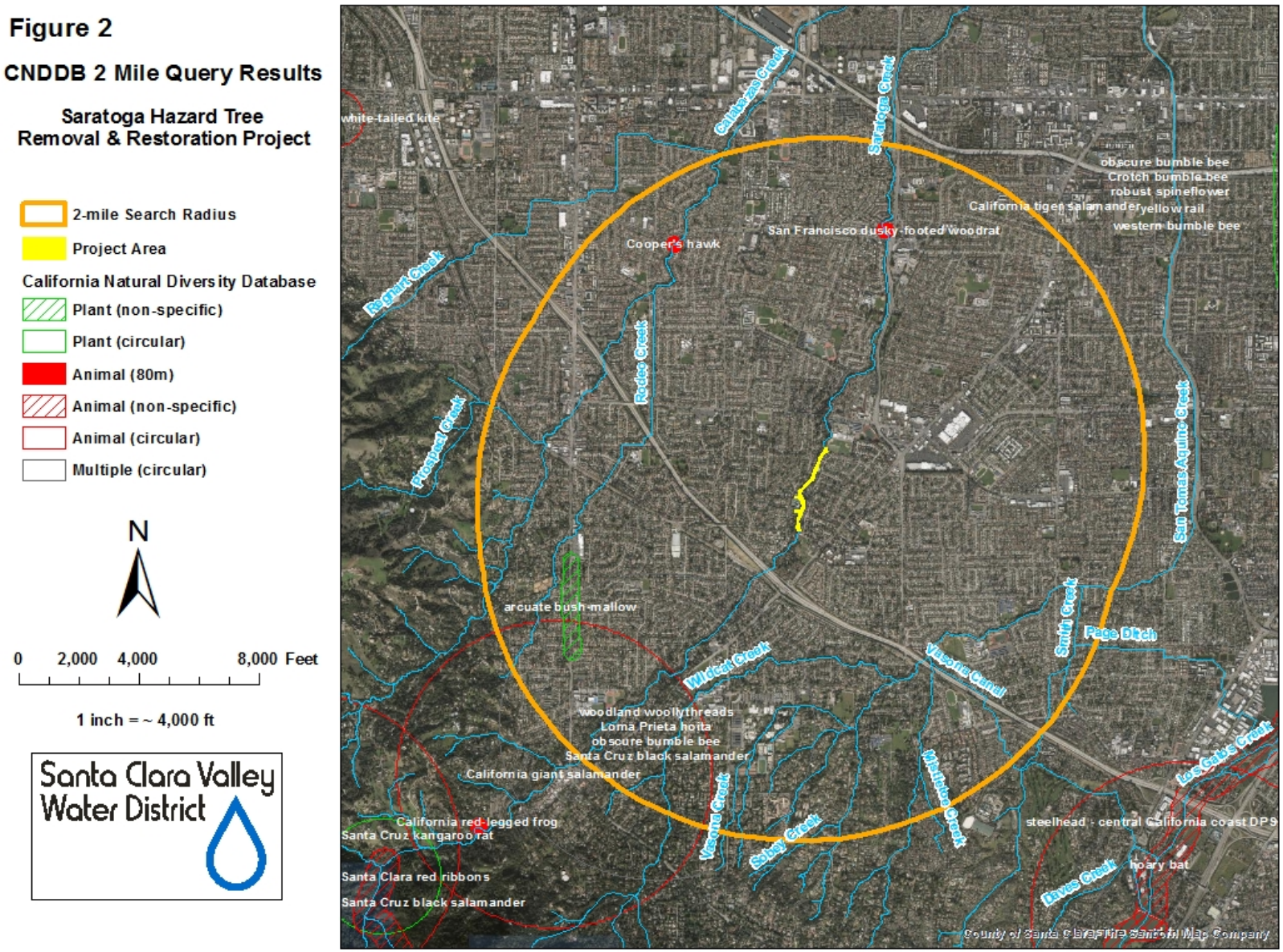


Figure 3: Map depicting the biological survey are throughout the Project area and 500 meters upstream and downstream of the Project area.

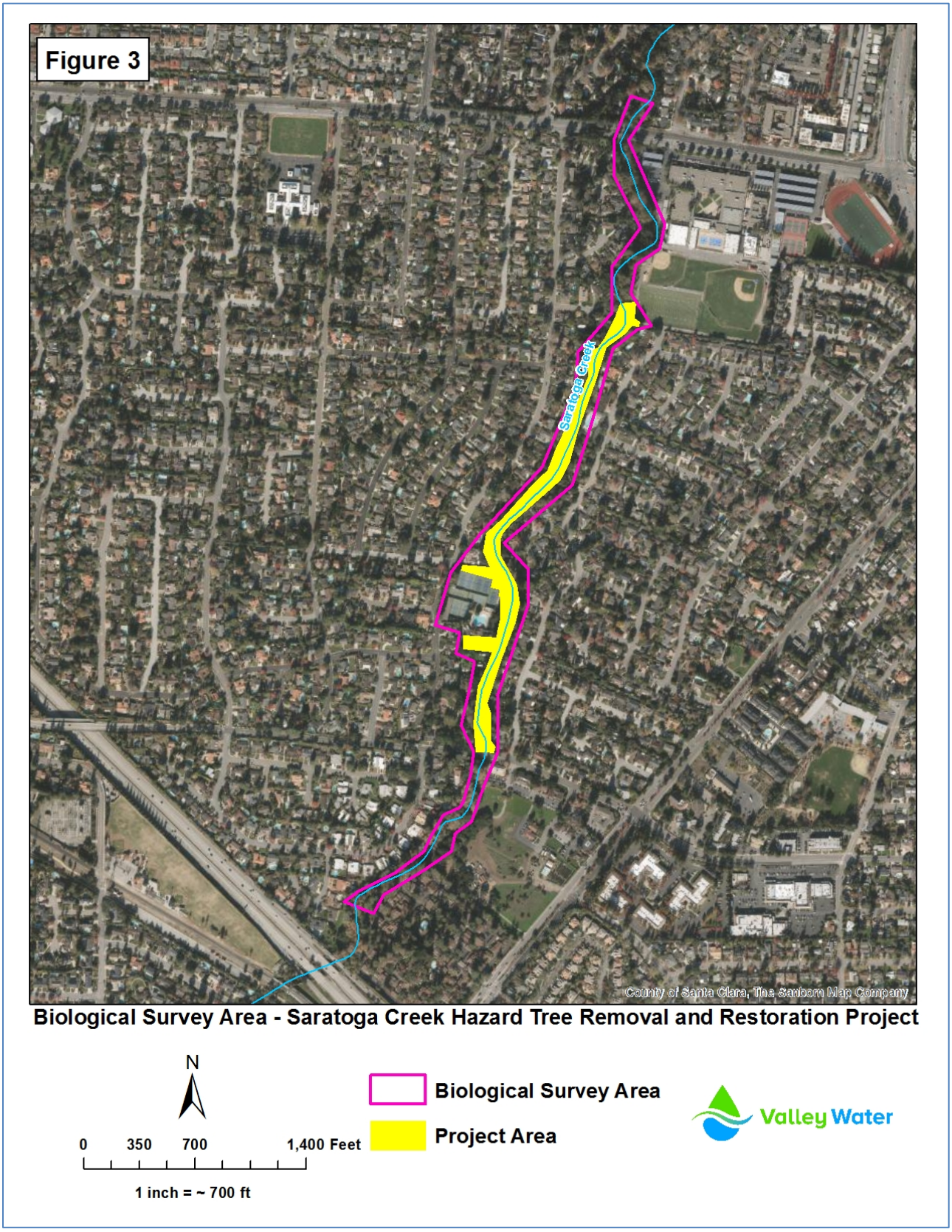
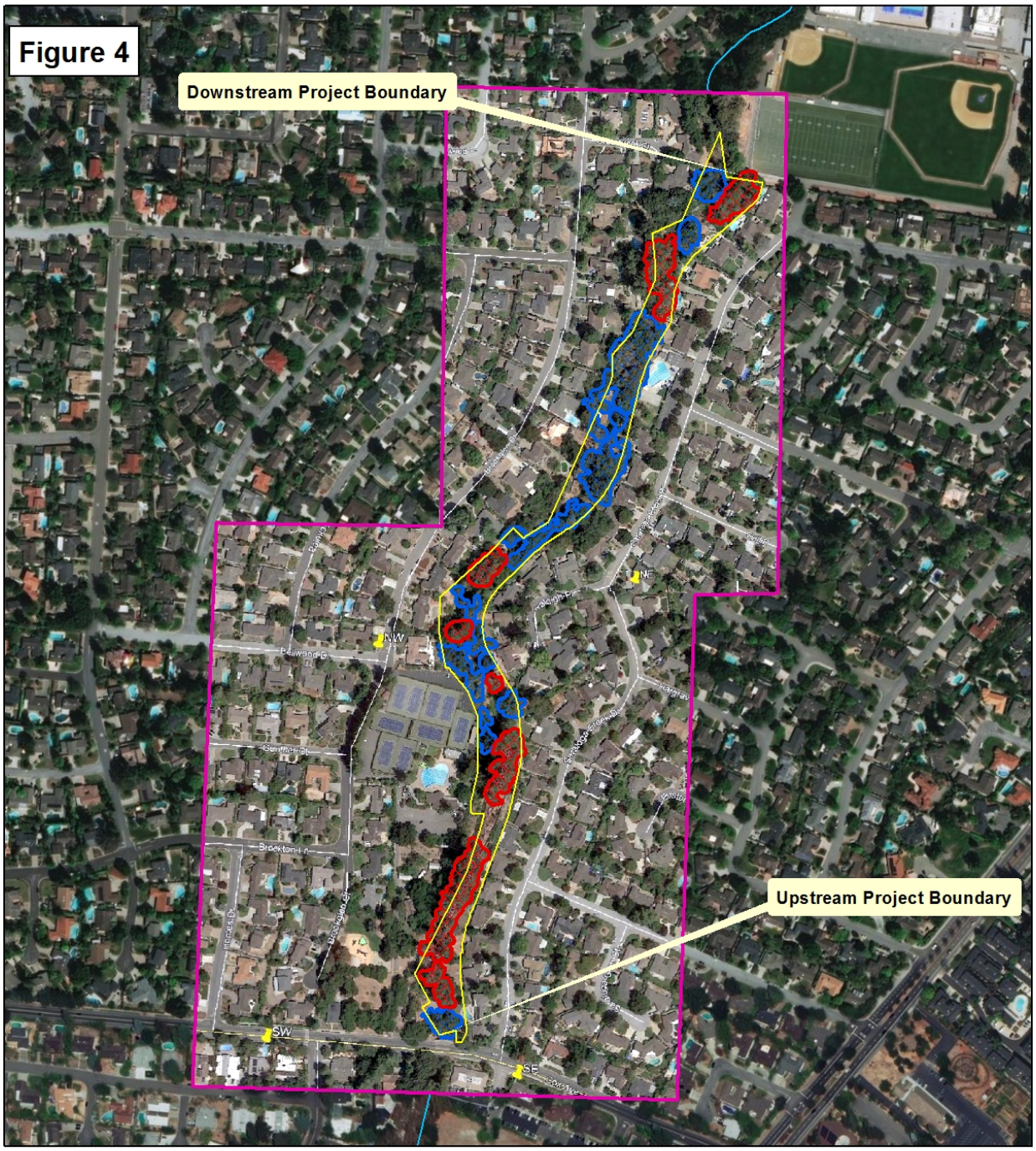


Figure 4: Map depicting the existing conditions for canopy cover for native riparian and *Eucalyptus* groves.



Photos of the Project Area

Photo 1: Foreground showing tree removal completed earlier in 2018.

Photo 2: Fruiting fungus body on trunk of recently removed tree.

Photo 3: Representative photo of shaded out understory under a *Eucalyptus* grove.

Photo 4: Photo facing upslope under a Eucalyptus grove towards the immediately adjacent properties.

Photo 5: Photo showing several leaning hazard trees on the left bank; 9/27/18

Photo 6: Photo of downstream temporary ramp location.

Photo 7: Photo of upstream temporary ramp location; 12/03/18

Photo 8: Photo showing historic raptor nest in Tree #317; 9/27/18

Attachment A

CNPS 9-quad Search

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

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

Search Criteria

Found in Quads 3712242, 3712241, 3712148, 3712232, 3712231, 3712138, 3712222 3712221 and 3712128;

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

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	1B.1	S1	G1
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	1B.2	S2	G5T2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Androsace elongata ssp. acuta	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5? T3T4
Anomobryum julaceum	slender silver moss	Bryaceae	moss		4.2	S2	G5?
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
Arctostaphylos andersonii	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	1B.2	S2	G2
Arctostaphylos glutinosa	Schreiber's manzanita	Ericaceae	perennial evergreen shrub	(Nov)Mar-Apr	1B.2	S1	G1
Arctostaphylos ohloneana	Ohlone manzanita	Ericaceae	evergreen shrub	Feb-Mar	1B.1	S1	G1
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	1B.2	S2	G2
Arctostaphylos silvicola	Bonny Doon manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.2	S1	G1
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S2	G2T2
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
Calyptridium parryi var. hesseae	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	1B.1	S2	G3G4T2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	1B.1	S2	G3T2
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
Chorizanthe pungens var. hartwegiana	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
	robust spineflower	Polygonaceae	annual herb	Apr-Sep	1B.1	S1	G2T1

Chorizanthe robusta var. robusta							
Cirsium fontinale var. campylon	Mt. Hamilton fountain thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	1B.2	S2	G2T2
Cirsium fontinale var. fontinale	Crystal Springs fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	1B.1	S1	G2T1
Cirsium praeteriens	lost thistle	Asteraceae	perennial herb	Jun-Jul	1A	SX	GX
Clarkia breweri	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	4.2	S4	G4
Clarkia concinna ssp. automixa	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	4.3	S3	G5?T3
Clarkia lewisii	Lewis' clarkia	Onagraceae	annual herb	May-Jul	4.3	S4	G4
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	1B.2	S2	G2
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	1B.2	S2	G2
Dudleya abramsii ssp. setchellii	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	1B.1	S2	G4T2
Eriogonum nudum var. decurrens	Ben Lomond buckwheat	Polygonaceae	perennial herb	Jun-Oct	1B.1	S1	G5T1
Eriophyllum latilobum	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	1B.1	S1	G1
Eryngium aristulatum var. hooveri	Hoover's button-celery	Apiaceae	annual / perennial herb	(Jun)Jul(Aug)	1B.1	S1	G5T1
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
Galium andrewsii ssp. gatense	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	Apr-Jul	4.2	S3	G5T3
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		1B.3	S2	G2
Grimmia vaginulata	vaginulate grimmia	Grimmiaceae	moss		1B.1	S1	G2G3
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3
Hesperocyparis abramsiana var. abramsiana	Santa Cruz cypress	Cupressaceae	perennial evergreen tree		1B.2	S1	G1T1
Hesperocyparis abramsiana var. butanoensis	Butano Ridge cypress	Cupressaceae	perennial evergreen tree	Oct	1B.2	S1	G1T1
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
Hoita strobilina	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	1B.1	S2?	G2?
	coast iris	Iridaceae	perennial	Mar-May	4.2	S3	G3

Iris longipetala			rhizomatous herb				
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	4.2	S4	G4
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S3?	G3?
Lessingia micradenia var. glabrata	smooth lessingia	Asteraceae	annual herb	(Apr-Jun)Jul-Nov	1B.2	S2	G2T2
Malacothamnus arcuatus	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q
Malacothamnus davidsonii	Davidson's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jan	1B.2	S2	G2
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May-Sep(Oct)	1B.2	S2	G2
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
Orthotrichum kellmanii	Kellman's bristle moss	Orthotrichaceae	moss	Jan-Feb	1B.2	S2	G2
Pedicularis dudleyi	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	1B.2	S2	G2
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	May-Jun	1B.2	S2	G4T2
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	1B.2	S3	G3
Plagiobothrys chorisianus var. chorisianus	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.2	S1	G3T1Q
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	Boraginaceae	annual herb	Apr-Jun	4.2	S3	G3T3Q
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Silene verecunda ssp. verecunda	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jun(Aug)	1B.2	S1	G5T1
Stebbinsoseris decipiens	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Streptanthus albidus ssp. albidus	Metcalf Canyon jewelflower	Brassicaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	1B.2	S2	G2T2

Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S3	G5T5
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	1B.1	S1	G1
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	1B.1	S2	G2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	Mar-Apr	1B.1	S1	G1
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		4.2	S4	G4

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 20 November 2018].

Attachment B

USFWS IPaC

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

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

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

Location

Santa Clara County, California

Local office

Sacramento Fish And Wildlife Office

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

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

Endangered species

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

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

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

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

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

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

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

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

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

Birds

NAME	STATUS
California Clapper Rail Rallus longirostris obsoletus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Bay Checkerspot Butterfly Euphydryas editha bayensis There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2320	Threatened
San Bruno Elfin Butterfly Callophrys mossii bayensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

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

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

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

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

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

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE

TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS *ENTIRE RANGE. "BREEDS ELSEWHERE"* INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

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

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

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31

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

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

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

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

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

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

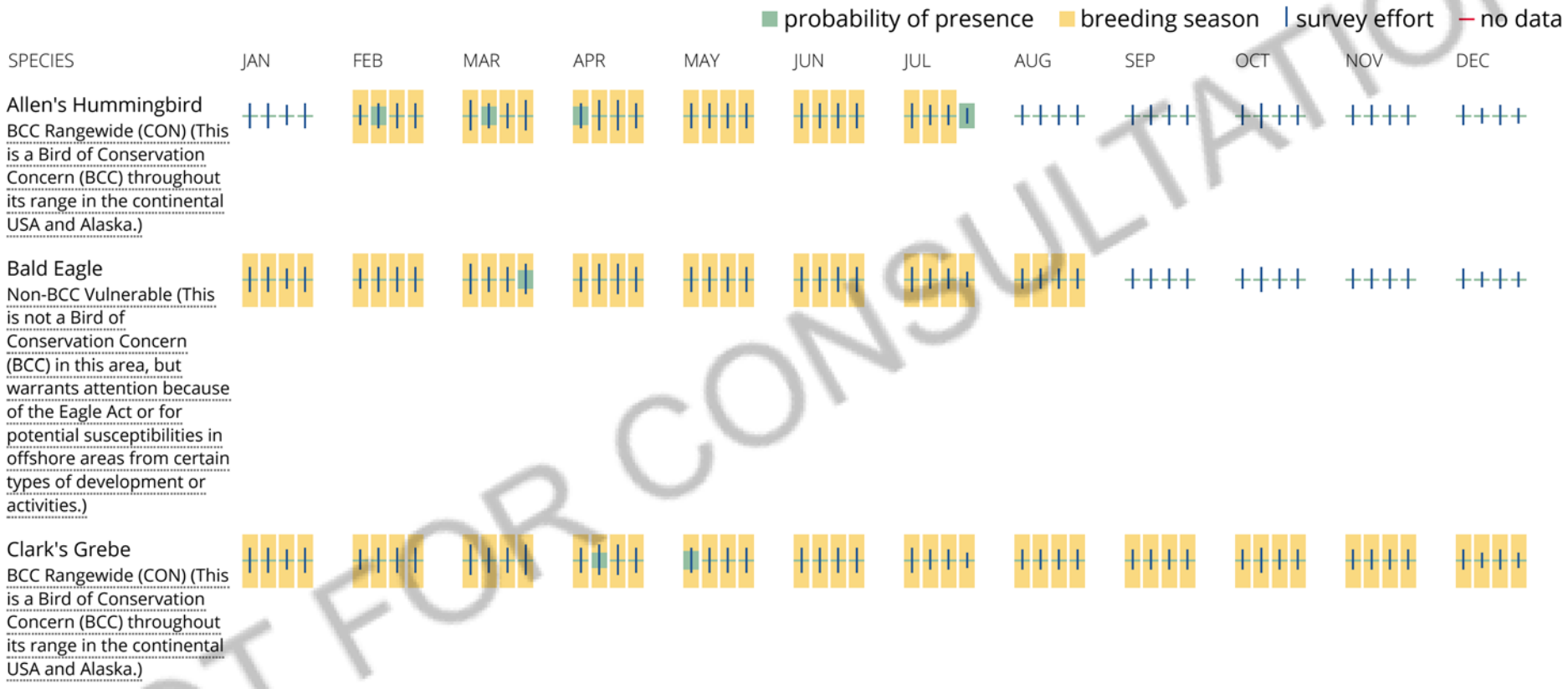
Survey Effort (|)

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

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

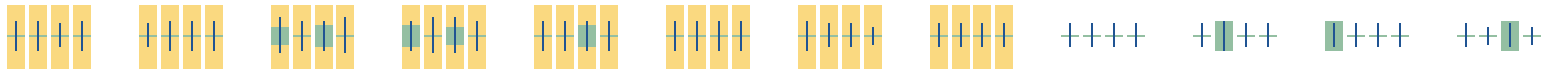
No Data (–)
A week is marked as having no data if there were no survey events for that week.

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

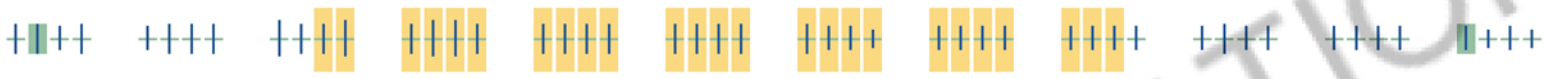


Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

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



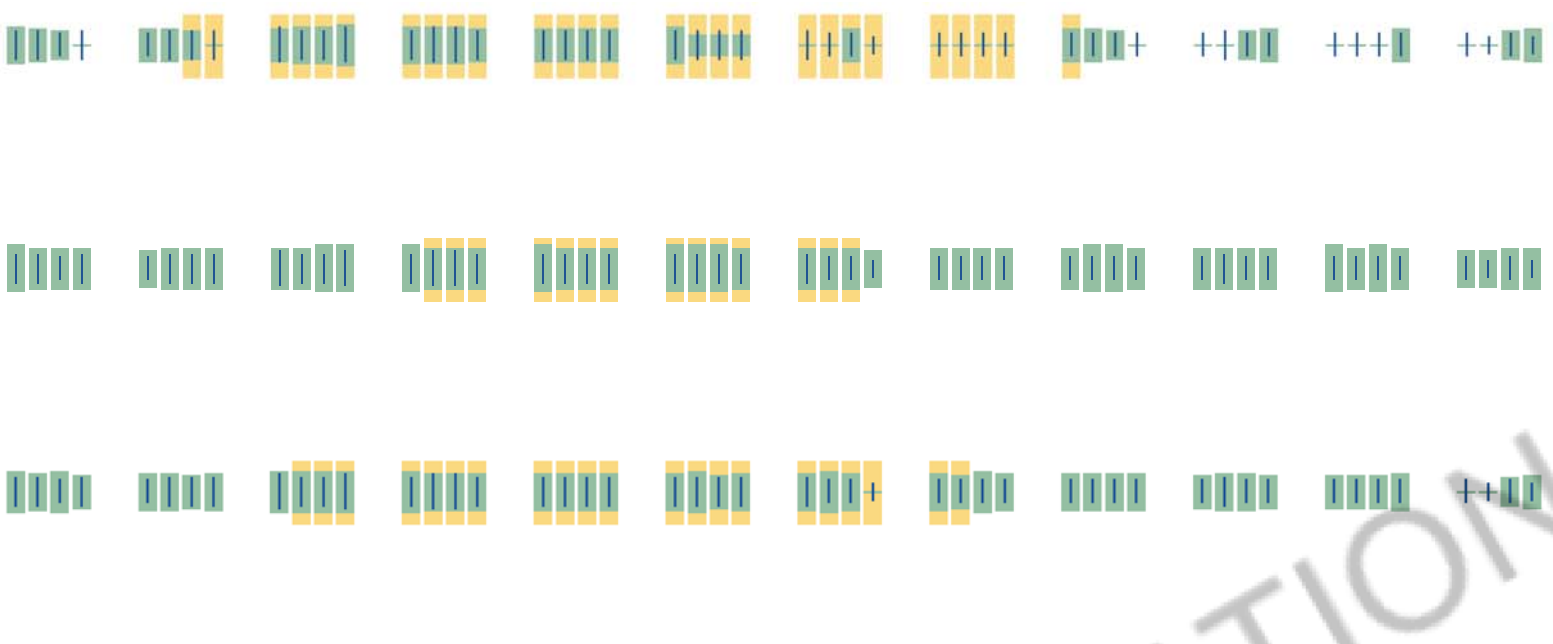
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

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

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



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

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

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

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

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

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

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

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

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

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PFOC

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

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

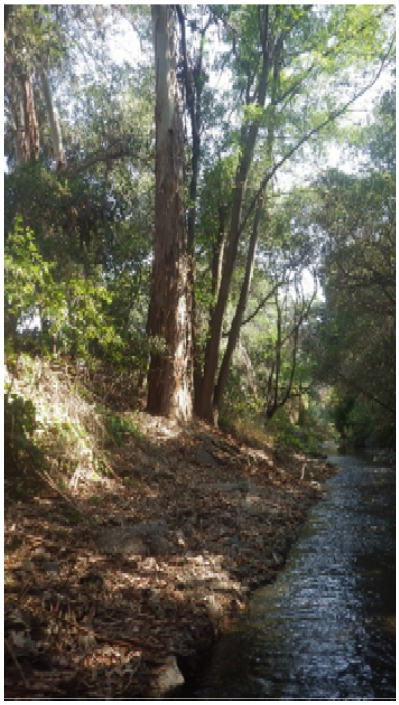
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal,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

APPENDIX C

AQUATIC RESOURCE DELINEATION REPORT- SARATOGA CREEK HABITAT REVITALIZATION PROJECT; COX TO KOSICH DRIVE

AQUATIC RESOURCE DELINEATION REPORT

Saratoga Creek Habitat Revitalization Project: Cox Avenue to Kosich Drive



Prepared By:

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November 2018

Executive Summary

On August 13, 2018, an aquatic resource delineation was conducted for the Santa Clara Valley Water District's (SCVWD or District) Saratoga Creek Habitat Revitalization Project: Cox Avenue to Kosich Drive (Project) to remove the eucalyptus trees and other nonnative invasive plants and replant with native species. The Project reach of Saratoga Creek is in Saratoga, Santa Clara County, California. The delineation was conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" (USACE 1987), Version 2.0 of the Arid West regional supplement (USACE 2008a), and "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (USACE 2008b). The total survey area was 5.88 acres and included the bed, banks, and floodplain terraces of Saratoga Creek from Cox Avenue to Kosich Drive.

The survey area includes a 1.26-acre portion of Saratoga Creek that is classified as an intermittent streambed and exhibits an OHWM. The intermittent streambed is single-thread, with coarse channel substrates, and 16–20 feet wide and 2–3 feet deep at the OHWM. The OHWM was delineated based on sharp changes in slope, a shift from gravels and cobbles to soil, and no vegetation to dense, primarily FAC or upland vegetation. There are no other aquatic resources in the survey area.

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Appendix D: Plant List
Appendix E: OHWM Data Sheets
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Acronyms and Abbreviations

Corps	U.S. Army Corps of Engineers
District	Santa Clara Valley Water District
FAC	Facultative
FACW	Facultative-Wetland
FACU	Facultative-Upland
FCDC	Federal Geographic Data Committee
GIS	Geographic Information System
GPS	Global Positioning System
NI	Indicator Status Not Known
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
OBL	Obligate
OHWM	Ordinary High Water Mark
Project	Saratoga Creek Habitat Revitalization Project: Cox Ave to Prospect Dr
SCVWD	Santa Clara Valley Water District
UPL	Upland
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Chapter 1. Introduction

Saratoga Creek between Cox Avenue and Kosich Drive supports many individual and stands of large blue gum eucalyptus trees. These nonnative invasive species preclude the establishment of native vegetation and increase the risk and severity of fire. Many of the eucalyptus trees in this reach are diseased, posing further risk to adjacent homes and recreational facilities. The Santa Clara Valley Water District (District or SCVWD) is proposing the Saratoga Creek Habitat Revitalization Project: Cox Avenue to Kosich Drive (Project) to remove the eucalyptus trees and other nonnative invasive plants and replant with native species. To do this work, temporary access routes will need to be built down to, and channel and tree removal equipment will be positioned in, the creek channel.

The District contact for the Project is:
Todd Sexauer, Environmental Planner
5750 Almaden Expressway, San Jose, CA 95118
(408) 630-3149
TSexauer@valleywater.org

The aquatic resource survey area included the bed, banks, and floodplain terraces of Saratoga Creek from Cox Avenue to Kosich Drive. The survey area is depicted in Appendix A.

The purpose of this report is to identify and describe the aquatic resources in the survey area. This report facilitates efforts to document aquatic resource boundary determinations for review by regulatory authorities and provide background information.

Chapter 2. Location

The Project is in and along Saratoga Creek between Cox Avenue and Kosich Avenue in the City of Saratoga, in Santa Clara County, California. The closest physical addresses to the upstream and downstream ends of the Project are 19123 Cox Avenue, Saratoga, CA 95070 and 12285 Saratoga Creek Drive, Saratoga, CA 95070, respectively. The approximate middle of the Project is in Lot 41, Township 7 South, Range 1 West, in the City of Saratoga, County of Santa Clara, as shown on Plat of the Quito Rancho filed in the General Land Office, Department of the Interior. The vicinity of the Project is depicted in Appendix B.

The Project is between private properties on both sides of the creek. The upstream end of Project can be accessed by taking the Saratoga Avenue exit off Highway 85, traveling north, turning left onto Cox Avenue, and walking down into the creek from the Cox Avenue bridge over Saratoga Creek. The downstream end of the Project can be accessed by continuing north on Saratoga Avenue, turning left onto Kosich Avenue, right onto Saratoga Creek Drive, and through the access road along Prospect High School. This end of the Project cannot be accessed without approval and a key from SCVWD.

Chapter 3. Methods

An aquatic resource delineation was conducted for the Project on August 13, 2018, by Zooey Diggory, a District plant ecologist and trained wetland delineator with over 15 years of experience, with field assistance from Jennifer Watson, a District biologist. The delineation was conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" (USACE 1987), Version 2.0 of the Arid West regional supplement (USACE 2008), and "A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (Lichvar and McColley 2008).

Prior to the field delineation, the following information sources were reviewed:

- Google Earth imagery (various dates);
- National Wetland Inventory (NWI) maps (USFWS 2018; see Appendix B);
- Soil map for Santa Clara Area, California, Western Part, from the Natural Resources Conservation Service's Web Soil Survey (NRCS 2018; see Appendix B); and
- Stream flow records from the SCVWD gage on Saratoga Creek at Pruneridge (high flows only), approximately three miles downstream of the Project, and USGS gage on Saratoga Creek at Saratoga, approximately two miles upstream of the Project (USGS 11169500).

During the field delineation, the entire Project reach—approximately 0.6 mile—was traversed by foot to assess creek and floodplain conditions and determine the potential for aquatic resources. Three OHWM sample transects were selected at the upstream, middle, and downstream sections of the survey area. Transect locations were recorded on a hardcopy field map, delineation data sheets were completed in accordance with Lichvar and McColley (2008) (see Appendix E), and photographs of representative conditions were taken (see Appendix C). Notes were taken on the data sheets of general resource conditions. The "State of California 2016 Wetland Plant List" (Lichvar et al. 2016) was used to identify the wetland indicator status of recorded plant species. Other than Saratoga Creek, no other potential aquatic resources were observed and, as a result, no wetland sample points were collected.

Back in the office, the location of the OHWM at the transects was extrapolated in GIS to the remaining portions of the survey area using photo-interpretation and topography. The mapped aquatic resource was classified according to the "Classification of Wetlands and Deepwater Habitats of the United States" (FCDC 2013), which is adapted from Cowardin et al. (1979). The aquatic resource delineation map was prepared in accordance with the "Updated Map and Drawing Standards for the South Pacific Division Regulatory Program" (USACE 2016).

Chapter 4. Existing Conditions

4.1 Landscape Setting

The Project is on a narrow reach of Saratoga Creek that runs through the highly developed valley floor, approximately half way between the Santa Cruz Mountains, where the creek originates, and San Tomas Aquino Creek, into which Saratoga Creek discharges. The Project reach is bordered by private property on both sides and the undeveloped channel corridor is approximately 60 feet wide between the top of the streambanks. At the upstream end of the Project reach, the channel is actively incising; farther downstream incision appears to have slowed or halted.

Stream flow in the Project reach is determined by rainfall runoff and imported water deliveries. Channel substrates are porous and surface water infiltrates relatively quickly into the underlying groundwater table. When imported water is not being released, this reach of Saratoga Creek is naturally episodic, with flow timing and magnitude in direct response to rainfall runoff patterns. The District releases imported water into Saratoga Creek approximately 0.3 mile upstream of the Project for in-channel percolation/groundwater recharge. These releases typically occur in the summer and result in moderate flows through the Project reach, such as those during the delineation (see Appendix C).

The channel has incised through relatively coarse-grained alluvium, with concrete rubble and other debris in portions of the channel and banks. This is consistent with Urban land-Still complex soil mapped in the Project area (see Appendix B).

Vegetation in the channel and below the OHWM is sparse in the Project reach. The primary species observed below the OHWM include: white alder (*Alnus rhombifolia*; FACW), red (or polished) willow (*Salix laevigata*; FACW), watercress (*Nasturtium officinale*; OBL), dotted smartweed (*Persicaria punctata*; OBL), tall flat sedge (*Cyperus eragrostis*; FACW), and stinging nettle (*Urtica dioica*; FAC). In the upstream end of the Project reach, the channel is incised and streambanks are too steep to support vegetation above the OHWM. Farther downstream, streambanks support species such as California blackberry (*Rubus ursinus*; FACU), Himalayan blackberry (*Rubus armeniacus*; FAC), English ivy (*Hedera helix*; FAC), smilograss (*Piptatherum miliaceum*; NI), periwinkle (*Vinca major*; NI), and Japanese privet (*Ligustrum japonicum*; FACU). Overstory species along streambanks and top of banks include blue gum eucalyptus (*Eucalyptus globulus*; NI), coast live oak (*Quercus agrifolia*; NI), and California sycamore (*Platanus racemosa*; FAC).

During the field delineation, climate conditions were typical for the season. It was clear, sunny, and warm. It had not rained since spring. Stream flow at the USGS gage on Saratoga Creek at Saratoga, which is approximately two miles upstream of the Project, was approximately 0.3 cfs on the day of the delineation, but flows were notably higher than this in the Project reach because of imported water releases (see Appendix C).

4.2 Aquatic Resources

Aquatic resources in the survey area are summarized in Table 1 and mapped in Appendix A. The 5.88-mile survey area includes 1.26 acre of Saratoga Creek, which exhibits an

OHWM and drains into San Thomas Aquino Creek, which flows to San Francisco Bay. This reach of Saratoga Creek only conveys flow episodically, and is classified as an intermittent streambed, according to FCDC (2013). The intermittent streambed is single-thread, with coarse channel substrates, and 16–20 feet wide and 2–3 feet deep at the OHWM. There were no other features in the survey area that exhibited riverine or wetland characteristics.

The OHWM was delineated based on changes in slope, sediment texture, and/or vegetation (see Appendix F). The OHWM is evident by sharp changes in slope, and a change in substrate from soil above the OHWM to gravel and cobble below the OHWM. Below the OHWM, the channel is mostly unvegetated, with just one white alder (*Alnus rhombifolia*; FACW), or sparse cover of species such as dotted smartweed (*Persicaria punctata*; OBL), tall flat sedge (*Cyperus eragrostis*; FACW), watercress (*Nasturtium officinale*; OBL), and rabbit's-foot grass (*Polypogon monspeliensis*; FAC). Above the OHWM, vegetation cover is relative dense with California blackberry (*Rubus ursinus*; FACU), Himalayan blackberry (*Rubus armeniacus*; FAC), English ivy (*Hedera helix*; FAC), and smilograss (*Piptatherum miliaceum*; NI) in the understory and blue gum eucalyptus (*Eucalyptus globulus*; NI), coast live oak (*Quercus agrifolia*; NI), and California sycamore (*Platanus racemosa*; FAC) in the overstory species.

Table 1. Aquatic Resources in the Survey Area

Classification[1, 2]	Latitude/Longitude	Size	Length
Intermittent Streambed	37° 17' 15" N/ 122° 0' 15" W	1.26 acre	3,110 feet
Total Waters of the U.S.		1.26 acre	3,110 feet

[1] See Appendix A maps for location
[2] Per FCDC (2013)

The NWI maps this reach of Saratoga Creek as freshwater forested/shrub wetland, which is typically limited to estuarine and palustrine wetlands (FCDC 2013). FCDC (2013) notes that forested and shrub wetlands can occur on the floodplains of riverine systems, but this reach of Saratoga Creek does not support floodplains upon which such wetlands could establish. As such, the classification in NWI seems to be incorrect.

Chapter 5. References

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USFWS (U.S. Fish and Wildlife Service). 2018. National Wetland Inventory. Access at: https://www.fws.gov/wetlands/data/data-download.html

Appendix A—Aquatic Resource Delineation Map

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Saratoga Creek Hazard Tree Removal and Habitat Enhancement Project

Legend

- OHWM Transect
- Intermittent Streambed (1.26 acres)
- Survey Area (5.88 acres)

N

0 112.5 225 450
Feet

Coordinate System:
NAD 1983, StatePlane, California III, (FIPS 0403 Ft)
Projection:
Lambert Conformal Conic
Datum:
North America 1983
Vertical Datum:
NAVD88, U.S. Feet

1 inch = 208 feet

Created on November 1, 2018

Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, as amended on February 10, 2016, by: Zooey Diggory and Lysee Moyaert, GIS Analyst, Santa Clara Valley Water District

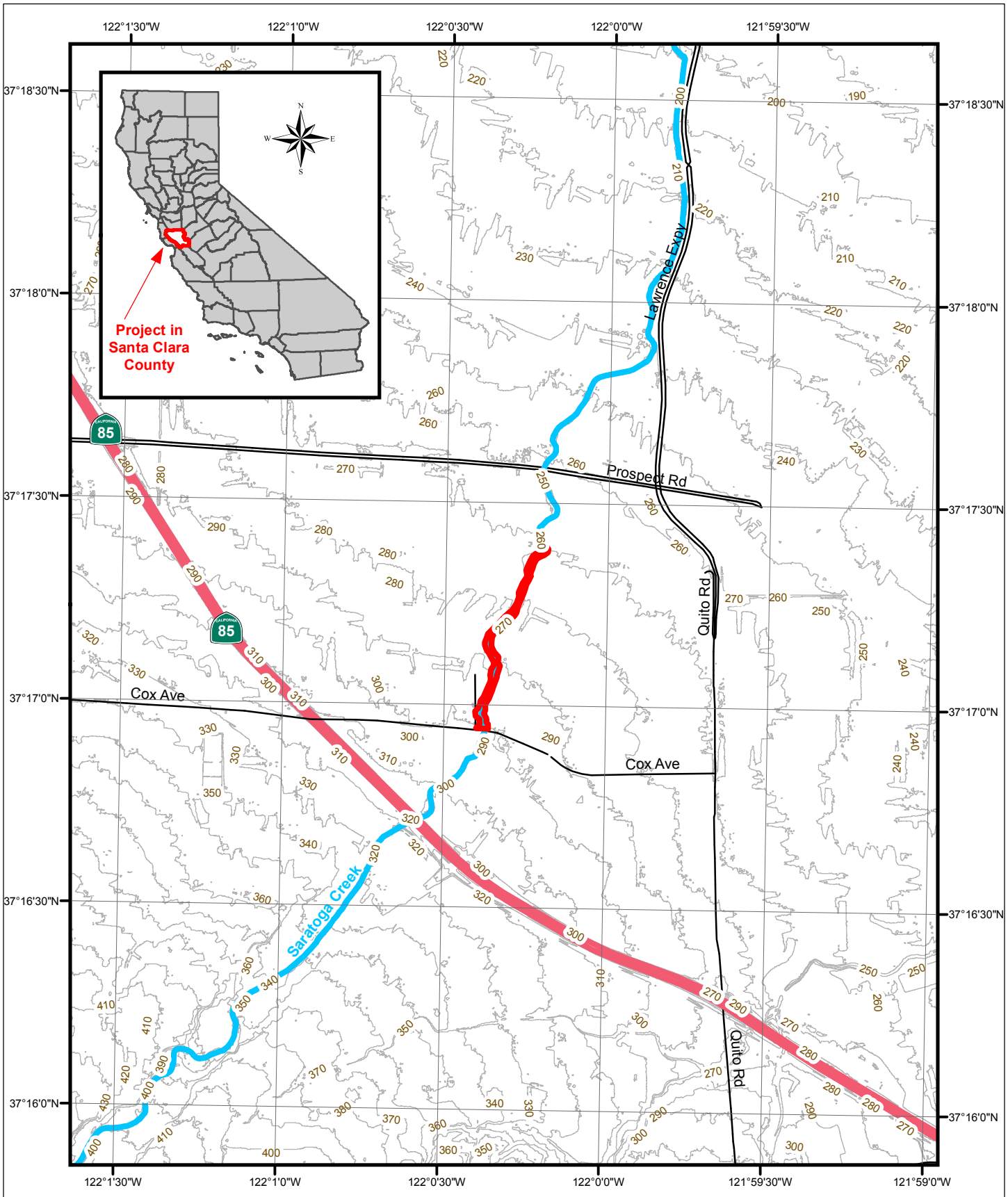
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.

2017 Orthophoto provided by: County of Santa Clara, The Sanborn Map Company

92761010\2018_038\DamMaintReplaceCulvertFellowsDike_AquaticResourceDelineation.mxd 17x11 8/8/2018

Appendix B—Supporting Maps

This appendix includes a vicinity map of the survey area, and the NWI and NRCS soil maps and reports for the survey area.



Legend

Project Area

0 1,000 2,000 4,000 Feet

1 inch = 2,000 feet

GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.

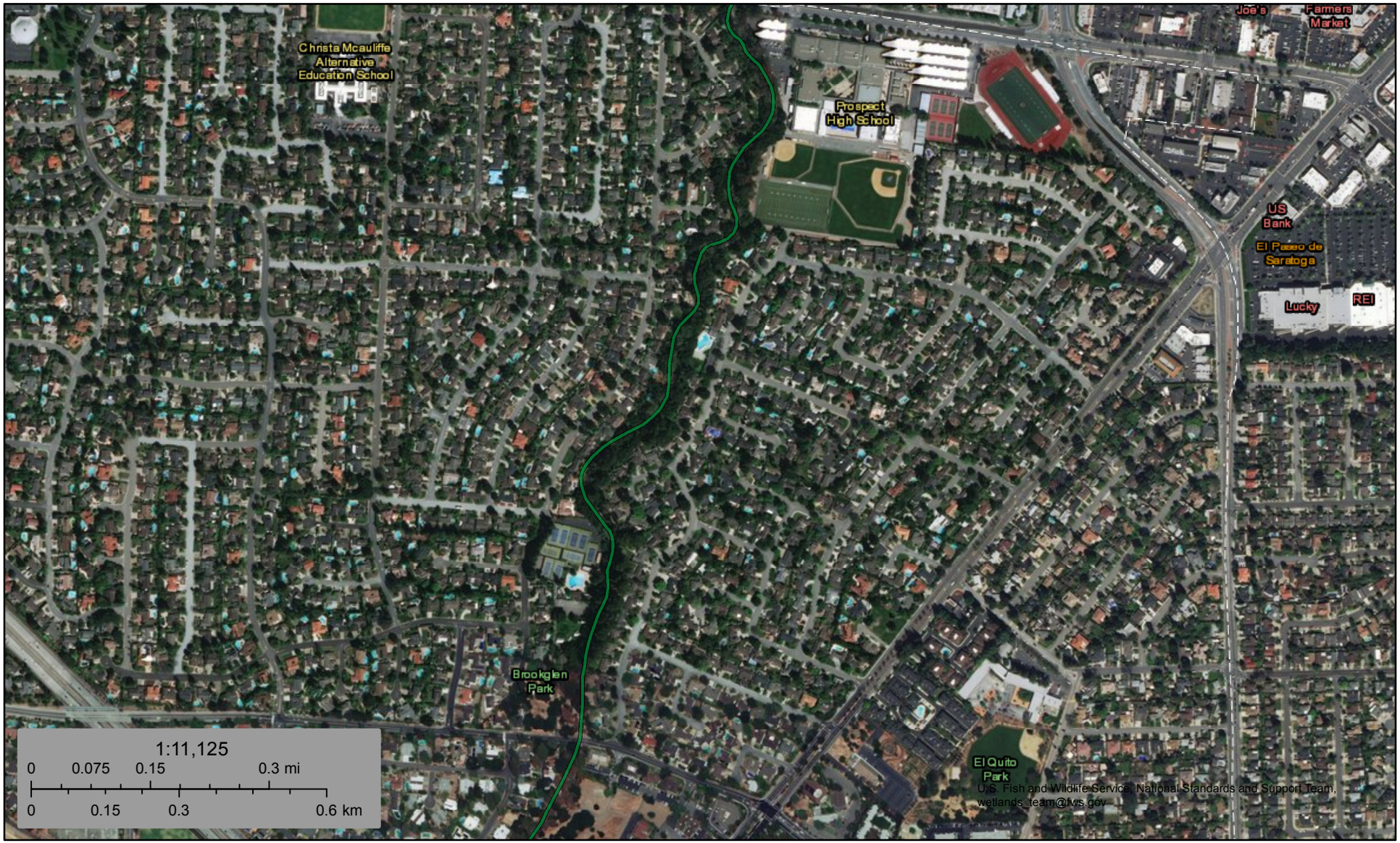
X:\Temporary\Current Month\Zooey D\SaratogaCreekWD

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

U.S. Fish and Wildlife Service

National Wetlands Inventory

Saratoga Creek



August 9, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Santa Clara Area, California, Western Part

Saratoga Creek

August 9, 2018

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Saratoga Creek)

Map Scale: 1:5,380 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Santa Clara Area, California, Western Part
Survey Area Data: Version 6, Sep 8, 2017

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

Date(s) aerial images were photographed: Oct 26, 2010—Nov 3, 2013

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

Map Unit Legend (Saratoga Creek)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
130	Urban land-Still complex, 0 to 2 percent slopes	125.8	99.9%
140	Urban land-Flaskan complex, 0 to 2 percent slopes	0.1	0.1%
Totals for Area of Interest		**125.9**	**100.0%**

Map Unit Descriptions (Saratoga Creek)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Santa Clara Area, California, Western Part

130—Urban land-Still complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1nszl
Elevation: 20 to 410 feet
Mean annual precipitation: 14 to 24 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 70 percent
Still and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Alluvial fans, flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Disturbed and human transported material

Description of Still

Setting

Landform: Alluvial fans, flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from metamorphic and sedimentary rock and/or alluvium derived from metavolcanics

Typical profile

A1 - 0 to 2 inches: sandy loam
A2 - 2 to 12 inches: very fine sandy loam
Bw1 - 12 to 20 inches: silt loam
Bw2 - 20 to 33 inches: silt loam
2Ab1 - 33 to 37 inches: loam
2Ab2 - 37 to 51 inches: loam
2Bwb1 - 51 to 62 inches: loam
2Bwb2 - 62 to 72 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.5 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Elpaloalto

Percent of map unit: 5 percent
Landform: Alluvial fans, flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

140—Urban land-Flaskan complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1nszx
Elevation: 20 to 660 feet
Mean annual precipitation: 14 to 24 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 275 to 325 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 70 percent
Flaskan and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Disturbed and human transported material

Description of Flaskan

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from metamorphic and sedimentary rock and/or alluvium derived from metavolcanics

Typical profile

Ap - 0 to 2 inches: sandy loam
ABt - 2 to 7 inches: sandy clay loam
Bt1 - 7 to 17 inches: gravelly sandy clay loam
Bt2 - 17 to 31 inches: gravelly sandy clay loam
C - 31 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Pachic haploxerolls, loamy-skeletal

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Landelspark

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Botella

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Stevenscreek

Percent of map unit: 1 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Appendix C—Photographs

All photographs taken by Zooey Diggory on August 13, 2018.

Looking downstream at OHWM transect 1 (OHWM approximated by dashed line).

Looking downstream at left bank of OHWM transect 2 (OHWM approximated by dashed line).

Looking upstream at right bank of OHWM transect 3 (OHWM approximated by dashed line).

Appendix D—Plant List

The following plant species were observed at the OHWM transects in the survey area.

Species	Common Name	Wetland Indicator Status[1]
Alnus rhombifolia	white alder	FACW
Cyperus eragrostis	tall flat sedge	FACW
Eucalyptus globulus	blue gum	NI
Hedera helix	English ivy	FACU
Ligustrum japonicum	Japanese privet	FACU
Nasturtium officinale	watercress	OBL
Persicaria punctata	dotted smartweed	OBL
Piptatherum mileaceum	smilograss	NI
Platanus racemosa	California sycamore	FAC
Polypogon monspeliensis	rabbit's-foot grass	FACW
Quercus agrifolia	coast live oak	NI[2]
Rubus armeniacus	Himalayan blackberry	FAC
Rubus ursinus	California blackberry	FAC
Salix laevigata	polished or red willow	FACW
Toxicodendron diversilobum	poison oak	FACU
Urtica dioica	stinging nettle	
Vinca major	periwinkle	NI

[1] From Lichvar et al. (2016) for the Arid West region:
OBL = "obligate" - occurs in aquatic resources > 99% of time
FACW = "facultative-wetland" - occurs in aquatic resources 67-99% of time
FAC = "facultative" - occurs in aquatic resources 34-66% of time
FACU = "facultative-upland" - occurs in aquatic resources 1-33% of time
UPL = "upland" - occurs in uplands > 99% of time
NI = indicator status not known in this region

[2] Listed *Quercus* species are FACU or UPL

Appendix E—OHWM Data Sheets

OHWM sample transects are mapped in Appendix A, and photographs of each are provided in Appendix C.

OHWM Delineation Cover Sheet - T1 Page 1 of 2

Project: Saratoga Creek **Date:** 8/13/2018

Location: D/s of Cox Ave. **Investigator(s):** Z. Diggory, J. Watson

Project Description:
Remove nonnative eucalyptus trees, which are hazards + preclude native vegetation, and replant suitable areas with native vegetation

Describe the river or stream's condition (disturbances, in-stream structures, etc.):
Deeply incised single-thread channel, with abundant bank erosion + concrete/cement rubble in channel + on lower banks.

Off-site Information

Remotely sensed image(s) acquired? ☒ **Yes** ☐ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:
Contemporary + historical aerial imagery

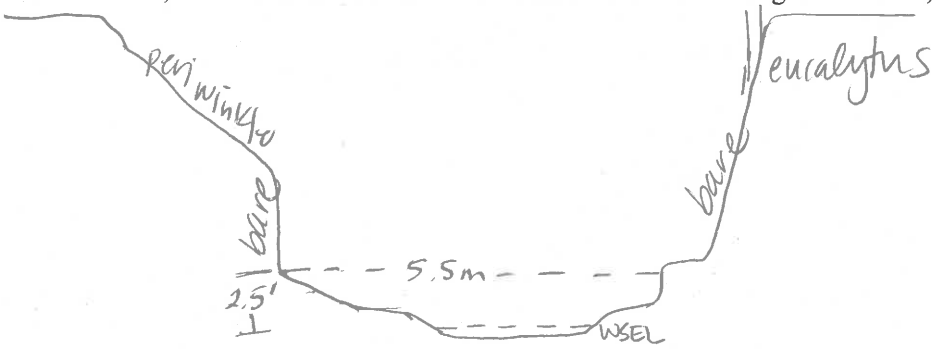
Hydrologic/hydraulic information acquired? ☒ **Yes** ☐ **No** [If yes, attach information to datasheet(s) and describe below.] Description:
Historical records from nearest upstream gage was reviewed (Saratoga @ Saratoga). A high flow of approx 250 cfs occurs nearly every year.

List and describe any other supporting information received/acquired:
National Wetland Inventory map
NRCS soil map

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Datasheet # T1 | **OHWM Delineation Datasheet** | Page 2 of 2

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☒ Sharp (> 60°) | ☐ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description: Between a low bench + steep upper bank

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	70	10	10	10	10	Some
Below OHWM	10	10	10	50	20	N

Notes/Description: Organic material + abundant leaf litter above OHWM

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	10	40	10	40
Below OHWM	0	10	10	80

Notes/Description: On RR eucalyptus overstory appears to preclude veg above OHWM
species = Eucalyptus sp. Rubus ursinus Quercus agrifolia Cynosurus echinatus
Vinca major Alnus rhombifolia Polypogon monspeliensis Persicaria sp.

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

OHWM is clearly evident based on bank erosion patterns + veg/leaf litter

photos 0441-0443

OHWM Delineation Cover Sheet T2 Page 1 of 2

Project: Saratoga Creek **Date:** 8/13/2018

Location: D/S end of tennis club **Investigator(s):** Z. Diggory, J. Watson

Project Description:

See T1 data sheet

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

Slightly incised channel, cutting through embedded/cemented cobble + gravel
Less incised than upstream w/ ~30' wide bench @ RL (riverleft)

Off-site Information

Remotely sensed image(s) acquired? ☒ **Yes** ☐ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

See T1 data sheet

Hydrologic/hydraulic information acquired? ☐ **Yes** ☐ **No** [If yes, attach information to datasheet(s) and describe below.] Description:

See T1 data sheet

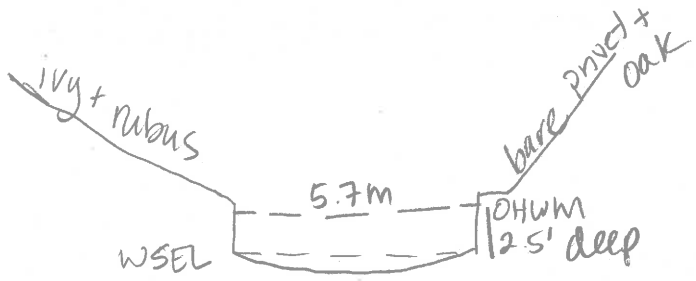
List and describe any other supporting information received/acquired:

See T1 data sheet

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Datasheet # T2 **OHWM Delineation Datasheet** Page 2 of 2

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☒ Sharp (> 60°) | ☐ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description: OHWM on vertical bank

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	75	0	10	10	5	Y
Below OHWM	40	10	20	20	10	N

Notes/Description: channel incised thru embedded/cemented GR+CO bar

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	10	30	30	30
Below OHWM	0	10	20	80

Notes/Description: Very little shrub cover rooted below OHWM

Species = Eucalyptus sp. Rubus ursinus Hedera helix
Quercus agrifolia Rubus armeniacus Ligustrum sp.
Platanus racemosa Piptatherum miliaceum

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

ph. 0447-0448

OHWM Delineation Cover Sheet T3 Page 1 of 2

Project: Saratoga Creek **Date:** 8/13/2018

Location: D/S of Community pool **Investigator(s):** Z. Diggory, J. Watson

Project Description:

See T1 data form

Describe the river or stream's condition (disturbances, in-stream structures, etc.):

See T2 data form

Off-site Information

Remotely sensed image(s) acquired? ☒ **Yes** ☐ **No** [If yes, attach image(s) to datasheet(s) and indicate approx. locations of transects, OHWM, and any other features of interest on the image(s); describe below] Description:

See T1 data form

Hydrologic/hydraulic information acquired? ☒ **Yes** ☐ **No** [If yes, attach information to datasheet(s) and describe below.] Description:

See T1 data form

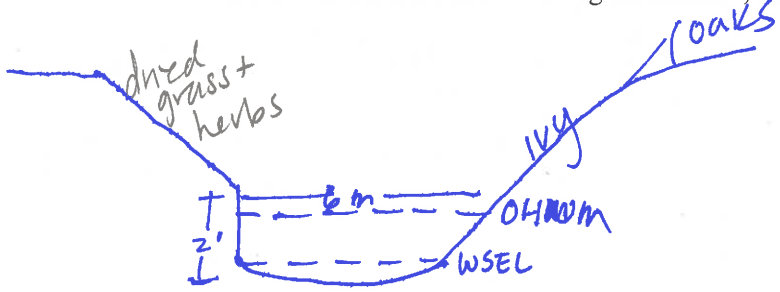
List and describe any other supporting information received/acquired:

See T1 data form

Instructions: Complete one cover sheet and one or more datasheets for each project site. Each datasheet should capture the dominant characteristics of the OHWM along some length of a given stream. Complete enough datasheets to adequately document up- and/or downstream variability in OHWM indicators, stream conditions, etc. Transect locations can be marked on a recent aerial image or their GPS coordinates noted on the datasheet.

Datasheet # T3 | **OHWM Delineation Datasheet** | Page 2 of 2

Transect (cross-section) drawing: (choose a location that is representative of the dominant stream characteristics over some distance; label the OHWM and other features of interest along the transect; include an estimate of transect length)



Break in Slope at OHWM: ☒ Sharp (> 60°) | ☒ Moderate (30–60°) | ☐ Gentle (< 30°) | ☐ None

Notes/Description: Change in slope is moderate on RR
" " " " sharp on RL

Sediment Texture: Estimate percentages to describe the general sediment texture above and below the OHWM

	Clay/Silt <0.05mm	Sand 0.05 – 2mm	Gravel 2mm – 1cm	Cobbles 1 – 10cm	Boulders >10cm	Developed Soil Horizons (Y/N)
Above OHWM	60	0	20	20	0-5	Y
Below OHWM	20	0	40	20	20	N

Notes/Description: Banks are cemented/embedded CO + GR mostly
Abundant leaf litter above OHWM

Vegetation: Estimate absolute percent cover to describe general vegetation characteristics above and below the OHWM

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	20	50	20	10
Below OHWM	0	10	20	70

Notes/Description: Herb + Vine cover is very high above OHWM, below mostly unvegetated

Species - Quercus agrifolia Piptatherum miliaceum Rorippa nasturtium
Hedera helix Rubus armeniacus

Other Evidence: List/describe any additional field evidence and/or lines of reasoning used to support your delineation

ph. 0452-0454

Appendix F—Property Access Statement

The Project is between private properties on both sides of the creek. Corps personnel are allowed to enter the Project reach from Cox Avenue and collect samples during normal business hours, but are encouraged to notify Santa Clara Valley Water District staff prior to doing so.

Todd Sexauer
SCVWD Environmental Planner and
authorized representative of Santa Clara Valley Water District

APPENDIX D

2018 CULTURAL RESOURCES SURVEY FOR THE SANTA CLARA VALLEY WATER DISTRICT- SARATOGA CREEK HAZARD TREE REMOVAL AND RESTORATION PROJECT, SANTA CLARA COUNTY, CALIFORNIA

Pacific Legacy Historic Preservation
Bay Area Division
900 Modoc Street
Berkeley, CA 94707
Phone: 510.524.3991
Fax: 510.524.4419
www.pacificlegacy.com

November 27, 2018

Mr. Todd Sexauer, Associate Environmental Planner
Environmental Planning Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Re: 2018 Cultural Resources Survey for the Santa Clara Valley Water District
Saratoga Creek Hazard Tree Removal and Restoration Project, Santa Clara County, California

Dear Mr. Sexauer:

This report presents the results of a cultural resources investigation conducted on behalf of the Santa Clara Valley Water District (SCVWD) for the proposed Saratoga Creek Hazard Tree Removal and Restoration Project (Project) in Santa Clara County, California. The proposed Project is located along Saratoga Creek between Cox Avenue and Prospect Road in the City of Saratoga (*see* Attachment A, Figures 1 and 2 and Attachment B). All work was performed under contract no. 3485-01 and was coordinated by senior archaeologist Lisa Holm, PhD, who meets the Secretary of the Interior's Professional Qualifications Standards for archaeology. The investigation was conducted consistent with federal and state historic preservation regulations, including Section 106 of the National Historic Preservation Act (NHPA), and the California Environmental Quality Act (CEQA). Native American consultation was conducted consistent with Assembly Bill 52.

Results Summary

An archival and records search was performed on November 15, 2018 by the Northwest Information Center (NWIC) of the California Historical Resources Information System (NWIC) for the Project and a surrounding 0.25-mile radius. The archival and records search revealed no known cultural resources within the Project area (*see* Attachment C). A request for a search of the Sacred Lands File was submitted to the Native American Heritage Commission (NAHC) on November 12, 2018. Also requested was a current listing of potential Native American stakeholders who may have knowledge of or an interest in the Project vicinity. On November 19, 2018, the NAHC responded by stating that no Native American cultural resources had been listed in the Sacred Lands File within the Project area. Contact with potential Native American stakeholders identified by the NAHC was initiated on November 20, 2018. No responses have been received to date, but any correspondence will be forwarded to the SCVWD as it becomes available (*see* Attachment D). Pacific Legacy archaeologist Mary O'Neill performed a pedestrian inventory survey of the Project area on November 19, 2018 (*see* Attachment B). No prehistoric or historic period cultural materials were observed, however surface visibility was limited due to dense vegetation and modern development. The archival and records search, search of the Sacred Lands File, and pedestrian inventory survey revealed no cultural resources within the Project area

.

Description of the Project

The SCVWD Environmental Planning Unit, in coordination with the Vegetation Management Unit, proposes to remove approximately 106 diseased blue gum eucalyptus trees from a 0.75-mile long stretch of Saratoga Creek. These trees span both sides of the creek between Cox Avenue to the south and Prospect Road to the north. The diseased trees are slated to be cut due to potential fire/fall hazards, and they pose a risk to many of the properties adjacent to the Saratoga Creek corridor. The Project alignment is located primarily on the eastern bank of Saratoga Creek within parcels owned by the SCVWD or in access easements held by the SCVWD. A small area along the west bank, adjacent to the Brookside Club of Saratoga (APN 386-22-009), would also be included in the Project area for access and staging purposes. A second access point for heavy equipment ingress/egress may be sited near the soccer field at Prospect High School (386-10-038) on the east bank of the creek. An earthen access ramp would be established from an area adjacent to the soccer field downslope into the creek bed. The heavy equipment would operate from the base of the channel to remove cut and felled logs from the eucalyptus trees. Trees marked for removal will be cut and dropped at the stump. No stumps will be removed, and the tree roots will be left intact. Remnant stumps will be painted to prevent regrowth of the tree. This activity will be minimally invasive to the surrounding soils and creek banks.

The Project would be implemented in three phases over a period of three years beginning in 2019. Work would be scheduled during the dry season beginning in August and ending in October of each year. Re-vegetation of the creek bank with native species would follow each phase of tree removal after approximately one year to ensure that all invasive plants are controlled prior to replanting with native riparian vegetation. On-going maintenance and monitoring would follow re-vegetation efforts to ensure survival of the plantings.

Project Location

The portion of Saratoga Creek that makes up the Project area is located within the City of Saratoga west of Saratoga Avenue, immediately south of Prospect Road, west of Saratoga Creek Drive, east of Brookglen Drive, and immediately north of Cox Avenue. It is a part of a narrow riparian corridor (~150 feet wide) bordered by urban residential development and infrastructure. PG&E transmission alignments are intermittently present along either side of Saratoga Creek. The Project area is depicted in Attachment A, Figure 1 on the Cupertino, California 7.5' USGS Quadrangle. It is located on unsectioned land in the Quito Civil Colonies Land Grant.

Project Setting

Saratoga Creek, historically known as Campbell Creek, originates on the northeastern slopes of the Santa Cruz Mountains along Castle Rock Ridge and flows through the cities of Saratoga, San Jose, and Santa Clara and then joins with San Tomas Aquino Creek, which drains into the San Francisco Bay at Guadalupe Slough. It is part of the San Tomas Aquino Creek/Saratoga Creek Watershed. The approximate 15-mile channel includes tributaries Bonjetti Creek and Booker Creek and drains an area of approximately 16.5 square miles before its confluence with San Tomas Aquino Creek. Historically, Saratoga Creek was stocked with steelhead trout from the Brookdale Hatchery and was once a key habitat for steelhead trout, though a SCVWD supported 1993/1994 study revealed that barriers to fish passage below the confluence of

Saratoga Creek and San Tomas Aquino Creek represented significant obstacles to spawning (Leidy, Becker and Harvey 2005).

The Santa Clara Valley floor is characterized by numerous stream channels. Over thousands of years, alluvial flooding events have resulted in the deposition of sediments along stream banks, resulting in the gradual formation of natural levees. These areas have yielded the greatest concentrations of archaeological resources within the Santa Clara Valley and represent some the most potentially sensitive areas for inadvertent discoveries (Hylkema 2010). Many archaeological deposits have also been capped or obscured over time by alluvial deposition, and it is notable that many of the archaeological sites and isolated finds recorded throughout the valley have only come to light through ground disturbing activities associated with urban development or infrastructure projects.

The Santa Clara Valley represents the ancestral lands of the Ohlone Indians, whose descendents continue to thrive in the region today. Prehistorically, the Santa Clara Valley offered a wide range of ecological niches, including marine, tidal marsh, freshwater marsh, grassland prairie, oak grassland savanna, riparian, chaparral, mixed hardwood, and evergreen forest communities (Bocek 1990). Franciscan chert and sandstone were readily available for the manufacture of flaked stone and groundstone tools, while other materials such as obsidian were obtained from neighboring groups through trade. Acorns, a staple for the Ohlone and many other Native Californians, were particularly important because they could be stored through the winter months during times of resource scarcity. They were ground with stone pestles and mortars, which are among the most frequently recorded archaeological finds in California.

Spanish exploration and missionization in the mid-to-late 18th century had a profound impact on the Ohlone and on the natural landscape of Santa Clara Valley. By 1805, most of the Ohlone within the valley had been brought within the mission system. Ultimately, the Ohlone population was severely decimated through exposure to European diseases and malnutrition (Field, et al. 2007; Milliken 2007). The native landscape of the Santa Clara Valley also was transformed, and agricultural development within the 19th century had profound effects upon the valley's ecosystem and the drainages that were integral to it. Though some creeks still flow within their original channel alignments, the filling of mashes and vernal pools, the excavation of artificial channels, and the construction of artificial levees has altered the landscape to the extent that many archaeological sites have been inadvertently exposed while others have been subsumed by these modern landscapes.

Archival and Records Search

The SCVWD submitted a request to the NWIC of the CHRIS in October 2018 for a non-confidential records search of the Project area (File #18-0804). In consultation with the SCVWD, Pacific Legacy contacted the NWIC on November 5, 2018 to request that the search be modified to include the Project area, a surrounding 0.25-radius, and confidential search results—specifically the locations and records for any known cultural resources within the archival and records search area. On November 15, 2018, Researcher Lisa C. Hagel forwarded the complete search results to Senior Archaeologist Lisa Holm of Pacific Legacy (*see* Attachment C). That search included a review of the following:

- *The Historic Properties Directory* (California Office of Historic Preservation 2015);
- *The California Inventory of Historic Resources* (State of California 1976);
- *California Historical Landmarks (*California Office of Historic Preservation 1996);
- *California Points of Historical Interest* listing May 1992 (State of California 1992);
- The National Register of Historic Places (*Directory of Determinations of Eligibility*, California Office of Historic Preservation, Volumes I and II, 1990; Office of Historic Preservation Computer Listing 1990 and updates); and
- Historic period maps and documents concerning the general area on file at the Berkeley office of Pacific Legacy.

Archival and records searches revealed that no cultural resources had been previously recorded within the Project area or within a surrounding 0.25-mile radius. One prior cultural resource study (S-016730) was completed within a portion of the Project area by Archaeological Resource Management in 1994, which resulted in negative findings. Two prior studies (S-032616 and S-004719) had been conducted within a 0.25-mile radius of the Project area (*see* Table 1). No historic period buildings or structures noted in state or federal registries were listed as adjacent to the Project area.

Table 1. Prior Studies within the Project Area and a Surrounding 0.25-Miles Radius.

Study Number	Author	Date	Type	Results in Project Area	Resources Recorded
S-16730	Cartier, Reese, and Wizorek	1994	Cultural Resources Evaluation	Negative in Project Area	None in or within 0.25 Miles of the Project Area
S-004719	Dietz	1976	Historical Evaluation and Field Study	Negative in Project Area	None in or within 0.25 Miles of the Project Area
S-032616	Billat	2006	Historical Evaluation and Field Study	Negative in Project Area	None in or within 0.25 Miles of the Project Area

Native American Contact

Pacific Legacy personnel submitted a request to the NAHC for a search of the Sacred Lands File as it encompasses the Project area on November 12, 2018. Gayle Totton, NAHC Associate Governmental Program Analyst, responded on November 19, 2018 to report that no Native American cultural resources had been previously reported within the Project area. She provided contact information for seven tribal representatives who may have knowledge of locations of concern within the Project vicinity. Pacific Legacy personnel contacted Mr. Edward Ketchum of the Amah Mutsun Tribal Band; Mr. Valentin Lopez, Chairperson of the Amah Mutsun Tribal Band; Ms. Irenne Zwierlein, Chairperson of the Amah Mutsun Tribal Band of Mission San Juan Bautista; Ms. Ann Marie Sayers, Chairperson of the Indian Canyon Mutsun Band of Costanoan; Ms. Charlene Nijmeh, Chairperson of the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area; Ms. Katherine Erolinda Perez, Chairperson of the Northern Valley Yokuts Tribe; and Mr. Andrew Galvan of the Ohlone Indian Tribe via certified letter on November 20, 2018 to request any information they might have regarding the Project area. Any replies to these requests for information are expected within 30 days and will be forwarded to the SCVWD as they become available (*see* Attachment D).

Pedestrian Inventory Survey

A pedestrian inventory survey of the Project area was conducted by Pacific Legacy archaeologist Mary O'Neill, BA, on November 19, 2018. The purpose of the survey was to identify cultural resources that may be adversely impacted by ground disturbing activities associated with the Project. The Project area is located within the Saratoga Creek riparian corridor between Cox Avenue to the south (upstream) and Prospect Road to the north (downstream). There was minimal flowing within the creek at the time of survey with the exception of the very north end of the Project area near Prospect Road.

The surveyed portion of the Saratoga Creek corridor encompassed all exposed soil areas in the creek bed and the cut and eroded banks on both the east and west side terraces. In some areas, the bank gently sloped down and leveled out at the creek. Visibility was highly variable overall and was generally poor on the west bank, which was marked by dense, abundant vegetation and. The east bank offered generally good ground surface visibility and was marked by less dense vegetation. Visibility on the west bank was generally 5% with some areas of 100% visibility and the east bank offered approximately 70-100% visibility. Concrete riprap and rubble is present in the creek bed and along the banks in many areas of the survey corridor. The entire corridor is encroached upon and bounded by fencing, built recreation/leisure areas, and yard waste/debris dumping from the adjacent residential lots. In the vicinity of the Brookside Club of Saratoga, eucalyptus trees had already been cut and stumps left in place on the east and west bank of the creek.

Vegetation in the corridor is comprised of an overstory of eucalyptus trees, willows, a few oaks, some ornamental bamboo, and a few other ornamental trees. The understory includes bramble thickets, poison oak, fennel, ivy, vines, weeds, and other unidentified plants. Most of the ground surface is obscured and covered with duff, leaf litter, deadfall, downed trees, and vines.

Visible soils and areas scuffed for examination were characterized by very dark grayish brown (10YR 3/2) sandy loam to grayish brown (2.5Y 5/2) sand. In the cut/eroded banks, soils are dark grayish brown (10YR 4/2) and range from sandy loam to loamy sand with creek gravels and pebbles. Only modern trash was observed, though it was minimal overall, and included soda cans, paper, candy wrappers, inflatable pool toys, baggies, plastic debris, remnants of a wood fence, tennis balls, rubber sandals, tires with concrete, concrete and brick rubble, rags, and a golf ball. No prehistoric or historic period cultural constituents were identified in any areas of the survey corridor. Photographic documentation of the survey corridor is included in Attachment B.

Survey Findings and Conclusions

Record search results revealed no previously recorded cultural resources in the Project area or within a surrounding 0.25-mile radius. Only one prior study had been conducted in the Project area, which yielded negative findings. The NAHC did not find any resources listed on the Sacred Lands Inventory within the Project area. Pacific Legacy personnel observed no intact prehistoric or historic period features or artifacts during a pedestrian inventory survey of the Project area. No artifacts, midden, or other evidence of prehistoric habitation was noted, and only modern trash was observed. Based on these results, it is our opinion that no cultural resource monitoring is required for this Project.

All exposed soils in the Project area were examined, along with spot-checked areas where the ground cover was scuffed aside, and no evidence of cultural constituents was found. The Project is not expected to reveal buried cultural materials, as the stumps of the trees identified for removal will be left intact, and ground disturbing activities will be kept to a minimum. Prior to initiating ground disturbing activities, however, construction personnel should be alerted to the possibility of encountering buried prehistoric or historic period cultural remains. Personnel should be advised that, upon discovery of buried cultural deposits, work in the immediate vicinity of the find should cease and a qualified archaeologist should be contacted immediately. Once the find has been identified, plans for the treatment, evaluation, and mitigation of impacts to the find will need to be developed if it is found to be eligible for listing in the National or California Register.

Potential cultural materials include prehistoric and historic period artifacts and remains. These may consist of, but are not limited to the following:

- historic period artifacts, such as glass bottles and fragments, tin cans, nails, ceramic and pottery sherds, and other metal objects;
- historic period features such as privies, wells, cellars, foundations or other structural remains (bricks, concrete, or other building materials);
- flaked-stone artifacts and debitage, consisting of obsidian, basalt, and/or chert;
- groundstone artifacts, such as mortars, pestles, and grinding slabs;
- dark, almost black, soil with a "greasy" texture that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire-affected rock; and,
- human remains.

If human remains are encountered during the course of the Project, work in that area must cease and the Santa Clara County Coroner must be notified immediately. If the remains are determined to be Native American, the NAHC must be notified within 48 hours as required by Public Resources Code 5097. The NAHC will notify the designated Most Likely Descendant, who will in turn provide recommendations for the treatment of the remains within 24 hours.

Should you have any questions regarding this report, please contact Lisa Holm at 510.524.3991, ext. 2.

Sincerely,

Lisa Holm

Senior Archaeologist
Pacific **L**egacy, **I**nc.
900 Modoc Street
Berkeley, CA 94707
510.524.3991 ext. 2
holm@pacificlegacy.com

Attachments:
Attachment A – Project Figures (Figures 1 and 2)
Attachment B – Photographic Documentation
Attachment C – Archival and Records Search Results
Attachment D – Native American Documentation

References Cited

Bocek, B.
1991 *Prehistoric Settlement Pattern and Social Organization on the San Francisco Peninsula, California.* Board of Trustees, Southern Illinois University. Chicago.

Field, Les, Alan Leventhal, Dolores Sanchez, and Rosemary Cambra
2007 Part 2: A Contemporary Ohlone Tribal Revitalization Movement—A Perspective from the Muwekma Costanoan/Ohlone Indians of the San Francisco Bay. In *Santa Clara Valley Prehistory: Archaeological Investigations at CA-SCL-690, The Tamien Station Site, San Jose, California*, edited by Mark G. Hylkema, pp. 47-60. Center for Archaeological Research at Davis, No. 15. University of California, Davis.

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2010 Archaeological Survey Report for the Proposed 2010 Stream Control Maintenance Program: Five Locations within Santa Clara County, California. On file at the Santa Clara Valley Water District, San Jose, California.

Leidy, R.A., G.S. Becker, B.N. Harvey
2005 Historical Distribution and Current Status of Steelhead/Rainbow Trout (*Oncorhynchus Mykiss*) in Streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, California.

Milliken, Randall
2007 Ethnohistory of the Ohlone People: Part 1: The Ohlone People of the Santa Clara Valley in the 1770s. In *Santa Clara Valley Prehistory: Archaeological Investigations at CA-SCL-690, The Tamien Station Site, San Jose, California*, edited by Mark G. Hylkema, pp. 47-60. Center for Archaeological Research at Davis, No. 15. University of California, Davis.

ATTACHMENT A: PROJECT FIGURES

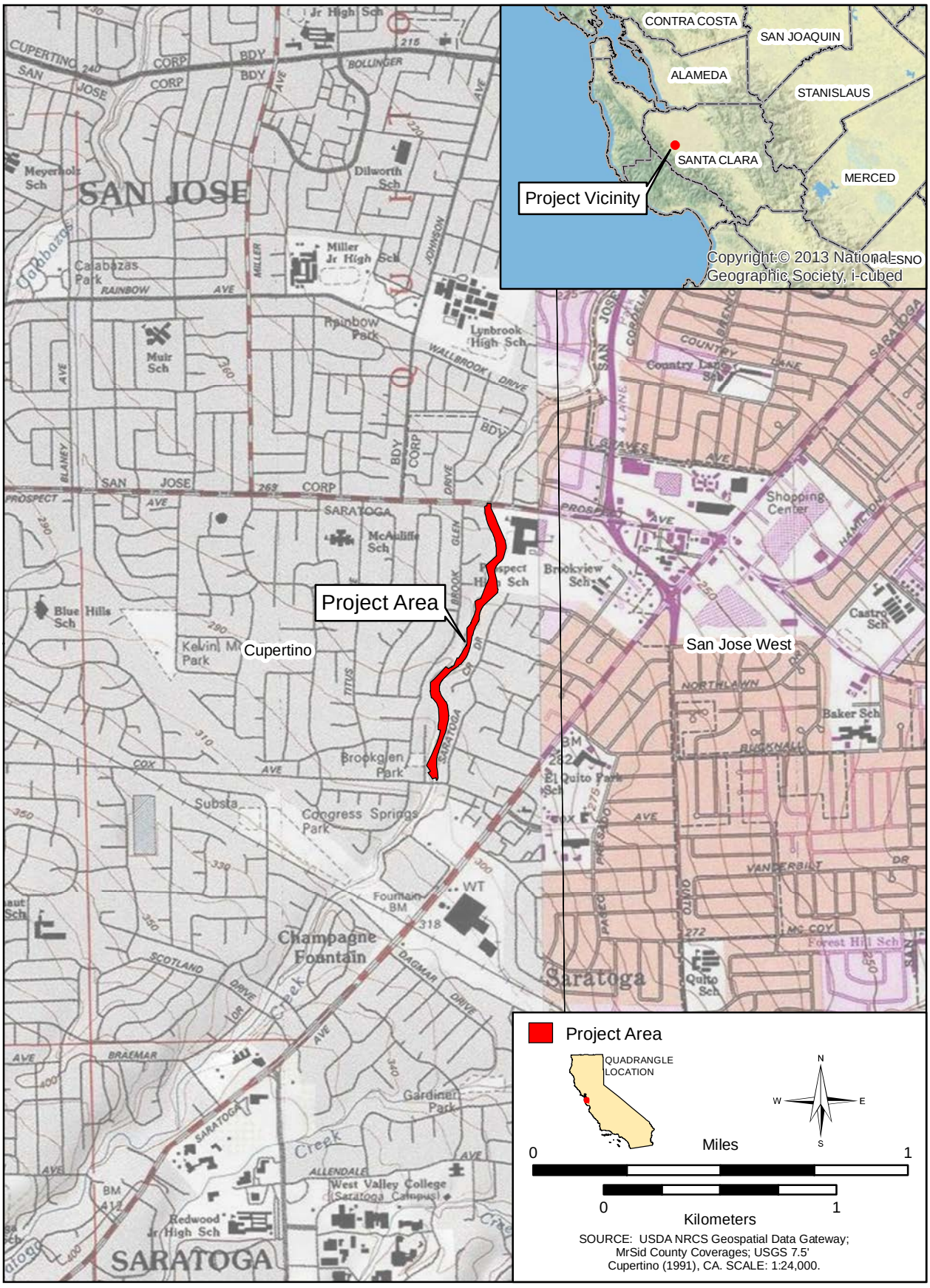


Figure 1. Project Location Map.

Figure 2. Proposed Project Area.

ATTACHMENT B: PHOTOGRAPHIC DOCUMENTATION

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

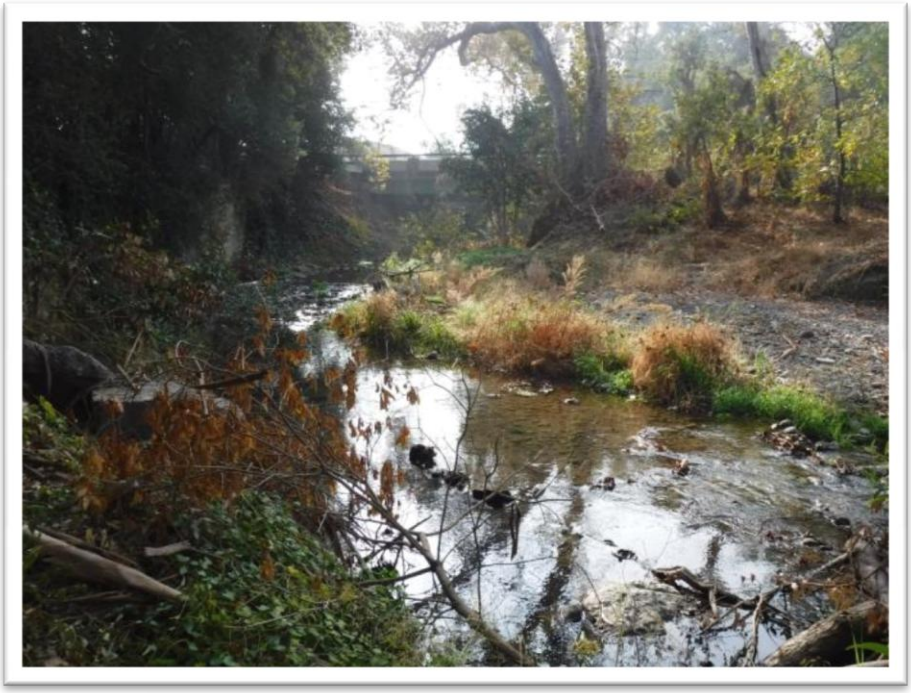
Photograph No. 1

Direction: South-Southeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill



Description:
(Photo#623) Overview of Saratoga Creek channel towards Cox Avenue at south end of survey corridor.

Photograph No. 2

Direction: North-Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#621) View of concrete riprap in the creek bed and adjacent east bank.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 3

Direction: Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#625) Overview of eroded west bank of creek near Cox Avenue.

Photograph No. 4

Direction: North-Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#626) Excavation of central sump and view of the riprap section marked for replacement.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 5

Direction: West

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#627) Close-up wall profile of eroded bank on the west side of the creek near Cox Avenue.

Photograph No. 6

Direction: Southeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#629) Overview of creek channel with recently cut tree stumps. View towards Cox Avenue in background.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 7

Direction: North-Northeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#632) Tree stumps, from recently cut eucalyptus trees, on the east bank of creek in vicinity of the Brookside Club.

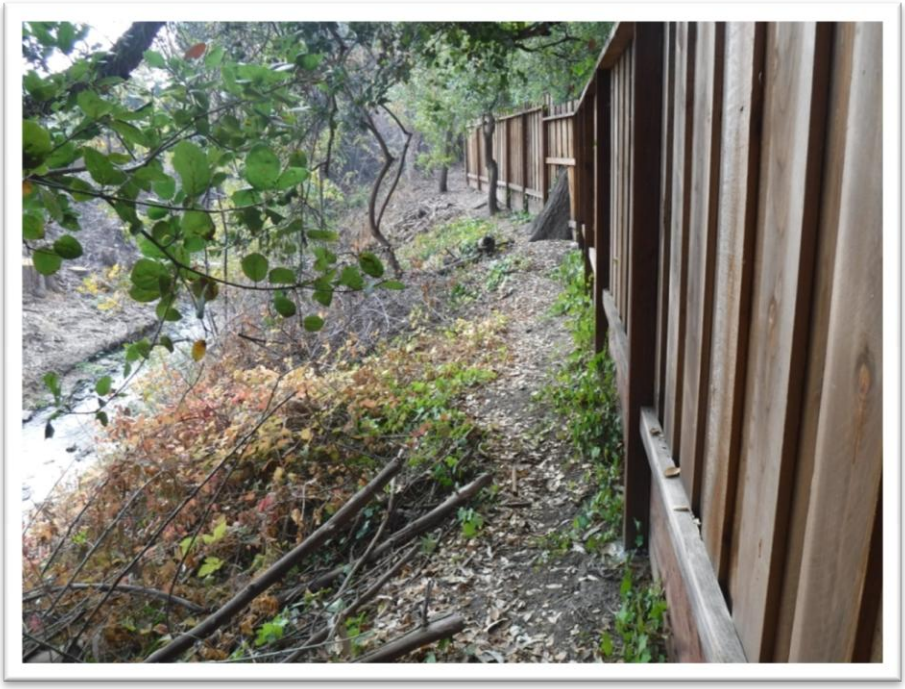
Photograph No. 8

Direction: South

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill



Description:
(Photo#635) View along survey corridor, on west bank, behind clubhouse.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 9

Direction: East

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#638) Stand of eucalyptus trees with dense duff on the east bank of the creek channel.

Photograph No. 10

Direction: North

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#640) Overview of likely staging area, on the west bank, behind the clubhouse fence.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 11

Direction: East

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#643) Concrete riprap in the creek bed north of the clubhouse.

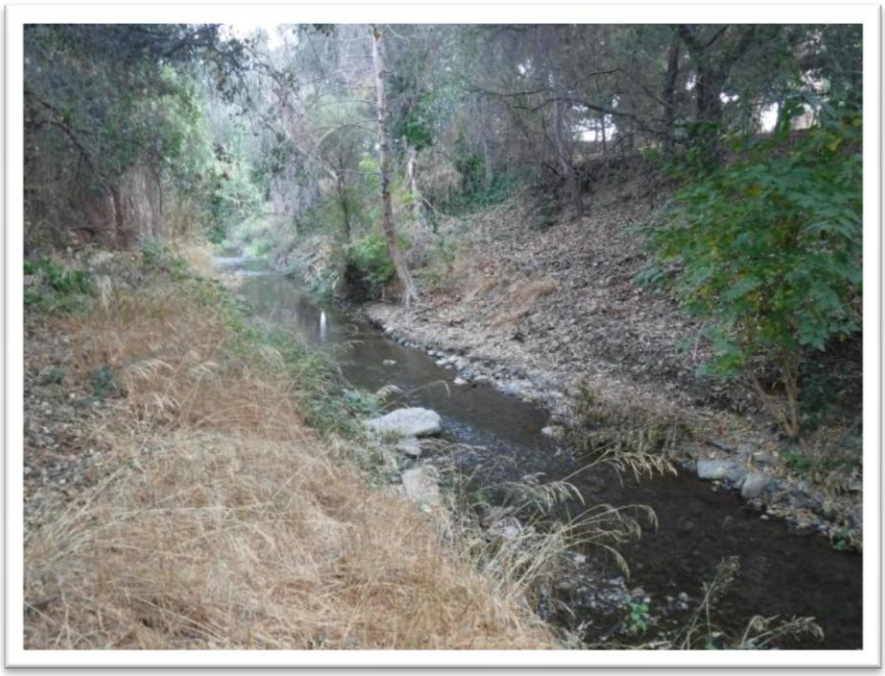
Photograph No. 12

Direction: Northeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill



Description:
(Photo#646) Overview of gently sloping banks in the creek channel.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 13

Direction: East

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#649) View of east bank wall profile in northern portion of survey corridor.

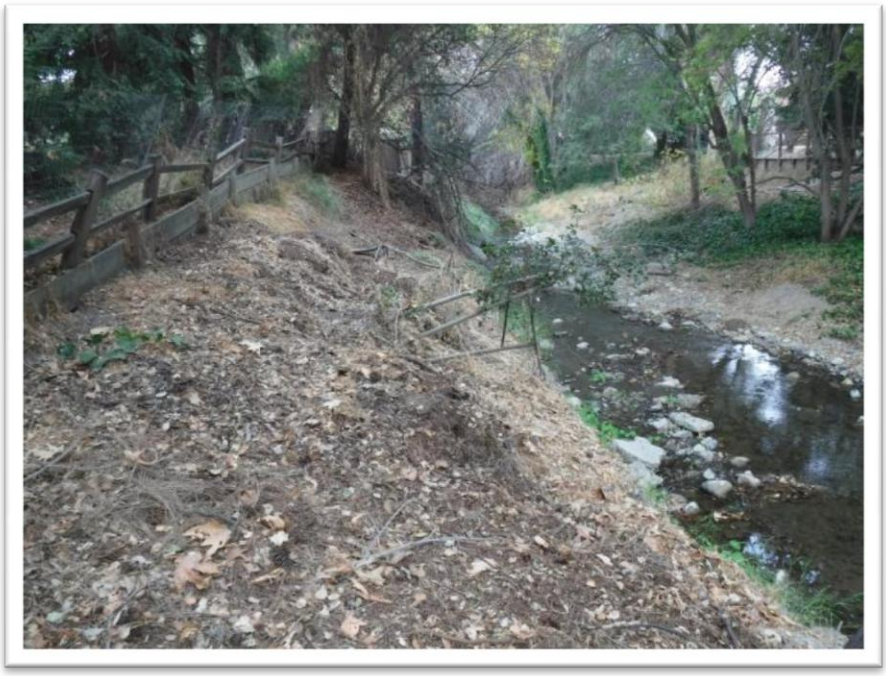
Photograph No. 14

Direction: North

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill



Description:
(Photo#652) Areas of exposed soil on west bank of the creek channel.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 15

Direction: East

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#654) Eroded east bank wall profile with creek gravels.

Photograph No. 16

Direction: Northeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#657) Overview of riprap in the creek channel, adjacent to the high school.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 17

Direction: Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#660) West bank near north end of survey corridor with leisure areas encroaching on creek.

Photograph No. 18

Direction: Northeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#663) Overview of area adjacent to soccer field at high school that will likely be used to access the creek channel.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 19

Direction: Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#668) Overview of creek channel with Prospect Road in background.

Photograph No. 20

Direction: Southeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#669) Overview of creek channel at north end with minimal water flow; Prospect Road in background.

Appendix B: Pacific Legacy Photographic Documentation

Client: Santa Clara Valley Water District Prepared by: Mary O'Neill

Photograph No. 21

Direction: North-Northwest

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill

Description:
(Photo#672) Large, open area at north end of survey corridor by Prospect Road.

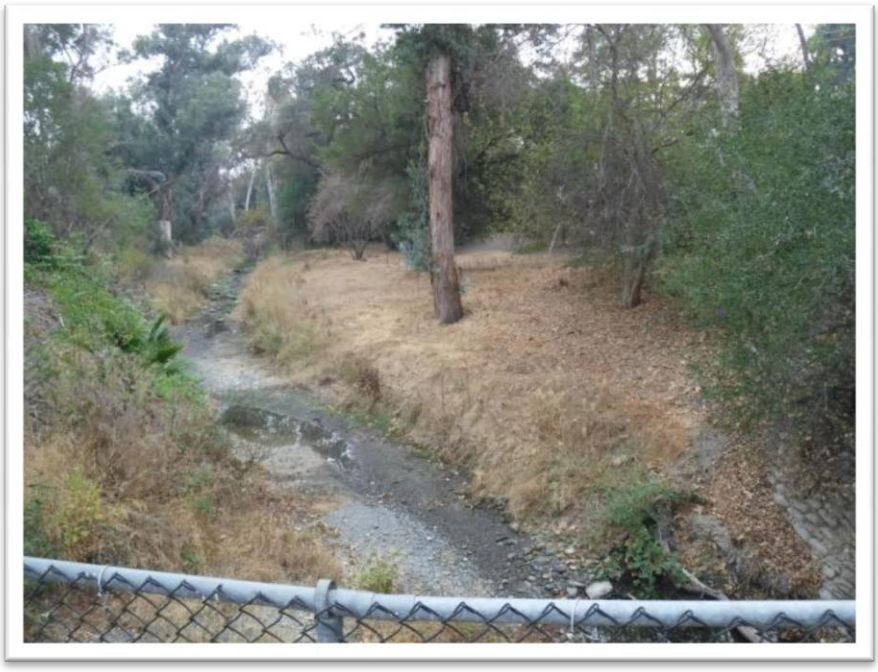
Photograph No. 22

Direction: South-Southeast

Date: 11/19/18

Location: Saratoga Creek between Cox Avenue and Prospect Road

Photographer: Mary O'Neill



Description:
(Photo#674) View from Prospect Road down dried up creek channel and large open area to right.

APPENDIX E

TRIBAL CULTURAL RESOURCES CONSULTATION DOCUMENTATION

Valley Water

Clean Water • Healthy Environment • Flood Protection

May 13, 2019

Charlene Nijmeh, Chairwoman
Muwekma Ohlone Indian Tribe of the
San Francisco Bay Area Region
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

Subject: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of Decision to Propose Undertaking a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1

Dear Chairwoman Nijmeh:

The Santa Clara Valley Water District (Valley Water) is providing the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area with formal notification of decision to propose undertaking the following project: Saratoga Creek Hazard Tree Removal and Restoration Project.

Enclosed please find a description of the proposed project, maps showing the project location and vicinity, and the name of our project point of contact, pursuant to Public Resources Code §21080.3.1(d) (hereafter PRC).

The proposed project would consist of several primary elements:

1. Phased removal of 104 hazard eucalyptus trees using a combination of mobile crane (crane-assisted), traditional climbing, and hauling of cut material through the creek bed over a three-year period
2. Reclaim access to Valley Water property along Saratoga Creek within the project area
3. Construct two temporary ramps for access of equipment with minimal grading to remove cut trees and limbs
4. Re-establish native, mixed riparian (i.e., coast live oak, blue elderberry, willows, mulefat, etc.) under- and overstory cover throughout the project area using a combination of active revegetation, passive revegetation, seeding, and weed control
5. Maintain the native planting and natural recruits until they have established and do not require further supplemental irrigation

The Project alignment is located on a narrow reach of Saratoga Creek that runs through the highly-developed valley floor, approximately half-way between the Santa Cruz Mountains, where the creek originates, and San Tomas Aquino Creek, into which Saratoga Creek discharges. The project area includes the east bank and portions of the west bank of Saratoga Creek, beginning immediately downstream of the Cox Avenue bridge and ending at the southwest corner of Prospect High School, within the City of Saratoga. Regional vicinity and project area maps are attached as Figure 1: Regional Location Map and Project Vicinity, and Figure 2: Project Area and Existing Access.

The Valley Water point of contact for consultation pursuant to PRC §21080.3.1 regarding the proposed project will be Todd Sexauer. Please direct any correspondence on this matter to Mr. Sexauer's attention at the contact information provided below.

Pursuant to PRC §21080.3.1(d), the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Region is allowed 30 days from the receipt of this letter to request consultation in writing, with Valley Water.

Very Respectfully,

Todd Sexauer
Associate Environmental Planner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Attachments: Figure 1 – Regional Location Map and Project Vicinity
Figure 2 – Project Area and Existing Access

Figure 1: Regional Location Map and Project Vicinity

Saratoga Creek Hazard Tree Removal and Restoration Project

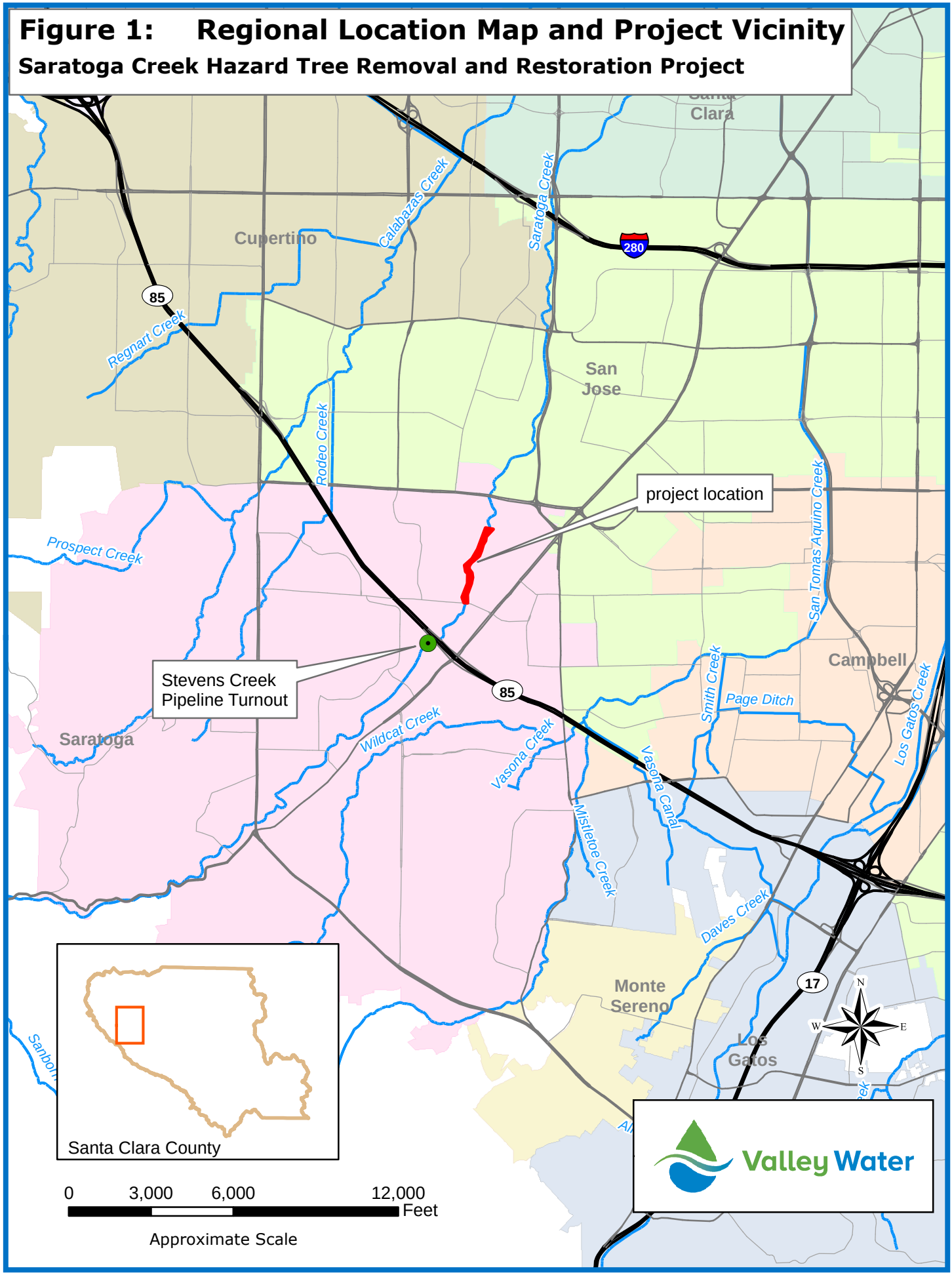


Figure 2:
Project Area and Existing Access

GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.