Valley Water

Final Environmental Impact Report

Coyote Creek Flood Protection Project

STATE CLEARINGHOUSE NO. 2023110513

JANUARY 2025

PREPARED BY

GEI Consultants

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Chapter 1. Introduction

1.1 Information on the Final Environmental Impact Report

Valley Water as lead agency has prepared this Final Environmental Impact Report (EIR) to provide other responsible agencies and the public with information about the potential environmental effects of the proposed Coyote Creek Flood Protection Project (CCFPP or project). This Final EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines (California Code of Regulations [CCR] title 14, Section 15000 et seq.). This Final EIR consists of the following information required in State CEQA Guidelines Section 15132:

- Revisions to the Draft EIR;
- Comments and recommendations received on the Draft EIR;
- A list of persons, organizations, and public agencies commenting on the Draft EIR;
- The responses of the lead agency (Valley Water) to significant environmental points raised in the review and consultation process; and
- Any other information added by the lead agency (such as a minor revisions made to the Draft EIR).

This document, combined with the Draft EIR, comprises the Final EIR for the proposed project.

1.2 Public Participation and Environmental Review Process

In June 2019, Valley Water initiated monthly coordination meetings with the City of San José Parks and Recreation Department to coordinate potential project alternatives with the City of San José Coyote Creek Trail Master Plan. A Coyote Creek Flood Risk Reduction Ad Hoc Committee (a Valley Water Board of Directors committee) meeting and a series of public meetings were held during 2019 to inform the Board as well as residents, business owners, and stakeholders about the progress of the proposed project and to solicit input from them. This series of meetings was focused on informing the public about the problem definition component of the planning phase of the proposed project, and to provide them an overview of the early conceptual alternatives to reduce the risk of flooding to the community. Since then, additional public meetings/open houses have been conducted by Valley Water for the different project reaches to update residents and local advocacy groups on the project design and obtain input on design details, including:

- A January 2020 meeting with the San Jose Parks Advocates focused on the proposed alternatives for Watson, William Street, Selma Olinder, Coyote Meadows, and Rocksprings parks;

- A series of virtual meetings held in June 2020 to present the preferred project alternatives to the public and stakeholders;
- A July 2021 meeting to update residents on the progress and next steps for the proposed project and the Coyote Creek Flood Management Measures Project (CCFMMP);
- Meetings held in October 2021, in partnership with the City of San José's Parks, Recreation and Neighborhood Services Department, to receive neighborhood input on the proposed flood protection elements located in the City's parks;
- A February 2022 meeting to provide updates on the design details and anticipated timelines for the CCFPP and CCFMMP; and
- Open house events held in May 2022 to provide information and updated timelines for the CCFPP and CCFMMP.

Public disclosure and informed decision-making are priorities under CEQA. CEQA mandates two periods during the EIR process when public and agency comments on the impacts of a proposed project are solicited: 1) during the scoping comment period, and 2) during the public review period for a Draft EIR. This following summarizes Valley Water's efforts to comply with CEQA mandates for public disclosure:

- In accordance with CEQA Guidelines Section 15082(a), Valley Water circulated a Notice of Preparation of a Draft EIR for the proposed project on November 22, 2023. The Notice of Preparation of a Draft EIR was posted on Valley Water's website at www.valleywater.org/public-review-documents; filed with the Governor's Office of Planning and Research State Clearinghouse and the Santa Clara County Clerk's Office; and circulated to the public, responsible and trustee agencies, other relevant local, state, and federal agencies, and other interested parties.
- Valley Water held a public scoping meeting on December 6, 2023, in the Franklin McKinley School District Boardroom, located at 645 Wool Creek Drive, San José. To solicit attendance, Valley Water published advertisements in several local newspapers and mailed notices to owners and occupants of properties in the project vicinity, as well as interested parties who had signed up to receive project-related information at previous public meetings conducted during the project's planning phase.
- Valley Water issued a Notice of Availability to provide agencies and the public with formal notification that the Draft EIR was available for review and comment, including filings with the State Clearinghouse and County Clerk's office. The Notice of Availability, Draft EIR, and selected appendices were posted to Valley Water's website at www.valleywater.org/public-review-documents. Hardcopies of the Draft EIR and all appendices were also available for review at the following locations:

    Santa Clara Valley Water District
    5750 Almaden Expressway
    San José, CA 95118-3686

    City of San José
    200 E Santa Clara Street
    San José, CA 95113

City of San José Library
East San Jose Carnegie Library
1102 E Santa Clara St, San Jose, CA 95116

- Valley Water circulated the Draft EIR for a 45-day public review and comment period from July 12, 2024 to August 26, 2024. The purpose of public circulation is to provide agencies, stakeholders, and interested individuals with opportunities to comment on the contents of the Draft EIR. Commentors were encouraged to send written comments or questions concerning the Draft EIR via email to CCFPPcomments@valleywater.org or to the name and address listed below.

  Santa Clara Valley Water District, Attention: Andrew Martin, Environmental Planner, 5750 Almaden Expressway San Jose, CA 95118-3686

  Valley Water held a public meeting on the Draft EIR on July 25, 2024, from 6:30 p.m. to 7:30 p.m. at the Roosevelt Community Center, located at 901 E. Santa Clara Street, San José.

1.3 Final EIR

Pursuant to CEQA Guidelines Section 15132, a Final EIR must include: the Draft EIR or a revision of the Draft EIR; comments received on the Draft EIR in full or summarized; a list of commenters on the Draft EIR; and responses to significant environmental points raised in Draft EIR comments.

Chapter 2, “Responses to Comments,” of this Final EIR includes all public comments received during the Draft EIR public review period, and responses to these public comments. Responses to public agency comments will be sent to commenting agencies at least 10 days prior to certification of the EIR consistent with CEQA Guidelines Section 15088(b).

The Final EIR also presents any minor changes to the Draft EIR resulting from staff-initiated changes. Attachment 1 to this Final EIR includes the text of the Draft EIR, with revisions to the Draft EIR that are shown with ~~strikethrough~~ text for deletions and <u>underlined</u> text for additions. In addition, a red ‘X’ is shown across figures that have been revised and the new figures are provided on the following page. Most Draft EIR revisions are related to minor changes to the Draft EIR project description; these minor changes do not alter the fundamental nature or main features of the proposed project as described in the Draft EIR.

None of the comments, responses, or Draft EIR revisions constitutes “significant new information” that would trigger recirculation of the Draft EIR under CEQA Guidelines Section 15088.5.

Minor changes to the Draft EIR documented in Attachment 1 of the Final EIR include the following:

- Minor changes to the length and alignments of some flood improvements;
- Removal of the temporary creek crossing;
- Removal of one small flood improvement in Reach 6;
- Addition of stormwater drainage for passive barriers;
- Addition of one staging area;

- Minor changes to footprint of staging and laydown areas;
- Minor revisions to the impact analyses in Draft EIR Chapters 3 and 4 to reflect these minor changes to the proposed project and,
- Updating figures to reflect all changes to flood improvements and construction areas.

1.4 EIR Certification and Project Approval

Prior to any decision on the project, the Board will review the Final EIR and consider certifying the document at a regularly scheduled Board meeting. Prior to making a decision, the Valley Water Board must certify that: (1) the Final EIR has been completed in compliance with CEQA, (2) the Final EIR was presented to the decision-making body of the lead agency (Valley Water Board), and (3) the decision-making body (Valley Water Board) reviewed and considered the information in the Final EIR prior to approving a project (CEQA Guidelines Section 15090).

Following EIR certification, the Valley Water Board would then consider adopting written findings for each significant adverse environmental effect identified in the EIR (CEQA Guidelines Section 15091), and if necessary, a statement of overriding considerations (CEQA Guidelines Section 15093). At the time that CEQA findings are adopted, Valley Water would also adopt a mitigation monitoring and reporting program for adopted mitigation measures. Descriptions of these documents are as follows:

- Findings/Statement of Overriding Considerations. For each significant impact of the Project identified in the EIR, Valley Water must find, based on substantial evidence, that either: (1) the Project has been changed to avoid or substantially reduce the magnitude of the impact, (2) changes to the Project are within another agency's jurisdiction and such changes have or should be adopted, or (3) specific economic, social, or other considerations make the mitigation measures or Project alternatives infeasible (CEQA Guidelines Section 15091). A Statement of Overriding Considerations must be adopted for significant unavoidable impacts that sets forth the specific social, economic, or other reasons supporting the agency's decision (CEQA Guidelines Section 150923).
- Mitigation Monitoring Reporting Program. CEQA requires the lead agency to adopt a Mitigation Monitoring and Reporting Program for mitigation measures that are adopted to avoid or substantially lessen significant effects on the environment.

After these actions, Valley Water would consider whether to approve the project or an alternative. If the Board decides to certify the EIR and approve the project or an alternative, Valley Water would then file a Notice of Determination. (CEQA Guidelines Section 15097[a]).

1.5 Organization of the Final Environmental Impact Report

The following text describes how this document was organized.

- **Chapter 1, Introduction.** This chapter presents the Final EIR context and its objectives, summarizes the public review period for the Draft EIR, and describes the organization and contents of the Final EIR.
- **Chapter 2, Comment Letters and Responses to Comments.** This chapter lists and gives identifiers to agencies and members of the public who commented on the Draft EIR during

the public review process, replicates in full the comments received, and gives responses to those comments. Comments within each letter are numbered sequentially.

- **Attachment 1, Revised Draft EIR.** Attachment 1 provides the entire Draft EIR with text changes and figure updates as a result of Valley Water-initiated changes.

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Chapter 2. Responses to Comments

2.1 Introduction

Comments provided on the Draft EIR by agencies and individuals during the public review period are documented in this chapter. Comments were submitted by letter and email. A list of all commenters is provided in Section 2.2. Valley Water received comment letters from three agencies and three individuals, containing a total of 87 comments. Copies of comment letters and other public input and responses to all comments are presented in Section 2.3.

2.2 List of Comment Letters Received

The comment letters and e-mails received on the Draft EIR were sorted by date and are collectively referred to in this chapter as "letters." The letters were assigned a number identifier on this basis. The commenters and identifiers are presented in order of the date of receiving the comments as listed in **Table 2-1** below.

Table 2-1. Commenters on the Draft EIR

Comment Letter Number	Commenter	Date of Comment
1	California Department of Transportation	August 22, 2024
2	California Department of Fish and Wildlife	August 26, 2024
3	San Fransico Bay Regional Water Quality Control Board	August 26, 2024
4	Rob Kleinschmidt	July 26, 2024
5	Libby Lucas	August 5, 2024
6	Libby Lucas	August 5, 2024
7	Libby Lucas	August 6, 2024
8	Libby Lucas	August 22, 2024
9	Libby Lucas	August 26, 2024
10	Katja Irvin	August 26, 2024
11*	Libby Lucas	August 29, 2024

* The letter was not addressed to the Valley Water e-mail address indicated in the Notice of Availability and the Draft EIR for submitting comments on the Draft EIR, and was submitted outside of the public comment period for the Draft EIR described in the Notice of Availability. Although not required to do so per CEQA Guidelines Section 15207, Valley Water has voluntarily provided responses to the comments in this this letter for informational purposes.

2.3 Comments and Reponses to Comments

This section presents a copy of each comment letter that was received on the Draft EIR during the review period, and numbering and bracketing of the individual comments in numeric order in each letter. Responses to issues raised in each letter follow immediately after the letter, sequentially.

2.3.1 Comment Letter 1 – California Department of Transportation

Letter 1

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 4
OFFICE OF REGIONAL AND COMMUNITY PLANNING
P.O. BOX 23660, MS–10D | OAKLAND, CA 94623-0660
www.dot.ca.gov

Re: Coyote Creek Flood Protection Project – Draft Environmental Impact Report (DEIR)

Dear Andrew Martin:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Coyote Creek Flood Protection Project. The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities. The following comments are based on our review of the July 2024 DEIR. 1-1

Please note this correspondence does not indicate an official position by Caltrans on this project and is for informational purposes only.

Project Understanding
The proposed project will construct approximately 18,083 linear feet of floodwalls, passive barriers, berms, and other improvements along Coyote Creek between Montague Expressway and Tully Road in San Jose. The project would also demolish structures such as fences and retaining walls within the project footprint. The project will also include regular maintenance and trash removal post construction. Some project areas are in vicinity of Caltrans' Right-of-Way (ROW). 1-2

Hydrology
Please ensure that any increase in storm water runoff to State Drainage Systems or Facilities be treated, contained on project site, and metered to preconstruction levels. Any floodplain impacts must be documented and mitigated. A detailed hydraulic report with 2-dimensional Hydrologic Engineering Center's River Analysis System (HEC-RAS) modelling should be submitted to Caltrans Hydraulics and Structural Hydraulics for review and approval during the Plans, Specifications, and Estimates (PS&E) phase. 1-3

Construction-Related Impacts
Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits (*link*). 1-4

Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the State Transportation Network (STN).

Encroachment Permit
Please be advised that any permanent work or temporary traffic control that 1-5

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Andrew Martin, Environmental Planner
August 22, 2024
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encroaches onto Caltrans' ROW requires a Caltrans-issued encroachment permit. Coordination with the Encroachment Permits office will determine the level of complexity and oversight that will be needed to issue an Encroachment Permit. Improvements or modifications to the highway system, including access points, within the study area would need to be approved by Caltrans. Additionally, while specific details will be determined during project delivery, it is anticipated that Valley Water will be responsible for maintaining any future floodwall that encroaches on Caltrans ROW.

As part of the encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW, digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement.

The Office of Encroachment Permit requires 100% complete design plans and supporting documents to review and circulate the permit application package. For constructing any permanent improvements within the Caltrans right of way, the applicant needs to submit TR-0416 to determine the appropriate review process Encroachment Permits Office Process (EPOP) and Quality Management Assessment Process (QMAP). If the QMAP is the determined as the appropriate review process, A Project Manager will be assigned to the project to assist the applicant. When all the requirements are completed and 100% plans are ready, the Project Manager will recommend the office of Encroachment Permits issue the permit without any further review. Until TR-0416 is completed and submitted by the applicant, the Office of EP will not be able to advise the applicant. To obtain more information and download the permit application, please visit Caltrans Encroachment Permits (*link*). Please note that the checklist TR-0416 is used to determine the appropriate Caltrans review process for encroachment projects. Your application package may be emailed to D4Permits@dot.ca.gov.

1-5 cont'd.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Marley Mathews, Associate Transportation Planner, via LDR-D4@dot.ca.gov.

For future early coordination opportunities or project referrals, please visit Caltrans LDR website (*link*) or contact LDR-D4@dot.ca.gov.

1-6

Sincerely,

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Andrew Martin, Environmental Planner
August 22, 2024
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YUNSHENG LUO
Branch Chief, Local Development Review
Office of Regional and Community Planning

c: State Clearinghouse

Response to Comment 1-1

Comment noted; no further response required.

Response to Comment 1-2

See text changes to Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for minor changes to the proposed flood risk reduction improvements (improvements) and associated areas of construction that were made subsequent to publication of the Draft EIR.

Response to Comment 1-3

The project would not result in stormwater runoff directed to State Drainage Systems or Facilities. The project would result in a minor increase in impervious surfaces from the proposed improvements, primarily from construction of passive barriers. See text added to page 2-13 in Attachment 1 of the Final EIR, to reflect that the passive barriers would include internal drainage systems to collect water within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system, except for those located in Reach 4. The four passive barriers in Reach 4 would drain via small pipes connected to rock outfalls on the upper creek bank. Stormwater runoff from the passive barriers’ surfaces would be by sheetflow onto surrounding areas, consisting of vegetation and pervious areas within parks, with some stormwater draining into the internal drainage systems in the passive barrier foundations that discharge into the City’s stormwater system. There are only a couple of passive barriers in streets and existing paved impervious areas where sheetflow would runoff in the same manner under current conditions and into the City’s stormwater collection system. See Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for a description of improvements that are part of the project, including improvements to the City of San Jose’s stormwater outfall system at specific locations along reaches of Coyote Creek within the project area. In addition, see pages 3.9-28 through 3.9-33 and 3.9-34 through 3.9-59 in Section 3.9, “Hydrology and Water Quality,” in Attachment 1 of the Final EIR, for an analysis of post-project hydrological conditions, including impacts on stormwater, and modeling of pre- and post-project flows within Coyote Creek for the 100-year flood event. Further, see Appendix H of the Draft EIR for technical memoranda and a hydrologic and hydraulic modeling report that documents the hydrologic and hydraulic modeling, including 2-dimensional Hydrologic Engineering Center’s River Analysis System modeling, conducted for the Draft EIR to analyze the project’s changes in flood flows.

Response to Comment 1-4

Valley Water’s contractor(s) would be required to apply for a Caltrans Transportation Permit for oversize or excessive load vehicles prior to travel on the State roadway system. Further, Valley Water would coordinate with Caltrans prior to construction with regards to construction scheduling for hauling of materials and equipment to and from the project area. See Section 3.13, “Transportation and Traffic,” in Attachment 1 of the Final EIR, for an analysis of project impacts on transportation and traffic as a result of construction activities. As described on page 3.13-37 in Section 3.13, “Transportation and Traffic,” in Attachment 1 of the Final EIR, truck trips would be spread among different improvement sites that are geographically separated, resulting in the use of different local roadways and access points throughout the construction period. Because construction would be limited to three improvements sites at any given time during the 2-year construction period, the relative increase in traffic volume from construction of each improvement site would not substantially increase traffic, including on the State Transportation Network.

Response to Comment 1-5

Information regarding the locations of project improvements and associated construction areas, including staging, laydown, and access areas was described in the Draft EIR and updated based on minor project changes in Chapter 2, “Project Description,” in Attachment 1 of the Final EIR. Some of the project construction activities and improvements would be conducted within a Caltrans’ Right-of-Way. For those areas where construction and improvements would occur within the Caltrans’ right-of-way, Valley Water will obtain an encroachment permit per the requirements described in the comment.

Response to Comment 1-6

Comment noted; no further response required.

2.3.2 Comment Letter 2 – California Department of Fish and Wildlife

Letter 2

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 26, 2024

Andrew Martin, Environmental Planner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
CCFPPcomments@valleywater.org

Subject: Coyote Creek Flood Protection Project, Draft Environmental Impact Report, SCH No. 2023110513, Santa Clara County

Dear Andrew Martin:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a Draft Environmental Impact Report (EIR) from Santa Clara Valley Water District (Valley Water) for the Coyote Creek Flood Protection Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1] CDFW previously submitted comments in response to the Notice of Preparation of the draft EIR.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. 2-1

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Valley Water 2-2

Objective: The objective of the Project is to provide flood protection along several reaches of Coyote Creek, totaling nine miles. Primary Project activities include the construction of floodwalls, passive barriers, headwalls and wingwalls, berms, and flap gates. The Project intends to construct the flood infrastructure to allow for a 20-year rain

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Conserving California's Wildlife Since 1870 event and increased flows from the dewatering of Anderson Dam under the future Anderson Dam Seismic Retrofit Project. 2-2 cont'd

Location: The Project runs along several reaches of Coyote Creek, starting at Re located at the intersection of the creek and Montague Expressway, 37°23'45" N, 121°54'54" W and continuing upstream to Reach 8 at the intersection of Tully Road, 37°18'37" N, 121°50'38" W, Santa Clara County, California.

Timeframe: The Project is expected to start in early 2025 and last for two years with up to three flood-control construction activities happening at once. 2-3

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Valley Water in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document. Based on the Project's avoidance of significant impacts on biological resources, CDFW concludes that an EIR is appropriate for the Project.

I. Project Description and Related Impact Shortcoming

Would the Project have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or U.S. Fish and Wildlife Service (USFWS)?

COMMENT 1: Impacts to Vegetation (Section 3.4.4, Environmental Impacts and Mitigation Measures)

Issue #1: The Biological Resources Section on page 3.4-60 details 26 riparian trees to be removed and another 8 trees to be trimmed that may cause mortality of trees located at the temporary creek crossing. However, the draft EIR does not describe the number of trees, species, or other vegetation to be removed across the entire project footprint. The draft EIR also does not address how much, if any, vegetation will be replanted at any locations where tree removal is proposed and how long it would take for the impacts to reach pre-project conditions. 2-4

Several areas of floodwalls are being installed within the riparian corridor. The draft EIR does not assess how many trees are above the floodwalls, and if their roots will be impacted by the installation of floodwalls. Additional mortality or loss of vitality may occur due to the floodwalls cutting off root access to water from Coyote Creek. In addition, dead trees may increase fuel load for wildfires which have the potential to cause a further loss of habitat and increased stream erosion and sediment (Pettit & Neiman 2007). 2-5

Riparian trees and vegetation, and associated floodplains provide many essential benefits to stream and river fish habitat (Moyle 2002, CDFG 2007). Riparian forests provide thermal protection, shade, and large woody debris. Large woody debris stabilizes substrate, provides shelter and cover from predators, facilitates pool establishment and maintenance, maintains spawning bed integrity, and creates habitat for aquatic invertebrate prey. Riparian areas also provide critical fish habitat in the form of off-channel and back-water winter-rearing sites and floodwater refugia (CDFG 2007). 2-6

Furthermore, impacts to oak woodlands will occur under the Project. The importance of oak woodlands is further supported through the Oak Woodlands Conservation Act (Fish & G. Code §1360–1372). A temporal loss also exists for regaining the specific habitat that oak trees provide such as trunk and branch cavities, downed woody debris, and snags. 2-7

Recommendation: CDFW recommends impacts to vegetation be addressed, including the total number of trees and shrubs being removed, the area of vegetation being removed, the species being removed, and the area of replanting and species to be replanted that is intended on-site. CDFW recommends that a figure be included showing the location of vegetation removal and locations of replanting. Any specific impacts related to vegetation loss that are being addressed under the Santa Clara Valley Habitat Plan (SCVHP) should also be stated. oaks are very slow growing trees, therefore, if any replanting of oaks occurs, they should be monitored for 10 years. 2-8

To evaluate and avoid potential Project impacts to floodwalls on tree mortality, CDFW recommends incorporating the following mitigation measures, and that these measures be made conditions of approval for the Project:

Mitigation Measure #1: Tree Assessment

CDFW recommends an assessment for tree mortality occur to determine if floodwalls are causing negative impacts on trees above the floodwalls. Potential survey methods may include surveying trees for health and vigor at the impact sites, and upstream and downstream as a control. If additional mortality or stress seen due to drought-like impacts occur at the near and around floodwalls and does not occur along other areas of the riparian corridor, additional mitigation may be required since impacts would likely be due to the installation of floodwalls. 2-9

Mitigation Measure #2: Vegetation Replanting

Temporarily impacted areas within the riparian zone or other sensitive natural community should be restored and planted with native trees, shrubs, and grasses. A mitigation and monitoring plan should be developed and include success criteria to be met at the end of the monitoring period. If success criteria to be met, the mitigation plan should include adaptive management actions along with additional years of monitoring as well as additional mitigation for the temporal loss. 2-10

Mitigation Measure #3: Santa Clara Valley Habitat Plan Payment

The draft EIR should explain the mitigation being provided through the SCVHP including the payment of fees and any off-site restoration. Any applicable monitoring should be included. 2-11

II. Environmental Setting and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

COMMENT 2: Wildlife Impacts (Section 3.4.4, Environmental Impacts and Mitigation Measures)

Issue: Section 3.11 Table 3.11.14 describes a maximum noise level at the receptors to be up to 112 decibels (dB), with a maximum change in noise level being over 61 dB during construction activities. Noise exceeding 45 dB for birds, 52 dB for mammals, and 60 dB for amphibians may be enough to cause physiological stress, behavioral changes, and reduced fitness (Francis & Barber 2013, Shannon et al. 2015), with similar impacts occurring when noise exceeds 3 dBA above ambient noise levels (Barber et. al 2009). The draft EIR did not evaluate specific impacts of noise on wildlife species including, but not limited to, nesting birds, roosting bats, and burrowing mammals. 2-12

To evaluate and avoid potential Project noise impacts CDFW recommends incorporating the following mitigation measures, and that these measures be made conditions of approval for the Project: 2-12 cont'd.

Mitigation Measure #4: Noise assessment

CDFW recommends increasing buffers between known wildlife occurrences and occupancy areas to decrease impacts on noise on wildlife, including special-status species when applicable, and based on species-specific impacts and needs. Qualified biologists/biological monitors should survey for any flushing of birds, abandonment or collapse of burrows, or behavioral changes of wildlife when Project activities exceed noise levels of 70 dB, or 3 dB above the recorded ambient noise. 2-13

Issue: Biological Resources section 3.4.4 and Cumulative Impacts section 4.4.2 state that no impacts will occur to habitat for northwestern pond turtle (*Actinemys marmorata*), and higher quality habitat may be provided in some areas. The Project does not address how higher quality habitat is being provided and where that habitat is being provided. 2-14

Recommendation: CDFW recommends impacts to pond turtle and pond turtle habitat are clarified. Habitat approvements should be addressed if they are being applied. Habitat improvements may include putting in basking sites and enhancing in-water and upland refugia (Hays et al. 1999). 2-15

Issue: The floodwalls and passive barriers have the potential to cause species impacts that may have not been fully addressed under the draft EIR. Because passive barriers are built into the ground, they have the potential to trap fish or other aquatic species when flood waters recede after barrier deployment. Additionally, there may be a potential for burrowing animals or birds to use the passive barriers as habitat or nesting sites when not deployed. During flood events, the habitat and nests have the potential to flood and cause mortality. 2-16

Page 3.4-63 of the draft EIR says that additional flow and scour from the installation of floodwalls and passive barriers are not causing a significant impact to species. However, CDFW still has concerns on species impacts including the additional loss of habitat due to increased velocities such as loss of large woody debris, pool habitat, back water habitat. Additional velocities could also scour eggs from fish and amphibians during high flow periods. 2-17

Recommendation: CDFW recommends that the full scope of impacts from the installation of floodwalls and passive barriers be included. CDFW also recommends the draft EIR address potential impacts that may occur to wildlife during flood events and deployment of the passive barriers. This may include hydrology and hydraulics analysis of pre- and post-construction flows and potential sediment scour to understand impact more fully. To evaluate and avoid potential impacts, CDFW recommends incorporating the following mitigation measures, and that these measures be made conditions of approval for the Project: 2-18

Mitigation Measure #5: Submittal of Designs and Consultation with Conservation Engineering Branch

Early and continued coordination with CDFW staff in the Habitat Conservation Program and Conservation Engineering Branch is recommended to provide review and analysis of any proposed structures or Project elements with the potential to impact fish and wildlife resources. CDFW should be provided with engineered drawings and design specification planning sheets during the initial design process and prior to design selection. Reinitiation of design consultation should be at 30 percent design at minimum and through the permitting process for review and comment. 2-19

Mitigation Measure #6: Submittal of a Mitigation and Monitoring Plan 2-20

Andrew Martin
Valley Water
August 26, 2024
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CDFW recommends developing a mitigation and monitoring plan for the proposed flood control infrastructure to assess post-construction impacts to mortality and movement of aquatic and terrestrial special-status species, as affected by flood walls and passive barriers during operations across a range of flows. The plan should include at a minimum, that the barriers should be regularly inspected for trapped wildlife, and that immediately following a storm event and flood barrier deployment, flood barriers shall be monitored for trapped fish or aquatic species. **2-20 cont'd.**

Issue: Page 3.4-68 of the draft EIR says that habitat loss will not be a significant impact to nesting birds because the total acreage of habitat loss would be insignificant compared to the rest of the habitat available. However, CDFW cannot fully determine if the impact is significant since details regarding the habitat loss, including species of vegetation, size of vegetation, and location of removal, is not stated. In addition to nesting birds, roosting bats, other wildlife species including such as the San Francisco dusky footed woodrat (*Neotoma fuscipes annectens*), and monarch butterfly (*Danaus Plexippus*), also may rely on vegetated habitat for nesting, foraging, roosting, and use as refugia. **2-21**

Recommendation: The draft EIR should include a full assessment of vegetation impacts following Mitigation Measures 1, 2, and 6. A more detailed assessment of the significance of habitat loss should then be included for any species that may use the removed vegetation for nesting, foraging, roosting, and use of refugia. **2-22**

III. Closely Related Past, Present, and Reasonably Foreseeable Probable Future Projects

Does the Project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that incremental effects of the Project are considerable when viewed in connection with effects of past projects, effects of other current projects, and effects of probable future projects?

COMMENT 3: Cumulative Impacts to Wildlife Habitat (Section 4.4.2 Cumulative Impacts)

Issue: The draft EIR describes that the cumulative impacts to nesting and roosting habitat is comparatively small, however, the total area loss for vegetation is not stated. Therefore, it is difficult to determine if there are significant cumulative impacts to species habitat. Additionally, the cumulative impacts do not address the amount of habitat loss across all projects, particularly between the Coyote Creek Flood Protection Project and the Coyote Creek Flood Management Measures since those projects are adjacent to one another. Additional cumulative impacts not assessed include temporary lighting between the two projects and if there would be continuous disturbance to nocturnal wildlife, impacts of construction noise across the two projects, loss of habitat across the two projects, and overall hydrological changes and consequent species impacts to Coyote Creek between the two projects. To evaluate and avoid potential impacts from cumulative impacts, CDFW recommends incorporating the following mitigation measures, and that these measures be made conditions of approval for the Project: **2-23**

Mitigation Measure #7: Addition of Reasonably Foreseeable Probably Future Projects

The draft EIR should address biological impacts across past, present, and future projects in the Coyote Creek watershed in more detail. The draft EIR should disclose cumulative impacts, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, § 15355). Although a project's impacts may be less-than-significant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact, e.g., reduction of habitat for a special-status species should be considered cumulatively considerable. The draft EIR should evaluate proposed mitigation measures **2-24** and CDFW recommendations in light of these additional projects that will exacerbate considerable cumulative impacts from the Project. This should include impacts of noise on biological resources, continuous temporary light, construction, loss of riparian habitat, changes in hydrology, and operations on biological resources. **2-24 cont'd.**

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. **2-25**

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (See Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.). **2-26**

CONCLUSION

CDFW appreciates the opportunity to comment on the draft EIR to assist Valley Water in identifying and mitigating Project impacts on biological resources. **2-27**

Questions regarding this letter or further coordination should be directed to Alex Anstett, Environmental Scientist, at (707) 815-6427 or Alexandra.Anstett@wildlife.ca.gov.

Sincerely,

Signed by:
Greg Martinelli for
7E1D27B5645E452...
Erin Chappell
Regional Manager
Bay Delta Region

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2023110513)

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Response to Comment 2-1

Comment noted; no further response required.

Response to Comment 2-2

See text changes to Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for minor changes to the proposed improvements and associated areas of construction that were made subsequent to publication of the Draft EIR.

Response to Comment 2-3

Comment noted; no further response required.

Response to Comment 2-4

See text changes to Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for minor changes to the proposed improvements and associated areas of construction that were made subsequent to publication of the Draft EIR. Information on vegetation removal provided in the Draft EIR has been updated and augmented as reflected in the text changes on pages 3.4-3, 3.4-83 through 3.4-88, and 3.4-91 through 3.4-93 in Attachment 1 of the Final EIR, to reflect land cover impacts based on the minor changes in the project design, and to summarize the number and characteristics (including species and diameter at breast height) of riparian trees that are anticipated to require removal. The revisions in Attachment 1 of the Final EIR include changes to Table 3.4.1, updated Figures 3.4.1 through 3.4.10, a new Table 3.4.4, and text changes to Impacts BIO-10, BIO-11, and BIO-13 discussions. The locations of vegetation removal correspond to the footprints of the flood risk reduction improvements shown in the figures.

Table 3.4.1 in in Attachment 1 of the Final EIR provides land cover acreages that would be affected by the project, Impact BIO-10 provides the estimates of riparian trees that would be removed, and Impact BIO-13 provides estimates of numbers of ordinance-size trees that would be removed from private property, City street right-of-way, and City Parks. Table 3.4.1 (page 3.4-3), Impact BIO-10 (pages 3.4-83 through 3.4-87), and Impact BIO-13 (pages 3.4-92 through 3.4-94) have been updated based on minor project changes in Attachment 1 of the Final EIR. Land cover acreages affected by the project provides the basis for evaluating significance of impacts on woodland, forest, and other land cover types across the entire project footprint. Quantifying acreage of habitat impacts is a standard and accepted methodology upon which to base impact evaluation. Specific information on the number and species of trees and other vegetation is not required to adequately evaluate impacts compared to the CEQA significance thresholds. However, in response to this and other comments, new Table 3.4.4 has been added on page 3.4-85 in Attachment 1 of the Final EIR, to provide information on the number and species of trees that would be removed from mixed riparian woodland and forest.

No tree planting would occur at exact locations from which trees are removed because tree removal would be limited to where it is necessary to permanently accommodate the improvements and adjacent long-term maintenance access areas. No tree removal would be necessary in staging areas or other portions of the project area that would be temporarily impacted. As indicated on page 3.4-91 of Impact BIO-13 in Attachment 1 of the Final EIR, Valley Water would seek City approval for removing trees from City streets and City Parks and develop mutually acceptable compensatory measures if required. Replacement tree planting may occur in City parks and/or along City streets from which trees would be removed. In addition, a native seed mix would be applied to areas temporarily disturbed during construction as described on page 2-76 in Chapter 2, “Project Description,” of the Draft EIR.

Response to Comment 2-5

Root damage was considered as part of the total tree impacts in both the riparian (Impact BIO-10 on pages 3.4-83 through 3.4-87) and local tree ordinance (Impact BIO-13 on pages 3.4-91 through 3.4-93) impact assessments in Section 3.4, “Biological Resources,” in Attachment 1 of the Final EIR. Trees that may have more than 25 percent of their root system impacted were assumed to need removal and included in the estimate of acres of permanent impacts to mixed riparian woodland and forest land cover and estimates of numbers of trees protected by local policies and ordinaces that would be removed presented in the Draft EIR. As indicated in the new Table 3.4.4 in Attachment 1 of the Final EIR, 69 trees and 0.67 acre of tree canopy are estimated to be removed from mixed riparian woodland and forest areas. Other trees adjacent to the proposed improvements may experience minor damage – less than 25 percent of the primary or secondary root system – as a result of construction but damage is not anticipated to be significant enough to warrant removal or lead to tree death or decline. Most improvements are proposed for installation along or beyond the top of bank, in upland habitat and/or at the outer extent of the riparian corridor. As a result, most riparian trees are rooted below the floodwalls or would be removed given the proximity to the floodwall construction footprints. Trees landside of the proposed improvements are mostly upland trees, including native oaks or ornamental species such as eucalyptus. These trees are not reliant on water availability from Coyote Creek and are an average of more than 15 feet above the ordinary high-water mark of the creek. The creek in the project area is highly channelized with steep, sloping banks. Most tree roots expand laterally out from the tree, extending to depths no greater than 3 feet, meaning trees above the floodwalls are unlikely to be reliant on creek hydrology and should not be affected by construction and installation of improvements cutting off root access to water in Coyote Creek. Instead, these upland trees are reliant on overland runoff and availability of this water source would largely remain unchanged. Furthermore, concrete is porous and in areas where concrete floodwalls would be installed, some water exchange could still occur. As described above in this response, trees whose roots would be damaged to an extent that would result in death or substantial decline in health would be removed during construction. Roots of trees above the floodwalls are unlikely to be cut off from access to water from Coyote Creek. As a result, no increase in fuel loads resulting from dead trees left in place would occur.

Response to Comment 2-6

This comment provides background information on riparian trees and vegetation. No further response is required.

Response to Comment 2-7

The acreage of Coast Live Oak Woodland and Forest land cover types within the footprint of the improvements and associated construction areas was provided in the Draft EIR and has been updated based on minor project changes in Table 3.4.1 in Attachment 1 of the Final EIR. Impacts on oak woodlands are discussed in Impact BIO-13 in the Draft EIR. As discussed in Impact BIO-13, Valley Habitat Plan (VHP) land cover impact fees will be paid for permanent and temporary project impacts to Coast Live Oak Woodland and Forest land cover types.

Response to Comment 2-8

See Response to Comment 2-4 regarding information on vegetation impacts provided in the Draft EIR. The area of vegetation within the footprint of project improvements and associated construction areas was calculated and shown on figures in the Draft EIR and has been updated based on minor project changes in Table 3.4.1 and Figures 3.4.1 through 3.4.10 on pages 3.4-5 through 3.4-23 in Attachment 1 of the Final EIR. Impacts were quantified based on acreage, not individual trees and shrubs, because this is a standard and accepted methodology upon which to adequately evaluate impacts related to the significance thresholds. However, in response to California Department of Fish and Wildlife (CDFW) comments, Table 3.4.4 has been added in Attachment 1 of the Final EIR, to provide information on the number and species of trees that would be removed from mixed riparian woodland and forest.

As indicated on pages 2-83 to 2-84 and 3.4-51 in Chapter 2, "Project Description," and Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR, respectively, the project is a covered activity identified in the VHP and Valley Water is required to pay applicable VHP impact fees. Therefore, acreages of all vegetated cover types removed within the footprint of the proposed improvements was provided in the Draft EIR and has been updated based on minor project changes in Table 3.4.1 in Section 3.4., "Biological Resources," in Attachment 1 of the Final EIR, would be addressed under the VHP; this includes all land cover types except Urban/Suburban. As indicated on page 3.4-91 of Impact BIO-13 in Attachment 1 of the Final EIR, Valley Water would seek City approval for removing trees from City streets and City Parks and develop mutually acceptable compensatory measures if required. Replacement tree planting may occur in City parks and/or along City streets from which trees would be removed, but the locations of planting areas are not known at this time.

Response to Comment 2-9

See Response to Comment 2-5 regarding evaluation of potential tree mortalilty resulting from root damage or floodwalls cutting off root access to water from Coyote Creek. Because this evaluation considers trees with canopy and/or root damage that could result in declines in health, and not just removal of trees within the project footprint, as permanent impacts, floodwall construction would be unlikely to cause mortality of trees left in place and therefore, a tree study or tree monitoring is not required to reduce a significant impact associated with this issue to a less-than-significant level.

Response to Comment 2-10

No tree or shrub removal would occur in temporary impact areas such as staging areas. Therefore, no temporarily impacted areas within the riparian zone or other sensitive natural community would require restoration. As indicated on page 2-80 Chapter 2, "Project Description," in Attachment 1 of the Final EIR and in accordance with Valley Water Best Management Practice (BMP) WQ-9, all areas temporarily disturbed by construction activities would be seeded with an appropriate native seed mix for erosion protection and to minimize the colonization of non-native invasive vegetation. Therefore, a new vegetation replanting mitigation measure for termporary impact areas is unnecessary. Because no on-site restoration of riparian or other sensitive natural community would occur, success monitoring is unnecessary.

Response to Comment 2-11

See Response to Comment 2-8 regarding use of the VHP for land cover impacts. Background information on the VHP, including VHP mitigation, is presented on pages 3.4-51 to 3.4-65 in Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR. The project is a covered activity identified in the VHP, and Valley Water would pay VHP impact fees that would support implementation of the VHP Conservation Program, including associated monitoring of any VHP off-site restoration. Therefore, project-specific monitoring of off-site conservation activities is not required.

Response to Comment 2-12

Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR , indicates in the analysis methodology on pages 3.4-66 and 3.4-67 and in Impacts BIO-6 (Burrowing Owl), BIO-7 (Other Protected Birds), BIO-8 (Special-status Bats), and BIO-9 (San Francisco Dusky-footed Woodrat), that project construction could result in noise-related disturbance. Such disturbance could occur at the levels cited in the comment and supporting literature. Implementing applicable Valley Water BMPs would require surveys for active bird nests before project construction begins and implementation of buffers around active nests to minimize project-related disturbance, including from project noise. Implementing Mitigation Measure BIO 8.1 would minimize project-related disturbance on bats by requiring no-disturbance buffers around active bat roosts being used for maternity or winter torpor purposes. In addition, implementing Mitigation Measures NOI-1 and NOI-2 would reduce project-related noise and vibration that could adversely impact wildlife. With implementation of Valley Water BMPs, VHP Avoidance and Minimization Measures (AMMs), and mitigation measures, project-related noise would not have a substantial adverse impact on special-status species or common nesting birds.

Response to Comment 2-13

Noise-related impacts on nesting birds, including special-status species, if present, would be minimized by implementing Valley Water BMP BIO-5, which requires pre-construction surveys for nesting birds and protection from project-related nest abandonment. With implementation of all applicable BMPs and VHP Conditions/AMMs listed in Section 3.4, "Biological Resources", in Attachment 1 of the Final EIR, and Mitigation Measure BIO 8.1 (which minimizes impacts on special-status bats) on pages 3.4-80 to 3.4-82 in Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR, temporary increases in noise levels caused by the project would not have a substantial adverse effect on special-status wildlife. Therefore, these impacts would be less than significant, as concluded in the species impact discussions in Section 3.4, "Biological Resources," of the Draft EIR, and mitigation, including that requested by the comment, is not required. See Response to Comment 2-21 for additional discussion of impacts of vegetation loss on wildlife, including special-status species.

Response to Comment 2-14

Impact BIO-5 on pages 3.4-75 through 3.4-76 in Attachment 1 of the Final EIR, acknowledges that the project would impact habitat for northwestern pond turtle. Because most impact areas would continue to provide habitat similar to, or of higher quality than, current conditions after project construction is complete, the impact discussion concludes there would be no permanent loss of aquatic habitat or potential nesting habitat and the project would not result in long-term loss of a substantial amount of other upland habitat. Potential habitat improvements could result from project-related vegetation removal if it improves micro-habitat conditions for northwestern pond turtle by increasing sun exposure and access to upland habitat.

Response to Comment 2-15

See Response to Comment 2-14 for information on impacts to northwestern pond turtle. The project does not include specific components designed to improve habitat conditions for northwestern pond turtle.

Response to Comment 2-16

Under existing conditions, during flood events with water surface elevations high enough to warrant deployment of passive barriers, fish and other aquatic species are subject to stranding in areas from which they would be excluded by the proposed passive barriers and other improvements. Without the proposed passive barriers and other improvements, such organisms would be exposed to a much larger area of stranding hazards, potentially over an extended period. Therefore, the potential for fish and other aquatic organisms to be trapped in the barriers when floodwaters recede would be less than the potential for stranding in upland areas disconnected from the creek following flooding under current conditions. Further, as described in Response to Comment 1-3, drainage from the footings of passive barriers would be through storm drainage pipes below the passive barriers that would convey stormwater to the City's stormwater drainage system, as all flood and stormwater flows currently do, or directly into Coyote Creek for passive barriers in Reach 4. Gaps around the passive barrier foundations would be very small and would not allow access by nesting birds and burrowing animals. In addition, deployment of passive barriers would protect burrows and nesting habitat from being inundated in areas subject to flooding under existing conditions.

Response to Comment 2-17

Pages 3.9-28 through 3.9-31 in Attachment 1 of the Final EIR provides information on the hydraulic and hydrologic modeling performed and the methodology used to analyze impacts of the project on scour and erosion within the Coyote Creek channel. As stated on pages 3.9-50 to 3.9-51 and depicted in Figures 3.9.16 through 3.9.23 in Impact HWQ-6 in Attachment 1 of the Final EIR, the project would result in many areas within the Coyote Creek channel with significant reductions in velocities, many areas with an increase in velocity between 0 and 1 feet per second (fps), and only a few isolated areas where there would be velocities above the threshold of causing scour or erosion in the channel, and the impact was found to be less than significant. The modeling data shows that post-project average maximum channel velocities are within the 7.5 feet per second (fps) permissible velocity and were consistent between the operational baseline conditions and post-project conditions. An increase in maximum velocity of 0 to 10 percent above the 7.5 fps permissible velocity is considered to have only a minor risk of increased erosion and scour. Scour is not distributed uniformly throughout a stream channel, and would not be distributed uniformly throughout the project area. The Draft EIR concluded that impacts related to erosion and sedimentation from alteration of stream flows would be less than significant. Special-status amphibian species identified as having potential to occur within the project area includes and is limited to California red-legged frog. Potential for California red-legged frog to occur within the project area is low and breeding is not expected, as the project area provides only low quality habitat for California red-legged frog due to the urban setting and likely presence of non-native predatory fish and bullfrogs. Further, there are no documented occurrences of California red-legged frog within Coyote Creek downstream of Anderson Dam. Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change aquatic habitat conditions, these changes would occur very infrequently and only under conditions when habitat would already be subjected to changed circumstances resulting from flood conditions. Potential evidence that any such impacts on habitat or on eggs from fish and amphibians as a result of the project from the few isolated areas where velocities would be above the threshold permissible velocity were not provided in the comment.

Response to Comment 2-18

See Responses to Comment 2-17, 2-19, and 2-20.

Response to Comment 2-19

As described in the impact analyses in Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR, with implementation of all applicable BMPs and VHP Conditions/AMMs, and Mitigation Measure BIO 8.1 (which minimizes impacts on special-status bats) on pages 3.4-80 to 3.4-82, the project would result in less-than-significant impacts on biological resources, including special-status wildlife. Therefore, the suggested mitigation requested by the comment, is not required. Further, as described on pages 3.4-89 and 3.4-91 in Section 3.4, "Biological Resources" in Attachment 1 of the Final EIR, the project would not result in a significant impact on movement of aquatic or terrestrial special-status species during and after construction activities. See Response to Comment 2-16 regarding passive barriers not entrapping wildlife. See Response to Comment 2-17 regarding velocities not affecting fish or amphibians. Initiation of consultation with CDFW will occur in the early stages of the permitting process and include information from the 90-percent design of the project. Incorporation of the information suggested in the comment as a mitigation measure is not necessary as Valley Water is required to comply with requirements of the California Endangered Species Act, Fish and Game Code, and other State and Federal regulations for the protection of biological resources in the Coyote Creek channel, and because the proposed mitigation measure is not needed to reduce any impacts on biological resources to a less-than-significant level.

Response to Comment 2-20

See Response to Comment 2-16 for discussion of how the passive flood barriers would not entrap wildlife and would reduce the risk of fish or other aquatic organisms becoming stranded compared to baseline conditions. This mitigation measure is not needed to reduce any impacts on biological resources to a less-than-significant level.

Response to Comment 2-21

See Response to Comment 2-4 regarding information on vegetation impacts provided in the Draft EIR. The locations of habitat loss corresponds to the footprints of the improvements and associated maintenance access areas, which was shown in the Draft EIR and has been updated based on minor project changes in Figures 3.4.1 through 3.4.10 in Attachment 1 of the Final EIR. Calculations of habitat loss from the project in the Draft EIR have also been updated based on minor project changes in Table 3.4.1 in Attachment 1 of the Final EIR, and includes 0.77 acre of Golf Courses/Urban Parks, 0.32 acre of Ornamental Woodland, 0.06 acre of Mixed Riparian Woodland and Forest, and 0.10 acre of Coast Live Oak Woodland and Forest spread over the approximately 4-mile-long, non-contiguous project area. Each of these land cover types is described, including typical dominant species composition, on pages 3.4-24 and 3.4-25 in Attachment 1 of the Final EIR. In addition, information on species and size of trees that would be removed from mixed riparian woodland and forest is provided in new Table 3.4.4 in Attachment 1 of the Final EIR. As indicated in the updated Table 3.4.4 in Attachment 1 of the Final EIR, the Biological Study Area (BSA) includes more than 45 acres of woodland and forest habitats and more than 78 acres of Golf Course/Urban Parks. The loss of less than 0.5 acre and less than 1 acre of these habitats, respectively, represents a very small proportion of the habitat available in the BSA. This supports the conclusion on page 3.4-79 in Attachment 1 of the Final EIR that the relatively limited extent of permanent habitat loss, compared to habitat available in the BSA, would not adversely affect nesting activities of a substantial number of individuals.

This extent of habitat loss also would not have a substantial adverse effect on monarch butterfly (Impact BIO-2), San Francisco dusky footed woodrat (Impact BIO-9), or special-status bats (Impact BIO-8, as mitigated), and would not substantially reduce the habitat of common wildlife species (Impact BIO-10). Therefore, these impacts would be less than significant, as concluded in the Draft EIR.

Response to Comment 2-22

See Response to Comments 2-4, 2-11, and 2-21. With BMPs, VHP Conditions/AMMs, and payment of VHP fees, impacts on vegetation and associated wildlife would be less than significant, and further assessment of vegetation impacts is not required.

Response to Comment 2-23

See Response to Comment 2-21. The amount of each land cover type, including those that support nesting and roosting habitat, that occurs in the footprint of the project features is indicated in the Draft EIR. As demonstrated on pages 4-21 through 4-27 in Chapter 4, “Other Statutory Requirements,” in Attachment 1 of the Final EIR, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on special-status species (with implementation of Mitigation Measure BIO-8.1) or sensitive habitats. This is based on the small amount of habitat loss; localized and temporary nature of construction-related impacts such as noise and lighting; implementation of BMPs, VHP Conditions/AMMs, and mitigation measures that would avoid and minimize habitat and species impacts; and payment of VHP fees that would support implementation of the VHP Conservation Program and compensate for project impacts. As indicated on page 4-7 in Attachment 1 of the Final EIR, impacts from the Coyote Creek Flood Management Measures Project (CCFMMP), as a component of the Anderson Dam Federal Energy Regulatory Commission Order Compliance Project, were considered in the cumulative impact analysis. The potential for any cumulative construction impacts, e.g., noise and lighting, from the CCFMMP when added to project impacts is minimal because construction of the CCFMMP would be complete before construction of the project.

Response to Comment 2-24

See Response to Comment 2-23. Cumulative impacts on biological resources were analyzed on pages 4-21 through 4-29 in Chapter 4, “Other Statutory Requirements,” in Attachment 1 of the Final EIR, in accordance with CEQA requirements. This analysis considered the project’s contribution to cumulative impacts based on the project impacts; implementation of BMPs, VHP

Conditions/AMMs, and mitigation measures; and payment of VHP fees. If a project in the cumulative list of projects provided in Table 4.22 Chapter 4, “Other Statutory Requirements,” in Attachment 1 of the Final EIR, results in loss of habitat for special-status species, that loss does not automatically cause a significant cumulative impact. Permanent habitat loss that would result from project implementation is relatively small. In addition, this habitat loss would be compensated by payment of VHP fees that support implementation of the VHP Conservation Program and associated habitat restoration, acquisition, preservation, and management. Therefore, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on biological resources, and no additional mitigation for cumulative impacts is required.

Response to Comment 2-25

No special-status species were observed during surveys conducted in support of the Draft EIR. . As indicated on page 3.4-27 in Attachment 1 of the Final EIR, communities in the BSA were not mapped to the association level matching characterizations in the CDFW Sensitive Natural Communities list; habitat mapping was based on existing VHP land cover mapping. Therefore, no reporting of special-status species or sensitive natural communities to the California Natural Diversity Database is relevant.

Response to Comment 2-26

Valley Water will pay CEQA fees when the Notice of Determination is filed.

Response to Comment 2-27

Comment noted; no further response required.

2.3.3 Comment Letter 3 – San Francisco Bay Regional Water Quality Control Board

Letter 3

California Water Boards

Gavin Newsom
Governor

Yana Garcia
Secretary for Environmental Protection

San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy will follow

August 26, 2024

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
Attn: Mr. Andrew Martin
Email: CCFPPComments@valleywater.org

Subject: Comments on Draft Environmental Impact Report for Coyote Creek Flood Protection Project, Santa Clara County (State Clearinghouse (SCH) No. 2023110513)

Dear Mr. Martin:

Thank you for the opportunity to comment on the draft environmental impact report (EIR) for the Coyote Creek Flood Protection Project (Project) that Valley Water is preparing pursuant to the California Environmental Quality Act (CEQA) (SCH No. 2023110513). The Project would construct a series of flood risk reduction improvements to reduce the risk of flooding in urban areas along nine miles of Coyote Creek in the City of San José (City). We offer the following comments on the draft EIR to support development of the project's design, evaluation of its potential environmental impacts, and the Water Board's future review of applications to authorize project construction. 3-1

Impacts and Mitigation – Additional Information Needed

We support Valley Water's approach to constructing the Project's flood control measures primarily in uplands and along the Creek's top-of-banks, with traditional and passive floodwalls, berms, and levees. Flood protection would be achieved without having to widen the Creek to increase flow capacity, thereby avoiding and minimizing discharges of excavation and fill materials in the Creek. 3-2

The EIR should be revised, however, to clearly explain the unavoidable temporary and permanent impacts to waters of the State. This is necessary for Valley Water to develop a mitigation and monitoring plan (MMP) to meet the Water Board's requirements for California's "no net loss" policy, which is to ensure no overall net loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and values. Pursuant to the *Procedures for the Discharges of Dredged or Fill Material to Waters of the State* (Procedures) issued by the State Water Resources Control Board (State Board), and the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan), section 4.23, the project proponent must avoid and minimize permanent impacts to waters of the State to the maximum extent practicable, and provide appropriate compensatory mitigation of unavoidable impacts to achieve no net loss. To address this, a detailed characterization of Project impacts is necessary to be able to identify appropriate types and amounts of compensatory mitigation. 3-3

For example: provide the lengths of impacts from riparian vegetation removal in addition to the areal extents for both temporary and permanent impacts; identify the vegetation species, sizes, and ecological functions they provide such as habitat for nesting, foraging, and refugia, and other functions like shading and bank stability; provide the types, volumes, lengths, and areas of discharges of excavation or fill material for construction of flood management measures along the tops of banks and between the Creek's banks. Similar details are also needed for temporary excavation or fill discharges including (but not limited to): the temporary Creek crossing; fill that may occur in the seasonal wetland in one of the staging areas and for coffer dams and discharge dissipation structures for Creek dewatering systems. In terms of environmental impacts pursuant to CEQA, some of this information was provided at concept level in the draft EIR; for Certification application, however, much more detail will be required, as noted here. 3-4

Additional details are also needed for compensatory mitigation and monitoring of the Project. The EIR indicates compensatory mitigation would be achieved by onsite revegetation in some areas, and by payment of Santa Clara Valley Habitat Plan (VHP) fees. The Water Board has not approved the VHP, so compensatory mitigation by paying VHP fees would not be acceptable for meeting the Water Board's requirements. We have, however, approved the VHP In-Lieu Fee Program (ILFP) enabling instrument, which means that the purchase of credits from the ILFP, if available, would potentially be acceptable. The EIR should clarify this important distinction. We recommend Valley Water discuss the use of VHP ILFP credits with the Interagency Review Team that oversees ILFP projects as soon as possible so that the EIR can be revised to cover the details for compensatory mitigation projects and activities. We also recommend Valley Water work through the ILFP MMP template (ILFP enabling instrument, Attachment G) to facilitate accurate characterization of the Project's impacts and to identify compensatory mitigation needs and types of ILFP credits that would be needed. Finally, the MMP should also include geomorphic monitoring to evaluate whether the Creek is stable with the new flood control elements. 3-5

Aquatic Resources Delineation (*Draft EIR, Appendix D-Biological Resources Technical Appendix*) – Additional Information Needed

The delineation was conducted in October 2023 with a follow-up visit in February 2024. Please clarify if the dry season surveys of October 2023 resulted in under-reporting of the presence of waters of the State. The Project's impacts to waters of the State and methods to avoid and minimize impacts may need to be revised in the EIR, accordingly. For a complete Certification application, this would also need to be addressed for consistency with the Procedures. 3-6

Hydrology and Hydraulics

Hydrology and Hydraulics Technical Appendix (draft EIR, Appendix H) indicate Project conditions were evaluated with the 100-year flow return frequency under various scenarios, but the Project is designed to protect against a 20-year flow. Please clarify if the Project would have risk of erosion or scour from the Project's floodwalls or other elements in the Creek or top of bank, and whether additional evaluations based on a 20-year flow event should be addressed. 3-7

Post-construction Stormwater Management Plan

The EIR indicates new impervious surfaces would "…be mainly from the construction of passive barriers within the ground (approximately 22,600 square feet)" (draft EIR, pg. 3.9-33, and others). Impervious surfaces are known to impact waters of the State by increasing erosion and sedimentation through hydromodification (i.e., changes in runoff volume and duration) and by collecting and concentrating pollutants in runoff. The EIR should describe measures that will be implemented to avoid and minimize impacts to water quality from runoff. For impervious surfaces associated with the passive barriers, runoff can be directed to adjacent vegetated areas, to non-erodible permeable areas, or towards the outboard side of levees. If runoff is directed to adjacent vegetated areas, a 2:1 or lesser 3-8 ratio of impervious to pervious surface is preferred. Management of runoff from project impervious surfaces should be consistent with Provision C.3 of the Municipal Regional NPDES Stormwater Permit (Order No. R2-2022-0018) and associated technical guidance. **3-8 cont'd.**

A post-construction stormwater management plan for this Project would need to also address new and replacement impervious surfaces, specifically for new maintenance access roads, in the Coyote Creek Flood Management Measures Project (CCFMMP) currently being constructed under the emergency authorization by State Board for the Anderson Federal Energy Regulatory Commission Order Compliance Project. State Board Deputy Director's conditional approval of the CCFMMP deferred a requirement for a post-construction stormwater management plan for the CCFMMP to this Project due to the urgent need for CCFMMP to begin construction (State Board letter dated November 10, 2022). **3-9**

Closing

If you have any questions about this matter, please contact Susan Glendening at (510) 622-2462 or susan.glendening@waterboards.ca.gov. We look forward to continuing to work with you on this project. **3-10**

Sincerely,

E. Morrison
Digitally signed by Elizabeth Morrison
Date: 2024.08.26 16:26:11 -07'00'
Water Boards

Elizabeth Morrison
Senior Environmental Scientist

Cc: State Clearinghouse, State.Clearinghouse@opr.ca.gov
Valley Water:
Andrew Martin, A.Martin@valleywater.org
Robert Yamane, R.Yamane@valleywater.org
CDFW:
Jason Faridi, Jason Faridi@Wildlife.ca.gov
Alex Anstett, Alexandra.Anstett@Wildlife.ca.gov
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Sarah Firestone, Sarah.m.Firestone@usace.army.mil
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Valley Habitat Agency:
Edmund Sullivan, Edmund.Sullivan@scv-habitatagency.org
Gerry Haas, Gerry.Haas@scv-habitatagency.org
USFWS, Joseph Terry, Joseph_Terry@USFWS.gov
U.S. EPA, Michael Beakes, Beakes.Michael@epa.gov

Response to Comment 3-1

Comment noted; no further response required.

Response to Comment 3-2

Comment noted; no further response required.

Response to Comment 3-3

Text changes have been made to impact analyses on state-protected waters and wetlands and riparian habitat provided in in Impacts BIO-10, BIO-11, and BIO-13 discussions on pages 3.4-83 through 3.4-88 and 3.4-91 through 3.9-93 in Attachment 1 of the Final EIR, to reflect the current project design. As stated in the text changes in the impact analyses, with implementation of Valley Water BMPs, payment of VHP impact fees, and implementation of applicable VHP Conditions and AMMs, impacts on waters of the state and riparian habitat would be less than significant. There would be no significant unavoidable impacts to waters of the state caused by the project, either as originally described in the Draft EIR (see Draft Impacts BIO-10 and BIO-11), or as modified in Attachment 1 of the Final EIR. Additional details regarding impacts on waters of the state and how they are offset will be provided as part of the permitting process.

Response to Comment 3-4

See updates to Table 3.4.1 on page 3.4-3 in Attachment 1 of the Final EIRfor areal extent of riparian impacts and summary of riparian tree removal. See Response to Comment 2-4 regarding impacts from vegetation removal. Minor changes to the project have occurred since the Draft EIR. As shown in text changes on page 2-76 and 2-77 in Attachment 1 of the Final EIR, the temporary creek crossing to access R7-FW11 would no longer be constructed. The minor project changes include some new improvements, such as drainange features for passive barriers, all of which are located outside waters of the state. Additionally, the seasonal wetland in Reach 4 is no longer located in a temporary construction area and no impactson this feature would occur. Therefore, there would be no direct fill of waters of the state. See also Response to Comment 3-3 regarding updates to impact analyses on riparian habitat which could result in indirect impacts on waters of the state. The Draft EIR quantification of aerial extent of waters of the state and adjacent riparian habitat,and discussion of associated impacts and avoidance, minimization, and compensation measures, meets CEQA requirements for analysis of this impact. In addition, Table 3.4.4 in Attachment 1 of the Final EIR summarizes impacts on trees in mixed riparian woodland and forest, some of which are below top of bank and which the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) may consider under their jurisdiction. More specific information on indirect impacts to waters of the state that would result from project implementation, including types, volumes, lengths, and areas of discharges of excavation or fill material, and how any impacts would be offset, will be provided to the SFBRWQCB as part of the permitting process.

Response to Comment 3-5

Impacts on waters of the state from the project would be less than significant under CEQA, and no additional CEQA mitigation is required. However, should compensatory mitigation ultimately be required by the SFRWQCB to meet water quality regulatory requirements, the details on how that mitigation will be provided, either through the Valley Habitat Agency In-lieu Fee

Program or permittee-responsible mitigation, will be provided to the SFBRWQCB in a Mitigation Monitoring Program.Valley Water understands that VHP fees alone are not mitigation for impacts to waters of the State and will take the RWQCB's recommendations into account during the permitting process.

Response to Comment 3-6

The October 2023 aquatic resources delineation and follow-up survey in February 2024 provided in Draft EIR Appendix D are unlikely to have under-reported waters of the State. Coyote Creek is a highly channelized linear feature that was mapped using ordinary high-water mark indicators, including scouring, wracking, and changes in vegetation, that are readily observed in the field at any time of year. These indicators are more identifiable during the dry season when water levels are low, and the banks are visible. Most of the land abutting the creek is either characterized as steep creek bank or flat developed land, neither of which are likely to support wetlands because of the topographic landscape or development. The ordinary high-water mark of the creeks in the project area, mapped as waters of the U.S., is consistent with the bounds of waters of the State.

A thorough desktop review of aerial imagery, topographic maps and elevation contours, soil types, and other available resources was conducted to identify target areas that exhibited any form of wetland signature meeting the definition of waters of the State. Areas beyond the ordinary high-water mark of the creeks supporting hydrophytic vegetation or other vegetation signature changes that indicate wetlands may be present were still identifiable late in the season when the October survey was conducted. The few areas that were identified as having potential wetland signature during the desktop review were investigated in the field and data points were collected where hydrophytic vegetation and other hydric soil or hydrology indicators were present.

All aquatic resources were mapped in the Aquatic Resources Delineation Report (GEI 2024) that was provided in Appendix D of the Draft EIR, including features likely not meeting the definition of waters of the U.S, but potentially considered water of the State, such as ephemeral channels and isolated seasonal wetlands. The methods used for the delineation are consistent with standard aquatic resources delineation procedures.

Response to Comment 3-7

See Response to Comment 2-17. Further, because the 20-year flood event would have lower flow velocities throughout Coyote Creek than the 100-year event, the potential for erosion and scour would be even less than that predicted by the hydraulic and hydrologic modeling for 100-year flood flows throughout all reaches of Coyote Creek after the project is constructed.

Response to Comment 3-8

See Response to Comment 1-3. As a co-permittee, Valley Water must satisfy all applicable requirements of the Municipal Regional Stormwater Permit ("MRP"; NPDES No. CAS612008), including management of runoff from project impervious surfaces consistent with Provision C.3 of the MRP and associated technical guidance. The permit could require measures such as hydraulic sizing criteria for stormwater capture at passive barriers, directing runoff into stormwater treatment measures (e.g., sheet flow onto grassy areas), and integrating planting of trees in areas of bioretention within local parks. Accordingly, Valley Water will prepare appropriate documentation demonstrating that adequate site design or source control measures have been incorporated into the project to satisfy requirements of the MRP. An assessment of the impervious surfaces constructed for the Coyote Creek Flood Management Measures Project (CCFMMP) will also be included. For measures to protect water quality required for both projects pursuant the provisions of the MRP, Valley Water will prepare a post-construction stormwater management plan detailing the necessary post-construction stormwater control measures as appropriate.

Response to Comment 3-9

As a co-permittee, Valley Water must satisfy all applicable requirements of the MRP, including management of runoff from project impervious surfaces consistent with Provision C.3 of the MRP and associated technical guidance. Valley Water appreciates the State Water Board's conditional approval of the Coyote Creek Flood Management Measures Plan for the FERC Order Compliance Project. Accordingly, Valley Water will provide the Water Boards appropriate documentation demonstrating that adequate site design and source control measures have been incorporated into the CCFPP and CCFMMP to satisfy requirements of the MRP.

Response to Comment 3-10

Comment noted; no further response required.

2.3.4 Comment Letter 4 – Rob Kleinschmidt

Letter 4

Andrew Martin

From: Rob Kleinschmidt <rkleinsc@gmail.com>
Sent: Friday, July 26, 2024 3:35 PM
To: CCFPPcomments
Cc: Rob Kleinschmidt; Bambi Moise
Subject: CCFPP Draft EIR Comments

*** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

My name is Robert Kleinschmidt.
I live at 266 N. 20th st. San Jose, at the corner of 20th and Roosevelt.
My email is rkleinsc@gmail.com.
My phone is (408) 368-9513

I lived at the above address during the 2017 flood and have had a chance to make some observations both during the flood and during normal conditions.
I also attended your community meeting at Roosevelt Center on 7/25/2024.
I feel a number of concerns about the plan to separate the creek from the community by a 6-10 foot high wall and am writing to express these concerns. 4-1

1) Your plans would seem to greatly restrict the spill area of the creek during a flood but do not seem to include any provision for water detention.
It seems reasonable to assume this will drastically increase the water speed and erosion and will reduce the amount of water fed back into local aquifers.
Have these concerns been taken into account during the planning and are they called out in your reports ? 4-2

2) Coyote Creek is a reasonably active riparian corridor, harboring foxes, coyotes and numerous other animals. Has this been considered when planning for walls ?
It seems highly desirable to preserve riparian corridors for wildlife habitat as well as for possible future park and trail space. 4-3

3) There are substantial numbers of unhoused persons living along the banks of the creek. It seems unrealistic to assume that fencing and barriers will not be breached. 4-4
What if any provisions are being considered in order to allow homeowners, Law Enforcement, Medical, Firefighter, and volunteer cleanup crews easy access to this space ? 4-5
The space by the creek banks is already something of a no mans land and the addition of these walls would seem to make things worse. 4-6

4) Locally, during the 2017 floods, the flooding was made much worse when a massive eucalyptus tree on the opposite side of the creek at San Jose High School fell into the creek and created a dam along with other downed trunks and branches which were already clogging the channel. Unless something changes, there seems every reason to believe that debris buildup in an unmaintained channel will cause the same serious damming and hazards in future floods as well. 4-7

In my mind, I see the contrasting images of Coyote Creek and the Los Angeles river. I would very much hate to see a relatively unspoiled riparian corridor turned into a concrete lined spillway to the bay. Coyote creek should be much more than just a flood channel. 4-8

1

Thanks for reading and considering this. 4-9

Robert L. Kleinschmidt

2

Response to Comment 4-1

This comment does not pertain to the adequacy, content, or impact conclusions of the Draft EIR. No further response is required. See Responses to Comments 4-2 through 4-8 for a discussion of the issues raised in the comment letter.

Response to Comment 4-2

See pages 3.9-28 through 3.9-33 and 3.9-34 through 3.9-59 in Attachment 1 of the Final EIR for analysis of post-project hydrological conditions, including impacts on stormwater, and modeling of pre- and post-project flows within Coyote Creek for the 100-year flood event and the project's impact on flow and erosion. The Draft EIR concluded that the project would result in less-than-significant impacts on flows and erosion along Coyote Creek within the project reaches and downstream of the project. As described on page 3.9-9 in Attachment 1 of the Final EIR, most of the inflow of recharge into the Santa Clara Plain comes from artificial recharge of local and imported supplies. In addition, flows within Coyote Creek recharge the Santa Clara Subbasin by in-stream percolation in Coyote Creek and at the Coyote Percolation Pond located immediately north of Metcalf Road. As stated on page 3.9-34 in Attachment 1 of the Final EIR, the Coyote Creek channel is the main source of groundwater recharge in the project area, and the project would not create impervious surfaces within the channel. Further, pages 3.9-28 through 3.9-31 and Appendix H in Attachment 1 of the Final EIR provide information on the hydraulic and hydrologic modeling performed and the methodology used to analyze impacts of the project on scour and erosion within the Coyote Creek channel. As stated on pages 3.9-50 to 3.9-51 and depicted in Figures 3.9.20 through 3.9.23 in Impact HWQ-6 in Attachment 1 of the Final EIR, the project would result in many areas within the Coyote Creek channel with significant reductions in velocities, many areas with an increase in velocity between 0 and 1 fps, and only a few isolated areas where there would be velocities above the threshold of causing scour or erosion in the channel. Because there are only a few isolated areas with increase in velocities, there would be no substantial reduction in percolation of water into the groundwater basin. Further, the comment provides no evidence that any such impacts on groundwater recharge from the few isolated areas where velocities would be increased could be significant.

Response to Comment 4-3

See Chapter 1, "Introduction," and Chapter 5, "Alternatives," in Attachment 1 of the Final EIR, for discussion of the project background and planning process. See Chapter 2, "Project Description," in Attachment 1 of the Final EIR, for details on the project construction and design. See Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR, for a description and analysis of project impacts on biological resources within the biological study area, including the special-status species and habitat within the Coyote Creek riparian corridor. No coyote and fox species were identified as special-status species within the project area. All impacts on special-status species were determined to be less than significant or less than that significant with mitigation incorporated, as discussed under Impacts BIO-2 through BIO-9 of the Draft EIR. Impacts to riparian habitat were determined to be less than significant, as discussed under Impact BIO-10 in Attachment 1 of the Final EIR. Additionally, as discussed under Impact BIO-12 in Attachment 1 of the Final EIR, impacts to wildlife movement within the riparian corridor from floodwalls were determined to be less than significant because the floodwalls would be located at the top of creek banks, often adjacent to developed areas, and would not be continuous.

Response to Comment 4-4

This comment, which is speculative, does not pertain to the adequacy, content, or impact conclusions of the Draft EIR. No further response is required.

Response to Comment 4-5

See Impact HAZ-5 in Section 3.8, “Hazards and Hazardous Materials,” in Attachment 1 of the Final EIR, which found the project would have no impact on implementation of an adopted emergency response or evacuation plan. Also, see Impact TR-4 in Section 3.13, “Transportation and Traffic,” in Attachment 1 of the Final EIR, which found that the project would result in a less-than-significant impact with mitigation in regard to local emergency service providers having adequate access during construction. The analysis in Section 3.13, “Traffic and Transportation,” in Attachment 1 of the Final EIR, found there would be no access restrictions for emergency service providers after the project is built.

Response to Comment 4-6

Please see Response to Comment 4-4.

Response to Comment 4-7

The comment discusses the possibility of flooding being made worse due to debris clogging the Coyote Creek channel. Any debris clogging the channel is an existing condition within the channel and would not be exacerbated by the project. Further, Valley Water maintains the channel of Coyote Creek, including removal of large woody debris, through implementation of its 2019-2023 Stream Maintenance Program Manual (see Chapter 9)(Valley Water 2019)).

Response to Comment 4-8

The project would not result in converting Coyote Creek to a concrete channel. See Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for a detailed description of the project and Section 3.2, “Aesthetics,” and Section 3.4, “Biological Resources,” in Attachment 1 of the Final EIR, for complete analysis of project impacts on aesthetics and biological resources within the Coyote Creek riparian corridor, respectively.

Response to Comment 4-9

Comment noted; no further response is required.

2.3.5 Comment Letter 5 – Libby Lucas

Letter 5

Andrew Martin

From: Jack Lucas <jlucas1099@aol.com>
Sent: Monday, August 5, 2024 7:57 AM
To: CCFPPcomments
Subject: Coyote Creek Flood Protection Project

***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

CCFPPcomments@valleywater.org

Attention Andrew Martin

In regards the Coyote Creek Flood Protection Project referenced in your latest Valley Water News Release. this is the first notification that I have seen on this project and I am unclear on deadline for response. Is the comment period still open? If not, may I have a continuance for two more weeks? **5-1**

Understand the emergency nature of the proposed measures of metal flood walls but since 8500 feet are already installed it appears a little late for CEQA compliance criteria. My concerns are probably all old school but do feel basic hydrology must be a consideration along with existing beneficial uses of natural percolation to the Santa Clara Aquifer, wildlife sustainability and public safety and recreation. **5-2**

Would appreciate also receiving the project summary in email attachment as time limited for review of full EIR document. **5-3**

Thank you,

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, CA 94022 email jlucas1099@aol.com

On Saturday, August 3, 2024 at 07:31:56 AM PDT, Valley Water <valley@santaclaravalleywaterdistrict.ccsend.com> wrote:

Maintaining our creeks

It's summer and our stream maintenance crews are hard at work in creeks across Santa Clara County to repair banks, clear sediment and manage vegetation to reduce the risk of flooding.

1

Response to Comment 5-1

A record of past public outreach was provided on page 1-7 of the Draft EIR. Further, as indicated on pages 1-10 and 1-11 in Attachment 1 of the Final EIR, information on the public comment period and submitting comments was provided in a Notice of Availability of the Draft EIR, including where to view the Draft EIR.

Response to Comment 5-2

As described in Chapter 1, “Introduction,” in Attachment 1 of the Final EIR, the CCFMMP and CCFPP were separated because the CCFMMP was identified as an emergency project with independent utility to prevent flooding associated with the operations of Anderson Dam during draw down conditions. Further, as described Chapter 1, “Introduction,” of this Final EIR, the Draft EIR and Final EIR were prepared pursuant to the requirements of CEQA and theCEQA Guidelines, including the analysis of cumulative impacts in Chapter 4, “Other Statutory Requirements,” in Attachment 1 of the Final EIR, that include other flood projects within the Coyote Creek watershed (e.g., the CCFMMP).

Additionally, see Response to Comment 4-2 for more information on impact analysis of the project on hydrology within Coyote Creek and Section 3.4, “Biological Resources,” Section 3.8, “Hazards and Hazardous Materials,” Section 3.9, “Hydrology and Water Quality,’ and Section 3.12, “Recreation,” in Attachment 1 of the Final EIR, for full descriptions and analysis of the existing environment and project impacts on these resources.

Response to Comment 5-3

See Response to Comment 5-1. See the “Executive Summary,” and Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for a summary of the project.

2.3.6 Comment Letter 6 – Libby Lucas

Letter 6

Andrew Martin

From: Jack Lucas <jlucas1099@aol.com>
Sent: Monday, August 5, 2024 9:38 PM
To: CCFPPcomments
Subject: Coyote Creek Flood Protection Project

***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

Andrew Martin,

In regards Coyote Creek Flood Protection Project for which you are receiving public comments believe I will submit concerns as briefly as possible from past experience rather than review recent environmental data.

In recent years I had expressed concern in comment letters to the Board that feasible watershed retention measures did not seem to be planned even though global warming promised atmospheric rivers of serious intensity and duration that would impact flows of both Coyote Creek and Guadalupe River.

In Coyote Valley the historic overflow of Coyote Creek to Laguna Seca and Fisher Creek in pre reservoir years seemed a valid upstream retention measure to reimplement. Another breakaway opportunity to Canoas Creek was equally appealing with overflow to adjacent Cottle Ranch still viable. It is hoped that these two scenarios might still be considered in the District's upgrade of Coyote Creek flood protection. 6-1

Also, pre reservoirs, heavy storm flows in Coyote Creek carved out wide meanders that muted flows have later left high and dry. Can this flood project retrace those more generous contours and restore health to this historic riparian canopy? This is particularly important as the roots of these mature trees reinforce percolation potential of Coyote Creek that is critical to supply Santa Clara aquifer. How can capability of the steel walls of project/s channel to injure or remove significant portions of mature riparian corridor be kept to a minimum? 6-2

These steel flood walls that the District is presently installing on Coyote Creek south of Montague are one of the most expensive flood control measures available and curtails most inherent beneficial uses that exist in a natural stream channel like Coyote Creek. The maintenance aspect of this floodwall will also be a challenge. 6-3

Am I right to envision the flood wall supported by an earthen levee at the top of which runs a maintenance road that can also serve as the recreation corridor? This needs only be installed on the project extent of one bank while the other bank can retain critical shade of a continuous riparian corridor? 6-4 I presume this design is preferable than to create a canal with two raised embankments that would encroach on adjacent residences. 6-5

There is an increased safety concern with this hard edged channel in that humans or wildlife that may be swept into the current from open space lands upstream will have no means of extricating themselves. How will this project address this danger? Ladders or landing platforms might be of some help for humans but for wildlife the options are slim. 6-6

1

Also as Coyote Creek is considered Waters of the U.S. it is available for recreation rafting, canoeing or fishing so access should be feasible. How will this be accommodated with the steel walls of present project? **6-7**

Project reach from Montague to Tully Road is a densely populated area of San Jose so public interface with Coyote Creek's riparian corridor has received full attention over the years and has environmentally sensitive setbacks. Can this conservation criteria be implemented and is creek public access still an appealing option? **6-8**

Hydrological impacts of the larger Anderson Reservoir outlet I find hard to evaluate. Had once thought step pools would mute peak flows in storm events. Presume US COE are involved in modeling so enough said. Though have found US COE at fault in designing interface of cement conduits with a natural riparian channel that resulted in head cutting that decimated the upstream riparian corridor. It is a challenge to place this steel reinforced canal into the lush riparian canopy of Coyote Creek so am sorry to see it made the flood design. **6-9**

Do hope my comments are acceptable in your time frame for public response on Coyote Creek flood project. **6-10**

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, CA 94022

Response to Comment 6-1

See Section 3.9, “Hydrology,” in Attachment 1 of the Final EIR for a discussion of the existing hydrology of Coyote Creek and the project’s impacts on flood flows. Additionally, see pages 5-4 through 5-7 in Attachment 1 of the Final EIR for a discussion of the alternatives screening process to refine alternatives to the proposed project. As described herein, conceptual alternatives initially considered during the early stages of planning did not include elements with extensive modifications to the channel, such as creek widening and excavation as suggested in the comment for retention of overflow into Laguna Seca and Fisher Creek, which would result in many more years of property acquisition, review, and permitting. Alternatives to the proposed project were based on achieving the project objectives, including completion in time before the Anderson Dam Seismic Retrofit Project Stage 2 Diversion is in operation, as listed on pages 5-2 to 5-3 in Attachment 1 of the Final EIR, reducing significant project impacts, and being feasible.

Response to Comment 6-2

See Response to Comments 2-4 and 2-5 regarding impacts from the floodwalls to roots of riparian trees. See Impact HWQ-2 on page 3.9-33 and 3.9-34 in Attachment 1 of the Final EIR, for the analysis of impacts of the project on groundwater supplies.

Response to Comment 6-3

The comment is on the CCFMMP project and not on the CCFPP. Further, the comment is speculative in asserting that the CCFMMP would preclude beneficial uses within Coyote Creek and result in maintenance issues. This comment does not pertain to the adequacy, content, or impact conclusions of the Draft EIR and does not raise an environmental issue related to specific contents of the Draft EIR, so no further response is required.

Response to Comment 6-4

See Chapter 2, “Project Description,” in Attachment 1 of the Final EIR, for a detailed description of the proposed flood improvements and associated areas of construction. Text changes in the project description reflect minor changes made to the project design subsequent to publication of the Draft EIR.

Response to Comment 6-5

See Response to Comment 6-4. See also Chapter 5, “Alternatives,” in Attachment 1 of the Final EIR, for a description of the alternatives formulation process, alternatives considered and and evaluated, and alternatives considered and dismissed from further evaluation in the Draft EIR because ther would not meet most of the project objectives, would be infeasible to implement, and would not avoid or lessen one or more significant environmental impacts of the proposed project.

Response to Comment 6-6

See Response to Comment 6-4 regarding the project purpose, objectives, and a detailed description of the project design. The underlying purpose of the project is to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek. The primary objective of the project is to reduce the risk of flooding to homes, schools, businesses, and transportation infrastructure along Coyote Creek. Additional project objectives are to: design the project to prevent increases in erosion and degradation of Coyote Creek; maintain access and minimize impacts to existing and planned recreation; and, minimize the need for future operations and maintenance activities. As described in Chapter 2, "Project Description" in Attachment 1 of the Final EIR, the project would not preclude access to Coyote Creek and would not prevent passage from within the creek to the banks and onto land by persons or wildlife. Pages 3.4-89 to 3.4-91 include an analysis of the project on wildlife movement within Coyote Creek. This analysis demonstrates that the project would have a less-than-significant impact on wildlife movement because the project floodwalls would not be continuous, would be located along the edges of current urban development, and would be separated by large areas of creek bank that would remain the same as current conditions.

Response to Comment 6-7

See response to comment 6-6. Accommodation of recreation in the Coyote Creek channel is not an objective of the project, and the project would not affect public access to Coyote Creek for water-based recreation. Further, see Section 3.4, "Biological Resources," in Attachment 1 of the Final EIR, for information regarding project impacts on waters of the U.S. Also, see Response to Comment 6-3 regarding beneficial uses of Coyote Creek.

Response to Comment 6-8

See Responses to Comments 6-3, 6-6, and 6-7. Accommodation of recreation or public access in the Coyote Creek channel is not an objective of the project and the project would not affect access to Coyote Creek for water-based recreation.

Response to Comment 6-9

The cumulative impact analyses provided in Chapter 4, "Other Statutory Requirements," in Attachment 1 of the Final EIR, included the Anderson Dam Reservoir Seismic Retrofit project in the list of cumulative projects provided in Table 4.2 on pages 4-7 to 4-18 of the Draft EIR. This comment does not pertain to the adequacy, content, or impact conclusions of the Draft EIR and does not raise an environmental issue related to specific contents of the Draft EIR, so no further response is required.

Response to Comment 6-10

Comment noted; no further response required.

2.3.7 Comment Letter 7 – Libby Lucas

Letter 7

From: Jack Lucas
To: CCFPPcomments
Subject: Fw: Coyote Creek Flood Protection Project
Date: Tuesday, August 6, 2024 6:22:38 PM

*** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

Valley Water staff,

Have yet to receive confirmation that my comments were received by appropriate Valley Water staff and have been entered into public record. Should I comment to Board as well on Coyote Creek flood project?

Thank you,

Libby Lucas

----- Forwarded Message -----
From: Jack Lucas <jlucas1099@aol.com>
To: CCFPPcomments@valleywater.org <ccfppcomments@valleywater.org>
Sent: Monday, August 5, 2024 at 09:37:39 PM PDT
Subject: Coyote Creek Flood Protection Project

> Andrew Martin,
>
> In regards Coyote Creek Flood Protection Project for which you are receiving public comments believe I will submit concerns as briefly as possible from past experience rather than review recent environmental data.
>
> In recent years I had expressed concern in comment letters to the Board that feasible watershed retention measures did not seem to be planned even though global warming promised atmospheric rivers of serious intensity and duration that would impact flows of both Coyote Creek and Guadalupe River. 7-1
>
> In Coyote Valley the historic overflow of Coyote Creek to Laguna Seca and Fisher Creek in pre reservoir years seemed a valid upstream retention measure to reimplement. Another breakaway opportunity to Canoas Creek was equally appealing with overflow to adjacent Cottle Ranch still viable. It is hoped that these two scenarios might still be considered in the District's upgrade of Coyote Creek flood protection.
>
> Also, pre reservoirs, heavy storm flows in Coyote Creek carved out wide meanders that muted flows have later left high and dry. Can this flood project retrace those more generous contours and restore health to this historic riparian canopy? This is particularly important as the roots of these mature trees reinforce percolation potential of Coyote Creek that is critical to supply Santa Clara aquifer. How can

capability of the steel walls of project/s channel to injure or remove significant portions of mature riparian corridor be kept to a minimum?

These steel flood walls that the District is presently installing on Coyote Creek south of Montague are one of the most expensive flood control measures available and curtails most inherent beneficial uses that exist in a natural stream channel like Coyote Creek. The maintenance aspect of this floodwall will also be a challenge.

Am I right to envision the flood wall supported by an earthen levee at the top of which runs a maintenance road that can also serve as the recreation corridor? This needs only be installed on the project extent of one bank while the other bank can retain critical shade of a continuous riparian corridor? I presume this design is preferable than to create a canal with two raised embankments that would encroach on adjacent residences.

There is an increased safety concern with this hard edged channel in that humans or wildlife that may be swept into the current from open space lands upstream will have no means of extricating themselves. How will this project address this danger? Ladders or landing platforms might be of some help for humans but for wildlife the options are slim.

Also as Coyote Creek is considered Waters of the U.S. it is available for recreation rafting, canoeing or fishing so access should be feasible. How will this be accommodated with the steel walls of present project? **7-1**

Project reach from Montague to Tully Road is a densely populated area of San Jose so public interface with Coyote Creek's riparian corridor has received full attention over the years and has environmentally sensitive setbacks. Can this conservation criteria be implemented and is creek public access still an appealing option?

Hydrological impacts of the larger Anderson Reservoir outlet I find hard to evaluate. Had once thought step pools would mute peak flows in storm events. Presume US COE are involved in modeling so enough said. Though have found US COE at fault in designing interface of cement conduits with a natural riparian channel that resulted in head cutting that decimated the upstream riparian corridor. It is a challenge to place this steel reinforced canal into the lush riparian canopy of Coyote Creek so am sorry to see it made the flood design.

Do hope my comments are acceptable in your time frame for public response on Coyote Creek flood project.

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, CA 94022

Response to Comment 7-1

See Responses to Comments from Letter 6.

2.3.8 Comment Letter 8 – Libby Lucas

Letter 8

From: Jack Lucas
To: CCFPPcomments
Subject: Re: Steel fencing flood control riverine prototype enquiry
Date: Thursday, August 22, 2024 2:45:22 PM
Attachments: image001.png

*** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

Robert Yamane,

Thank you for responding in regards installation of steel pile floodwalls on Coyote Creek for Valley Water.

My concerns on this ongoing project are really on the applicability of such a rigid type of flood protection in a natural stream channel that can have sustained high levels of flood flow to a subsided delta region subject to high tidal reflux. I had hoped to learn of riverine projects that addressed similar conditions but as SFCOE did not respond with any Bay Area option, presume the Coyote Creek installation is unique.

My only frame of reference therefore is past observation of storm flows on Guadalupe River in mid 1990's in adjacent Santa Clara Valley floor urban interface. One particularly memorable storm I observed an inland sea of white caps and circling seagulls on the Guadalupe River bypass at airport's Hedding Street Bridge. This powerful volume of water could not have been contained by steel pile floodwalls.

SFCOE estimates of 100 year flood flows in Guadalup River and Coyote Creek at that time were 17,000 cfs with qualification that upstream reservoirs were operable. With reduction of capacity in Anderson Reservoir one would imagine Coyote Creek's 100 year flow to have a considerable increase. Has SFCOE determined the present maximum Coyote Creek flows for which this project design needs to be calibrated? 8-1

I feel this is critical data as to refer again to the Guadalupe River past flood performance where installed concrete mattresses were not designed to withstand the levels of flood flow and separated from both channel bottom and banks. Specific criteria in the COE manual had not been adhered to I believe.

As evidenced in this past week's river flooding in Connecticut, rain levels have become particularly high and sustained and the thought of similar conditions on Mount Hamilton are sobering. I can't help but envision the steel pile flood walls midstream with a similar inland sea as I observed on Guadalupe River decades ago.

Therefore do wonder if setback levees can be considered behind these floodwalls to contain extreme events and to provide recreation and maintenance trails and wildlife corridors? As am limited in field excursions this will have to be an ill informed if wishful suggestion. Appreciate any consideration you can give my concerns.

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, Ca.

On Wednesday, August 21, 2024 at 07:14:50 PM PDT, Robert Yamane <ryamane@valleywater.org> wrote:

> Hi Libby,
>
> We have a few presentations that can be downloaded from our project website that might be helpful. The Coyote Creek project has two phases, one which is currently in construction and one which is in the design phase. Our CEQA Draft EIR was published recently for the second phase which includes a lot of detailed information and is also available from the project website.
>
> https://www.valleywater.org/project-updates/creek-river-projects/E1-coyote-creek-flood-protection
>
> We also utilized steel sheet pile floodwalls for the Lower Penitencia Creek Flood Protection Project which was recently constructed (last year). They have a PDF talking about the completed project. Here is the website for the Lower Pen project:
>
> https://www.valleywater.org/project-updates/lower-penitencia-creek-improvements-project
>
> The steel sheet piles are segmental pieces of corrugated structural steel which has interlocking joints and can be driven or hydraulically pressed into the ground. While the interlocks do have some water tightness, we place an expanding sealant into the interlock joints during installation so that they become water-tight.
>
> Best regards,
>
> **ROBERT YAMANE, P.E.**
> Senior Engineer - Structural
>
> Watersheds Design and Construction Division
>
> RYamane@valleywater.org
>
> Tel. (408) 630-2925

SANTA CLARA VALLEY WATER DISTRICT

5750 Almaden Expressway, San Jose CA 95118
www.valleywater.org

Clean Water · Healthy Environment · Flood Protection

If you need my review, please tag me in your e-mail by using the "@" ("mention") feature:
@ryamane@valleywater.org

From: Jack Xu <JXu@valleywater.org>
Sent: Wednesday, August 21, 2024 6:49 PM
To: Jack Lucas <jlucas1099@aol.com>; Robert Yamane <RYamane@valleywater.org>
Subject: Re: Steel fencing flood control riverine prototype enquiry

Hi Libby,

I've cc'd my colleague Robert who is our senior engineer leading the project on Coyote Creek. He may be able to answer your questions about the steel panel fencing.

I think the flood protection feature you are inquiring about is actually a sheet pile wall (looks like big corrugated metal sheets). Let me know if that's correct.

Jack

From: Jack Lucas <jlucas1099@aol.com>
Sent: Wednesday, August 21, 2024 5:54:06 PM
To: Jack Xu <JXu@valleywater.org>
Subject: Fw: Steel fencing flood control riverine prototype enquiry

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----- Forwarded Message -----

From: Jack Lucas <jlucas1099@aol.com>

To: jxu@valleywater.com <jxu@valleywater.com>

Sent: Wednesday, August 21, 2024 at 05:40:27 PM PDT

Subject: Steel fencing flood control riverine prototype enquiry

Jack Xu,

I have tried to ascertain from SF USCOE what criteria they have established for use of steel panel fencing in flood control measures on Bay Area rivers and creeks and what prototypes are in existence and functioning but they were unable to supply such data and referred me to you at Valley Water.

Can you direct me to such prototypes so I may evaluate how the Coyote Creek steel panel fencing can provide the necessary flood protection for its densely populated neighborhoods in San Jose?

Thank you,

Libby Lucas

Response to Comment 8-1

The comments are on the merits of the project and do not address the content, scope, or adequacy of analysis within the Draft EIR. Pages 3.9-28 through 3.9-31 in Attachment 1 of the Final EIR provide information on the hydraulic and hydrologic modeling performed and the methodology used to analyze impacts of the project on scour and erosion within the Coyote Creek channel. Please also see Appendix H in Attachment 1 of the Final EIR for technical memoranda explaining the hydrology and hydraulic modeling of pre- and post-project conditions within Coyote Creek. See Response to Comment 6-1 regarding alternatives to the proposed project and Response to Comments 6-7 and 4-3 regarding access for recreation and wildlife, respectively. The proposed project is outside the jurisdiction of USACE and, therefore, the USACE design criteria was not used to design the project flood improvements.

2.3.9 Comment Letter 9 – Libby Lucas

Letter 9

From: Jack Lucas
To: CCFPPcomments
Subject: Re: Steel fencing flood control riverine prototype enquiry
Date: Monday, August 26, 2024 1:00:14 PM
Attachments: image001.png

*** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

Robert Yamane,
August 26, 2024

Afraid I still have trouble believing that US COE have no design criteria or riverine prototype guidelines for use of steel pile fencing for flood control when it critically affects their earlier major flood control project on lower Coyote Creek. Particularly, regarding 100 year flow cfs, the mid 1980's SF COE project engineered lower Coyote Creek channel for some 17,000 cfs with upstream reservoirs fully operational.

The new mid Coyote Creek steel pile fencing installed from Montague to Tully Road will be engineered to channel an estimated 24,000 cfs 100 year storm flow from natural Coyote Creek's high percolation meander below Anderson Reservoir? How will this 24,000 cfs flow meld into the 17,000 cfs capacity lower Coyote Creek channel, which is likely to be already compromised by high SF Bay tide reflux up to #101?

Bank overflow in lower Coyote Creek can impact Santa Clara County's transportation center, Highway #237, Metcalf power plant and San Jose water quality control plant, and challenges the integrity and sustainability of the SF COE project. Has a solution to this transition zone overload been devised in hydrology modeling? **9-1**

Had also hoped that the US COE manual would have criteria of how the upper reach of this steel pile fence might impact the natural riparian corridor and high percolation zone that supplies the Santa Clara drinking water aquifers. Erosion could destabilize fencing and high flows could pass behind the steel pile fence? The reinforced concrete mattresses COE installed in downtown Guadalupe River in mid 1990's did separate from channel and bank in high storm flows and became a hazard.

Apart from concerns of hydrology I would reiterate my initial comment that I find it very sad to convert this natural resource of Coyote Creek's riparian corridor canopy that served both residents and wildlife into a hardscape drainage canal hazard. As Waters of the US Coyote Creek should provide access for fishing, navigation and recreation. There must be a reason Los Angeles is removing hardscape in river channels.

Please return to restoration of historic pre reservoir upstream retention in Coyote Valley as in Laguna Seca and Coyote's wide river meanders and freshwater wetlands of Tennant Marsh. Canoas Canal could also be restored to cross valley tributary status with overflow to Cottle Ranch preserve. 9-1

Thank you for consideration of my numerous submittals on your CCFPP comments.

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, CA. 94022

On Wednesday, August 21, 2024 at 07:14:50 PM PDT, Robert Yamane <ryamane@valleywater.org> wrote:

> Hi Libby,
>
> We have a few presentations that can be downloaded from our project website that might be helpful. The Coyote Creek project has two phases, one which is currently in construction and one which is in the design phase. Our CEQA Draft EIR was published recently for the second phase which includes a lot of detailed information and is also available from the project website.
>
> https://www.valleywater.org/project-updates/creek-river-projects/E1-coyote-creek-flood-protection
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>
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> The steel sheet piles are segmental pieces of corrugated structural steel which has interlocking joints and can be driven or hydraulically pressed into the ground. While the interlocks do have some water tightness, we place an expanding sealant into the interlock joints during installation so that they become water-tight.
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> Best regards,
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> **ROBERT YAMANE, P.E.**
> Senior Engineer - Structural
>
> Watersheds Design and Construction Division
>
> RYamane@valleywater.org

Tel. (408) 630-2925

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If you need my review, please tag me in your e-mail by using the "@" ("mention") feature:
@ryamane@valleywater.org

From: Jack Xu <JXu@valleywater.org>
Sent: Wednesday, August 21, 2024 6:49 PM
To: Jack Lucas <jlucas1099@aol.com>; Robert Yamane <RYamane@valleywater.org>
Subject: Re: Steel fencing flood control riverine prototype enquiry

Hi Libby,

I've cc'd my colleague Robert who is our senior engineer leading the project on Coyote Creek. He may be able to answer your questions about the steel panel fencing.

I think the flood protection feature you are inquiring about is actually a sheet pile wall (looks like big corrugated metal sheets). Let me know if that's correct.

Jack

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Sent: Wednesday, August 21, 2024 5:54:06 PM
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***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

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From: Jack Lucas <jlucas1099@aol.com>

To: jxu@valleywater.com <jxu@valleywater.com>

Sent: Wednesday, August 21, 2024 at 05:40:27 PM PDT

Subject: Steel fencing flood control riverine prototype enquiry

Jack Xu,

I have tried to ascertain from SF USCOE what criteria they have established for use of steel panel fencing in flood control measures on Bay Area rivers and creeks and what prototypes are in existence and functioning but they were unable to supply such data and referred me to you at Valley Water.

Can you direct me to such prototypes so I may evaluate how the Coyote Creek steel panel fencing can provide the necessary flood protection for its densely populated neighborhoods in San Jose?

Thank you,

Libby Lucas

Response to Comment 9-1

See Response to Comments 6-1 and 8-1.

2.3.10 Comment Letter 10 – Katja Irvin

Letter 10

Comments on Draft Environmental Impact Report Coyote Creek Flood Protection Project

Submitted by Katja Irvin on August 26, 2024

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report (EIR) for the Coyote Creek Flood Protection Project (CCFPP).

Regarding Tree Removal 10-1

All tree removals planned for this project should be documented (tree removal plans and a list of tree removals) so the extent of impacts and needed mitigation can be evaluated. Of particular concern are trees within areas designated as Mixed Riparian Woodland and Forest Sensitive Natural Community.

Specific information about tree removals is needed to understand requirements to comply with local tree regulations, to evaluate whether tree removals for temporary access points will be minimized (BMP GEN-23), to evaluate whether maintenance of riparian canopy will be incorporated into the project design (VHP General Aquatic AMM #44), and to comply with CDFW Section 1602 regarding riparian habitat. 10-2

To understand cumulative impacts of CCFPP with impacts of Coyote Creek Flood Management Measures Project (CCFMMP), tree removals for the CCFMPP need to be identified, and potential cumulative impacts on sensitive natural communities, private properties, and parks need to be discussed. Depending on the amount of tree removal, the impacts on species and water quality could be significant. 10-3

The potential for tree removals to impact aesthetics, biological resources and hydrology needs to be discussed in the EIR and a mitigation measure should be added to require onsite tree replacement for all removed trees, especially those within the riparian corridor (as required in the stream maintenance program). 10-4

Regarding Temporary Access to Build Flood Wall R7-FW11

In addition to tree removals, the grading that will occur on the left bank to allow temporary access for R7-FW11 will be significant. The impacts of this grading and the eventual restoration (including revegetation and fill) of this creek bank needs to be discussed in the EIR, including in the project description and in relevant impact categories such as biological resources. Measures taken to prevent erosion of this creek bank during construction need to be discussed. 10-5

Regarding Biological Resources

- The EIR should include analysis of the impacts of tree removal under *Impact BIO-10: Substantial Adverse Effects on Riparian Habitat or Other Sensitive Natural Community*. Planned tree removals need to be described and analyzed along with previous (cumulative) tree removals from the CCFMMP to understand whether the project will have a substantial adverse effect (including cumulative effect) on Mixed Riparian Woodland and Forest Sensitive Natural Communities. 10-6

- Tree replacement (rather than in-lieu fees to pay for distant conservation) would enhance and expedite recovery of Riparian Woodland, prevent establishment of non-native tree species, and shade the creek corridor to reduce water temperatures in the creek. Mitigation should require on-site tree replacement wherever possible. **10-7**
- The discussion of *Impact BIO-13: Conflict with Local Policies and Ordinances Protecting Biological Resources* should account for all trees removed for both phases of the Coyote Creek project. In particular, the discussion currently says "The number of trees that would be removed during project construction was estimated based on the number of trees that overlap the footprint of the flood risk reduction improvements or are within 10 feet of the footprint." This does not account for the tree removals that will occur along access routes or in staging areas. It is especially important to account for other tree removals in the riparian corridor, including for access to construct flood wall R7-FW11. **10-8**

Response to Comment 10-1

See Response to Comment 2-4 and Response to Comment 10-2 regarding vegetation and tree removal. Payment of VHP fees would support implementation of the VHP Conservation Program, including riparian restoration, acquisition, preservation, and management. Therefore, as described on pages 3.4-83 through 3.4-87 in Attachment 1 of the Final EIR, impacts on Mixed Riparian Woodland and Forest would be less than significant.

Response to Comment 10-2

Compliance with local tree regulations is addressed on page 3.4-91 in Attachment 1 of the Final EIR, including estimates of trees subject to these regulations that would be removed, including removal of trees for construction staging areas and site access routes. Additionally, estimates of tree removals have been updated due to minor project changes in Section 3.4, “Biological Resources,” in Attachment 1 of the Final EIR, including additional information on removal of trees from mixed riparian woodland and forest isprovided in the new Table 3.4.4 on page 3.4-85. The project has been designed to minimize impacts on trees and the number of trees to be removed has been reduced by design updates since the Draft EIR was prepared. For example, as shown on pages 3.4-69 and 3.4-70 in Attachment 1 of the Final EIR, the temporary creek crossing would no longer be constructed, and the associated tree removal would not occur. In addition, all BMPs and AMMs relevant to riparian habitat will be implemented, and the project will comply with requirements of California Fish and Game Code Section 1602.

Response to Comment 10-3

See Responses to Comments 2-22 and 2-23. See pages 4-21 to 4-29 in the cumulative impact analysis in Chapter 4, “Other Statutory Requirements” in Attachment 1 of the Final EIR. As stated therein, the project has been designed to minimize impacts on the riparian habitat of Coyote Creek by locating improvements outside of the channel and upslope of streambanks. As a result, the project would have a relatively minimal impact on the overall extent of riparian habitat in the project area. However, some removal of trees and other woody vegetation in mixed riparian woodland and forest would occur with both the CCFMMP and CCFPPP, and these habitats could be indirectly affected by mplementation. of both projects. With implementation of Valley Water BMPs, compliance with applicable VHP conditions and AMMs, compliance with applicable environmental regulations, and payment of VHP fees, impacts on riparian vegetation (including trees) would be reduced to to less than cumulatively considerable levels and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact ontree removal, sensitive natural communities, water quality, or other biological resource issues.

Response to Comment 10-4

Impacts of vegetation removal, including trees, are discussed throughout Section 3.4, “Biological Resources,” in Attachment 1 of the Final EIR. Tree removal would be limited to where it is necessary to accommodate the permanent improvement features. As indicated on page 4-28 in Attachment 1 of the Final EIR, Valley Water would comply with applicable City tree replacement requirements, pay in-lieu fees, or implement alternative mutually acceptable compensatory measures for tree removal subject to City regulations. Replacement tree planting may occur in City parks and/or along City streets from which trees would be removed. The Valley Water 2019-2023 Stream Maintenance Program Manual addresses multiple mitigation strategies, including both on-site and off-site mitigation; it does not require on-site tree replacement for all removed trees. With implementation of BMPs, AMMs, and mitigation measures; compliance with applicable environmental regulations; and payment of VHP fees, tree removal would not result in a significant impact on biological resources and additional mitigation is not required. Also, analysis of project impacts on aesthetics and hydrology related to tree removal was provided in the Draft EIR in Impacts AES-1 and AES-2 on pages 3.2-29 through 3.2-37 and Impacts HWQ-5 and HWQ-6 on pages 3.9-36 to 3.9-49 and pages 3.9-50 to 3.9-59, respectively, and Appendix H of the Draft EIR. The modeling takes into account the removal of trees to account for the areas where the flood improvements would be constructed. Further, the number of trees removed by the project would not significantly affect the modeling results presented in the Draft EIR.

Response to Comment 10-5

The originally-proposed temporary crossing providing access to R7-FW11 is described in Chapter 2, "Project Description," in Attachment 1 of the Final EIR, and its impacts analyzed throughout the biological resources impact discussions in Chapter 4.3, "Biological Resources," in Attachment 1 of the Final EIR. However, as shown on pages 3.4-69 and 3.4-70 in Attachment 1 of the Final EIR, the project has been revised so that the temporary crossing would not be constructed. Therefore, previously described impacts of the temporary crossing would not occur.

Response to Comment 10-6

See Responses to Comment 2-4, Comment 2-23, and Comment 2-24. Impact BIO-10 in Attachment 1 of the Final EIR evaluated effects of riparian woodland and forest removal on an acreage basis. Quantification of aerial extent of riparian habitat provided in the Draft EIR and discussion of associated impacts and avoidance, minimization, and compensation measures adequately evaluates this impact for CEQA purposes. However, in response to this and other comments, a new Table 3.4.4 on page 3.4-85 in Attachment 1 of the Final EIR has been added to provide information on numbers and species of trees that would be removed from mixed riparian woodland and forest. As described in Impact BIO-10 in Attachment 1 of the Final EIR, permanent loss of Riparian Woodland and Forest resulting from project implementation would be relatively small and this habitat loss would be compensated by payment of VHP fees that support implementation of the VHP Conservation Program and associated habitat restoration, acquisition, preservation, and management; and this analysis has not changed due to minor project changes since publication of the Draft EIR. Therefore, as discussed in Cumulative Impact BIO-2 on pages 4-25 through 4-27 in Attachment 1 of the Final EIR, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on mixed riparian woodland and forest.

Response to Comment 10-7

See Response to Comment 2-8. Replacement tree planting may occur in City parks and/or along City streets from which trees would be removed and could result in some of the benefits of on-site tree replacement cited by the commenter (e.g., enhance riparian recovery and minimize establishment of non-native trees). However, CEQA does not require mitigation to be implemented at the location where impacts occur and payment of VHP fees that support implementation of the VHP Conservation Program and associated habitat restoration, acquisition, preservation, and management would adequately compensate for this impact.

Response to Comment 10-8

See Response to Comments 10-2 and 10-3. The temporary creek crossing to access R7-FW11 would no longer be constructed and no trees would be removed from temporary impact areas, including temporary access routes and staging areas.

2.3.11 Comment Letter 11 – Libby Lucas

Letter 11

From: Jack Lucas
To: Robert Yamane
Subject: Re: Steel fencing flood control riverine prototype enquiry
Date: Thursday, August 29, 2024 8:13:39 AM
Attachments: image001.png

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Robert,

One more question in regards the CCFPP. In the past the SF COE has been foremost in flood control measures in Santa Clara County, especially for projects on Coyote Creek and Guadalupe River. On my recent query to SF COE I received no response as to support data for their hydrology modeling, flood flows, or technical use of steel sheet pile fencing in riverine applications to be implemented in Coyote Creek. **11-1**

Does this mean SF COE takes no responsibility for Montague to Tully Road Coyote Creek project design?

How will FEMA adjust its flood maps if proposed Coyote Creek flood measures are not consistent with COE approved criteria and specifications for reinforced levees and with global warming 50 to100 year flood flow?

Also, to be in compliance with CEQA Law and Guidelines on segmentation of projects, doesn't that imply that sequential projects on a river should function in coordination and satisfy the same base flow safety criteria? **11-2**

Afraid more and more I see government agencies relinquish their responsibilities on public health and safety. It is very worrying. Ages past we found note nailed to tree by US army in Northern Luzon, December 1942,
as they pulled out of Baguio overnight "You will be safer without us". Wonder if that is rationale of COE today. **11-3**

Libby Lucas
On Tuesday, August 27, 2024 at 02:34:52 PM PDT, Robert Yamane <ryamane@valleywater.org> wrote:

> Hi Libby,
>
> I did not receive your comments yesterday. Did you send them to me or did you submit it as a Draft EIR question?
>
> **ROBERT YAMANE, P.E.**
> Senior Engineer - Structural
>
> Watersheds Design and Construction Division
>
> RYamane@valleywater.org
>
> Tel. (408) 630-2925

SANTA CLARA VALLEY WATER DISTRICT

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If you need my review, please tag me in your e-mail by using the "@" ("mention") feature: ***@ryamane@valleywater.org***

From: Jack Lucas <jlucas1099@aol.com>
Sent: Tuesday, August 27, 2024 1:36 PM
To: Robert Yamane <RYamane@valleywater.org>
Subject: Re: Steel fencing flood control riverine prototype enquiry

***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

Robert,

Hope you got my last round of comments yesterday.

Can't help but brood over these miles of hardscape replacing historic riparian corridor interface with parks and residential neighborhoods. Old San Jose deserves better.

And do fault your hydrology models.

Libby Lucas

On Wednesday, August 21, 2024 at 07:14:50 PM PDT, Robert Yamane <ryamane@valleywater.org> wrote:

> Hi Libby,

We have a few presentations that can be downloaded from our project website that might be helpful. The Coyote Creek project has two phases, one which is currently in construction and one which is in the design phase. Our CEQA Draft EIR was published recently for the second phase which includes a lot of detailed information and is also available from the project website.

https://www.valleywater.org/project-updates/creek-river-projects/E1-coyote-creek-flood-protection

We also utilized steel sheet pile floodwalls for the Lower Penitencia Creek Flood Protection Project which was recently constructed (last year). They have a PDF talking about the completed project. Here is the website for the Lower Pen project:

https://www.valleywater.org/project-updates/lower-penitencia-creek-improvements-project

The steel sheet piles are segmental pieces of corrugated structural steel which has interlocking joints and can be driven or hydraulically pressed into the ground. While the interlocks do have some water tightness, we place an expanding sealant into the interlock joints during installation so that they become water-tight.

Best regards,

ROBERT YAMANE, P.E.
Senior Engineer - Structural

Watersheds Design and Construction Division

RYamane@valleywater.org

Tel. (408) 630-2925

Valley Water

SANTA CLARA VALLEY WATER DISTRICT

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Clean Water · Healthy Environment · Flood Protection

If you need my review, please tag me in your e-mail by using the "@" ("mention") feature: ***@ryamane@valleywater.org***

From: Jack Xu <JXu@valleywater.org>
Sent: Wednesday, August 21, 2024 6:49 PM
To: Jack Lucas <jlucas1099@aol.com>; Robert Yamane <RYamane@valleywater.org>
Subject: Re: Steel fencing flood control riverine prototype enquiry

Hi Libby,

I've cc'd my colleague Robert who is our senior engineer leading the project on Coyote Creek. He may be able to answer your questions about the steel panel fencing.

I think the flood protection feature you are inquiring about is actually a sheet pile wall (looks like big corrugated metal sheets). Let me know if that's correct.

Jack

From: Jack Lucas <jlucas1099@aol.com>
Sent: Wednesday, August 21, 2024 5:54:06 PM
To: Jack Xu <JXu@valleywater.org>
Subject: Fw: Steel fencing flood control riverine prototype enquiry

***** This email originated from outside of Valley Water. Do not click links or open attachments unless you recognize the sender and know the content is safe. *****

----- Forwarded Message -----

From: Jack Lucas <jlucas1099@aol.com>

To: jxu@valleywater.com <jxu@valleywater.com>

Sent: Wednesday, August 21, 2024 at 05:40:27 PM PDT

Subject: Steel fencing flood control riverine prototype enquiry

> Jack Xu,
>
> I have tried to ascertain from SF USCOE what criteria they have established for use of steel panel fencing in flood control measures on Bay Area rivers and creeks and what prototypes are in existence and functioning but they were unable to supply such data and referred me to you at Valley Water.

Can you direct me to such prototypes so I may evaluate how the Coyote Creek steel panel fencing can provide the necessary flood protection for its densely populated neighborhoods in San Jose?

Thank you,

Libby Lucas

Response to Comment 11-1

The letter is not addressed to the Valley Water e-mail address indicated in the Notice of Availability and the Draft EIR for submitting comments on the Draft EIR and was submitted outside of the public comment period for the Draft EIR described in the Notice of Availability. Although not required to do so per CEQA Guidelines Section 15207, Valley Water has voluntarily provided responses to the comments in this this letter for informational purposes.

Questions about the U.S. Army Corps of Engineers (USACE) hydrologic modeling of Coyote Creek do not pertain to the adequacy, content, or impact conclusions of the Draft EIR ,since Valley Water conducted the hydrologic modeling, and not USACE, to support the Draft EIR impact analyses. No further response is required.

Questions about possible future adjustments to Federal Emergency Management Agency flood maps similarly do not pertain to the adequacy, content, or impact conclusions of the Draft EIR, and are also speculative. No further response is required.

Response to Comment 11-2

By “sequential projects,” Valley Water assumes the comment is referring to the CCFMMP and the CCFPP. As described in Chapter 1, “Introduction,” in Attachment 1 of the Final EIR, the CCFMMP and CCFPP were separated because the CCFMMP was identified as an emergency project with independent utility to prevent flooding associated with the operations of Anderson Dam during draw down conditions. Because the CCFMMP and CCFPP have independent utility, Valley Water’s CEQA compliance approach for the CCFPP complies with CEQA requirements related to project segmentation. See, e.g., Del Mar Terrace Conservancy, Inc., v. City Council (1992) 10 Cal. App. 4th 712,736.

Further, as described in Chapter 1, “Introduction,” of this Final EIR, the Draft EIR and Final EIR were prepared pursuant to the requirements of CEQA and the State CEQA Guidelines, including the analysis of cumulative impacts in Chapter 4, “Other Statutory Requirements,” of the Draft EIR, which includes other flood projects within the Coyote Creek watershed (e.g., the CCFMMP).

Response to Comment 11-3

This comment does not pertain to the adequacy, content, or impact conclusions of the Draft EIR. No further response is required .

2.4 References

GEI. 2024. Final Aquatic Resources Delineation Report, Coyote Creek Flood Protection Project.

Valley Water. 2014. Best Management Practices Handbook.

Attachment 1: Revised Draft EIR

Valley Water

Final Environmental Impact Report

Coyote Creek Flood Protection Project

STATE CLEARINGHOUSE NO. 2023110513

JANUARY 2025

PREPARED BY

GEI Consultants

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Appendices

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Acronyms and Abbreviations

AB	Assembly Bill
ADSRP	Anderson Dam Seismic Retrofit Project
ADTP	Anderson Dam Tunnel Project
ADSRP	Anderson Dam Seismic Retrofit Project
AMM	Avoidance and Minimization Measure
APE	Area of Potential Effects
APN	Accessor Parcel Number
AQ	Air Quality
BAAQMD	Bay Area Air Quality Management District
Bay	South San Francisco Bay
Bay Area	San Francisco Bay area
BCE	before current era
bgs	below ground surface
BGEPA	Bald and Golden Eagle Protection Act
BI	Biology
BMP	Best Management Practice
Board	Valley Water Board of Directors
BSA	biological study area
°C	Celsius
Cal EMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	climate action plan
CARE	Community Air Risk Evaluation
CCAP	Climate Change Action Plan
CCFMMP	Coyote Creek Flood Management Measures Project
CCFPP or project	Coyote Creek Flood Protection Project
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDL	Coyote Discharge Line
CE	current era
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHRIS	California Historical Resources Information SystemI
CI	carbon intensity
City	City of San José
CIWMA	California Integrates Waste Management Act of 1989
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CO_2e	CO_2-equivalents
County	Santa Clara County
CRHR	California Register of Historic Resources
CU	Cultural
CWA	Clean Water Act
dBA	A-weighted decibels
DDT	dichlorodiphenyltrichloroethane
DEH	Department of Environmental Health
DMP	Dam Maintenance Program
DOC	Department of Conservation
DOT	U.S. Department of Transportation
DPS	distinct population segment
DTSC	Department of Toxic Substance Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESL	Environmental Screening Levels
ESU	evolutionarily significant unit
EV	electric vehicle
FAHCE	Fish and Aquatic Habitat Collaborative Effort
FERC	Federal Energy Regulatory Commission
FHSZ	Fire Hazard Severity Zones
FHWA	Federal Highway Administration
FOCP	FERC Order Compliance Project
fps	feet per second

FTA	Federal Transit Administration
FW	Floodwall
FWARG	Far Western Anthropological Research Group
GEN	general
GHG	greenhouse gas
GHGRS	Greenhouse Gas Reduction Strategy
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
GWP	global warming potential
H&H	hydrologic and hydraulic
HASP	Health and Safety Plan
HCP	Habitat Conservation Plan
HEC-RAS	USACE Hydrologic Engineering Center's River Analysis System
HFC	hydrofluorocarbon
HHRA	Human Health Risk Assessment
HM	Hazards
HMMP	Hazardous Materials Management Plan
HOV	high occupancy vehicle
HSLA	Ha zardous Substance Liability Assessments
Hwy	Highway
Hz	hertz
I	Interstate
IIPP	Injury and Illness Prevention Program
improvements	flood risk reduction improvements
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
KOP	Key Observation Point
LBD	Lorentz Barrel and Drum Company
LCFS	Low Carbon Fuel Standard
Ldn	Day-night noise level
Leq	equivalent noise level
Lmax	maximum noise level
LOS	level of service
LT	long-term
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Levels
mg/kg	milligrams per kilogram
MLD	Most Likely Descendant
MMT	million metric tons
mPa	micro-Pascals
mph	miles per hour

MRP	Municipal Regional Permit
$MTCO_2e$	metric tons are carbon dioxide equivalent
MUTCD	Manual of Uniform Traffic Control Devices
MY	model year
N_2O	nitrous oxide
N/A	not applicable
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
NCCPA	Natural Community Conservation Plan Act
NCSS	National Cooperative Soil Survey
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NOx	oxides of nitrogen
NRHP	National Register of Historic Places
NTU	Nephelometric Turbidity Unit
NWIC	Northwest Information Center
NZMS	New Zealand mudsnail
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PEA	Preliminary Endangerment Assessment
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM	particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPE	personal protective equipment
PPV	peak particle velocity
PRC	Public Resources Code
PRNS	Parks, Recreation, and Neighborhood Services
PWRPA	Power and Water Resources Pooling Authority
R	Reach
RAW	Removal Action Workplan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RMS	root-mean-square
ROG	reactive organic gases
RSL	Regional Screening Levels
RWQCB	Regional Water Quality Control Board

SB	Senate Bill
SCVHA	Santa Clara Valley Habitat Agency
SCVHRP	Santa Clara Valley Habitat Restoration Plan
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SERC	State Emergency Response Commission
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SGMA	Sustainable Groundwater Management Act
SGMP	Soil and Groundwater Management Plan
SJMC	San José Municipal Code
SJW	San Jose Water Company
SLF	Sacred Lands File
SMP	Stream Maintenance Program
SMAQMD	Sacramento Metropolitan Air Quality Management District
SPL	sound pressure level
SRA	State Responsibility Area
SSID	Stressor Source Identification
ST	short-term
SVOC	Semi-volatile Organic Compound
SWRCB	State Water Resources Control Board
TCR	Tribal Cultural Resource
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Loads
TPH	Total Petroleum Hydrocarbons
TR	Transportation
UCMR	Urban Creeks Monitoring Reports
USACE	U.S. Army Corps of Engineers
USC	United States Code
USGS	U.S. Geological Survey
UT	Utilities
UWMP	2020 Urban Water Management Plan
Valley Water	Santa Clara Valley Water District
VdB	Vibration decibels
VHFHSZ	very high fire hazard severity zone
VHP	Valley Habitat Plan
VMT	vehicle miles traveled
VOC	volatile organic chemical
VTA	Santa Clara Valley Transportation Authority
WPRR	Western Pacific Railroad
WQ	Water Quality

WQO	Water Quality Objective
WSMP	Water Supply Master Plan 2040

Executive Summary

ES.1. Introduction

The Santa Clara Valley Water District (Valley Water) is proposing the Coyote Creek Flood Protection Project (CCFPP or project) to implement a series of flood risk reduction improvements (or improvements) to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek in the City of San José (City). During the 2016 to 2017 winter season, storms caused significant flooding events and unprecedented reservoir spills throughout Santa Clara County, including Anderson Dam. On February 21, 2017, Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road, resulting in flooding that caused evacuations and property damage. During that flood event, Coyote Creek experienced the largest flows since the construction of Anderson Dam in 1950. In response to the flooding, the Board accelerated the Mid-Coyote Creek Project, modified project goals, and revised the proposed level of flood risk reduction from a 100-year flood to the February 2017 flood event, which is equivalent to an approximate 20-year flood event. The Board also renamed the Mid-Coyote Creek Project to the CCFPP, extended the project site upstream to Tully Road, and directed staff to move forward with the planning, design, and construction of the project.

As a part of Valley Water's Anderson Dam Federal Energy Regulatory Commission Order Compliance Project (FOCP), approximately 40 percent of the original CCFPP was identified as necessary to be designed and constructed under the FOCP to support the construction of the Anderson Dam Tunnel Project to prevent flooding within urbanized areas of the City associated with increased water releases from the tunnel. These prioritized elements of the CCFPP are now a separate and an independent project under the FOCP referred to as the Coyote Creek Flood Management Measures Project (CCFMMP). The CCFMMP consists of seven spans of floodwalls outside of the Coyote Creek channel, totaling approximately 8,654 linear feet, which are located along Reaches 5 to 7 of Coyote Creek between Old Oakland Road and I-280. The CCFMMP is statutorily exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15269(c) because it was deemed as an emergency project being carried out under the FOCP to reduce the risk of flooding associated with earthquake-induced dam failure.

The remaining approximately 60% of the original CCFPP is the proposed project that is the subject of this Environmental Impact Report (EIR). Valley Water is the lead agency under CEQA because it is the public agency proposing to approve and execute the proposed project. CEQA requires the preparation of an EI) when a project could significantly affect the physical environment. Valley Water determined that the project could potentially cause significant environmental impacts, and that preparation of an EIR was therefore required for the project to comply with CEQA.

Valley Water has prepared this Draft EIR to provide decision makers, the public, and responsible and trustee agencies with information about the environmental impacts of the project. This EIR was prepared in compliance with the California Environmental Quality Act of 1970 (as amended) and the State CEQA Guidelines (California Code of Regulations [CCR] title 14, Section (§) 15000 et seq.) (collectively, CEQA). Valley Water has prepared this EIR to evaluate environmental effects of the CCFPP including design, construction, and maintenance of the project. This EIR evaluates the direct, indirect, and cumulative impacts of the project, identifies mitigation measures that are feasible to lessen or avoid significant impacts, and identifies alternatives that may lessen one or more significant impacts of the project.

ES.2. Purpose and Objectives

The underlying purpose of the project is to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek. The primary objective of the project is to reduce the risk of flooding to homes, schools, businesses, and transportation infrastructure along Coyote Creek between Montague Expressway and Tully Road (Reaches 4 through 8) from a flood event equivalent to the February 21, 2017, flood – approximately a 20-year flood event (a flood with a 5 percent chance of occurring in any year).

Additional project objectives are to:

- complete the project before the Anderson Dam Seismic Retrofit Project (ADSRP) Stage 2 Diversion is in operation (estimated in 2028);
- design the project to prevent increases in erosion and degradation of Coyote Creek;
- maintain access and minimize impacts to existing and planned recreation facilities; and,
- minimize the need for future operations and maintenance activities.

ES.3. Project Location

Project Area

Valley Water is proposing the CCFPP along Coyote Creek from the downstream face of the Montague Expressway bridge to the upstream face of the Tully Road bridge in the City of San José, Santa Clara County, California. The proposed flood risk reduction improvements are located along four reaches of Coyote Creek (Reaches 4, 6, 7, and 8) between Montague Expressway and Tully Road, with Reach 4 at the northern end of the project area (downstream) and Reach 8 at the southern end of the project area (upstream). Although no flood risk reduction improvements would be constructed along Reach 5, construction staging would occur at one designated location along this reach. Reaches 4, 5, 6, 7, and 8 are described below and shown in **Figure ES.1**.

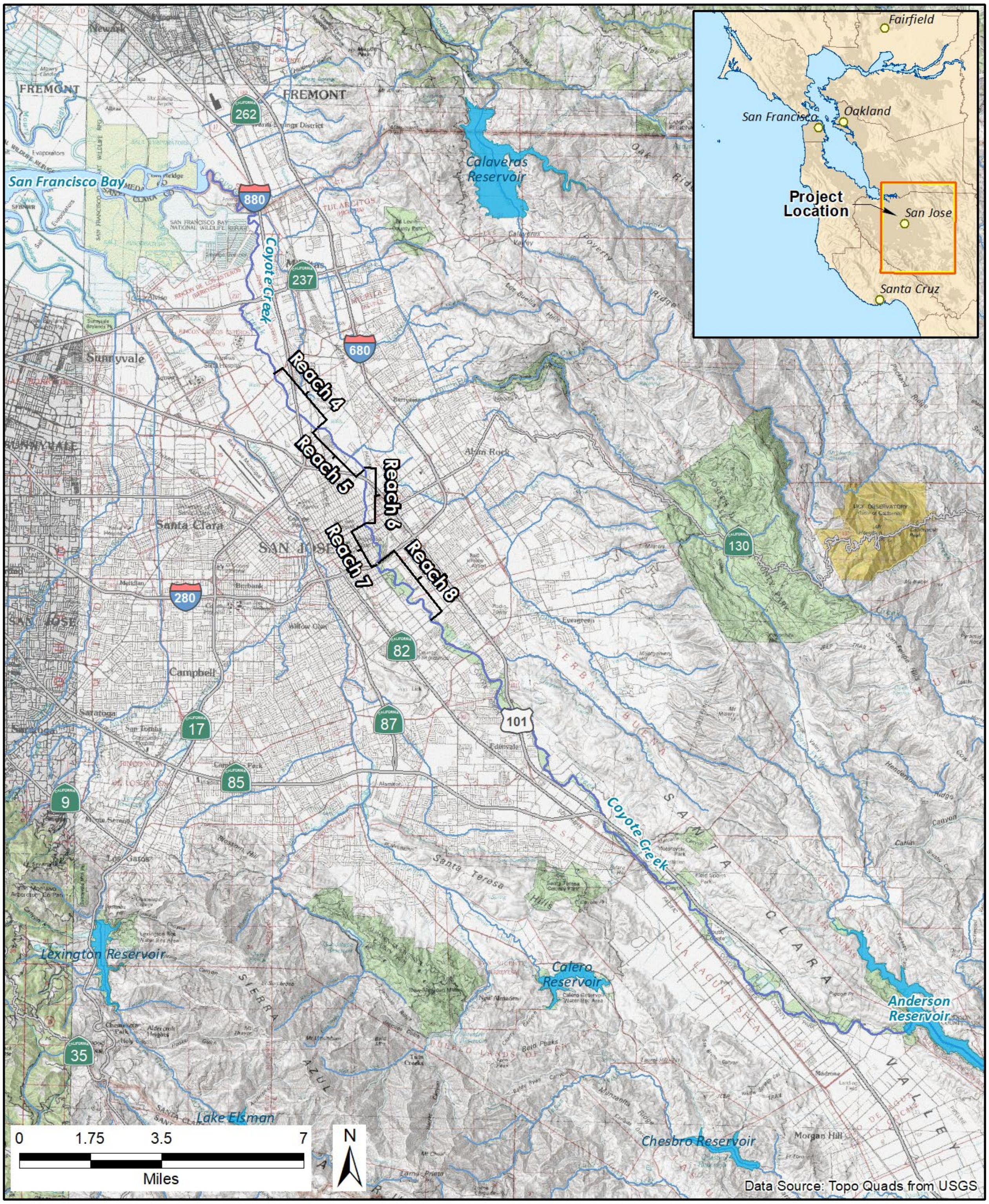

Figure ES.1. Regional Project Location

ES.4. Summary of Project Description

Project Elements

The project improvements were identified to contain flood flows from a 20-year flood event, contain flood flows from a potential future 100-year flood event after completion of the proposed Anderson Dam Seismic Retrofit Project (ADSRP), and provide additional freeboard in compliance with Valley Water's freeboard standards[1].

Flood risk reduction improvements identified for the project consist of floodwalls, passive barriers, and berms that would be constructed along and adjacent to Coyote Creek. The project also includes constructing headwalls and wingwalls along the Charcot Avenue Bridge (or Bridge) crossing over the Coyote Creek channel and reinforcing the Bridge structure. In total, the project includes constructing approximately ~~17,006~~ 17,060 feet of improvements along the 9-mile stretch of Coyote Creek from Montague Expressway to Tully Road.

The following improvements would be constructed:

- Approximately ~~10,399~~ 13,703 feet of floodwalls and passive barriers
- ~~Approximately 3,549 feet of passive barriers~~
- Approximately ~~352~~ 355 feet of headwalls and wingwalls
- Approximately ~~2,706~~ 3,002 feet of berms

In addition to the flood risk reduction improvements above, Valley Water, in coordination with the City, has identified a need to prevent backflow of water during flood events from entering the City's stormwater conveyance system. Under the through existing outfalls within the creek, which has historically resulted in localized flooding due to stormwater system overflows. project, Valley Water would install flap gates within seven manholes located inland of the existing outfalls, including six existing manhole vaults and one within a one newly constructed manhole vault. In addition, an approximately 240-foot-long temporary berm made of sandbags would be installed in one location in Reach 4 during the 4-year period when the Anderson Dam Tunnel Project is under construction.

Valley Water would acquire temporary easements for construction, as well as permanent easements and/or fee titles for operations and maintenance within limited areas along and surrounding project elements.

Floodwalls

Three general floodwall design types – I-Walls, T-Walls, and L-Walls – would be used for the project. I-Walls are sheet piles driven or pressed into the ground. T-Walls and L-Walls are made of reinforced concrete and include a reinforced concrete foundation. The selection of a floodwall design depends on the space available at the improvement site and construction constraints. The foundation of a T-Wall extends outward on both sides of the floodwall and can be used where there are no space restrictions for excavation. The foundation of an L-Wall is on one side of the floodwall and requires less space for excavation than a T-Wall. I-Walls are used where there is limited or no space for excavation. Aesthetic treatments may be applied to concrete

[1] Freeboard is additional distance from the top of the water line (or water surface elevation) to the top of the height of the flood risk reduction improvement (i.e., floodwall, passive barrier, or berm). Valley Water's freeboard standard, which is used for the proposed project, is the higher of 1 foot freeboard on the 20-year flood event water surface elevation or 3 feet freeboard on the potential future 100-year flood event water surface elevation.

floodwalls and concrete casings around sheet pile floodwalls. Aesthetic treatments would be determined in coordination with landowners. At locations where floodwalls intersect bridges, the floodwall would be connected with the concrete bridge headwalls, abutments and wingwalls to prevent flows from overtopping onto adjacent land.

Floodwalls are proposed with approximate heights ranging between 1 and 13 feet above the ground surface and footings and foundations between approximately 4 and 8 feet below ground surface.

Passive Barriers

Passive barriers and floodwalls would contain flood flows within the creek channel in the same way. However, passive barriers are designed to only be deployed during flood conditions. Passive barriers are used in place of floodwalls to maintain access to roads and open space during non-flooding conditions. Passive barriers can either be hinged or vertical; only hinged passive barriers would be used for the project. Hinged barriers include gates that rise as the water hydrostatic pressure increases and are passive automatic flood barrier systems that remain hidden below ground until flood conditions trigger deployment.

Passive barriers would automatically rise on the edge facing the creek flows as water infiltrates under the barrier and buoyant forces raise the barrier. The passive barriers would be secured and mounted on the land side at a hinge also buried underground. The passive barriers would be located between small supporting wiper walls between the floodwall and passive barriers. Wiper walls are typically made of aluminum and support the passive barrier to prevent flood water from leaking onto the landside. <u>Passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system directly within the footprint of or adjacent to the passive barriers, except for those located in Reach 4. The four passive barriers in Reach 4 would drain via small pipes to outfalls on the creek bank with riprap bank protection.</u>

Passive barriers would range between approximately 1 and 9.5 feet above the ground surface when deployed during flood conditions, would be approximately 8 and 11 feet wide, and would be buried up to approximately 5 feet below ground.

Charcot Avenue Bridge Reinforcement, Headwalls, and Wingwalls

The existing Charcot Avenue Bridge would be reinforced and headwalls and wingwalls would be constructed along the upstream and downstream surface of the bridge to contain flood flows. The headwalls would be constructed of reinforced concrete designed to be high enough to block flows in the creek from overtopping the bridge. The headwalls would be connected to wingwalls and then to floodwalls on either side of the bridge to form a continuous barrier to contain flood flows in the creek. Wingwalls are angular walls that would be constructed on either end of each of the headwalls. The replacement of the existing Bridge railing would retain the sidewalk on the upstream side of the Bridge. Bridge reinforcement would use carbon fiber reinforcement strips installed along the bridge deck (road on top of bridge) and on the soffit (underside surface) of the Bridge and parallel to the flow of water in Coyote Creek.

Berms

Berms would be constructed of low permeability fill from soil excavated during the construction of other flood risk reduction improvements. Berms are proposed at two locations. Berms would be located in areas where existing land use and space allow for maintaining access and provide enough area for the berm structure. Berms do not require excavation, but the top few inches of ground surface would be scraped when preparing the site for berm construction. Berm soil would be compacted, and the top surface and side slopes would be covered in erosion control material (e.g., coir). Berm side slopes would be graded to an approximately 1:3.5 slope where possible. Berms would be approximately 1 to 13 feet above the ground surface and approximately 3 to 24 feet wide at the top elevation.

Flap Gates

Flap gates would be installed within seven manhole vaults to prevent backflow from increases in water surface elevations as a result of the project. Flap gates would be installed in manhole vaults inland of existing outfalls along the creek and within the City's stormwater conveyance system. The flap gates would be installed on the end of the manhole vaults outflow pipes. There would be no need for heavy construction equipment for installation of the six flap gates within the existing manhole vaults. Hand tools and equipment would be lowered into the manhole vaults and workers would install the flap gates in the below ground vaults. One flap gate would require the construction of a new manhole vault that would require excavation of a 10-foot square area where the new manhole would be installed within an existing stormwater conveyance pipeline located inland of an existing outfall within the creek. The flap gate in the new manhole would be installed in the same manner as those for existing manhole vaults.

Project Construction

Construction is anticipated to commence in early 2025 and would last approximately 2 years. A total number of approximately 462 workdays is based on the anticipated work duration of approximately 22 months, 4 weeks per month, 5 workdays per week, and approximately 22 Saturdays. Up to three flood risk reduction improvements would be constructed at a time.

The duration of construction activities in each reach is estimated as follows.

- Reach 4 – Approximately 17 weeks
- Reach 6 – Approximately 32 weeks
- Reach 7 – Approximately 50 weeks
- Reach 8 – Approximately 15 weeks

Staging/laydown areas have been designated in locations that are paved and/or have been previously disturbed, or that are open with no trees and within short driving distances to nearby improvement sites. Staging/laydown areas would be temporary and used only during construction activities for construction office trailers, worker, and equipment parking, as an equipment maintenance yard, for equipment fueling, or for temporary storage of other construction materials. Staging/laydown areas would be cleared of vegetation and/or other debris before equipment would be mobilized to the site. Temporary construction areas have been identified as the space around each improvement site and site access route that may be used during construction activities and where ground disturbance could occur. To obtain access along designated site access routes, minor improvements may be required, such as tree trimming, and/or the demolition of light poles, signs, concrete curbs, and fences.

Construction activities would begin along each reach by mobilizing equipment and locating materials within the nearest staging/laydown area. Equipment and materials would be stored at the staging/laydown area and moved to each nearby improvement site for construction activities.

Project Operation and Maintenance Activities

Valley Water has the sole responsibility for maintaining the flood risk reduction improvements. Valley Water would obtain easements and access agreements where necessary for development and maintenance of flood risk reduction improvements. Property owners would be responsible for maintaining their property in a reasonably safe condition that does not interfere with Valley Water's ability to access or maintain the floodwalls.

Similar to current practice and consistent with 2019 – 2023 *Valley Water's Stream Maintenance Program Manual* (SMP Manual), maintenance activities would be conducted within Reaches 4 through 8 following project construction. These activities may include trash and debris removal, vegetation management (e.g., removing vegetation along maintenance roads), minor maintenance road repairs, management of wildlife conflicts, and graffiti removal. The newly installed flood risk reduction improvements would be visually inspected on a periodic basis (one to two times per year). If observed damage threatens the integrity of any structures, repairs would be completed to return them to the as-built design. In addition, event-driven inspections would take place during or immediately after a natural hazard such as a large storm event, flood, earthquake, or any other event having the potential to damage the project elements or create hazards for public safety.

After construction of the project, maintenance areas, which consist of a 10-foot area around each flood risk reduction improvement, would be maintained by Valley Water, as needed, to facilitate access to each improvement to conduct the maintenance activities discussed above in this section. Vegetation would be removed within these maintenance areas, as needed, to access the flood risk reduction improvements. Vegetation would be preserved if the improvement may be accessed for maintenance without vegetation removal.

Avoidance and Minimization Measures

Valley Water developed the *Best Management Practices Handbook* (Handbook) to provide general technical guidance and standardized procedures for all Valley Water projects. The Handbook contains a comprehensive list of standard best management practices (BMPs) that Valley Water incorporates into projects to avoid or minimize potential environmental impacts. Specific Water Valley BMPs incorporated into the project, including Stream Maintenance Program (SMP) BMPs as well as Handbook BMPs, are listed in Chapter 2, "Project Description."

Valley Water Monarch Butterfly and Crotch's Bumblebee Avoidance Plans

Valley Water prepared plans to meet the Federal Energy Regulatory Commission Order Compliance Project (FOCP) to specifically avoid impacts on two special status species:

monarch butterfly; and Crotch’s Bumblebee. Specific Water Valley avoidance measures are incorporated into the project as described in Chapter 2, "Project Description.”

Valley Habitat Plan Conditions, Avoidance and Minimization Measures, and Fees

The Valley Habitat Plan (VHP) is a joint Habitat Conservation Plan and Natural Communities Conservation Plan developed to serve as the basis for issuance of incidental take permits and authorizations pursuant to Section 10 of the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and Natural Community Conservation Plan Act. Valley Water is a permittee required to comply with the requirements for activities covered under the VHP. The VHP lists construction of flood protection projects and maintenance of roads associated with these kinds of project as one of many covered actions required to implement Avoidance and Minimization Measures (AMMs) and associated mitigation fees for permitees (i.e., Valley Water) to meet their legal obligations under the VHP. The project is a covered activity identified in the VHP. Valley Water will adhere to applicable VHP conditions, which will be based on the results of VHP biological surveys and VHP land cover field verification to be conducted, and all applicable VHP AMMs, including the aquatic habitat AMMs from the VHP throughout implementation of the project. These are also listed in Chapter 2, “Project Description.” Valley Water will also pay applicable VHP impact fees for project activities, including fees for effects on stream, wetland, and riparian habitats.

ES.5. Agency Roles and Responsibilities

Valley Water, as the CEQA lead agency, has the principal responsibility for approving and carrying out the project and for ensuring that CEQA requirements and all other applicable regulations are met. The following agencies are expected to use this EIR in their decision making for permits, approvals, and consultations:

- U.S Army Corps of Engineers
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- State Historic Preservation Office
- California Department of Fish and Wildlife
- San Francisco Bay Regional Water Quality Control Board
- California Department of Transportation
- City of San José
- Santa Clara Valley Habitat Agency

ES.6. Summary of Project Impacts and Mitigation Measures

CEQA Guidelines Section 15123(b)(1) requires that an EIR Executive Summary identify the project’s significant impacts and proposed mitigation measures. **Table ES.1** presents a summary of the project’s impacts and mitigation measures identified for the project in the EIR. A full description of each impact and mitigation measure is found in Chapter 3, “Environmental Setting and Impacts.” In addition, the project’s cumulative impacts and mitigation measures are evaluated in Chapter 4, “Other Statutory Considerations;” Significant cumulative impacts are identified for biological resources, cultural and tribal cultural resources, paleontological resources, hazards and hazardous materials, noise and vibration (significant and unavoidable), and transportation and traffic.

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Table ES.1. Summary of Impacts and Mitigation Measures

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.2 Aesthetics			
Impact AES-1: Substantially degrade the existing visual character or quality of public views of the site and its surroundings temporarily during construction	LTS	No mitigation required.	LTS
Impact AES-2: Substantially permanently degrade the existing visual character or quality of public views of the site and its surroundings from development of project elements	LTS	No mitigation required.	LTS
Impact AES-3: Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality	LTS	No mitigation required.	LTS
Impact AES-4: Introduce New Sources of Light and Glare	LTS	No mitigation required.	LTS
3.3 Air Quality			
AIR-1: Conflict with Applicable Air Quality Plan for Construction Activities	LTS	No mitigation required.	LTS
AIR-2: Result in Cumulatively Considered Net Increase of Any Criteria Pollutant from Construction Activities	LTS	No mitigation required.	LTS
AIR-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations	LTS	No mitigation required.	LTS
AIR-4: Other Construction Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	LTS	No mitigation required.	LTS
3.4 Biological Resources			
BIO-1: Substantial Adverse Effect on Special-status Plants	LTS	No mitigation required.	LTS
BIO-2: Substantial Adverse Effect on Monarch Butterfly	LTS	No mitigation required.	LTS
BIO-3: Substantial Adverse Effect on Crotch's Bumble Bee	LTS	No mitigation required.	LTS
BIO-4: Substantial Adverse Effect on Special-Status Fish, Critical Habitat, and Essential Fish Habitat	LTS	No mitigation required.	LTS
BIO-5: Substantial Adverse Effect on California Red-legged Frog and Northwestern Pond Turtle	LTS	No mitigation required.	LTS
BIO-6: Substantial Adverse Effect on Western Burrowing Owl	LTS	No mitigation required.	LTS
BIO-7: Substantial Adverse Effect on Other Protected Birds	LTS	No mitigation required.	LTS
BIO-8: Substantial Adverse Effect on Special-status Bats	S	Mitigation Measure BIO 8.1: Minimize Impacts on Special-status Bats	LTS
BIO-9: Substantial Adverse Effect on San Francisco Dusky-footed Woodrat	LTS	No mitigation required.	LTS

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
BIO-10: Substantial Adverse Effects on Riparian Habitat or Other Sensitive Natural Community	LTS	No mitigation required.	LTS
BIO-11: Substantial Adverse Effect on State or Federally Protected Aquatic Resources (Waters or Wetlands).	LTS	No mitigation required.	LTS
BIO-12: Substantial Interference with Fish or Wildlife Movement or Native Nursery Sites	LTS	No mitigation required.	LTS
BIO-13: Conflict with Local Policies and Ordinances Protecting Biological Resources	LTS	No mitigation required.	LTS
BIO-14: Conflict with an Adopted Habitat Conservation Plan	LTS	No mitigation required.	LTS
3.5 Cultural Resources and Tribal Cultural Resources			
CUL-1: Cause a Substantial Adverse Change in the Significance of a Built Environment Historical Resource listed or eligible for listing in the NRHP, CRHR, or a local register	LTS	No mitigation required.	LTS
CUL-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resource	S	Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided	LTS
CUL-3: Cause a Disturbance of Human Remains, including Remains Interred Outside of Dedicated Cemeteries	S	Mitigation Measure CUL 3.1: Avoid Disturbances of Human Remains, including Remains interred Outside of Dedicated Cemeteries Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided	LTS

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
CUL-4: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, as Defined in PRC Section 21074	S	Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided Mitigation Measure CUL 3.1: Avoid Disturbances of Human Remains, including Remains interred Outside of Dedicated Cemeteries	LTS
3.7 Geology, Soils and Seismicity			
GEO-1: Adverse Effects from Rupture of a Known Earthquake Fault, Seismic Ground Shaking, Liquefaction, Subsidence, Soil, Instability, Landslides, or Expansive Soils	LTS	No mitigation required.	LTS
GEO-2: Result in Substantial Erosion or Loss of Topsoil	LTS	No mitigation required.	LTS
GEO-3: Destruction of Unique Paleontological Resources during Construction	S	Mitigation Measure GEO 3.1: Prepare and Implement a Paleontological Mitigation and Monitoring Plan	LTS
3.8 Greenhouse Gas Emissions and Energy Use			
GHG/EN-1: Direct or Indirect Construction-Generated GHG Emissions that may have a Significant Effect on the Environment	LTS	No mitigation required.	LTS
GHG/EN-2: Conflict with any Applicable Plan, Policy, or Regulations of an Agency Adopted for the Purpose of Reducing GHG emissions	LTS	No mitigation required.	LTS
GHG/EN-3: Unnecessary, Wasteful, or Inefficient Consumption of Energy	LTS	No mitigation required.	LTS
GHG/EN-4: Conflict with an Applicable Plan to Improve Energy Efficiency or Promote Renewable Energy	LTS	No mitigation required.	LTS
3.9 Hazards and Hazardous Materials			
HAZ-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials	LTS	No mitigation required.	LTS
HAZ-2: 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	S	Mitigation Measure HAZ 2.1: Ensure Worker Safety in Areas with Elevated Concentrations of Lead Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan	LTS

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
HAZ-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials within 0.25 mile of Existing or Proposed Schools	S	Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan	LTS
HAZ-4: Be Located on a Site Which is included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5	S	Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan	LTS
HAZ-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	NI	No mitigation required.	NI
HAZ-6: Create a significant hazard to construction workers or the public through exposure to Valley Fever during Construction Activities	LTS	No mitigation required.	LTS
3.10 Hydrology and Water Quality			
HWQ-1: Violate any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality	LTS	No mitigation required.	LTS
HWQ-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such that the Project May Impede Sustainable Groundwater Management of the Basin	LTS	No mitigation required.	LTS
HWQ-3: 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 Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Offsite	LTS	No mitigation required.	LTS
HWQ-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Creates or Contributes Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff	LTS	No mitigation required.	LTS
HWQ-5: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Impedes or Redirects Flood Flows	LTS	No mitigation required.	LTS

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
HWQ-6: 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 Result in Substantial Erosion or Siltation On- or Offsite	LTS	No mitigation required.	LTS
HWQ-7: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	LTS	No mitigation required.	LTS
3.11 Land Use and Planning			
LUP-1: Cause a Significant Environmental Impact Not Analyzed Elsewhere in this EIR Due to a Conflict with any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect	LTS	No mitigation required.	LTS
3.12 Noise and Vibration			
NOI-1: Substantial Temporary Construction-Related Increase in Noise Levels in Excess of FTA and City of San José Standards	S	Mitigation Measure NOI 1.1: Develop and Implement a Construction Noise Control Plan Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving Mitigation Measure NOI 1.3: Use of Temporary Sound Barriers Mitigation Measure NOI 1.4: Establish Construction Noise Coordinator	SU
NOI-2: Generate Excessive Ground Vibration or Groundborne Noise Levels from Construction Activities	S	Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving Mitigation Measure NOI 2.1: Implement Alternative Construction Methods to Reduce Vibration Mitigation Measure NOI 2.2: Develop and Implement a Vibration Control Plan	LTS
NOI-3: Result in Long-Term Substantial Increases in Noise that Exceed FTA Noise Standards	LTS	No mitigation required.	LTS
3.13 Recreation			
REC-1: Increase in Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such that Substantial Physical Deterioration of the Facilities Would Occur or be Accelerated	LTS	No mitigation required.	LTS

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.14 Transportation and Traffic			
TR-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities	LTS	No mitigation required.	LTS
TR-2: Conflict with CEQA Guidelines Section 15064.3(b) during Construction	LTS	No mitigation required.	LTS
TR-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Use	LTS	No mitigation required.	LTS
TR-4: Result in Inadequate Emergency Access	S	Mitigation Measure TR 4.1: Implement a Traffic Safety Plan and Coordinate with Local Emergency Service Providers	LTS
3.15 Utilities and Service Systems			
UTL-1: Require or Result in the Relocation or Construction of Existing or New Utility Infrastructure Which Could Cause Significant Environmental Effects	LTS	No mitigation required.	LTS
UTL-2: Lack Sufficient Water Supplies to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years	LTS	No mitigation required.	LTS
UTL-3: Generate Solid Waste Potentially Exceeding Permitted Capacity of Local Landfills or Fail to Comply with Statutes and Regulations Related to Reducing Solid Waste	LTS	No mitigation required.	LTS

NI = No Impact
B = Beneficial LTS = Less than Significant
S = Significant PS = Potentially Significant
SU = Significant and Unavoidable

ES.7. Project Alternatives

Chapter 5, "Alternative," presents the alternatives analysis for the CCFPP. s It sets forth the objectives of the project, summarizes the project's significant environmental impacts, describes the range of alternatives considered, compares the impacts of the alternatives evaluated to the impacts of the project, and discusses the alternatives considered but eliminated from further analysis.

The CEQA Guidelines, Section 15126.6, state that an EIR must describe and evaluate a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives and avoid or substantially lessen any significant adverse effects of the project. An EIR is not required to consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The CEQA Guidelines further state that a "no project" alternative shall also be evaluated.

The EIR discusses several alternatives that were considered but eliminated from further analysis, including an Alternative with Replacement of Charcot Avenue Bridge, Alternative with Vegetative Berm at edge of William Street Park, Alternative with Berms Around Large Parcels of Land Upstream to Create Storage and Reduce Anderson Dam Peak Flows, and an Alternative with Floodwalls in Backyards of All Frequently Flooded Properties. These alternatives were eliminated from further analysis because either they were not substantially different from one of the considered alternatives, failed to meet most of the basic project objectives, would be infeasible to implement or operate, and/or would not avoid or lessen one or more significant environmental impacts.

The two alternatives that were considered in detail, the No Project Alternative and Alternative 1, are summarized below.

No Project Alternative

The CEQA Guidelines Section 15126.6(e) requires that EIRs include an evaluation of the No Project Alternative to provide decision-makers the information necessary to compare the relative impacts of approving the project and not approving the project. The No Project Alternative is defined as a continuation of existing conditions, as well as conditions that are reasonably expected to occur in the event that the proposed project is not approved and implemented.

Under the No Project Alternative, the CCFPP would not proceed, and existing environmental conditions and Valley Water operations would be maintained. Under the No Project Alternative, Valley Water would not construct the flood risk reduction improvements described in Chapter 2, "Project Description," along the various reaches of Coyote Creek. As a result, flooding within areas along Coyote Creek would occur in the future to some extent when flows reach levels equivalent to those of the 2017 flood event – a 20-year flood event. The No Project Alternative would fail to achieve all of the project objectives related to flood risk reduction, and the community would continue to experience flooding in the future.

However, the No Project Alternative would avoid all direct construction-related significant impacts, including significant and unavoidable adverse impacts, of the proposed project because no construction would occur, and the entirety of the project area would be unchanged by project construction. Although the No Project Alternative would result in fewer direct significant impacts, the No Project Alternative would not achieve the benefits of the project's reduction in flood risk or meet most of the project's objectives. Without the project and with the increasing threat of more frequent flooding from climate change, if a flood event occurred that would not have otherwise occurred with the project, there could be substantial indirect environmental and other impacts to the local area flooded.

Alternative 1 – Elevating or Acquiring Three Residential Properties Along Brookwood Avenue Instead of Constructing Floodwalls

Alternative 1 would include implementation of the project with the exception of the construction of a floodwall in Reach 7. Instead of constructing this floodwall, Alternative 1 would consists of Valley Water elevating or acquiring three properties located along Brookwood Avenue along the east bank of Coyote Creek in Reach 7. These properties are listed below:

- 311 Brookwood Avenue - elevate by 8 feet or demolish and restore,
- 315 Brookwood Avenue - elevate by 8 feet or demolish and restore, and
- 321 Brookwood Avenue - elevate by 7 feet or demolish and restore.

Alternative 1 would include implementing one of two scenarios: 1) raising the three properties above the 20-year flood elevation by 7 or 8 feet; or 2) acquiring the properties, demolishing the residences, and restoring riparian habitat on the sites.

~~This alternative would avoid the impacts of the project related to construction of the floodwalls on the three properties specified above, that would include accessing these properties via a temporary creek crossing that would require the construction of a cofferdam.~~ Under Alternative 1, the three properties would be accessed from Brookwood Avenue~~; therefore, the creek crossing, and cofferdam proposed for construction of the project would no longer be required.~~ Alternative 1 would reduce the amount of tree removal required along the ~~western~~ eastern bank of Coyote Creek because construction impacts would be limited to the residential properties, which have direct access from Brookwood Avenue. Although Alternative 1 would not require as much tree removal ~~and would not require creek crossing or use of a cofferdam,~~ similar construction-related impacts would occur in the same general project area.

Alternative 1 would be logistically and economically challenging due to the disruption of current residents, length of construction, real estate acquisitions, regulatory permitting beyond schedule limitations required to meet project objectives, and cost to acquire and maintain the three properties in perpetuity. However, Alternative 1 is potentially feasible and would achieve most of the project's objectives associated with reducing flood risk to homes, schools, businesses, and transportation. Alternative 1 would not meet the project's objective of "project completion before the ADSRP Stage 2 Diversion is in operation."

Overall, Alternative 1 would lessen ~~some project~~ impacts related to ~~water quality,~~ biological resources, and noise and vibration, although it would not avoid or substantially lessen any significant impacts compared to the project. Nevertheless, Alternative 1 is considered the environmentally superior alternative because it would reduce some project impacts related to ~~water quality,~~ biological resources, and noise and vibration. Alternative 1 does, however, have the disadvantages of increased costs and inability to meet the project's schedule objective.

ES.8. Areas of Known Controversy and Issues to be Resolved

Pursuant to CEQA Guidelines Sections 15123(b)(2) and (3), the EIR Executive Summary is required to include areas of controversy, including those raised by agencies and the public, and issues to be resolved. Based on comments made during the 30-day public review period in response to information published in the Notice of Preparation (NOP) and in scoping meeting public comments, areas of controversy were identified for the project regarding construction around parks and recreational facilities and impacts on biological resources.

Issues to be resolved include the choice among alternatives, and how to mitigate the project's significant environmental impacts.

ES.9. Public Review and Final EIR[2]

Valley Water has issued a Notice of Availability to provide agencies and the public with formal notification that the Draft EIR is available for review and comment. The Notice of Availability, Draft EIR and selected appendices are available at the following website: www.valleywater.org/public-review-documents. The Draft EIR and all appendices are also available for review at the following locations:

Santa Clara Valley Water District
5750 Almaden Expressway
San José, CA 95118-3686
(408) 630-3055

City of San José
200 E Santa Clara Street
San José, CA 95113

City of San José Library
East San José Carnegie Library
1102 E Santa Clara St, San José, CA 95116

The Draft EIR can be reviewed on any Valley Water business day between the hours of 7:30 a.m. and 5:00 p.m., Monday through Thursday, at the Valley Water Main Campus, located at 5750 Almaden Expressway, San José, CA 95118. Please contact Mr. Andrew Martin at (408) 630-2160 to arrange a date and time for review.

Valley Water is circulating this Draft EIR for a 45-day public review and comment period, and will host a public meeting during this period, to be announced in the Notice of Availability and on the project website.

Written comments concerning this Draft EIR should be mailed or emailed during this review period and should be directed to the name and address listed below. Please submit your written comments at the earliest possible date, but no later than 5:00 p.m. on August 26, 2024. A public

[2] No changes were made to this section as part of the Revised Draft EIR. Please refer to Chapter 1, "Introduction," of the Final EIR for further updated information on the EIR process.

meeting for the Draft EIR is scheduled for July 25, 2024, from 6:30 p.m. to 7:30 p.m. at the Roosevelt Community Center, located at 901 E. Santa Clara Street, San José.

Andrew Martin, Environmental Planner
Santa Clara Valley Water District
5750 Almaden Expressway
San José, CA 95118-3686
(408) 630-2160
CCFPPcomments@valleywater.org
Subject line: CCFPP Draft EIR Comments

All written comments received on the adequacy of this Draft EIR during the public review period will be addressed in a "response-to-comments" chapter in the Final EIR, which, together with the Draft EIR, will constitute the entirety of the Final EIR. The Final EIR will also present any changes to the Draft EIR resulting from public and agency comments, and Valley Water staff-initiated changes.

Prior to any decision on the project, the Valley Water Board of Directors (Board) will review the Final EIR and consider certifying the document at a regularly scheduled Board meeting. Upon EIR certification, Valley Water may proceed with project approval actions. Approval of the project would be preceded by written findings for each significant environmental effect identified in the EIR (CEQA Guidelines Section 15091), and if necessary, a statement of overriding considerations (CEQA Guidelines Section 15093). At the time that CEQA findings are adopted, the Board would also adopt a mitigation monitoring and reporting program for adopted mitigation measures.

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Chapter 1. Introduction[1]

The Santa Clara Valley Water District (Valley Water) has prepared this Draft Environmental Impact Report (EIR) to provide decision makers, the public, and responsible and trustee agencies with information about the environmental impacts of the Coyote Creek Flood Protection Project (CCFPP or project). This DEIR was prepared in compliance with the California Environmental Quality Act of 1970 (as amended) and the State California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations [CCR] title 14, Section (§) 15000 et seq.) (collectively CEQA).

1.1 Project Background

Coyote Creek originates in Henry Coe State Park and the surrounding hills in the Diablo Range Mountains. It flows approximately 62 miles north through the cities of Morgan Hill, San José, and Milpitas, and unincorporated areas of Santa Clara County, and discharges into the San Francisco Bay, as shown in **Figure 1.1**. Flows in Coyote Creek are primarily associated with rainfall events that cause direct runoff from the lower Coyote Creek watershed and releases from Anderson Dam in the upper watershed. Since 1852, more than 10 different flooding events have occurred along portions of Coyote Creek. The most recent flooding event was observed in February 2017 (Valley Water 2022).

1.1.1 Mid-Coyote Creek Project

In November 2000, voters approved the Clean, Safe Creeks and Natural Flood Protection Plan (Measure B), a 15-year special parcel tax that allocated funds for the Mid-Coyote Creek Project. The project entailed the development of flood risk reduction improvements along Coyote Creek in San José. The Mid-Coyote Creek Project aimed to provide 100-year flood risk reduction per Federal Emergency Management Agency standards for homes, schools, businesses, and highways along Coyote Creek from Montague Expressway to Interstate (I)-280. Valley Water completed studies and held public meetings to develop a range of alternatives for the Mid-Coyote Creek Project. Due to the cost of the project and limited available funding, Valley Water initiated the design for the downstream reaches between Montague Expressway and I-880; however, design work was subsequently paused due to uncertainty about the impacts of the planned Anderson Dam Seismic Retrofit Project (ADSRP) on Coyote Creek.

While the reauthorization of the 2012 Safe, Clean Water and Natural Flood Protection Program did not provide additional funding to the Mid-Coyote Creek Project, the remaining budget was carried forward into the 2012 program. However, in 2016, due to the lack of necessary funding and uncertainty of impacts from other Valley Water projects, the Valley Water Board of Directors (Board) paused planning for the Mid-Coyote Creek Project until fiscal year 2018-2019 to allow for the revision of alternatives.

[1] No changes were made to this Chapter as part of the Revised Draft EIR. Please refer to Chapter 1, “Introduction,” of the Final EIR for further updated information.

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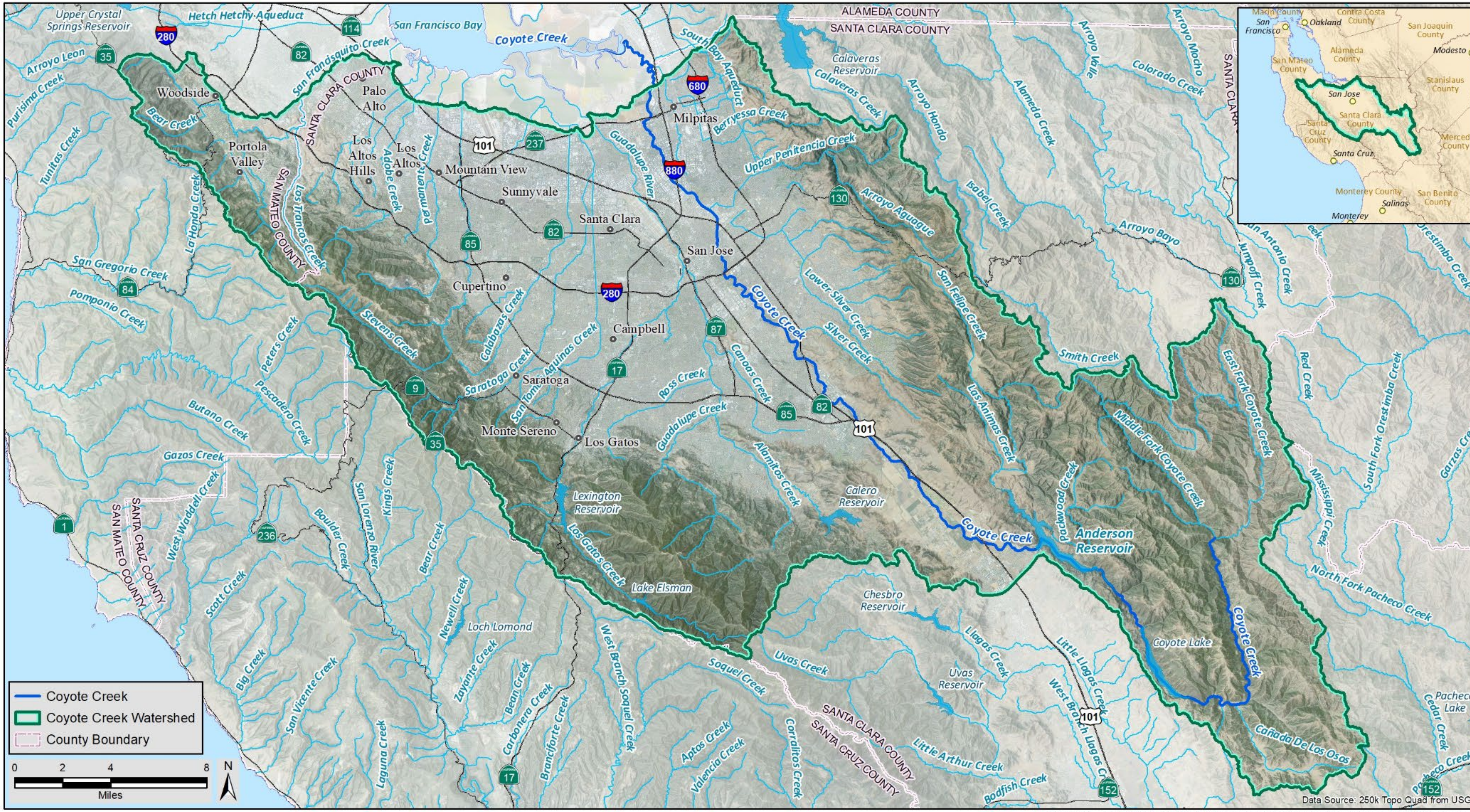

Figure 1.1 Coyote Creek and the Coyote Creek Watershed

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1.1.2 Coyote Creek Flood Protection Project

During the 2016 to 2017 winter season, storms caused significant flooding events and unprecedented reservoir spills throughout Santa Clara County, including Anderson Dam. On February 21, 2017, Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road, resulting in flooding that caused evacuations and property damage. During that flood event, Coyote Creek experienced the largest flows since the construction of Anderson Dam in 1950. In response to the flooding, the Board accelerated the Mid-Coyote Creek Project, modified project goals, and revised the proposed level of flood risk reduction from a 100-year flood to the February 2017 flood event, which is equivalent to an approximate 20-year flood event. The Board also renamed the Mid-Coyote Creek Project to the CCFPP, extended the project site upstream to Tully Road, and directed staff to move forward with the planning, design, and construction of the project.

Federal Energy Regulatory Commission Order Compliance Project

In February 2020, pursuant to the Federal Energy Regulatory Commission's (FERC's) jurisdiction over Anderson Dam, and for public health and safety reasons, Valley Water received an order from FERC to start lowering Anderson Reservoir to deadpool (the lowest attainable level in the reservoir using the outlet works), and to further reduce risks to public safety by implementing certain risk reduction measures for dam operation and design. As a part of the FOCP, it was determined that approximately 40 percent of the original CCFPP was necessary to be designed and constructed under the FOCP to support the construction of the Anderson Dam Tunnel Project to prevent flooding within urbanized areas of the City of San José associated with increased water releases from the tunnel.

These prioritized elements of the CCFPP are now a separate and independent project under the FOCP referred to as the Coyote Creek Flood Management Measures Project (CCFMMP). The CCFMMP consists of seven spans of floodwalls outside of the Coyote Creek channel, totaling approximately 8,654 linear feet, which are located along Reaches 5 to 7 of Coyote Creek between Old Oakland Road to I-280, as shown in **Figure 1.2**. The CCFMMP is statutorily exempt from CEQA pursuant to CEQA Guidelines Section 15269(c) because it was deemed as an emergency project being carried out under the FOCP to reduce the risk of flooding associated with earthquake-induced dam failure.[2]

Revised Coyote Creek Flood Protection Project

The remaining approximately 60 percent of the original CCFPP will continue to be implemented as the revised CCFPP. The CCFPP is proposed along Reaches 4, 5, 6, 7, and 8 as shown in Figure 1.2 and described in Chapter 2, "Project Description." Implementation of CCFMMP has been considered in the design of CCFPP. Although the CCFMMP and CCFPP are independent, implementation of CCFMMP has been considered in the design of CCFPP, and collectively, both projects provide risk reduction between Montague Expressway to Tully Road up to the flood levels that occurred in February 2017, equivalent to an approximate 20-year event (i.e., 5 percent flood).

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[2] Notice of Exemption filed July 28, 2020 (State Clearinghouse Number 2020070520).

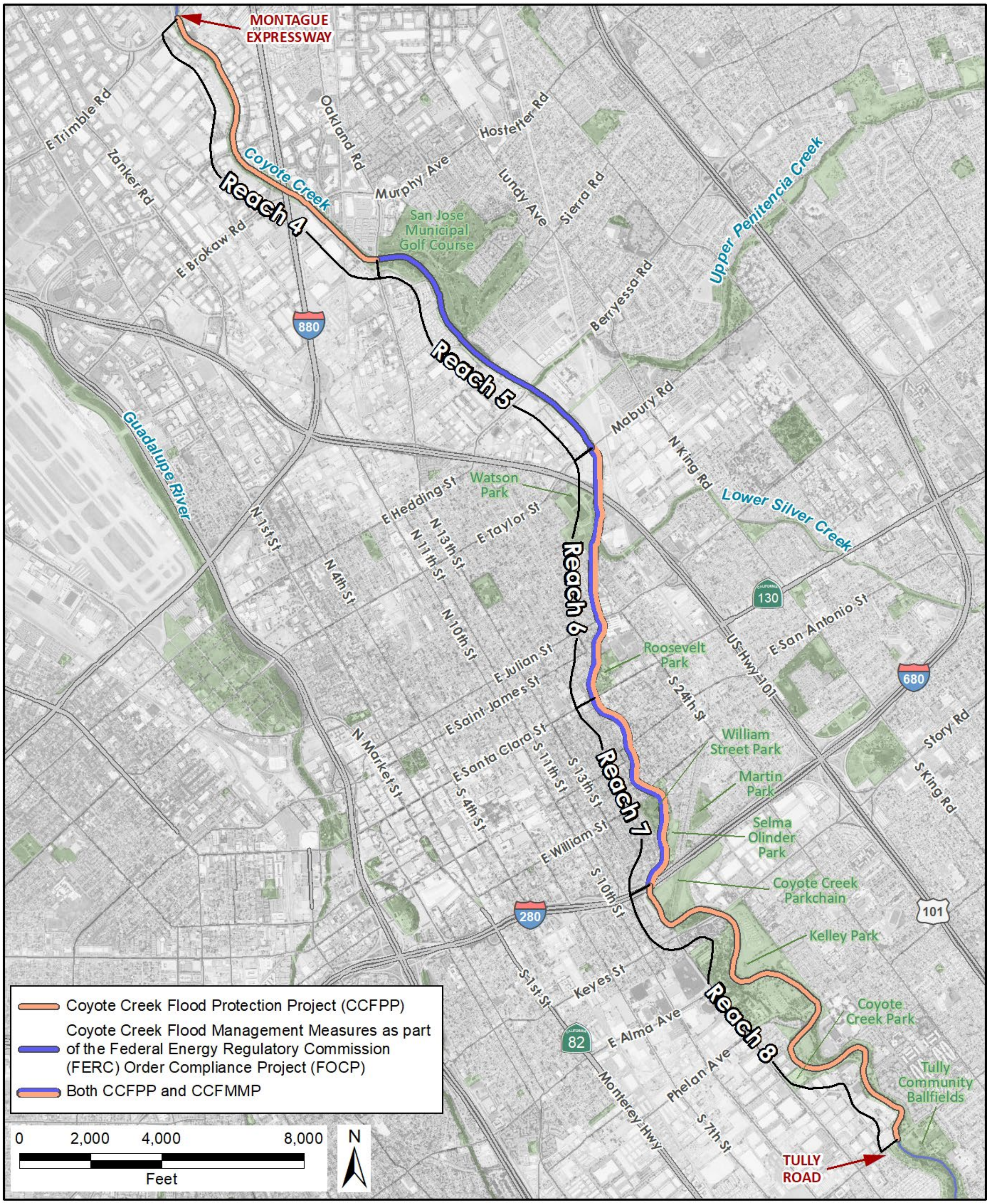

Figure 1.2. Coyote Creek Flood Protection Project and Coyote Creek Flood Management Measures Project Reach Locations

Valley Water has prepared the EIR for the CCFPP in compliance with CEQA to evaluate environmental effects of the CCFPP including design, construction, and maintenance of the project. This EIR evaluates the direct, indirect, and cumulative impacts of the project, identifies mitigation measures that are feasible to lessen or avoid significant impacts, and identifies alternatives that may lessen one or more significant impacts of the project.

1.1.3 Stakeholder Outreach

In June 2019, Valley Water initiated monthly coordination meetings with the City of San José Parks and Recreation Department to coordinate potential project alternatives with the City of San José Coyote Creek Trail Master Plan. A Coyote Creek Flood Risk Reduction Ad Hoc Committee (a Valley Water Board of Directors committee) meeting and a series of public meetings were held during 2019 to inform the Board as well as residents, business owners, and stakeholders about the progress of the CCFPP and to solicit input from them. This series of meetings was focused on informing the public about the problem definition component of the planning phase of the CCFPP, and to provide them an overview of the early conceptual alternatives to reduce the risk of flooding to the community. Since then, additional public meetings/open houses have been conducted by Valley Water for the different project reaches to update residents and local advocacy groups on the project design and obtain input on design details, including:

- A January 2020 meeting with the San Jose Parks Advocates focused on the proposed alternatives for Watson, William Street, Selma Olinder, Coyote Meadows, and Rocksprings parks,
- A series of virtual meetings held in June 2020 to present the preferred project alternatives to the public and stakeholders,
- A July 2021 meeting to update residents on the progress and next steps for the CCFPP and CCFMMP,
- Meetings held in October 2021, in partnership with the City of San José's Parks, Recreation and Neighborhood Services Department, to receive neighborhood input on the proposed flood protection elements located in the City's parks,
- A February 2022 meeting to provide updates on the design details and anticipated timelines for the CCFPP and CCFMMP, and
- Open house events held in May 2022 to provide information and updated timelines for the CCFPP and CCFMMP.

Stakeholder input has been carefully considered in designing the project, such as in selecting the location and alignment of floodwalls and using passible/passive barriers instead of floodwalls when advantageous.

1.2 Project Relationship to Other District Activities

The project is one of several projects that Valley Water is either planning or implementing within the Coyote Creek watershed. Coyote Creek flows into Anderson Reservoir, and releases from Anderson Dam, flowing into Coyote Creek and towards the San Francisco Bay. Currently, Anderson Dam is being retrofitted under the ADSRP. The ADSRP would benefit Valley Water's regional water supply by improving groundwater infiltration, providing additional public safety, and enhancing the natural environment along Coyote Creek. Before the ADSRP can begin, the Anderson Dam Tunnel Project (ADTP), being constructed as part of the FOCP, must be completed. The ADTP includes the creation of a new 24-foot diameter tunnel that will allow Valley Water to release and manage larger flows than the capacity of the existing outlet structure from Anderson Reservoir to maintain desired water levels in the reservoir. The ADTP is anticipated to be completed by end of 2024.

To reduce the risk of flooding downstream of Anderson Dam from the increased flows generated in Coyote Creek by the ADTP, the CCFMMP was expedited. Coyote Creek Reach 5 and sections of Reaches 6 and 7 are within the CCFMMP flood risk reduction improvements, as shown in Figure 1.2. Construction of the CCFMMP commenced in early 2023. As of the date of this Draft EIR, construction of the CCFMMP is ongoing and is anticipated to be complete by the end of 2024. The remaining flood risk reduction improvements under the CCFPP within Reaches 4, 5, 6, 7, and 8 would be completed in 2026, after the scheduled completion of the ADTP.

1.3 Overview of CEQA Requirements

CEQA is the cornerstone of environmental law and policy in California. CEQA's primary objectives (CEQA Guidelines Section 15002) are to:

- ensure that the significant environmental effects of proposed activities are disclosed to decision-makers and the public;
- identify ways to avoid or reduce environmental damage; prevent environmental damage by requiring implementation of feasible alternatives; and avoid, minimize, reduce, and/or compensate for environmental impacts through implementation of mitigation measures;
- disclose the reasons for agency approval of projects with significant environmental effects;
- foster multidisciplinary interagency coordination in the review of projects; and,
- allow for public participation in the planning process.

With certain limited exceptions, CEQA requires all state and local government agencies to consider the environmental impacts of projects over which they have discretionary authority before taking action on those projects. It establishes both procedural and substantive requirements that agencies must satisfy to meet CEQA's objectives. For example, if the CEQA lead agency determines that a proposed project could result in significant environmental impacts, CEQA requires that the agency prepare an EIR analyzing both the proposed project and a reasonable range of feasible alternatives.

As described in Section 15121(a) of the CEQA Guidelines, an EIR is a public information document that assesses environmental effects of a proposed project and identifies mitigation measures and alternatives to the project that could reduce or avoid adverse environmental impacts. Other key CEQA procedural requirements include developing a plan for mitigation measure reporting and monitoring and accomplishing specific noticing and distribution steps to facilitate public involvement in the environmental review process.

The EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project. Valley Water is the EIR lead agency under CEQA because it is the public agency proposing to approve and execute the proposed project.

1.4 Intended Uses of the EIR

As described in the CEQA Guidelines (14 CCR Section 15121[a]), an EIR is a public information document that assesses environmental effects of a proposed project, as well as identifies mitigation measures and alternatives to the project that could reduce or avoid significant environmental impacts (CEQA Guidelines Section 15121[a]). The intent of this Draft EIR is to evaluate in detail all the actions proposed to take place under the project. The analysis in the Draft EIR has been prepared at a "project level" pursuant to the State CEQA Guidelines Section 15161. Accordingly, this Draft EIR focuses on changes in the environment that could result during all phases of the project, including planning, construction, operation, and maintenance.

The EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project. The information contained in this Draft EIR and the administrative record will be reviewed and considered by the Board prior to making a decision to approve, disapprove, or modify the project. In addition, the Draft EIR will also be used by responsible agencies for the purpose of deciding whether and how to approve the project within their jurisdictional authorities and responsibilities. Responsible agencies are state or local agencies other than the lead agency which have some discretionary approval authority over the project. Responsible agencies for the CCFPP include the Regional Water Quality Control Board, California Department of Fish and Wildlife, Caltrans, and the City of San José. More information about permits, approvals, and consultations is provided in Chapter 2, "Project Description."

1.5 CEQA Scoping Process

"Scoping" refers to the public outreach process used under CEQA to determine the scope and content of an EIR. The scoping comment period offers an important opportunity for public review and comment in the early phases of a project.

1.5.1 Notice of Preparation and Scoping Comments

The scoping process for an EIR begins with publication of the Notice of Preparation (NOP) as required by CEQA. The NOP provides formal notice to the public and to interested agencies and organizations that a Draft EIR is being prepared. During the scoping period, agencies and the public are invited to offer comments on the approach to environmental analysis and identify any issues of concern.

In accordance with CEQA Guidelines Section 15082(a), Valley Water circulated an NOP for the proposed project on November 22, 2023. The NOP was posted on Valley Water's website; filed with the Governor's Office of Planning and Research State Clearinghouse and the Santa Clara County Clerk's Office; and circulated to the public; responsible, trustee, and other relevant local, state, and federal agencies; and other interested parties.

Valley Water held an informational public scoping meeting on December 6, 2023, in the Franklin McKinley School District Boardroom, located at 645 Wool Creek Drive, San José. To solicit attendance, Valley Water published advertisements in several local newspapers and mailed notices to owners and occupants of properties in the project vicinity, as well as interested parties who had signed up to receive project-related information at previous public meetings conducted during the project's planning phase. A scoping report, which includes the NOP and comments received in response to the NOP and at the scoping meeting, is included in this Draft EIR as **Appendix A**. Valley Water considered comments received on the NOP when preparing this Draft EIR.

1.5.2 Tribal Consultation

Assembly Bill (AB) 52, passed in 2014, requires formal consultation with Native American Tribes during the CEQA process for projects that have an NOP filed on or after July 1, 2015. Project notification letters were sent to Tribal representatives of the Muwekma Ohlone Indian and Tamien Nation Tribes on November 6, 2023, consistent with AB 52 and CEQA requirements.

1.5.3 Draft Environmental Impact Report Comment Period[3]

Valley Water has issued a Notice of Availability to provide agencies and the public with formal notification that the Draft EIR is available for review and comment. The Notice of Availability, Draft EIR and selected appendices are available at the following website: www.valleywater.org/public-review-documents. The Draft EIR and all appendices are also available for review at the following locations:

Santa Clara Valley Water District
5750 Almaden Expressway
San José, CA 95118-3686
(408) 630-3055

City of San José
200 E Santa Clara Street
San José, CA 95113

City of San José Library
East San Jose Carnegie Library
1102 E Santa Clara St, San Jose, CA 95116

The Draft EIR can be reviewed on any Valley Water business day between the hours of 7:30 a.m. and 5:00 p.m., Monday through Thursday, at the Valley Water Main Campus, located at 5750 Almaden Expressway, San José, CA 95118. Please contact Mr. Andrew Martin at (408) 630-2160 to arrange a date and time for review.

Valley Water is circulating this Draft EIR for a 45-day public review and comment period and will host a public meeting during this period, to be announced in the Notice of Availability and on the project website. The purpose of public circulation is to provide agencies, stakeholders, and interested individuals with opportunities to comment on the contents of the Draft EIR.

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[3] No changes were made to this section as part of the Revised Draft EIR. Please refer to Chapter 1, "Introduction," of the Final EIR for further updated information on the EIR process.

Written comments concerning this Draft EIR should be mailed or emailed during this review period and should be directed to the name and address listed below. Please submit your written comments at the earliest possible date, but no later than 5:00 p.m. on August 26, 2024. A public meeting for the Draft EIR is scheduled for July 25, 2024, from 6:30 p.m. to 7:30 p.m. at the Roosevelt Community Center, located at 901 E. Santa Clara Street, San José.

Andrew Martin, Environmental Planner
Santa Clara Valley Water District
5750 Almaden Expressway
San José, CA 95118-3686
(408) 630-2160
CCFPPcomments@valleywater.org
Subject line: CCFPP Draft EIR Comments

1.5.4 Preparation of Final Environmental Impact Report

All written comments received on the adequacy of this Draft EIR during the public review period will be addressed in a "response-to-comments" chapter in the Final EIR, which, together with the Draft EIR, will constitute the entirety of the Final EIR. The response-to-comments and Final EIR will also present any changes to the Draft EIR resulting from public and agency comments, and Valley Water staff-initiated changes.

Prior to any decision on the project, the Board will review the Final EIR and consider certifying the document at a regularly scheduled Board meeting. Upon EIR certification, Valley Water may proceed with project approval actions. Approval of the project would be preceded by written findings for each significant environmental effect identified in the EIR (CEQA Guidelines Section 15091), and if necessary, a statement of overriding considerations (CEQA Guidelines Section 15093). At the time that CEQA findings are adopted, the Valley Water Board would also adopt a mitigation monitoring and reporting program for adopted mitigation measures.

1.6 Organization of this Draft EIR

This Draft EIR contains the following components:

Executive Summary. Summaries of the project, project alternatives, environmental impacts, and mitigation measures are provided in this chapter.

Chapter 1, Introduction. This chapter describes the project background, EIR purpose and organization, and EIR preparation and review process.

Chapter 2, Project Description. This chapter describes the project, including a brief description of the project's location, purpose, objectives, project components, and project construction and maintenance activities.

Chapter 3, Regulatory and Environmental Setting and Impact Analysis. Chapter 3 includes 15 sections that describe existing regulatory and environmental conditions and the proposed project's anticipated environmental impacts. The introduction to Chapter 3 (Section 3.1) also discusses certain project impacts that were eliminated from further analysis.

The following resource topics are analyzed in Chapter 3:

3.2 – Aesthetics
3.3 – Air Quality
3.4 – Biological Resources
3.5 – Cultural Resources and Tribal Cultural Resources
3.6 – Geology, Soils, and Seismicity
3.7 – Greenhouse Gas Emissions and Energy
3.8 – Hazards and Hazardous Materials
3.9 – Hydrology and Water Quality
3.10 – Land Use and Planning
3.11 – Noise and Vibration
3.12 – Recreation
3.13 – Transportation
3.14 – Utilities and Service Systems

These resource sections identify feasible mitigation measures to address impacts determined to be significant. This chapter also addresses the project's potential to contribute to cumulative impacts at the end of each resource section.

Chapter 4, Other Statutory Requirements. Chapter 4 describes the project's potential to induce growth and identifies irreversible environmental changes and significant unavoidable impacts resulting from the project and analyzes cumulative impacts.

Chapter 5, Alternatives. This chapter describes the process through which alternatives to the project were developed and screened, describes the alternatives selected for detailed evaluation, evaluates their likely environmental impacts, and identifies the environmentally superior alternative.

Chapter 6, Report Preparation. This is a list of the individuals involved in preparing the EIR and their responsibilities.

Chapter 7, References. This is a list of the references cited throughout the EIR organized by appearance in associated chapters and sections.

Appendices. The appendices to the EIR provide additional, often more technical or specialized information about various environmental topics discussed in the EIR.

1.7 EIR Terminology

This Draft EIR uses the following defined standard terms:

- **CCFPP or project** – refers to the revised Coyote Creek Flood Protection Project (which excludes elements removed and separated into the CCFMMP).
- **flood risk reduction improvements (or improvements)** – refers collectively to the floodwalls, passive barriers, berms, flap gates, and Charcot Avenue Bridge improvements proposed by the project to reduce flood risk to surrounding areas.
- **project area** – generally refers to the collective site of all improvements, construction activities, and maintenance activities proposed for the project along Coyote Creek Reaches 4 through 8.

- **project vicinity** – generally refers to the area nearby the project area.
- **improvement site(s)** – refers to a site(s) where a specific improvement or improvements are located, constructed, and maintained; a more defined area than the entire project site.

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Chapter 2. Project Description

The Santa Clara Valley Water District (Valley Water) is proposing to develop, construct, and maintain the Coyote Creek Flood Protection Project (CCFPP or project) to implement a series of flood risk reduction improvements (improvements) to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek in the City of San José (City). This chapter describes the project location, objectives, flood risk reduction improvements, construction activities, operation and maintenance activities, avoidance and minimization measures, and permits and other approvals.

2.1 Project Location

2.1.1 Project Area

Valley Water is proposing the CCFPP along Reaches 4 through 8 of Coyote Creek from the downstream face of the Montague Expressway bridge to the upstream face of the Tully Road bridge in the City of San José, Santa Clara County, California (**Figure 2.1**). Coyote Creek flows from south to north through the project area. Anderson Reservoir is located approximately 15 miles upstream and south of Reaches 4 through 8. Within Reaches 4 through 8, two main tributaries drain into Coyote Creek – Upper Penitencia Creek and Lower Silver Creek. Coyote Creek flows into the South San Francisco Bay approximately 5 miles downstream and north of Reaches 4 through 8. The Coyote Creek channel within Reaches 4 through 8 is typically defined by a riparian corridor surrounded by densely developed urban land uses. Parks and open spaces adjacent to Coyote Creek within the extent of the project area include the Coyote Creek Parkway, Watson Park, Roosevelt Park, William Street Park, Selma Olinder Park, Coyote Meadows, Rocksprings Park, and Kelley Park. Major roads and highways within the project area include U.S. Highway 101, Interstate (I)-280 and I-880.

2.1.2 Coyote Creek Reaches

The proposed flood risk reduction improvements are located between Montague Expressway and Tully Road, as shown in **Figure 2.2**, with Reach 4 at the northern end of the project area (downstream) and Reach 8 at the southern end of the project area (upstream). Linear flood risk reduction improvements are proposed along all Reaches 4, 6, 7, and 8. Flap gates would also be installed within manhole valves along Reaches 4, 5, 6, and 8 to prevent backflow of flood waters. Each of the five Coyote Creek project reaches are described below.

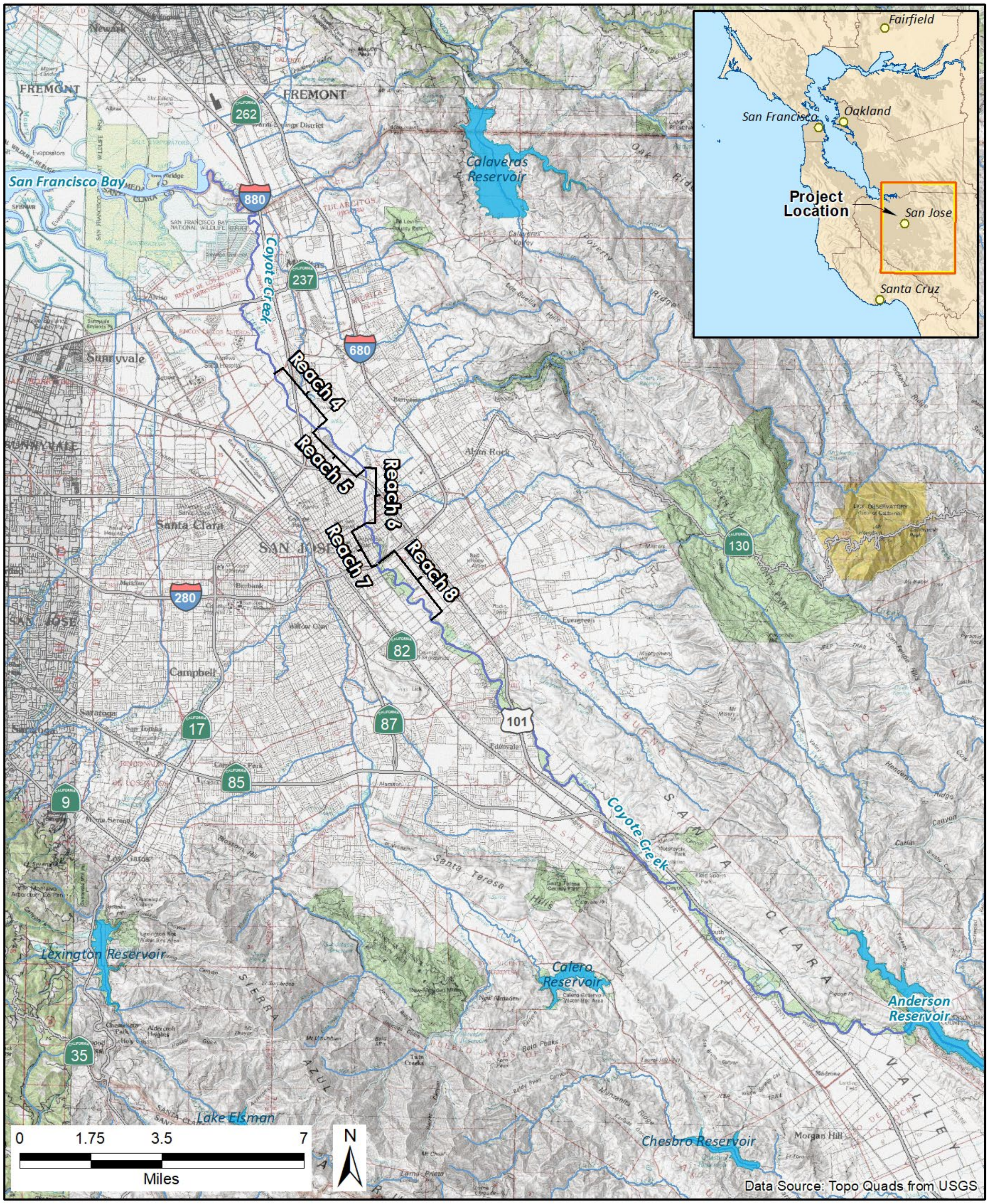
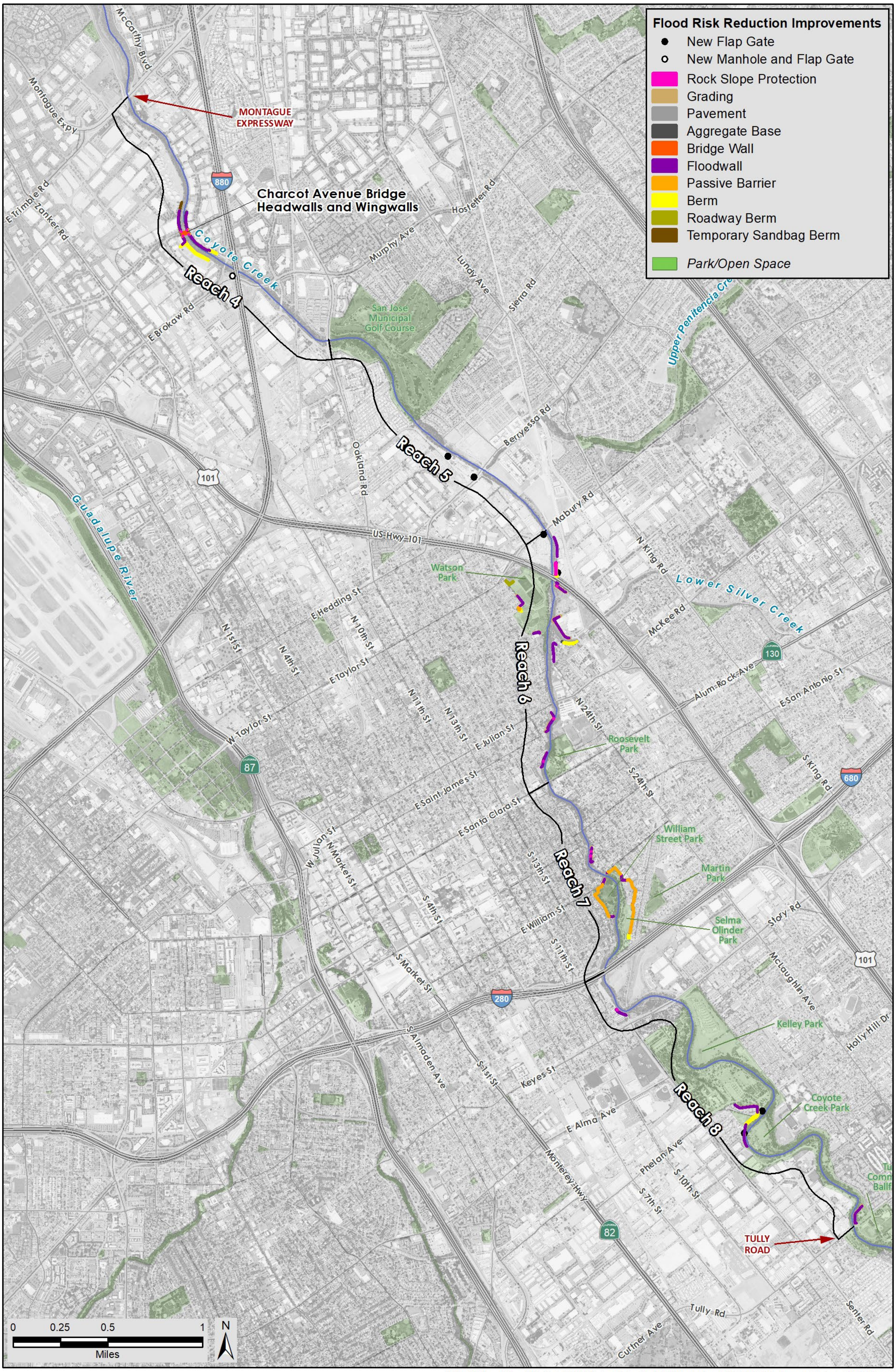


Figure 2.1. Regional Project Location

Flood Risk Reduction Improvements
New Flap Gate
New Manhole and Flap Gate
Bridge Headwall
Bridge Wingwall
Floodwall
Passive Barrier
Berm
Temporary Sandbag Berm
Park/Open Space
MONTAGUE EXPRESSWAY
Charcot Avenue Bridge Headwalls and Wingwalls
Coyote Creek
Reach 4
Reach 5
Reach 7
San Jose Municipal Golf Course
Watson Park
Roosevelt Park
William Street Park
Martin Park
Selma Olinder Park
Kelley Park
Coyote Creek Park
Guadalupe River
Upper Penitencia Creek
Lower Silver Creek
0 0.25 0.5 1
Miles
N



18Nov2024 RS Z:\Projects\2004818_CoyoteCr_FloodCntrl_Protection_Prj\CCFPP_EIR_ProposedProject_20241118.mxd

Figure 2.2 Proposed Flood Risk Reduction Improvements

Reach 4 – Montague Expressway to Old Oakland Road

Reach 4 is approximately 1.9 miles along Coyote Creek (see Figure 2.2). This reach supports a riparian corridor. Adjacent land uses include industrial and commercial uses. I-880 crosses the creek channel in the southern part of the reach. The top of the creek banks support levees/berms. Maintenance access roads extend along the top of the levees/berms on both sides of the creek.

Reach 5 – Oakland Road to Mabury Road

Reach 5 is approximately 1.6 miles along Coyote Creek (see Figure 2.2) and extends from Oakland Road to Mabury Road. This reach of Coyote Creek is narrow and supports a small riparian corridor that is closely surrounded by open space, residential, commercial and industrial land uses. The San Jose Municipal Golf Course surrounds the northern third of this reach on the right bank (east side) of the Creek.

Reach 6 – Mabury Road to Santa Clara Street

Reach 6 is approximately 1.9 miles along Coyote Creek (see Figure 2.2). Highway 101 crosses the creek channel in the northern part of this reach. This reach supports a riparian corridor. Adjacent land uses to the north/downstream of Highway 101 consist primarily of industrial and commercial uses. Land uses to the south/downstream of Highway 101 consist primarily of residential and recreational uses. The City's Watson Park is located immediately west of Coyote Creek in this reach. Lower Silver Creek flows into Coyote Creek along the west bank, opposite of Watson Park. Roosevelt Park is located along the east bank further south/upstream along Reach 6.

Reach 7 – East Santa Clara Street to I-280

Reach 7 is approximately 1.2 miles along Coyote Creek (see Figure 2.2). This reach supports a riparian corridor with parks adjacent to the creek near I-280 at the south end of the reach. Adjacent land uses consist primarily of residential and recreational uses. The channel in the southern part of this reach, immediately north of I-280, extends through an area of parks and then residences further to the north. In this area, William Street Park is located along the west bank of Coyote Creek and Selma Olinder Park is located along the east bank. The Coyote Creek Trail extends along the east bank of Coyote Creek through William Street Park and Selma Olinder Park.

Reach 8 – I-280 to Tully Road

Reach 8 is approximately 2.8 miles along Coyote Creek (see Figure 2.2). This reach supports a riparian corridor, and the adjacent land uses is open space for much of this reach. Kelly Park is located along the creek on both banks to the south of Story Road until Bevin Book Drive. The Coyote Creek Trail extends along the east bank from I-280 to near the southern end of Kelly Park. A mix of residential, industrial, and commercial land uses are located along the west bank of Coyote Creek. Residential land uses are also adjacent to the east bank near Tully Road.

2.2 Project Objectives

The underlying purpose of the project is to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek. The primary objective of the project is to reduce the risk of flooding to homes, schools, businesses, and transportation infrastructure along Coyote Creek between Montague Expressway and Tully Road (Reaches 4 through 8) from a flood event equivalent to the February 21, 2017, flood – approximately a 20-year flood event (a flood with a 5 percent chance of occurring in any year).

Additional project objectives are to:

- complete the project before the Anderson Dam Seismic Retrofit Project (ADSRP) Stage 2 Diversion is in operation (estimated in 2028);
- design the project to prevent increases in erosion and degradation of Coyote Creek;
- maintain access and minimize impacts to existing and planned recreation facilities; and,
- minimize the need for future operations and maintenance activities.

2.3 Project Elements

Valley Water used hydrologic modeling and data analysis to identify locations where flood waters would be expected to overtop Coyote Creek, expanding beyond the creek channel into adjacent land uses. This hydrologic analysis was used to identify sites where flood risk reduction improvements would be required to contain flows in the channel and reduce flood risks to adjacent areas from a 20-year flood event, described previously, and from future 100-year flood flow releases after the ADSRP is complete. The hydrologic analysis identified the water surface elevation[1] that needs to be contained at each site.

The project improvements were identified to contain flood flows from a 20-year flood event, contain flood flows from a potential future 100-year flood event after completion of ADSRP, and provide additional freeboard in compliance with Valley Water's freeboard standards.[2] The projected future (post-ADSRP) 100-year flood event water surface elevations were generally lower and incorporated 3 feet of freeboard, and the 20-year flood event (equivalent to the February 21, 2017 flood) flows were generally high and incorporated 1-foot of freeboard.

Flood risk reduction improvements identified for the project primarily consists of floodwalls, passive barriers, and berms that would be constructed along and adjacent to Coyote Creek. These improvements are introduced in **Figure 2.3**. The projects also include constructing headwalls and wingwalls along the Charcot Avenue Bridge crossing over the Coyote Creek channel and reinforcing the bridge structure. In total, the project includes constructing approximately ~~17,006~~ 17,060 feet of improvements along the 9-mile stretch of Coyote Creek from Montague Expressway to Tully Road.

[1] Water surface elevation refers to the elevation at the top of the water surface during a specific flow or flood event.

[2] Freeboard is additional distance from the top of the water line (or water surface elevation) to the top of the height of the flood risk reduction improvement (i.e., floodwall, passive barrier, or berm). Valley Water's freeboard standard, which is used for the proposed project, is the higher of 1 foot freeboard on the 20-year flood event water surface elevation or 3 feet freeboard on the potential future 100-year flood event water surface elevation.

Floodwalls	Passive Barriers	Berms
		
▪ Permanent vertical walls extending above the ground surface to contain flood flows from Coyote Creek ▪ Sheet pile (shown above) or concrete floodwalls; sheet pile may or may not be encased in concrete ▪ Reinforced concrete foundations where space is available, or pressed in sheet-piles (extending below ground) where space is limited ▪ Above ground wall widths ranging from 2.5 to 3 feet ▪ Heights ranging from 1 to 13 feet above the ground surface	▪ Metal walls that automatically rise from the ground during flood events to contain flood flows from Coyote Creek ▪ Temporarily raised when deployed during flood event ▪ Embedded in the ground when not deployed, providing a level surface for other uses (e.g., roadways) ▪ Heights ranging from 5 to 9.5 feet above the ground surface, when deployed ▪ Buried widths between 8 and 11 feet ▪ Extend up to 5 feet below the ground surface	▪ Permanent compacted mounds of land extending above the ground surface to contain flood flows from Coyote Creek ▪ Above ground berm widths ranging from 3 to 24 feet at the top of the berm ▪ Heights ranging from 1 to 13 feet

Figure 2.3. Summary of Proposed Floodwalls, Passive Barriers, and Berms

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The following improvements would be constructed:

- Approximately ~~10,399~~ 13,703 feet of floodwalls and passive barriers
- ~~Approximately 3,549 feet of passive barriers~~
- Approximately ~~352~~ 355 feet of headwalls and wingwalls
- Approximately ~~2,706~~ 3,002 feet of berms

In addition to the flood risk reduction improvements above, Valley Water, in coordination with the City, has identified a need to prevent backflow of water during flood events from entering the City's stormwater conveyance system through existing outfalls within the creek, which has historically resulted in localized flooding due to stormwater system overflows. The project would install flap gates within seven manholes located inland of the existing outfalls, including six existing manhole vaults and one newly constructed manhole vault. In addition, an approximately 240-foot-long temporary berm made of sandbags would be installed in one location in Reach 4 during the 4-year period when the ~~ADTP~~ ADSRP is under construction.

Valley Water would acquire temporary easements for construction, as well as permanent easements and/or fee titles for operations and maintenance within limited areas along and surrounding project elements. The remainder of this section discusses the design, characteristics, and location of the proposed flood risk reduction improvements.

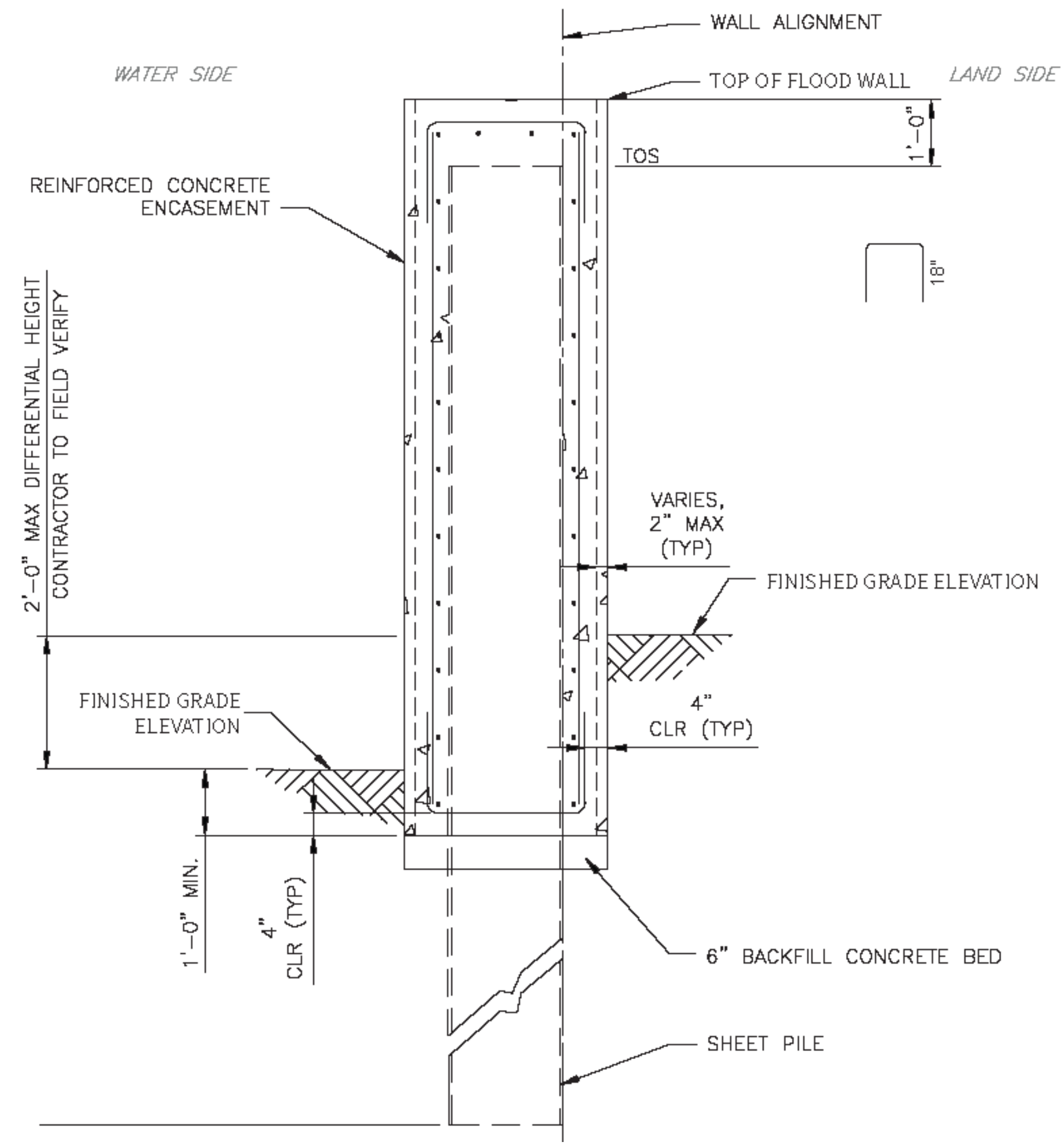
2.3.1 Flood Risk Reduction Improvement Design Characteristics

Floodwalls

Three general floodwall design types – I-Walls, T-Walls, and L-Walls – would be used for the project. I-Walls are sheet piles driven or pressed into the ground. T-Walls and L-Walls are made of reinforced concrete and include a reinforced concrete foundation. The selection of a floodwall design depends on the space available at the improvement site and construction constraints. The foundation of a T-Wall extends outward on both sides of the floodwall and can be used where there are no space restrictions for excavation. The foundation of an L-Wall is on one side of the floodwall and requires less space for excavation than a T-Wall. I-Walls are used where there is limited or no space for excavation. Aesthetic treatments may be applied to concrete floodwalls and concrete casings around sheet pile floodwalls. Aesthetic treatments would be determined in coordination with landowners. At locations where floodwalls intersect bridges, the floodwall would be connected with the concrete bridge headwalls, abutments and wingwalls to prevent flows from overtopping onto adjacent land (see more description of headwalls and wingwalls that follow). Each floodwall type and access gates through floodwalls are discussed below.

Sheet Pile I-Wall Floodwall

An I-Wall is named based on the cross-sectional view of its design, which does not include a foundation, and is instead sheet piles extending directly into the ground. I-walls would be constructed at several locations using the general design features shown in **Figure 2.4**. The project would construct sheet pile floodwalls with or without concrete encasings or with a concrete encasing on one side, when enhanced aesthetics are appropriate. A vinyl cap would be used when there is no concrete encasing. The above ground height and below ground depth of the I-Walls are based on the design flows and ground surface elevations. I-Walls are proposed with approximate heights between 1.5 and 13 feet above the ground surface.[3] All I-Walls also include a sheet pile cutoff wall, which is the portion of sheet pile that extends beneath ground. These cutoff walls would stop or redirect the infiltration and flow of water under the creek banks and the foundation of the floodwalls (otherwise known as seepage). The depth of the cutoff wall at a particular site depends on the floodwall height and site conditions. Cutoff walls used for the project would extend up to 30 feet below the ground surface.



Note: Image shows sheet pile floodwall completely encased in concrete. Sheet pile floodwalls may also only be encased in concrete on one side or used without concrete encasing, in which case a vinyl cap would be installed on top.

Figure 2.4. Typical Sheet Pile I-Wall Cross Section

[3] All heights of flood risk reduction improvements presented in this chapter represent the maximum height of the improvement segment above the ground surface. Due to variability in topography, portions of the same segments may have a reduced height above the ground surface.

Concrete T-Wall Floodwall

A T-Wall is named based on the cross-sectional view of the foundation design. The project would construct reinforced concrete T-Walls at three locations using the general design features shown in **Figure 2.5**. The above ground height and below ground depth of the T-Walls are based on the design flows and ground surface elevations. T-Walls are proposed with approximate heights between 1.5 and 8 feet above the ground surface with reinforced concrete footings and foundations between approximately 4 and 8 feet below ground surface.

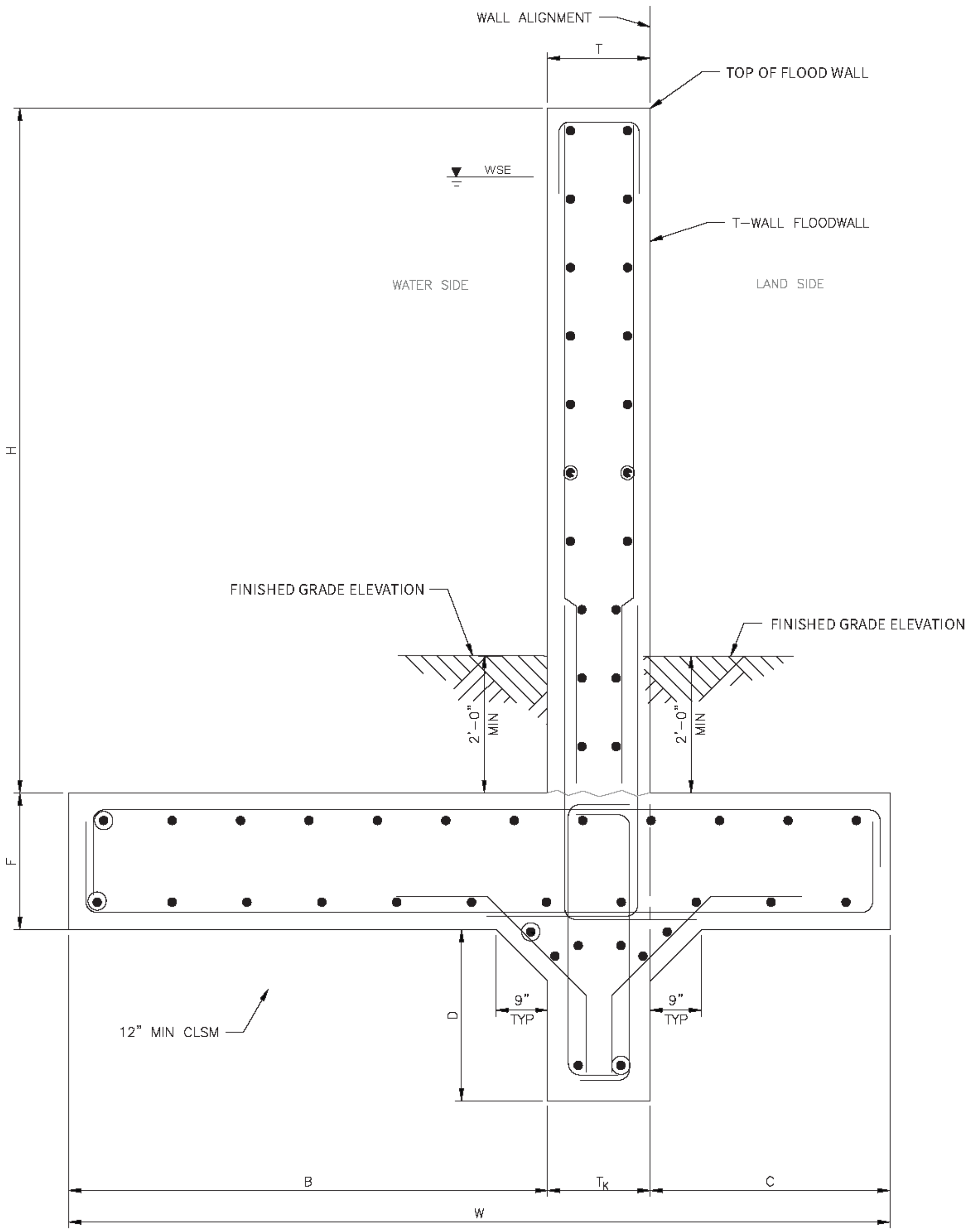


Figure 2.5. Typical Concrete T-Wall Floodwall Cross Section

Concrete L-Wall Floodwall

An L-Wall is named based on the cross-sectional view of the foundation design. The project would construct reinforced concrete L-Walls at three locations using the general design features shown in **Figure 2.6**. The above ground height and below ground depth of the L-Walls are based on the design flows and ground surface elevations. L-Walls would range from 2 to 8 feet above the ground surface with reinforced concrete footings and foundations extending approximately 4 feet below ground surface.

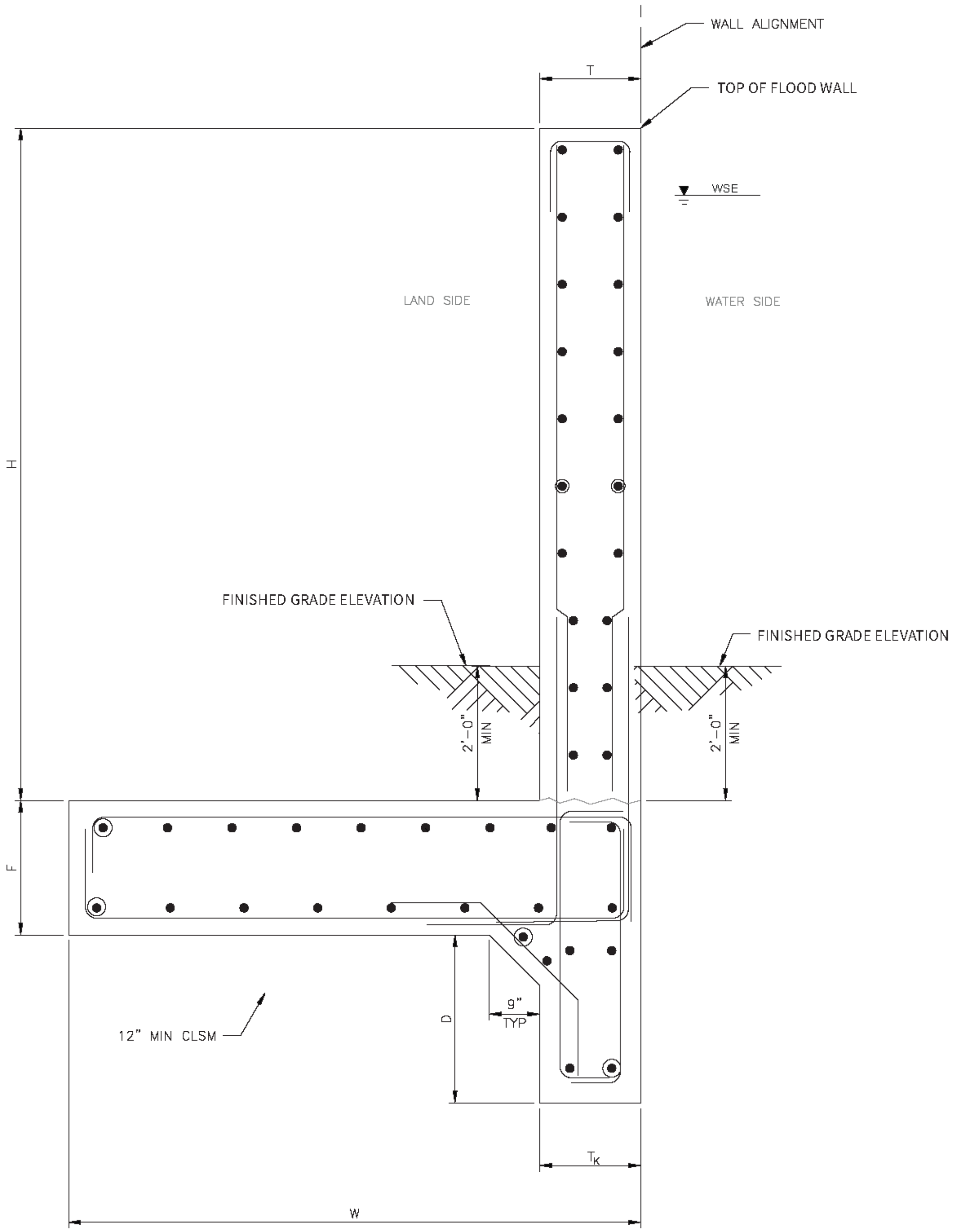


Figure 2.6. Typical Concrete L-Wall Floodwall Cross Section

Floodwall Access Gates

Access gates, consisting of either sliding gates or doors, would be installed where needed along floodwalls to provide permanent access for maintenance vehicles, equipment, and personnel, and/or property owners. While in the closed position, access gates would form a water-tight seal around the openings in existing structures and/or the floodwall to prevent water leakage to the protected land side.

Passive Barriers

Passive barriers and floodwalls would contain flood flows within the creek channel in the same way. However, passive barriers are designed to only be deployed during flood conditions. Passive barriers are used in place of floodwalls to maintain access to roads and open space during non-flooding conditions. Passive barriers can either be hinged or vertical; only hinged passive barriers would be used for the project. Hinged passive barriers would be constructed at several locations using the general design features shown in **Figures 2.7** and **2.8**. Additionally, **Figure 2.9** shows an illustration of a hinged passive barrier level with the ground and raised. Hinged barriers include gates that rise as the water hydrostatic pressure increases and are passive automatic flood barrier systems that remain hidden below ground until flood conditions trigger deployment.

Passive barriers would automatically rise on the edge facing the creek flows as water infiltrates under the barrier and buoyant forces raise the barrier. The passive barriers would be secured and mounted on the land side at a hinge also buried underground. The passive barriers would be located between small supporting wiper walls between the floodwall and passive barriers. Wiper walls are typically made of aluminum and support the passive barrier to prevent flood water from leaking onto the landside, as shown in Figure 2.7. <u>Passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system directly within the footprint of or adjacent to the passive barriers, except for those located in Reach 4. The four passive barriers in Reach 4 would drain via small pipes to outfalls on the creek bank with riprap bank protection.</u>

Passive barriers would range between approximately 1 and 9.5 feet above the ground surface when deployed during flood conditions, would be approximately 8 and 11 feet wide, and would be buried up to approximately 5 feet below ground.

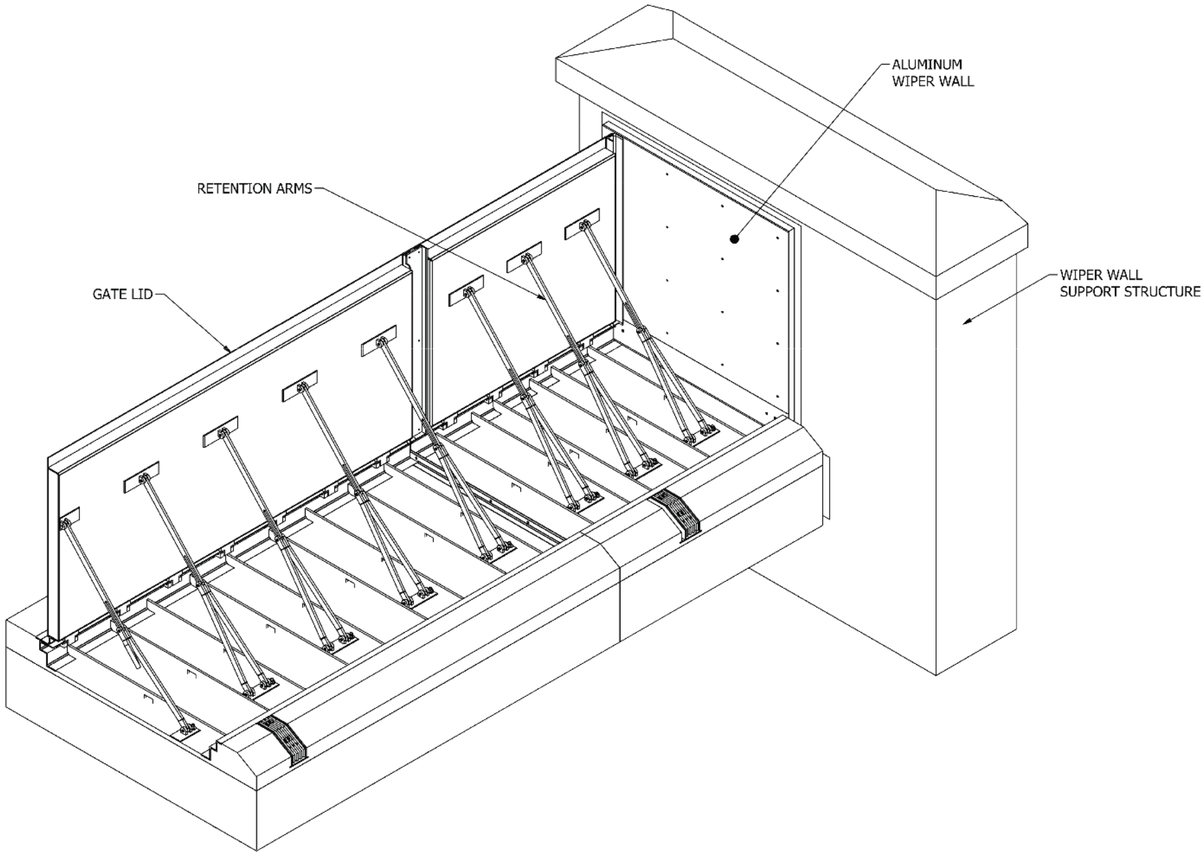


Figure 2.7. Typical Hinged Passive Barrier View

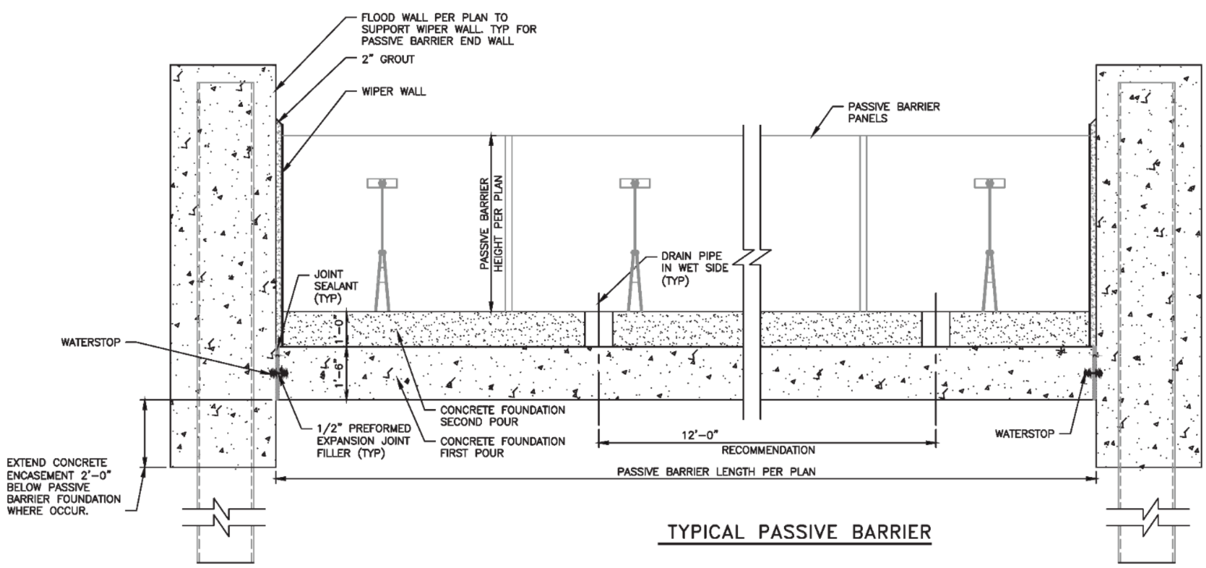
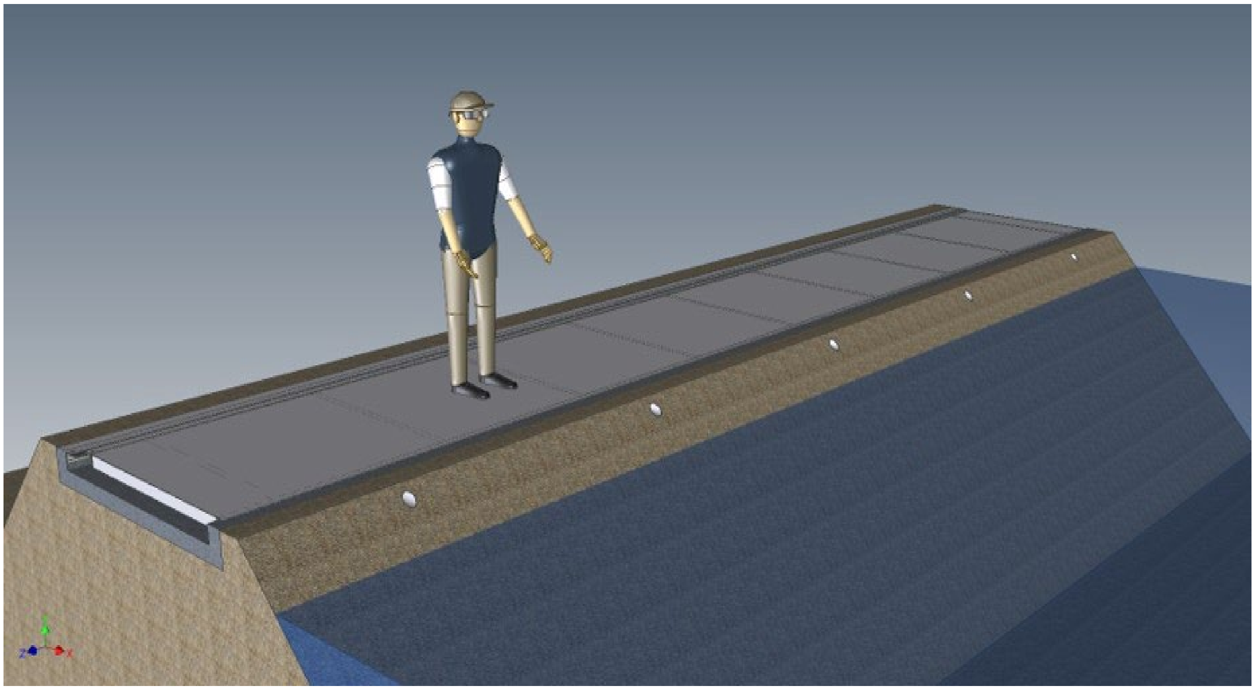
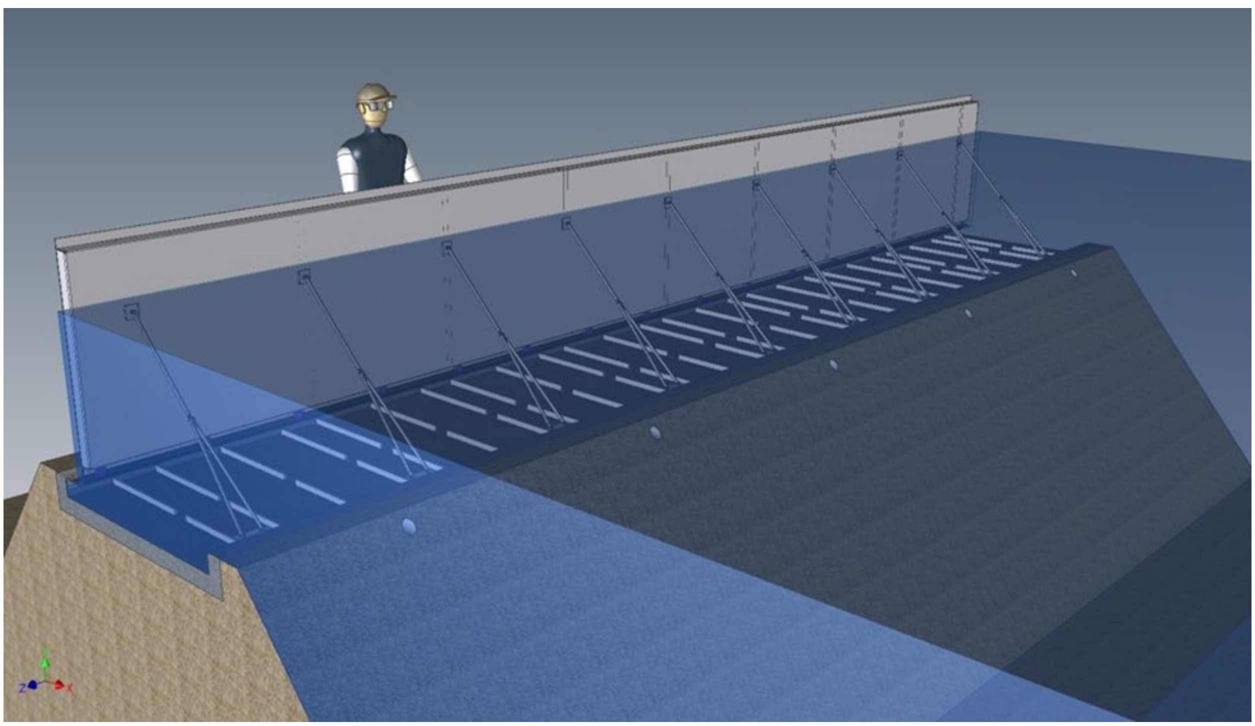


Figure 2.8. Typical Hinged Passive Barrier Cross Section



Level - Hinged passive barrier embedded in ground during normal conditions.



Raised - Hinged passive barrier deployed during flood event.

Figure 2.9. Illustration of Passive Barrier Level with Ground and Raised

Charcot Avenue Bridge Reinforcement, Headwalls, and Wingwalls

The existing Charcot Avenue Bridge would be reinforced and headwalls and wingwalls would be constructed along the upstream and downstream surface of the bridge to contain flood flows. The headwalls would be constructed of reinforced concrete designed to be high enough to block flows in the creek from overtopping the bridge. The headwalls would be connected to wingwalls and then to floodwalls on either side of the bridge to form a continuous barrier to contain flood flows in the creek. Wingwalls are angular walls would be constructed on either end of each of the headwalls (see more details in the section describing improvements in Reach 4 in Section 2.3.2, "Flood Risk Reduction Improvements by Reach"). The replacement of the existing Bridge railing would retain the sidewalk on the upstream side of the Bridge. Bridge reinforcement would use carbon fiber reinforcement strips (CFRS) installed along the bridge deck (road on top of bridge) and on the soffit (underside surface) of the bridge and parallel to the flow of water in Coyote Creek. **Figure 2.10** shows a typical cross section of Charcot Avenue Bridge with the proposed reinforcement and improvements.

Berms

Berms would be constructed of low permeability fill from soil excavated during the construction of other flood risk reduction improvements. Berms are proposed at two locations. **Figure 2.11** provides a typical cross section of the proposed berms. Berms would be located in areas where existing land use and space allow for maintaining access and provide enough area for the berm structure. Berms do not require excavation, but the top few inches of ground surface would be scraped when preparing the site for berm construction. Berms soil would be compacted, and the top surface and side slopes would be covered in erosion control material (e.g., coir). Berm side slopes would be graded to an approximately 1:3.5 slope where possible. Berms would be approximately 1 to 13 feet above the ground surface and approximately 3 to 24 feet wide at the top elevation.

Flap Gates

Flap gates would be installed within seven manhole vaults to prevent backflow from increases in water surface elevations as a result of the project. Flap gates would be installed in manhole vaults inland of existing outfalls along the creek and within the City's stormwater conveyance system. The flap gates would be installed on the end of the manhole vault outflow pipe as shown in **Figure 2.12**. There would be no need for heavy construction equipment for installation of the six flap gates within the existing manhole vaults. Hand tools and equipment would be lowered into the manhole vaults and workers would install the flap gates in the below ground vaults. One flap gate would require the construction of a new manhole vault that would require excavation of a 10-foot square area where the new manhole would be installed within an existing stormwater conveyance pipeline located inland of an existing outfall within the creek. The flap gate in the new manhole would be installed in the same manner as those for existing manhole vaults. The locations of the flap gates are provided in figures in the next section by reach.

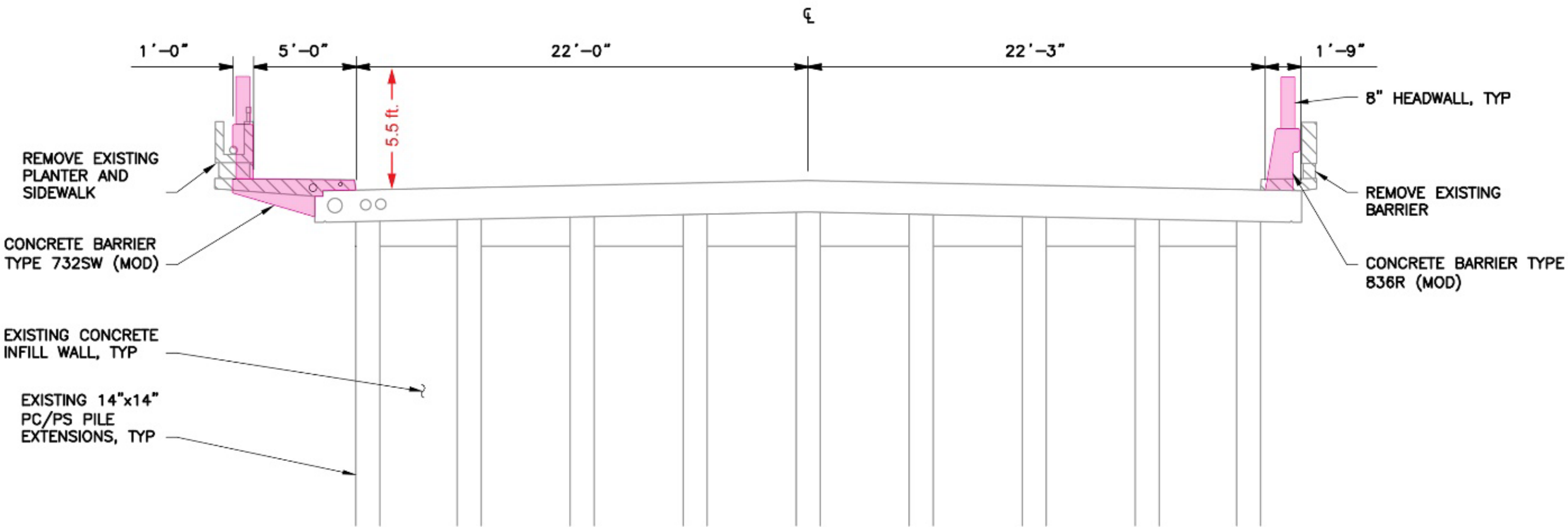


Figure 2.10. Cross Section of Charcot Avenue Bridge Reinforcement and Improvements

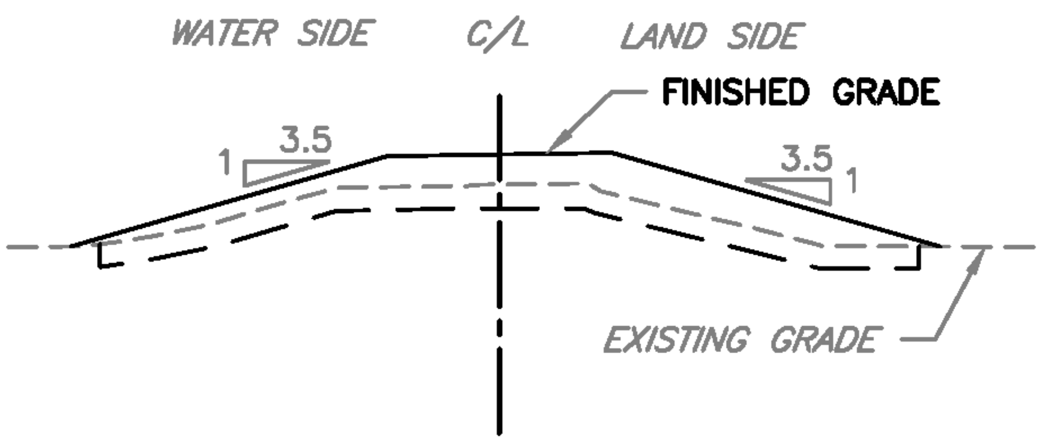


Figure 2.11. Typical Berm Cross Section

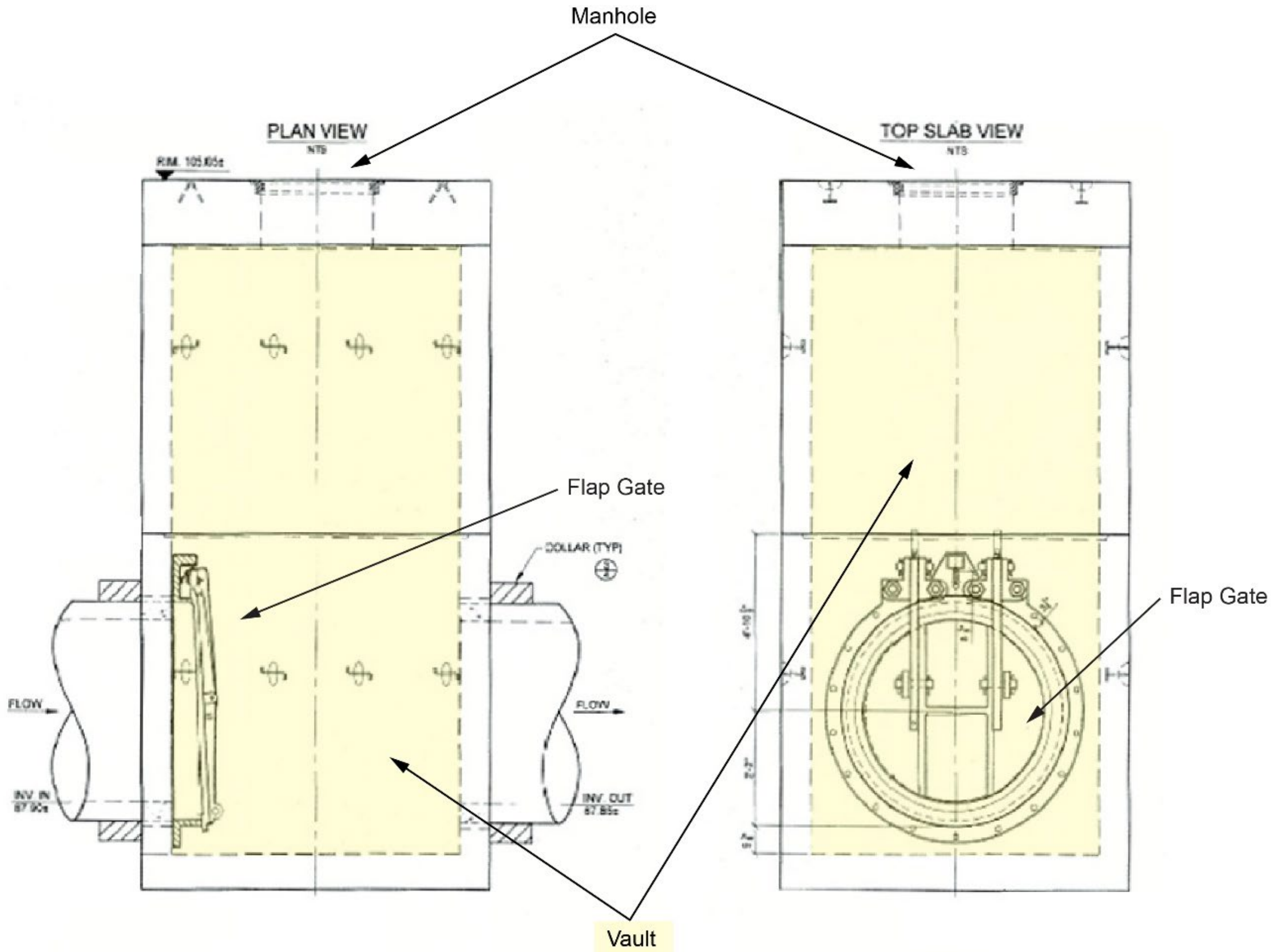


Figure 2.12. Typical View of Flap Gate Installation in Manhole Vault

2.3.2 Flood Risk Reduction Improvements by Reach

This section identifies and discusses the flood risk reduction improvements, including general methods of construction, proposed along Coyote Creek Reaches 4 to 8. Flood risk reduction improvements along Reach 4 are shown in **Figures 2.13** and **2.14**, along Reach 5 are shown in **Figure 2.15**, along Reach 6 are shown in **Figures 2.16** to **2.20**, along Reach 7 are shown in **Figure 2.21** and **2.22**, and along Reach 8 are shown in **Figure 2.23** to **2.25**. These figures also show maintenance areas, which consists of a 10 feet area around each flood risk reduction improvement. Maintenance areas are discussed in Section 2.5, "Project Operations and Maintenance." Each figure contains a table with information on the location, design, and key characteristics of the flood risk reduction improvements proposed along the reach and shown in the figure.

Each flood risk reduction improvement has been assigned an ID for the project, as follows:

- **Reach (R) Number – Improvement Type and Unique Number** – for Example, Reach 4-Floodwall 1 = R4-FW1. In some instances, a sub-improvement is identified. For example, if a floodwall segment was determined to be needed along a passive barrier segment in Reach 4-Floodwall 1, the label would be R4-PB1 FW1.

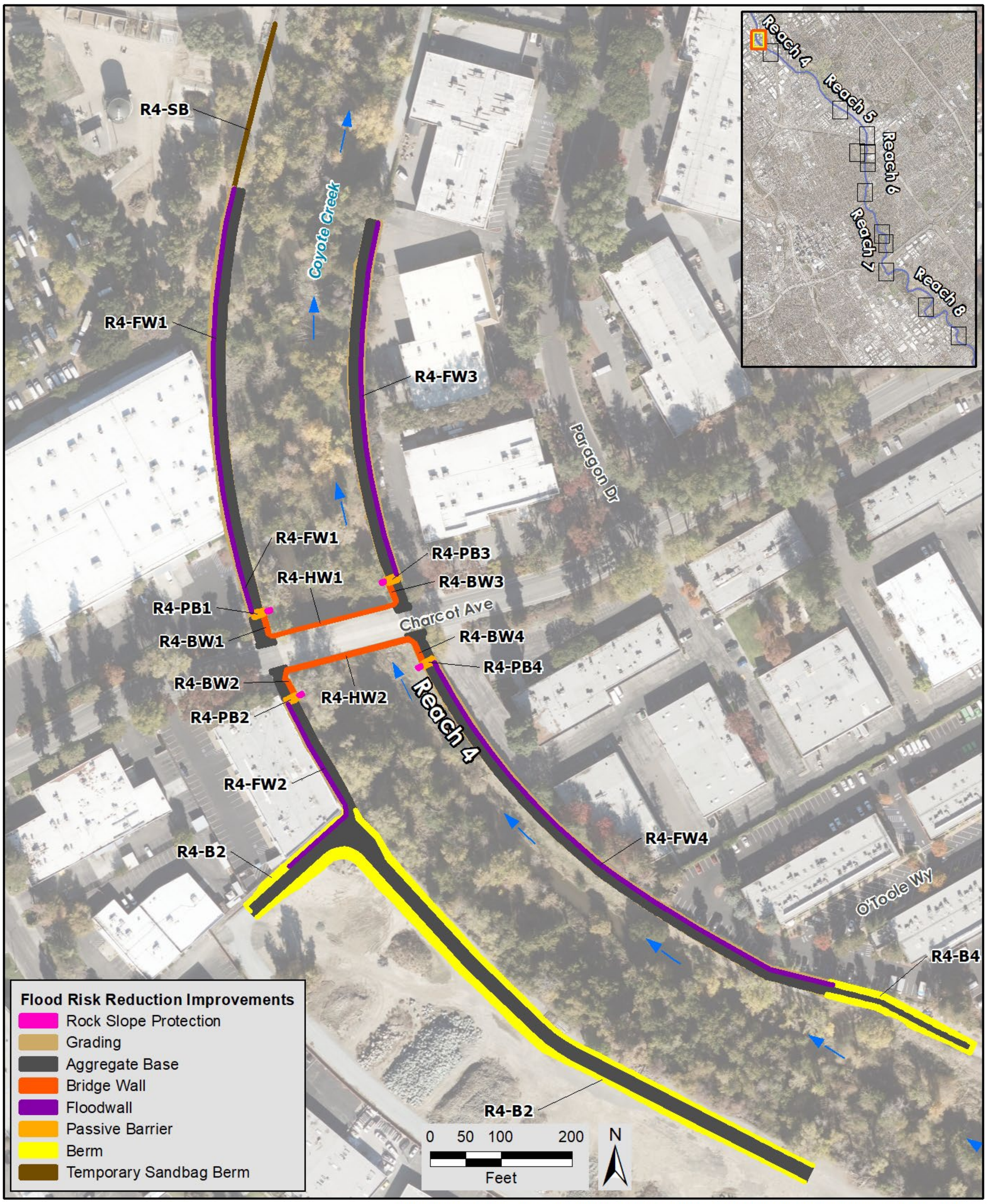
Reach 4

Charcot Avenue Bridge and Adjacent Areas along the Levee Maintenance Roads

Approximately 4,132~~079~~ feet of floodwalls, passive barriers, berms, and headwalls would be constructed on and near Charcot Avenue. The floodwalls constructed near the Charcot Avenue crossing of the channel would extend from all four corners of the Charcot Avenue bridge along both the east bank (R4-FW3 and -FW4) and west bank (R4-FW1 and -FW2) of the creek and would be adjacent to the existing levee maintenance roads. Passive barriers (R4-PB1, -PB2, -PB3, and -PB4) would be installed between the floodwalls and the wingwalls. The passive barriers would be approximately 12 feet wide with an additional amount of cement wiper walls on either side of each passive barrier. Each of the four passive barriers would collect any stormwater that enters through the small gaps between the passive barrier wall and the foundation and drain out through a pipe to an outfall equipped with riprap slope protection at the top of the bank of the creek. Headwalls would be installed along both sides of the bridge (R4-HW1 on the upstream side and R4-HW2 on the downstream side) across the full length of the bridge span and connect with the floodwalls and passive barriers across maintenance roads to ensure floodwaters are contained within the creek and do not spill over onto the Charcot Avenue bridge and surrounding areas. The approximate height of the floodwalls in this reach would be between approximately 4.5 and 6 feet high, while the headwalls along the bridge sides would be approximately between 5 and 6 feet high.

An approximately 985-foot long and 3-foot-high compacted earthen berm would be constructed upstream from floodwall R4-FW2. This berm would include a ramp at the northern terminus with R4-FW2 so that maintenance vehicles can access the maintenance road on the west bank of the creek on the flattened top of the berm. Aggregate base would be applied to the top of the berm for maintenance access. On the east bank of the creek, an approximately 2204-foot long and 1.5-foot-high compacted earthen berm topped with aggregate base would be constructed from the upstream terminus of R4-FW4 to provide access to the maintenance road on the east bank of the creek. North and upstream of the terminus of R4-FW1, a temporary approximately 240-foot-long sandbag berm (R4-SB) would be placed during the 4-year period when the ~~ADTP~~ ADSRP is under construction. One flap gate (R4-FG1) would be installed to the west of interstate 880 and north of E. Brokaw Road southwest of the creek bank.


R4-SB
R4-FW1
R4-FW3
R4-HW1
R4-PB1
R4-BW1
R4-BW2
R4-PB2
R4-FW2
R4-B2
R4-B4
O'Toole Wy
Reach 4
Reach 7
Reach 8
Maintenance Access
Flood Risk Reduction
Bridge Headwall
Bridge Wingw
Floodwall
Passive
Berm
Temp
Berm
0
400
Feet
N



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ID	Type	Design	Location	Length (linear feet)	Maximum Height[4] (feet above ground)
R4-HW1, -HW2,-BW1 to -BW 4	Headwalls and Wingwalls	Concrete headwalls and wingwalls	Upstream and downstream sides of Charcot Avenue Bridge	355 ~~2~~	5.5
R4-PB1, -PB2, -PB3, and 4	Passive Barriers	Passive barrier segments connected to sheet pile I-Wall and concrete floodwall segments (R4- FW1 -FW2, -FW3, and -FW4)	West and east banks north and south of Charcot Avenue bridge	83 ~~45~~	4.75
R4-FW1	Floodwall	Sheet pile I-Wall or concrete floodwall	West bank south of Charcot Avenue bridge and passive barrier	632	6
R4-SB	Sandbags	Temporary Sandbag berm	North of the north terminus of R4-FW1 on the west bank	240	0.5
R4-FW2	Floodwall	Sheet pile I-Wall or concrete floodwall	West bank north of Charcot Avenue bridge and passive barrier	314 ~~7~~	6
R4-FW3	Floodwall	Sheet pile I-Wall or concrete floodwall	East bank south of Charcot Avenue bridge and passive barrier	531 ~~0~~	6
R4-FW4	Floodwall	Sheet pile I-Wall or concrete floodwall	East bank north of Charcot Avenue bridge and passive barrier	772 ~~1~~	6
R4-B2	Berm	Compacted earthen berm and maintenance road ramp	West bank south of R4-FW2	985	3
R4-B4	Berm	Compacted earthen berm	East bank south of Charcot Avenue Bridge	220 ~~4~~	1.5

Figure 2.13. Reach 4 Proposed Flood Risk Reduction Improvements


O'Toole Wy
O'Toole Ln
R4
Coyote Creek
880
Reach
I- 880
O'Toole Ave
E Brok
Enterprise Dr
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Existing City
Maintenanc
Flood Risk Re
ements
Floodw
Berm
New Manhole and Flap Gate
0
100
200
400
Feet
N

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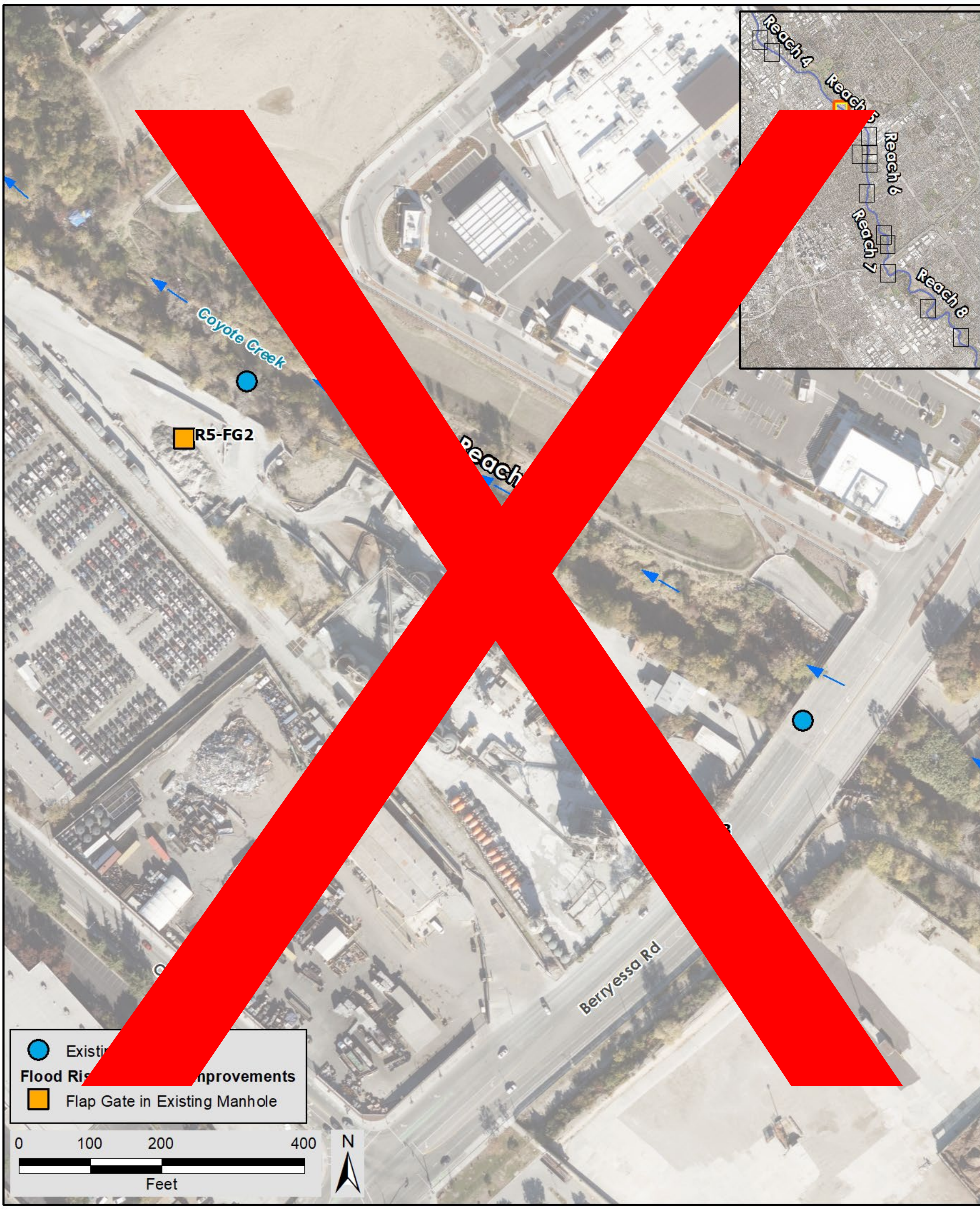
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R4-FG1	Flap Gate	Flap gate in new manhole vault	West of interstate 880 and north of E. Brokaw Road southwest of the creek bank	N/A	N/A
			Reach 4 Total	**4,132 ~~079~~**	**1.5 to 6**

Figure 2.14. Reach 4 Proposed Flood Risk Reduction Improvements Continued



Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Coyote Creek
R5-FG2
Reach
Berryessa Rd
Flood Ris
mprovements
Flap Gate in Existing Manhole
0
100
200
400
Feet
N

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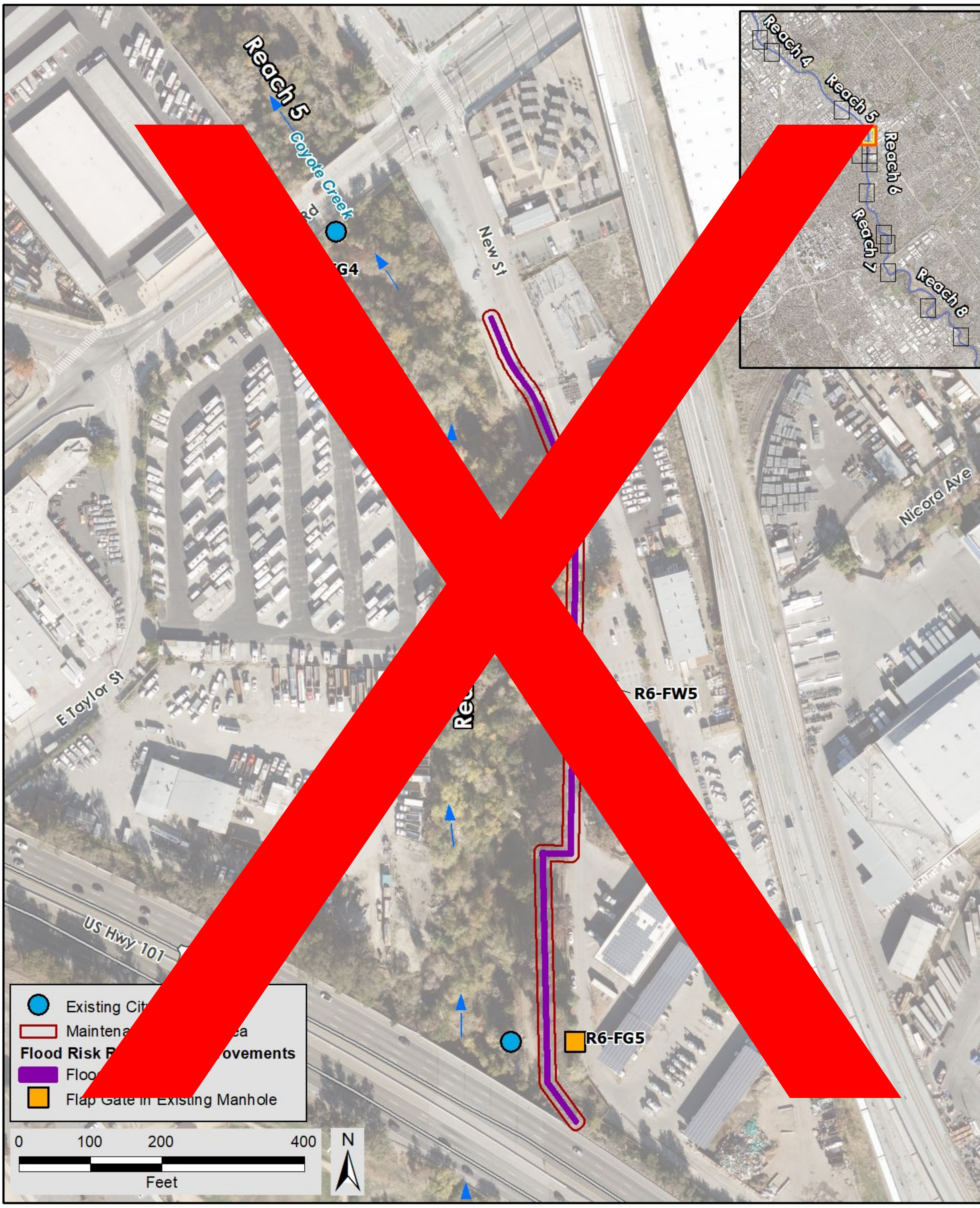
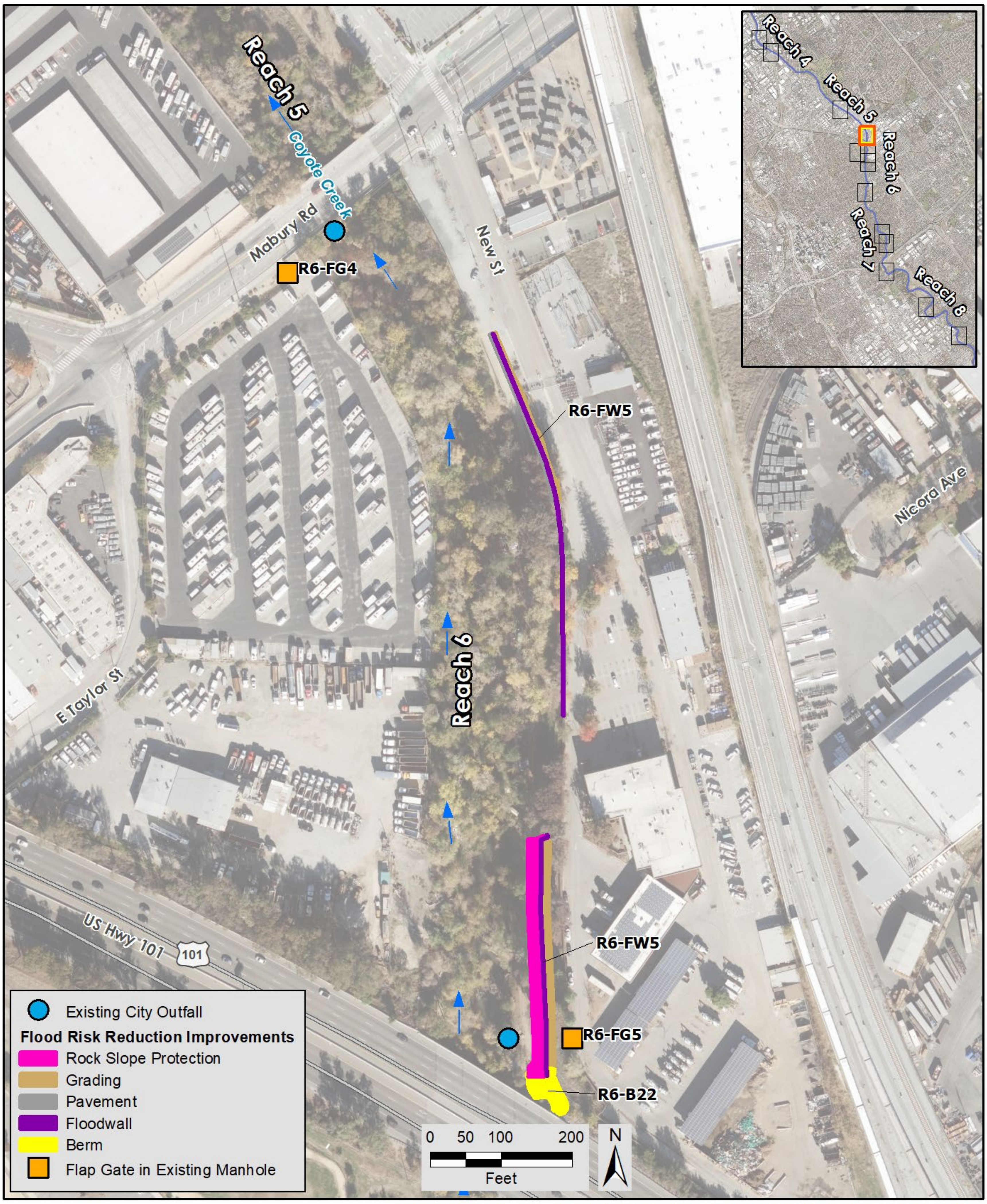
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R5-FG2	Flap Gate	Flap gate in existing manhole vault	Industrial use area east of Berryessa Road and south of the creek bank	N/A	N/A
~~R6-FG3~~ R5-FG3	Flap Gate	Flap gate in existing manhole vault	Southwest bound lane of Berryessa Road and south of the creek bank	N/A	N/A
			Reach 5 Total	N/A[1]	N/A[1]

Notes: [1] Reach 5 improvements consist only of installing flap gates in existing manhole vaults, and therefore, there is not length or height associated with linear features.

Figure 2.15. Reach 5 Proposed Flood Risk Reduction Improvements


Reach 5
Coyote Creek
G4
New St
R6-FW5
E Taylor St
US Hwy 101
Nicora Ave
R6-FG5
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Existing Cit
Maintena
ea
Flood Risk R
ovements
Floo
Flap Gate in Existing Manhole
0
100
200
400
Feet
N



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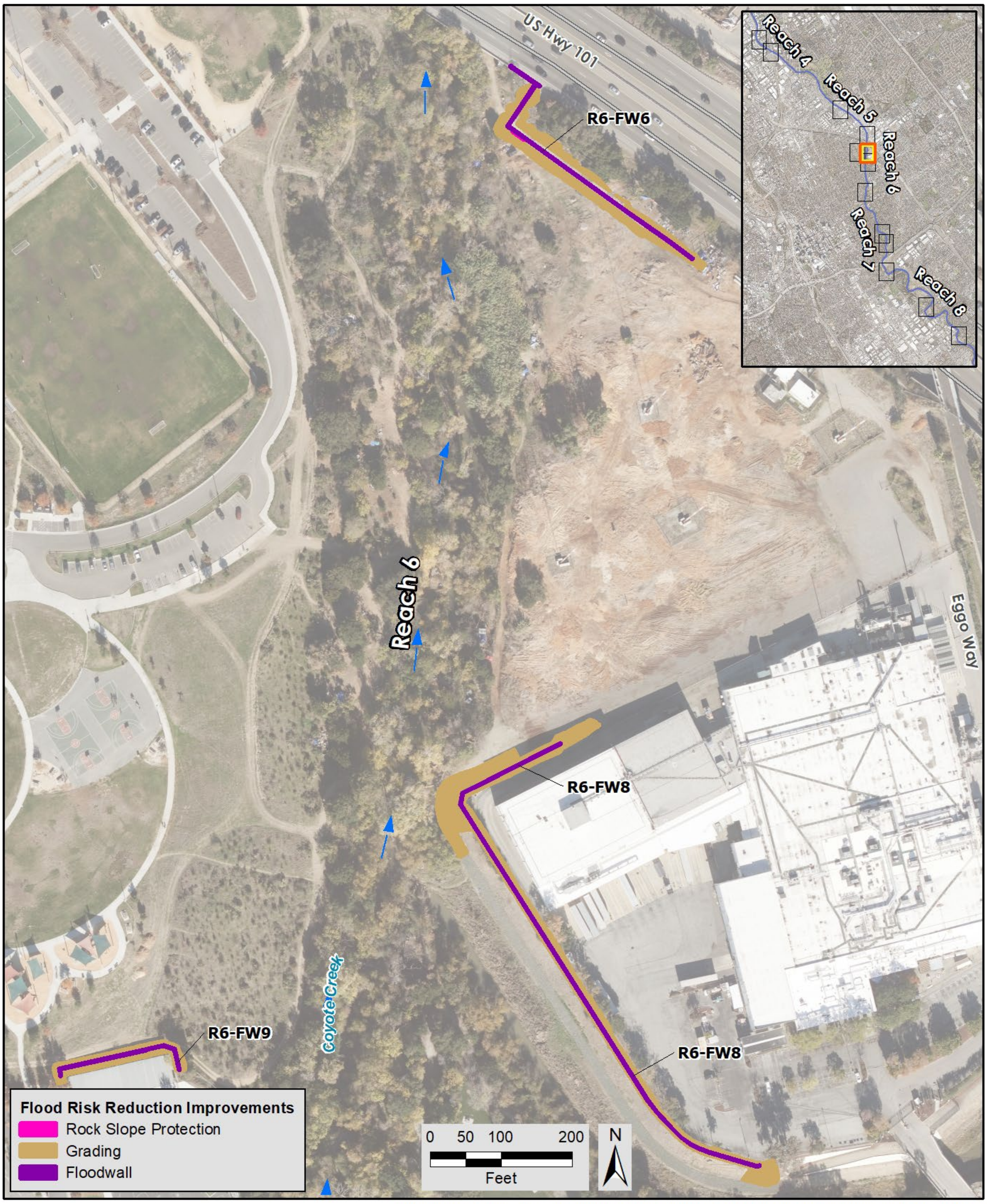
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R6-FW5	Floodwall	Sheet pile I-Wall or concrete floodwall	East bank adjacent to the City of San Jose Mabury Service Yard	899 ~~1,028~~	4
R6-FG4	Flap Gate	Flap gate in existing manhole vault	South of Maybury Road northwest of R6-FW5	N/A	N/A
R6-FG5	Flap Gate	Flap gate in existing manhole vault	East bank of Coyote Creek and east of R6-FW5	N/A	N/A

Figure 2.16. Reach 6 Proposed Flood Risk Reduction Improvements

Reach 4
Reach 5
Reach 7
Reach 8
US Hwy 101
101
R6-FW6
R6-FW16
Coyote Creek
Flood Risk
Floodwall
0
100
200
400
Feet
N



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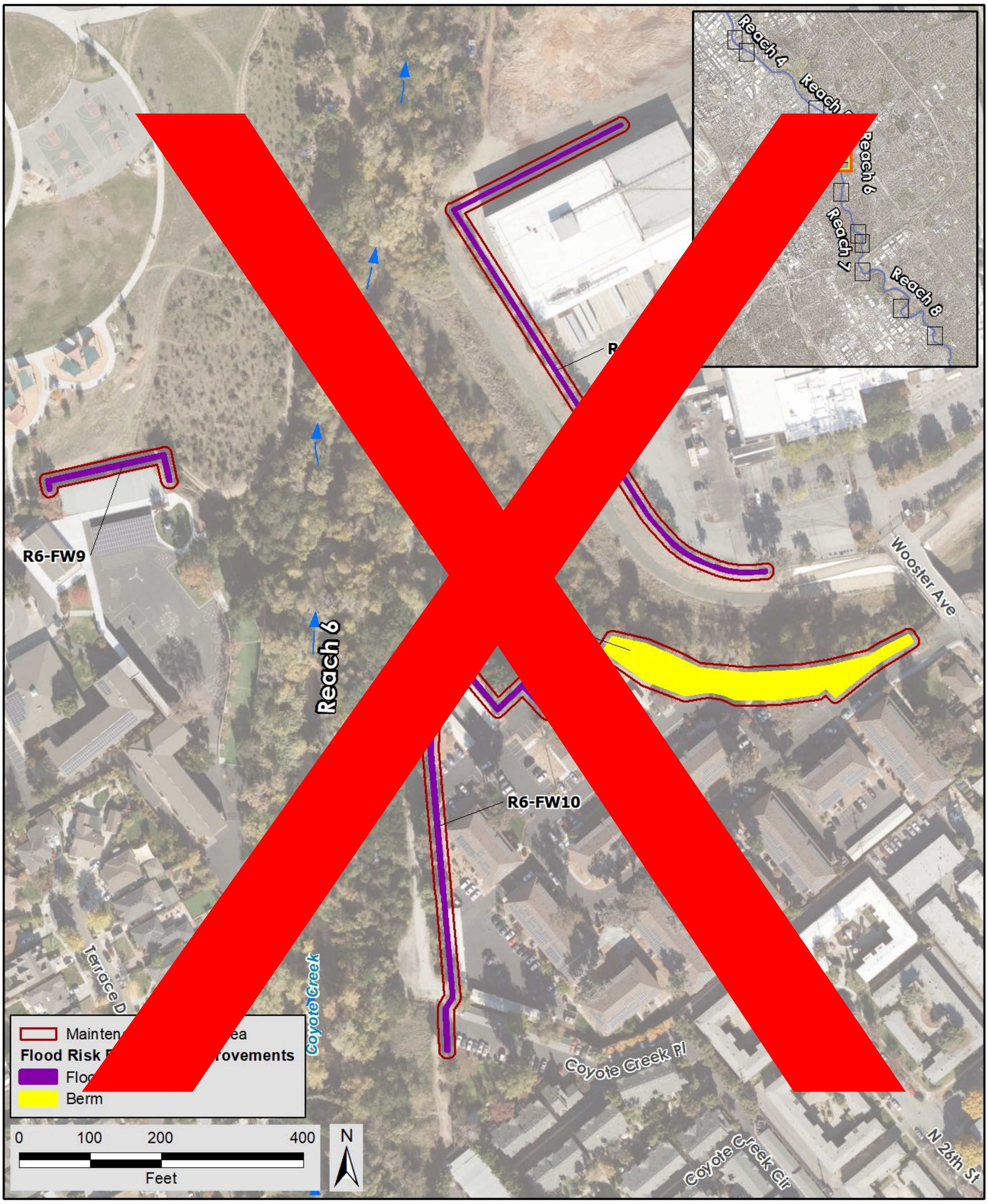
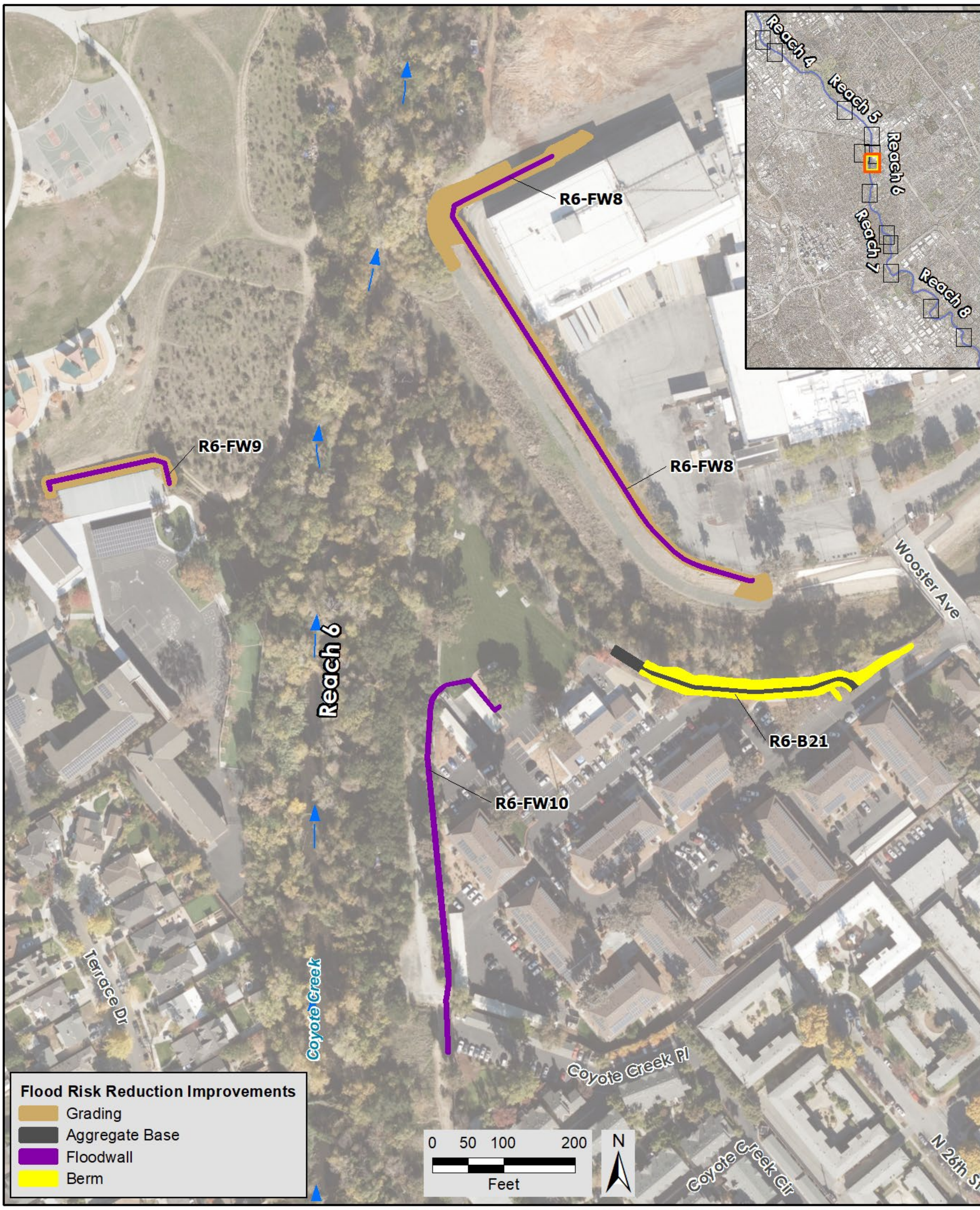
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R6-FW8	Floodwall	Sheet pile I-Wall or concrete floodwall	Western edge of Kellogg Factory building	856 ~~1,000~~	5.5
R6-FW6	Floodwall	Sheet pile I-Wall or concrete floodwall	South of U.S. Highway 101 (along upstream face)	394 ~~407~~	8
~~R6-FW16~~	~~Floodwall~~	~~Concrete floodwall~~	~~Walls around existing utility box, adjacent to south corner of Watson Park Soccer Field next to bike racks~~	~~86~~	~~8~~

Figure 2.17. Reach 6 Proposed Flood Risk Reduction Improvements


Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
R6-FW9
R6-FW10
Reach 6
Wooster Ave
Terrace D
Coyote Creek
Coyote Creek Pl
Coyote Creek Cir
N 26th St
Mainten
ea
Flood Risk
rovements
Flo
Berm
0
100
200
400
Feet
N



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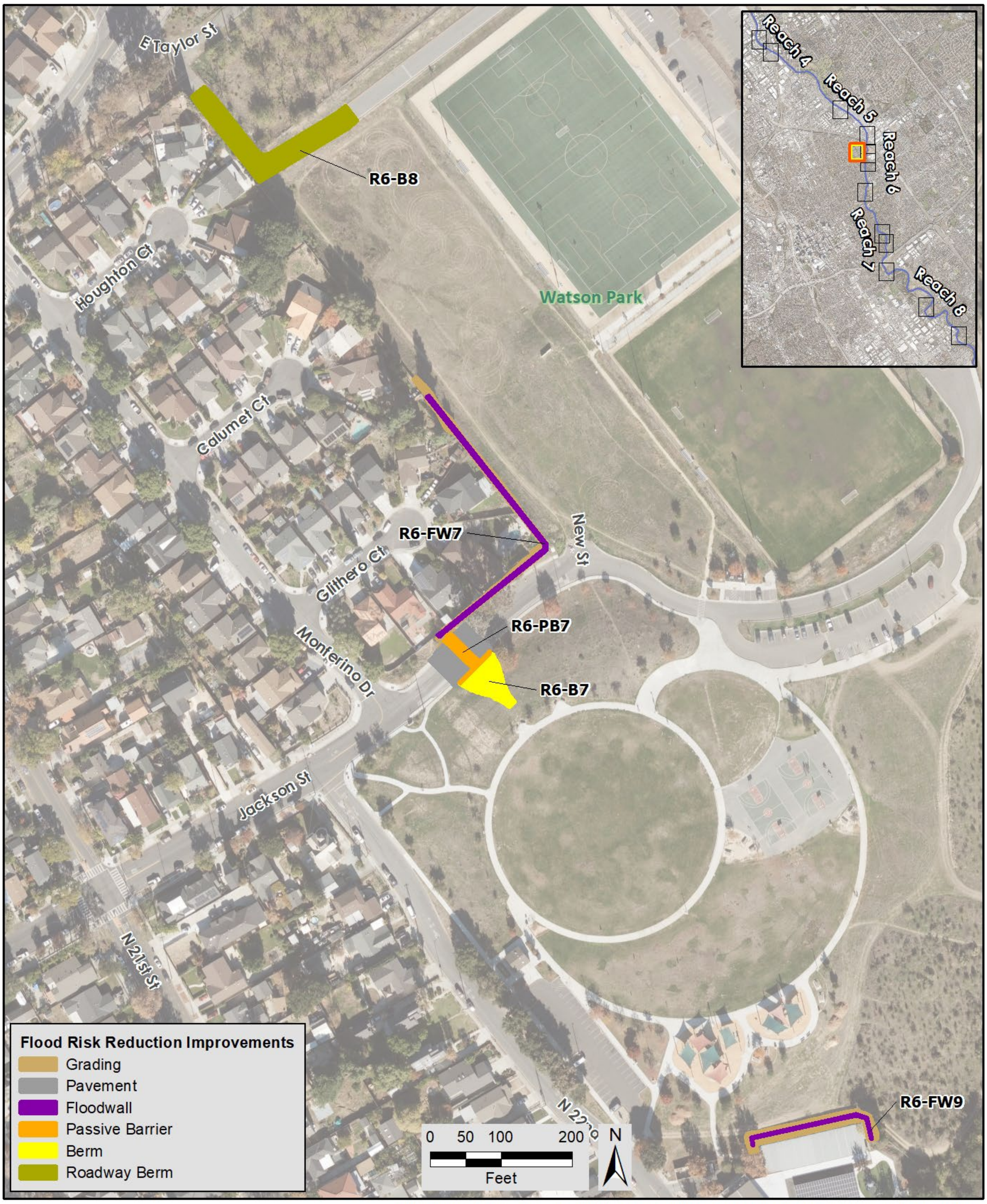
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R6-FW9	Floodwall	Concrete floodwall	Watson Park: northern side of Empire Gardens Elementary School	209 ~~14~~	5
R6-B21	Berm~~Floodwall~~	Compacted earthen berm ~~Sheet pile I-Wall or concrete floodwall~~	East bank at Parkside Terrace Apartments	473 ~~680~~	8
R6-FW10	~~Berm~~Floodwall	~~Compacted earthen berm~~ Sheet pile I-Wall or concrete floodwall	Above west bank of Coyote Creek and adjacent to Parkside Terrace Apartments	623 ~~500~~	3

Notes: Details for R6-FW8 are shown in the table on Figure 2.17.

Figure 2.18. Reach 6 Proposed Flood Risk Reduction Improvements Continued


Reach 4
Reach 6
Reach 7
Reach 8
Watson Park
Houghton Ct
Calumet Ct
Glithero Ct
Monferino Dr
Jackson St
N 22nd St
R6-FW7
R6-FW16
R6-B7
R6-FW9
Reach 6
Berm
0
100
200
400
Feet
N



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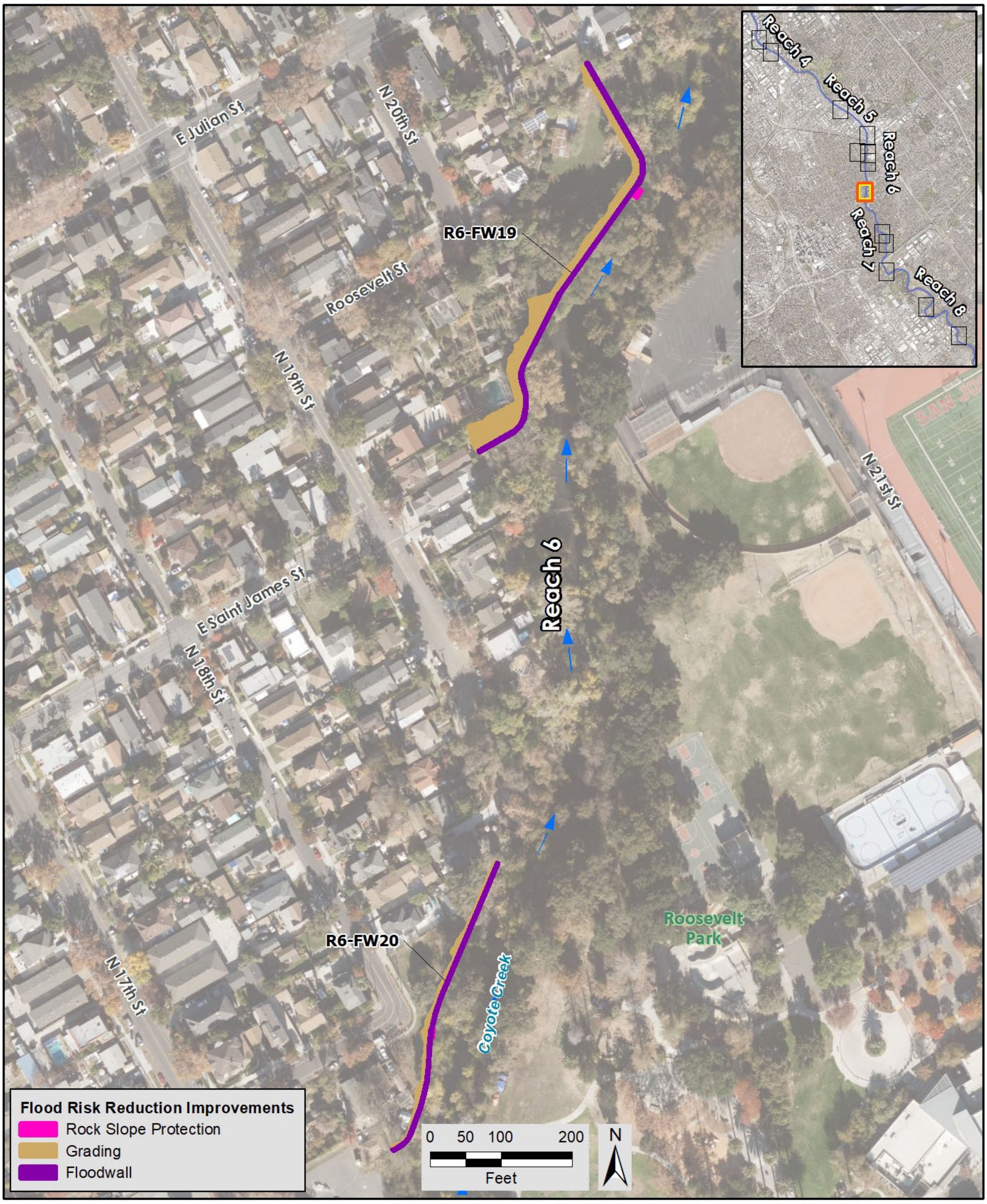
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R6-PB7	Passive barrier	Passive barrier	Watson Park: across Jackson Street	54	9.5
R6-B7	Berm	Compacted earthen berm (R6-B7) connected to concrete passive barrier wiper wall (R6-PB7)	Watson Park: at the park adjacent to Jackson Street	74 ~~5~~	9
R6-FW7	Floodwall	Sheet pile I-Wall floodwall with concrete on both sides	Watson Park: western edge adjacent to residences	479 ~~7~~	9
R6-B8	Roadway Berm	Raised asphalt berm in center of road	Watson Park: corner of road northwest edge of park	318	<1

Notes: Details for ~~R6-FW16 are shown in the table on Figure 2.17 and for~~ R6-FW9 are shown on Figure 2.18.

Figure 2.19. Reach 6 Proposed Flood Risk Reduction Improvements Continued

R6-FW19
R6-FW20
N 20th St
N 19th St
N 18th St
N 17th St
N 21st St
E Saint James St
Coyote Creek
Reach 4
Reach 6
Reach 7
Reach 8
Area
Flood Ris
mprovements
Floodwall
0
100
200
400
Feet
N



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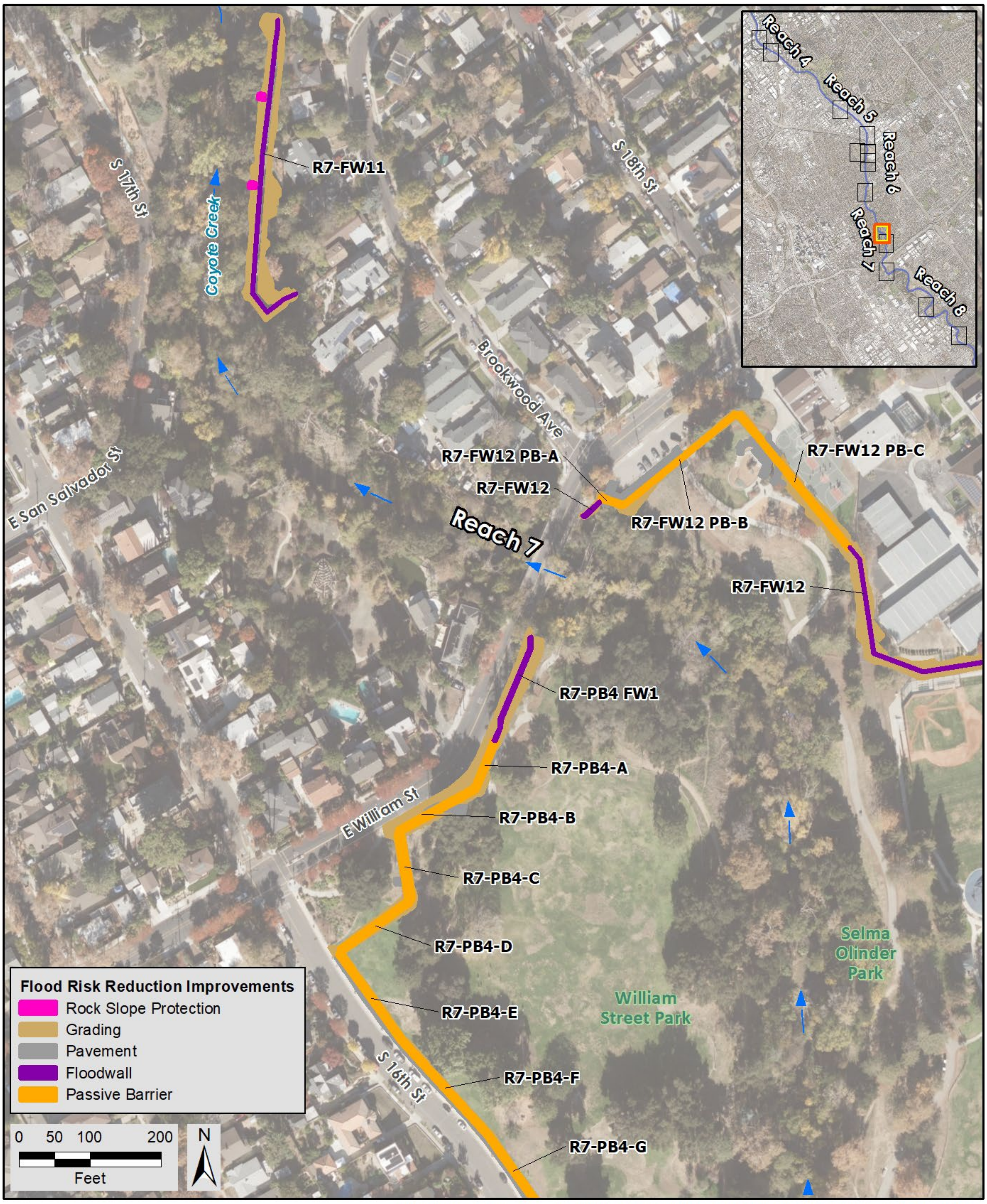
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R6-FW19	Floodwall	Sheet pile I-Wall floodwall and concrete L-Wall	East of the corner of Roosevelt Street and N 20th Street on west bank of Coyote Creek	657 ~~715~~	13
R6-FW20	Floodwall	Sheet pile I-Wall floodwall	North of East Santa Clara Street, between North 18th Street on west bank of Coyote Creek	458 ~~15~~	10.5
			Reach 6 Total	**5,062 ~~651~~**	**3 to 13**

Figure 2.20. Reach 6 Proposed Flood Risk Reduction Improvements Continued


R7-FW11
S 17th St
S 18th St
Brookwood Ave
E San Salvador St
R7-FW12 PB-C
R7-FW12
R7-PB5-A
R7-PB4-B
R7-PB4-C
R7-PB4-D
R7-PB4-E
R7-PB4-F
R7-PB4-G
S 16th St
William Street Park
Selma Olinder Park
Reach 4
Reach 6
Reach 7
Reach 8
Passive Barrier
0 100 200 400
Feet
N



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ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R7-FW11	Floodwall	Concrete T-Wall floodwall	West of properties on Brookwood Avenue	469 ~~359~~	8
R7-FW12	Floodwall and Passive Barrier	Sheet pile I-Wall floodwall segments (R7-FW12) connected with passive barrier segments (R7-FW12 PB-A and -B)	West and South of Selma Olinder Elementary School	846 ~~50~~	6
R7-PB4	Passive Barrier and Floodwall	Passive barriers (R7-PB4-A to -H) connected to a sheet pile I-Wall floodwall (R7-PB4 FW1)	William Street Park along East William Street and South 16th Street	1,323 ~~5~~	7

Figure 2.21. Reach 7 Proposed Flood Risk Reduction Improvements


R7-FW12
R7-PB5-A
R7-PB5-B
R7-PB5-C
R7-PB4-E
R7-PB4-F
R7-PB4-G
R7-PB4-H
R7-PB5 FW1
R7-PB5-F
R7-PB5-G
R7-B5
Selma Olinder Park
Reach 7
Coyote Creek
Woodborough Dr
Woodborough Pl
S 16th St
S 15th St
S 22nd St
Reach 4
Reach 8
Berm
0
100
200
400
Feet
N

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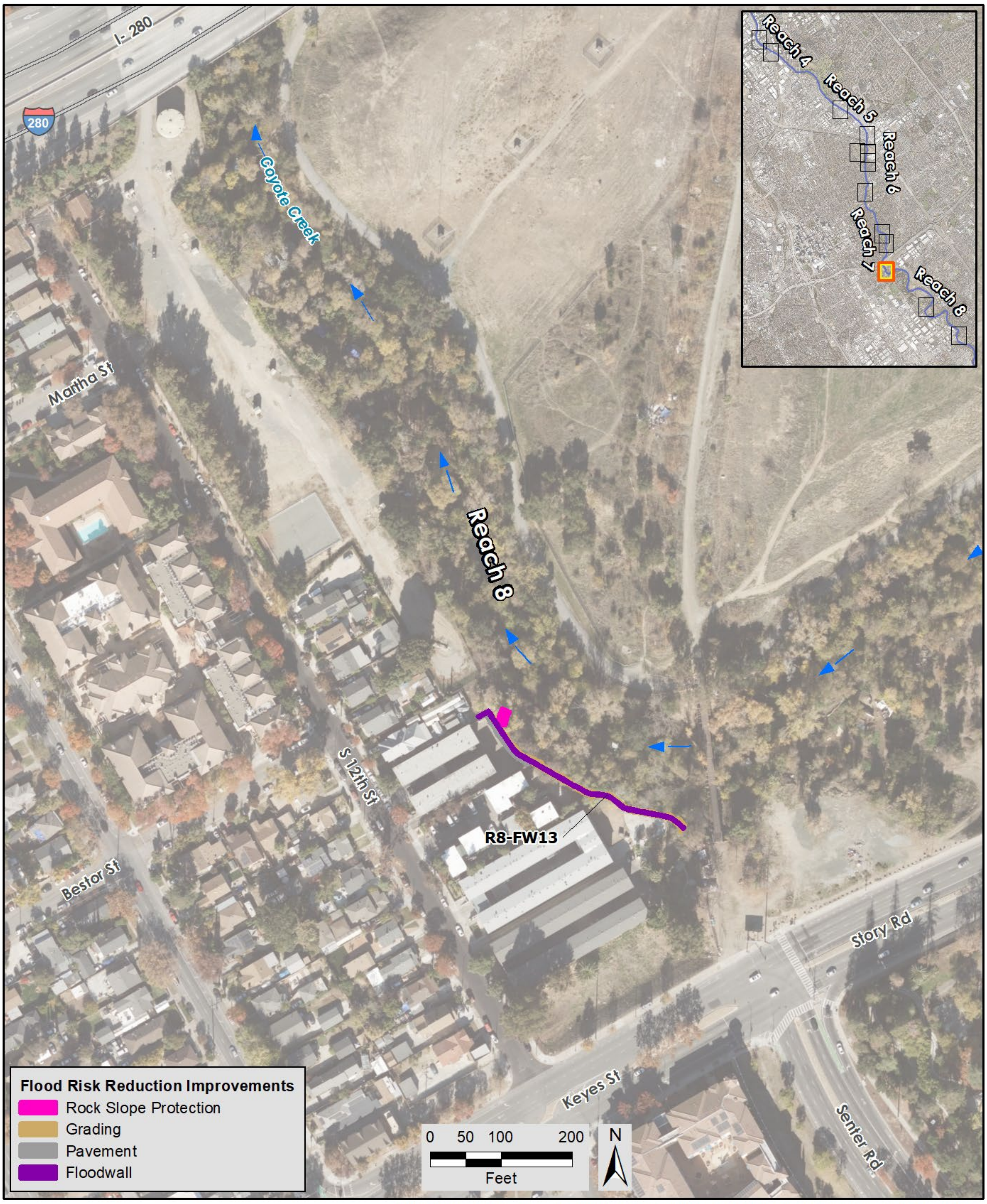
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R7-FW18	Floodwall	Concrete L-Wall floodwall	South end of William Street Park along the South 16th street residential property	119 ~~30~~	8
R7-PB5	Passive Barrier and Floodwall	Passive barriers (R7-PB5-A to -J) connected with sheet pile I-Wall floodwall (R7 PB5 FW1)	Eastern edge of Selma Olinder Park along Woodborough Drive	1,640 ~~34~~	9
R7-B5	Berm	Compacted earthen berm connected to passive barrier wiper wall	Eastern edge of Selma Olinder Park at the southern limits of Woodborough Drive	182 ~~97~~	1
			Reach 7 Total	**4,579 ~~495~~**	**1 to 9**

Notes: Details for R7-FW12 and R7-PB4 are shown in the table on Figure 2.17 and R6-FW9 is shown on Figure 2.18

Figure 2.22. Reach 7 Proposed Flood Risk Reduction Improvements Continued

I- 280
280
Martha St
Bestor St
Story Rd
Keyes St
Senter Rd
Reach 4
Reach 6
Reach 7
Reach 8
Flood Risk Reduction Improvements
Floodwall
0
100
200
400
Feet
N



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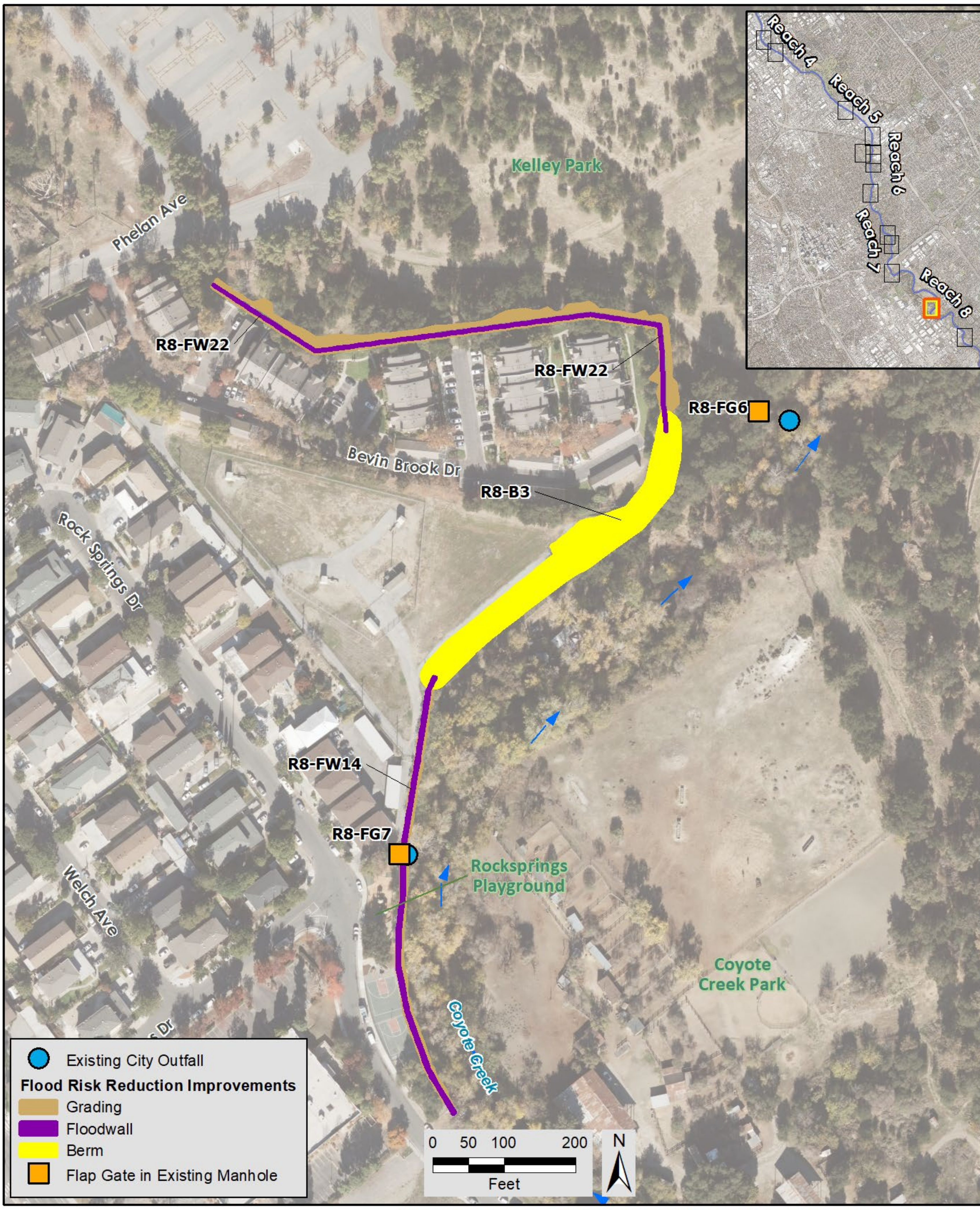
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R8-FW13	Floodwall	Sheet pile I-Wall floodwall	West bank north of Keyes Street	346 ~~8~~	10

Figure 2.23. Reach 8 Proposed Flood Risk Reduction Improvements


Kelley Park
Phelan Ave
Rock Springs Dr
Welch Ave
Coyote Creek
R8-FW22
R8-FG6
R8-B3
R8-FW14
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Flap Gate in Existing Manhole
0
100
200
400
Feet
N



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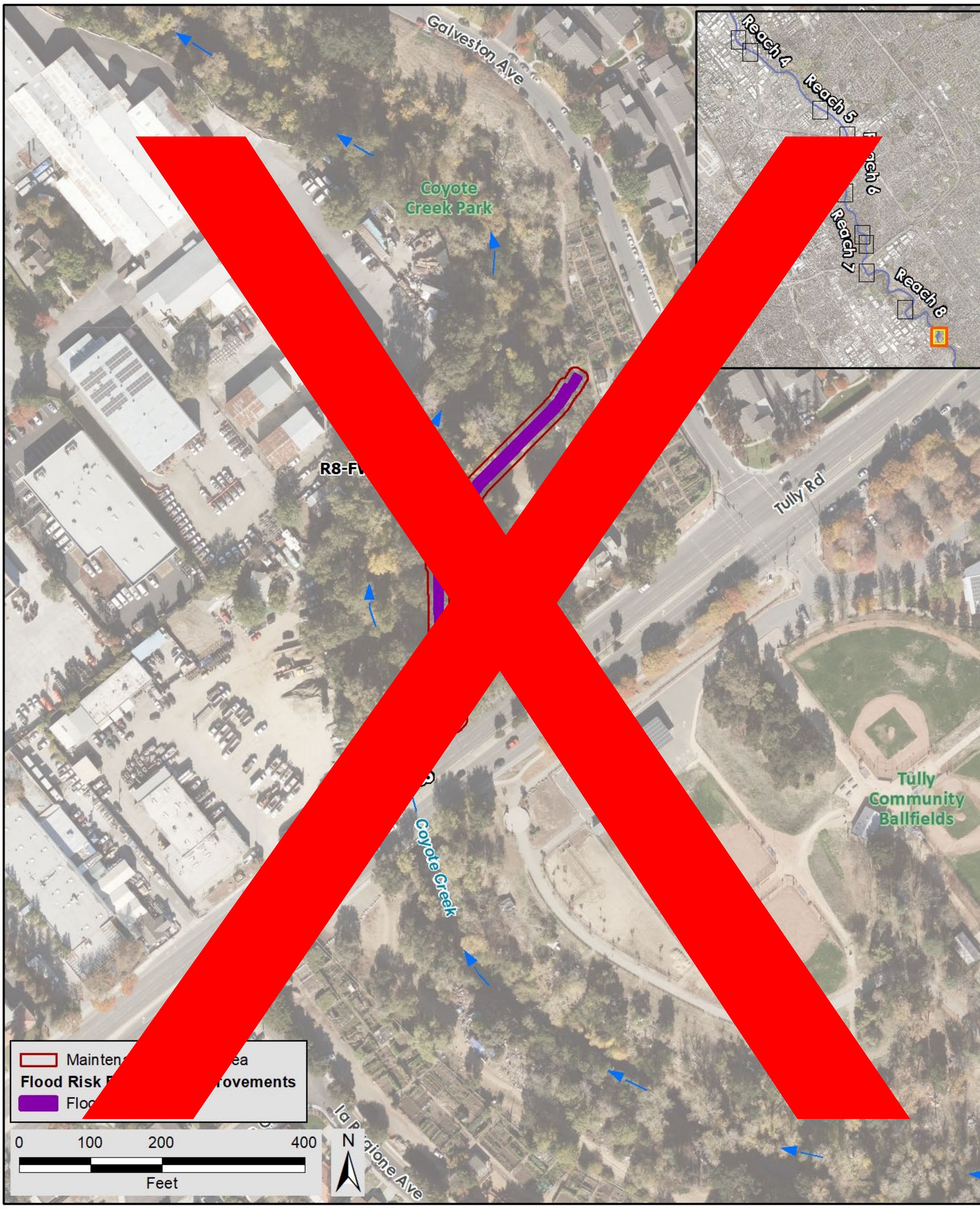
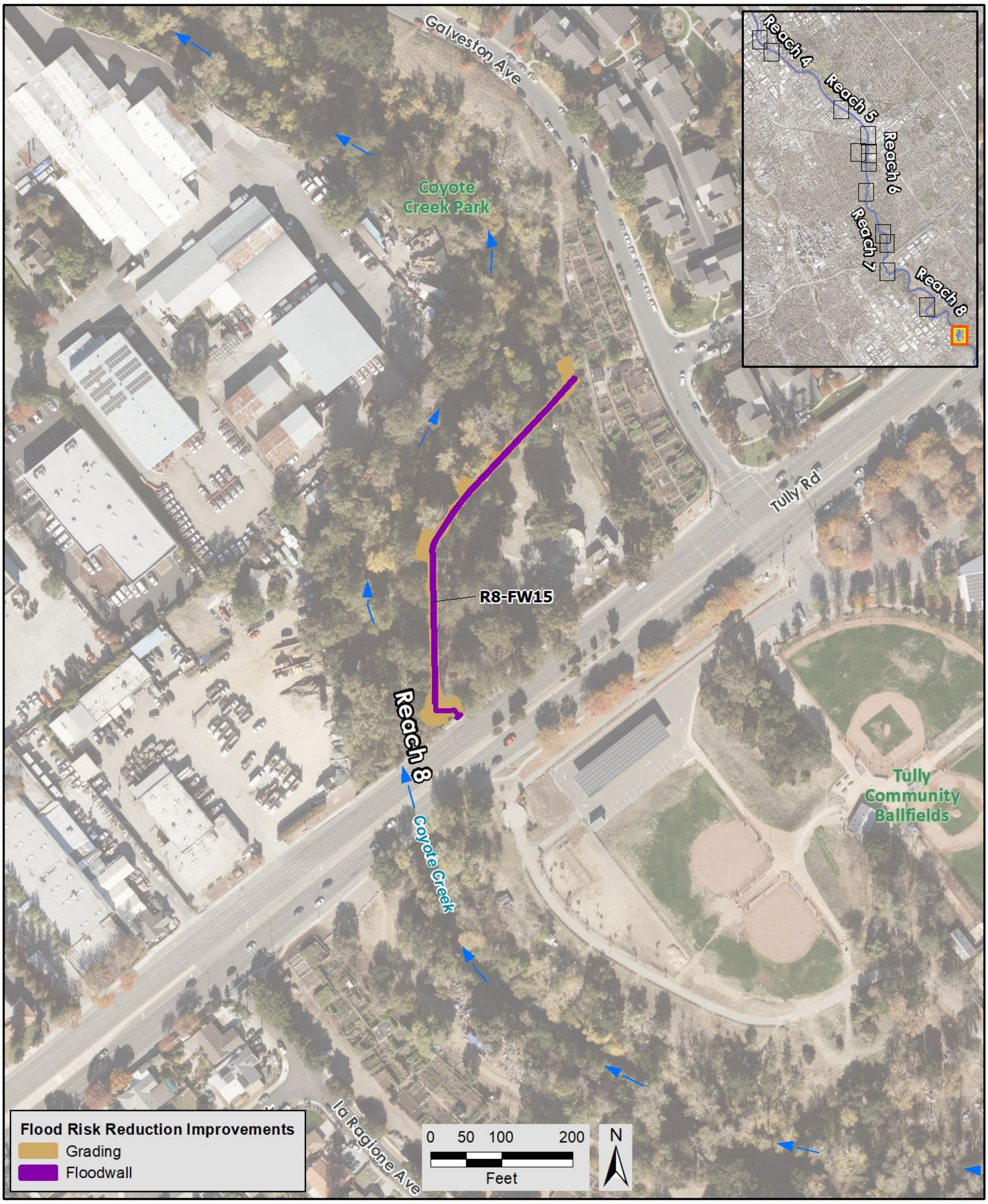
ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R8-FW14	Floodwall	Sheet pile I-Wall floodwall	Edge of Rock Springs Park	652 ~~06~~	5
R8-FW22 R8-B3	Berm and Floodwall	Compacted earthen berm (R8-B3) connected to a concrete L-Wall floodwall (R8- FW22)	East of Bevin Brook Drive	1,280 ~~61~~	3
R8-FG6	Flap Gate	Flap gate in existing manhole vault	East of Bevin Brook Drive	N/A	N/A
R8-FG7	Flap Gate	Flap gate in existing manhole vault	West bank of Coyote Creek and east edge of Rock Springs Park	N/A	N/A

Figure 2.24. Reach 8 Proposed Flood Risk Reduction Improvements Continued



Galveston Ave
Coyote Creek Park
Reach 4
Reach 5
Reach 7
Reach 8
R8-F
Tully Rd
Tully Community Ballfields
Coyote Creek
Flood Risk
0 100 200 400
Feet
N



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ID	Type	Design	Location	Length (linear feet)	Maximum Height[1] (feet above ground)
R8-FW15	Floodwall	Concrete T-Wall floodwall	East bank north of Tully Road	577 ~~66~~	10
			Reach 8 Total	**2,855 ~~781~~**	**3 to 10**

Figure 2.25. Reach 8 Proposed Flood Risk Reduction Improvements Continued

Figure 2.26. Charcot Avenue Headwalls and Wingwalls

Additionally, as described previously, the Charcot Avenue Bridge would require reinforcement with CFRS to withstand the hydrostatic forces of flood flows under the bridge from destabilizing the structural integrity of the bridge. The bridge deck would be sawcut with grooves to fit the CFRS in place to be level with the road surface. Strips would then be epoxied in place and covered with appropriate road surface materials. On the soffit of the bridge, surfaces would be cleaned with pressure washers or sandblasted to be prepared for attaching CFRS with epoxy. The CFRS on the deck would be approximately 4 feet in length covering the approximately 38-foot width along the centerline of each bridge span (the distance between the piers underneath the deck). The bridge deck would be treated with a chemical sealant (methacrylate) after installation of the CFRS strips. The CFRS on the soffit of the bridge would be approximately 7 feet in length covering approximately 36 feet width of the bridge soffit at the centerline of each location where piers join to the bottom of the bridge. **Figure 2.26** shows a depiction of the general scale and location of the headwalls and wingwalls that would connect with passive barriers, then floodwalls at Charcot Avenue Bridge with other design features identified with callouts.

Reach 5

Two flap gates (R5-FG2 and -FG3) would be installed within existing manholes north of Berryessa Road, east of Commercial Street, and west of Coyote Creek.

Reach 6

North/Downstream of Highway 101

A floodwall ~~(R6-FW5)~~ with an approximate height of 4 feet would be constructed along the east bank of Coyote Creek from south of Mabury Road (Taylor Street) for approximately 250 feet with a connection to the existing City recreational trail wall. From there, a concrete extension would be added to the top of the existing City recreational trail wall to an approximate height of 4 feet for approximately 300 feet. Approximately 168 feet from the end of the City recreational trail wall, another segment of floodwall with an approximate height of 4 feet and length of 349 feet would be constructed to the downstream face of Highway 101 and adjacent to ~~where~~ the City's Mabury Service Yard ~~is located~~ as shown on **Figure 2.16**. An approximately 15-foot-wide strip of riprap slope protection would be installed along this segment of floodwall on the creekside. These proposed segments are collectively referred to as R6-FW5.This floodwall would reduce the risk of flooding to the City's service yard and industrial areas to the east of Coyote Creek. In addition, two flap gates would be installed in existing manhole vaults; one (R6-FG4) south of Mabury Road northwest of R6-FW5, and one (R6-FG5) on the east bank of Coyote Creek and to the east of R6-FW5.

South/Upstream of Highway 101

Along the upstream face of the Highway 101 bridge crossing, an approximately 8-foot-high floodwall (R6~~4~~-FW6) would be constructed parallel to the Highway 101 crossing to prevent flood flows from reaching the highway. The top portions of the 8-foot-high floodwall may include a sound wall. Two approximately 8-foot-high access gates would be installed at locations along the floodwall alignment to allow access for maintenance vehicles. One access gate would be mounted on rails for moving the gate to one side when access through the floodwall is necessary and the other access gate would swing on a hinge when opening the gate is necessary. Access gates would be constructed with gaskets around the gates to prevent leakage of water around the gates during flood flows.

Watson Park

Various flood risk reduction improvements are proposed at the City's Watson Park. Flood flows would be allowed within Watson Park, but improvements would reduce flood risks to neighboring homes. At the northern entrance to Watson Park, a roadway berm consisting of ~~an~~ approximately less than 1-foot mound of asphalt ~~speed bump~~ would be contoured onto the road to create a high point in the middle of the road ~~installed across~~ within North 23rd Street (R6-B8~~no improvement identification was assigned~~). Along the western perimeter of Watson Park and continuing along Jackson Street, an approximately 9-foot-high floodwall (R6-FW7) would be constructed to protect homes neighboring this area of the park.

An approximately 9.5-foot-high passive barrier (R6-PB7) would be installed at the entrance of Watson Park on Jackson Street. The passive barrier would be embedded into the ground and would automatically rise and align perpendicularly with the floodwall (R6-FW7) and an approximately 9-foot-high berm (R6-B7) with a wiper wall oriented parallel to Jackson Street ~~floodwall (R6-FW1) would be constructed~~ within Watson Park on the south side of Jackson Street. Permanent traffic warning signals would be installed along Jackson Street entering Watson Park. When flood flows are expected to trigger the raising of the passive barriers, the signal and a blockade would be activated (similar to a railroad crossing) and all traffic would be prevented from travelling along Jackson Street into Watson Park. Traffic would be detoured until flood flows diminish and the passive barriers return to grade and the signal and blockade end, allowing traffic to resume into the park. It is anticipated that Valley Water would enter into a long-term maintenance agreement with the City to maintain the traffic signal.

At the southern perimeter of Watson Park, an approximately 5.5-foot-high floodwall (R6-FW9) would be constructed to contain flows within Coyote Creek and reduce flood risk at the Empire Gardens Elementary School.

Creekside of Kellogg Factory and Parkside Terrace Apartment Building

Two floodwalls would be constructed south of Watson Park and east of Coyote Creek. An approximately 5.5-foot-high floodwall (R6-FW8) would be constructed adjacent to the western perimeter of the Kellogg Factory, which is situated just north of Lower Silver Creek. Further upstream, an approximately 8~~3~~-foot-high berm (R6-~~FW~~B21) would be constructed south of the confluence of Lower Silver Creek and Coyote Creek, and an approximately 6~~5~~-foot-high floodwall (R6-FW10) would be constructed above the east bank of Coyote Creek to protect the Parkside Terrace apartment buildings. The berm would be topped with aggregate base for maintenance and trail access.

Upstream from Watson Park and just south of East Julian Street, an approximately 13-foot-high and 657~~715~~-foot-long floodwall (R6-FW19) would be constructed behind residences on Roosevelt Street and North 19th Street along the west bank of Coyote Creek to reduce flood risk to residences to the west/northwest of the floodwall. Further upstream and south of East Saint (St.) James Street, an approximately 10.5-foot-high and 458~~15~~-foot-long floodwall (R6-FW20) would be constructed behind residences on North 18th Street and East St. John Street and the west bank of Coyote Creek to reduce flood risk to residences to the west/northwest of the floodwall. Both floodwalls include pipes equipped with flap gates to drain stormwater that collects on the land side of the floodwalls. Stormwater would discharge where the pipe daylights on riprap bank protection that would be installed on the creek bank.

Reach 7

Creekside of Brookwood Avenue Properties

An approximately 8-foot-high and ~~35~~469-foot-long floodwall (R7-FW11) would be constructed along the backyard of the private properties at 311, 315, 321, and 329 Brookwood Avenue. The floodwall would be constructed along the boundaries of these properties adjacent and east of the top of the creek bank. Two stormwater discharge pipes with flap gates would be installed through the floodwall to discharge any stormwater that collects on the landside of the floodwall. The pipes would daylight on the creek bank and discharge stormwater on installed riprap bank protection.

William Street Park

Passive barriers and floodwalls would be constructed along William Street Park. Flood flows would be allowed within William Street Park, but improvements would reduce flood risks to neighboring homes. An approximately 7-foot-high passive barrier (R7-PB4-A to -H), including a floodwall segment (R7-PB4 FW1), would be constructed near the sidewalk along the western perimeter of William Street Park, across the street from residences and the entrance ramp of the Coyote Outdoor Classroom. Passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system. At the south end of William Street Park, a floodwall (R7-FW18) would be constructed to replace the existing privacy wall between the park and a private residence. In addition to flood improvements, the project would plant native trees in several areas along the eastern side of the park between the existing footpath and the creek riparian corridor.

Creekside of the Selma Olinder Elementary School

Adjacent to the east bank of Coyote Creek, flood risk reduction improvements would be constructed to reduce the flood risk to Selma Olinder Elementary School and adjacent residential areas. An approximately 6-foot-high floodwall (R7-FW12), including passive barrier segments (R7-FW12 PB4-A, -B, and -C), would be constructed starting west of the existing parking lot along the south side of the parking lot, along the west side of the basketball court, and then connect with another 6-foot-high floodwall segment (R7-FW12) along the school's existing athletic facilities that runs south/southeast before connecting with R7-PB5, described below. Passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system. The floodwalls in this area would require openings to release stormwater detained behind the floodwalls during storms and would either be directed to existing stormwater drainage inlets or discharged as sheet flow across the park in the direction of the creek once flood flows recede from the floodwalls and/or under non-flood storm conditions. The openings would be closed during flood flows, similar to a flap gate.

Selma Olinder Park

Passive barriers and floodwalls would be constructed along Selma Olinder Park. Flood flows would be allowed within Selma Olinder Park, but improvements would reduce flood risks to neighboring homes. An approximately 8.8-foot-high and 1,640~~34~~-foot-long passive barrier (R7-PB5), including a floodwall segment (R7-PB5 FW1), would be constructed along the east end of Selma Olinder Park and athletic facilities associated with the school to protect residential areas on the opposite side of Woodborough Drive. Passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City of San José stormwater system. Two approximately 8-foot-high access gates would be installed at locations along the floodwall alignment to provide access for property owners and Valley Water maintenance vehicles, equipment, and necessary personnel. The access gates would slide closed and be easily operated from both the waterside and landside. In addition, seven flood doors would be installed at various locations along the floodwalls to allow access to homeowners or maintenance activities. Access gates would be constructed with gaskets around the gates to prevent leakage of water around the gate during flood flows. South of R7-PB5, an approximately 1-foot-high compacted earthen berm would be constructed along the same alignment with and connected to the R7-PB5 wiper wall.

Reach 8

Creekside of the Creekside Garden Apartment Complex

South of I-280, an approximately 9-foot-high floodwall (R8-FW13) would be constructed along the western bank of the creek, northeast of the intersection of South 12th Street and Keyes Street, to protect the Creekside Garden Apartment complex. A stormwater collection grate and pipeline would be installed adjacent and along the landside of the floodwall and connect to a stormwater discharge pipe with flap gates that would be installed through the floodwall to discharge any stormwater that collects on the landside of the floodwall. The pipe would daylight on the creek bank and discharge stormwater on installed riprap bank protection.

Creekside of Residential Uses near Bevin Brook Drive

Farther to the south, an approximately 3-foot-high berm (R8-B3) and floodwall (R8-FW22) would be constructed on the west bank of the creek to protect residential properties on Bevin Brook Drive. An existing temporary berm that was built after the February 2017 flood event would be raised 1.5 feet and extended as part of the project. An approximately 5-foot-high floodwall (R8-FW14) would be constructed to the south from the berm and would extend east of Rocksprings Park. The new floodwall would replace a temporary vinyl floodwall that was constructed following the February 2017 flood event. In addition, two flap gates would be installed within existing manholes; one (R8-FG6) east of Bevin Brook Drive and R8-FW22 on the west bank of Coyote Creek, and one (R8-FG7) on the west bank of Coyote Creek and to the west of R8-FW14.

North of Tully Road

Just north of Tully Road, an approximately 10-foot-high floodwall (R8-FW15) would be constructed along the eastern bank of Coyote Creek to reduce flood risk for the neighboring San Jose Water Company groundwater station, a critical potable water facility.

2.4 Project Construction

2.4.1 Construction Schedule

Construction is anticipated to commence in early 2025 and would last approximately 2 years. Construction activities would be conducted Monday through Friday for approximately 10 hours per day during daylight hours (between 7 a.m. and 7 p.m.). Consistent with City of San José Municipal Code Section 20.100.450, work at nighttime (before 7 a.m. and after 7 p.m.) and on weekends may occur where construction activities are more than 500 feet from residential units. If nighttime construction activities occur within 100 feet of Coyote Creek, construction-related lighting would be directed at specific areas in which work is actively occurring and/or shielded to minimize illumination of the creek and adjacent natural habitat.

A total number of approximately 462 workdays is based on the anticipated work duration of approximately 22 months, 4 weeks per month, 5 workdays per week, and approximately 22 Saturdays. Flood risk reduction improvements that are more than 500 feet from residences include all features along Reach 4 and one element along Reach 6 (R6-FW5). Up to three flood risk reduction improvements would be constructed at a time.

The duration of construction activities in each reach is estimated as follows.

- Reach 4 – Approximately 17 weeks
- Reach 6 – Approximately 32 weeks
- Reach 7 – Approximately 50 weeks
- Reach 8 **–** Approximately 15 weeks

2.4.2 Construction Areas and Activities

Designated staging/laydown areas, temporary construction areas at improvements sites, and site access to improvement sites, excluding routes along existing public roadways, are shown on **Figures 2.27** to **2.34**. Staging/laydown areas are also identified in **Table 2.1** and have been designated in areas that are paved and/or have been previously disturbed, or that are open with no trees and within short driving distances to nearby improvement sites. Staging/laydown areas would be temporary and used only during construction activities for construction office trailers, worker and equipment parking, as an equipment maintenance yard, for equipment fueling, or for temporary storage of other construction materials. Staging areas would be cleared of vegetation and/or other debris before equipment would be mobilized to the site. Temporary construction areas have been identified as the space around each improvement site and site access route that may be used during construction activities and where ground disturbance could occur. To obtain access along designated site access routes, minor improvements may be required, such as tree trimming, and/or the demolition of light poles, signs, concrete curbs, and fences.

Construction activities would begin along each reach by mobilizing equipment and locating materials within the nearest staging/laydown area. Equipment and materials would be stored at the staging/laydown area and moved to each nearby improvement site for construction activities. The following sequence of activities would be conducted for each flood risk reduction improvement, as necessary. Each of these activities is discussed further below in this section.


Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Coyote Creek
Reach 4
Paragon Dr
O'Toole Wy
O'Toole Ln
O'Toole Ave
Fox Ln
880
I-880
Hartog Dr
R4-FG1
E Brokaw Rd
Enterprise Dr
Flood Risk Reduction
Bridge Headwall
Floodwall
Berm
New Manhole and Flap Gate
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0
100
200
400
Feet
N

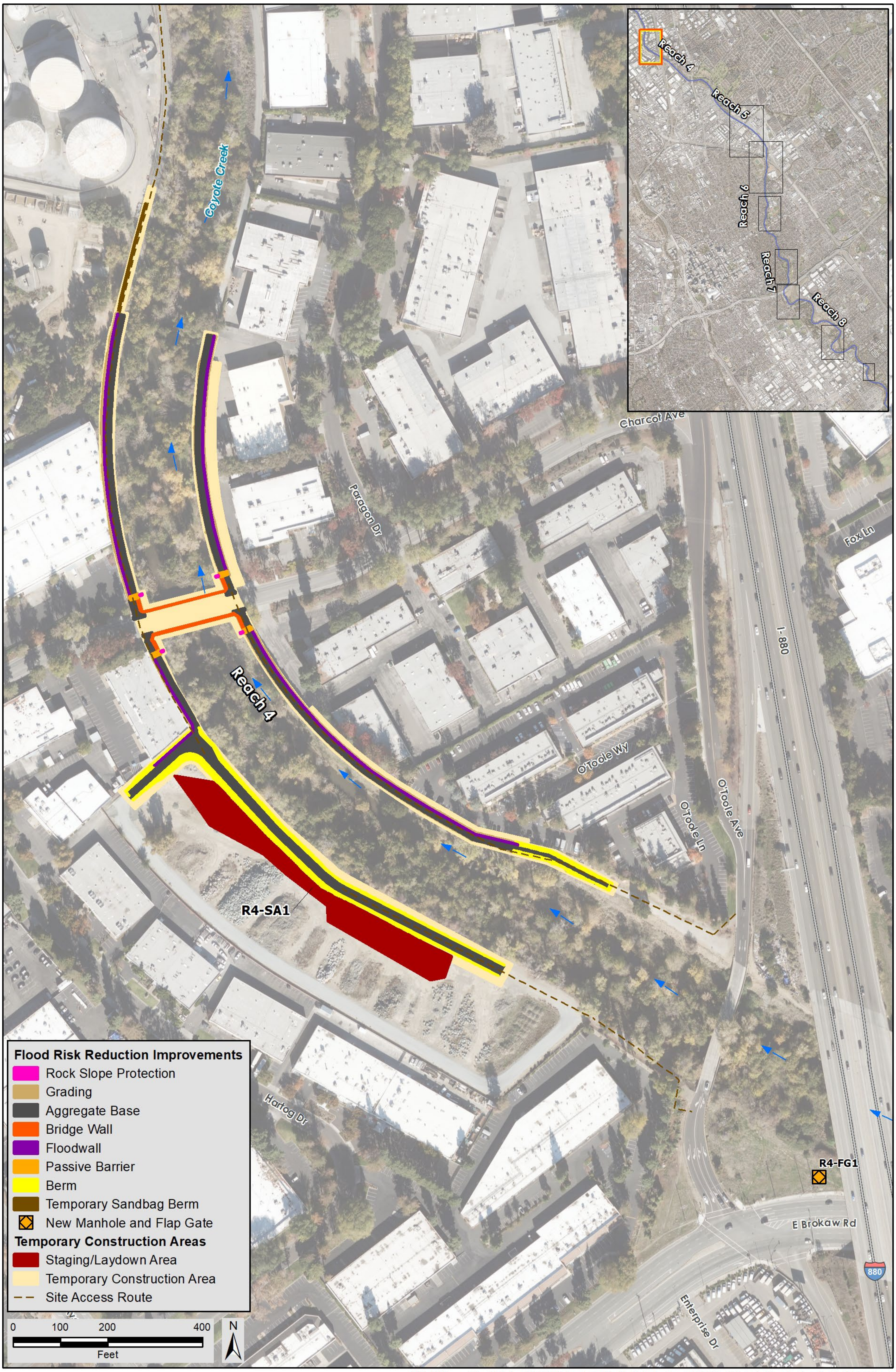

Figure 2.27. Reach 4 Construction Areas and Access

Harefield Dr
Chessington Dr
Littleton Dr
Cornish Ln
Berryessa Rd
R5-FG2
Reach 5
Commercial St
R5-SA3
Timothy Dr
US Hwy 101
Mabury Rd
N 23rd St
E Taylor St
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Flood Risk Reduction Improvements
Flap Gate in Existing Manhole
Construction Areas and Access
Staging/Laydown Area
Temporary Construction Area
0
150
300
600
Feet
N

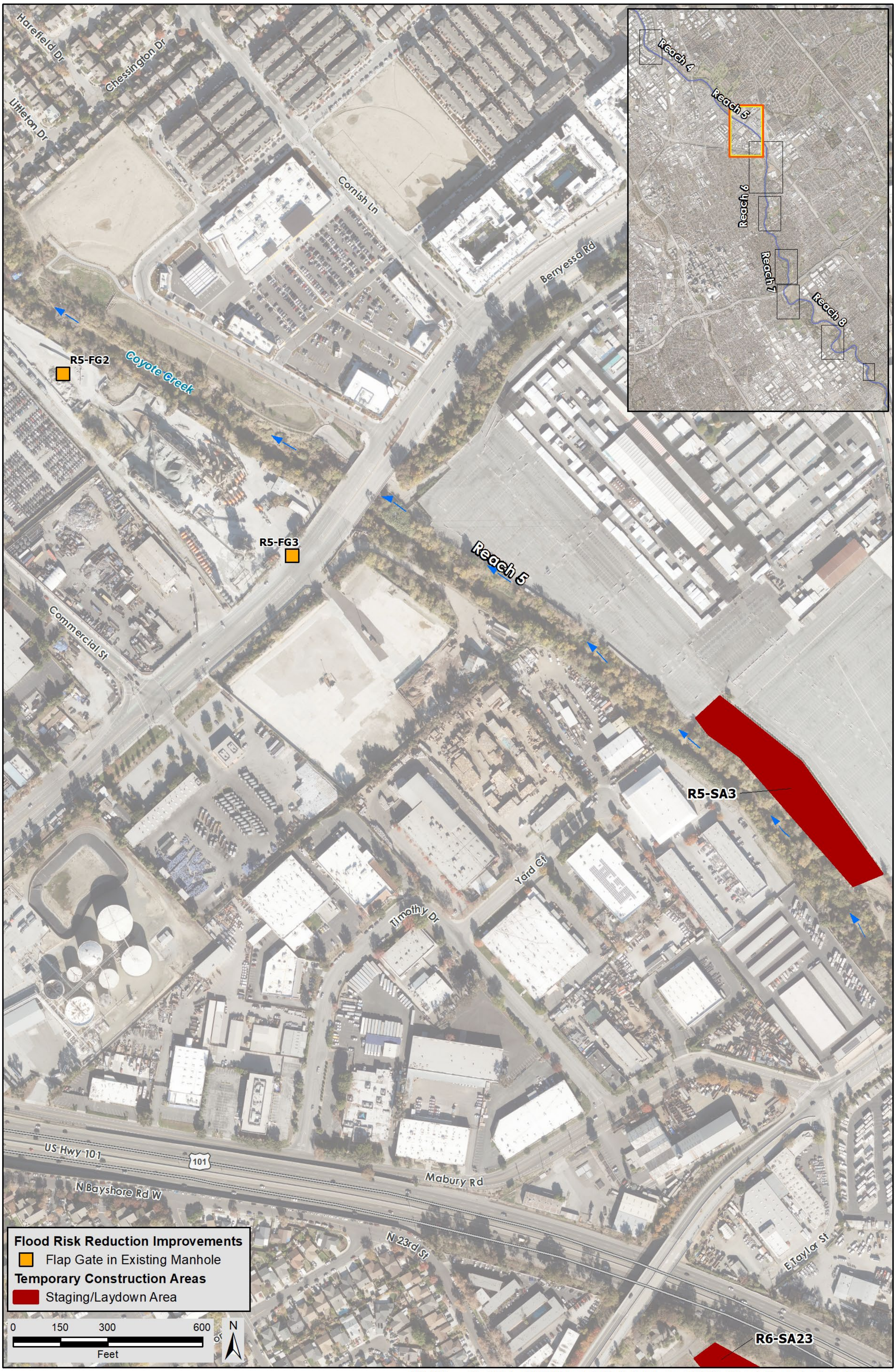

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Figure 2.28. Reach 6 Construction Areas and Access


Reach 5
R6-FG4
Coyote Creek
New St
Timothy Dr
Mabury Rd
US Hwy 101
N 23rd St
E Taylor St
R6-FG5
Watson Park
R6-SA4
R6-SA5
Calumet Ct
Monferino Dr
Githero Ct
Jackson St
Las Plumas Ave
N Marburg Way
Eggo Way
N 22
N 21st S
Terrace Dr
R6-SA6
Coyote Creek Pl
Coyote Creek Cir
N 26th St
Washington St
Wooster Ave
West Ct
Permata Ct
Rocektship Discovery Prep
Reach 4
Reach 6
Reach 7
Reach 8
Flood Risk Reduc
ents
Floodwall
Passive
Berm
Flap Gate in Existing Manhole
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0 150 300 600
Feet
N

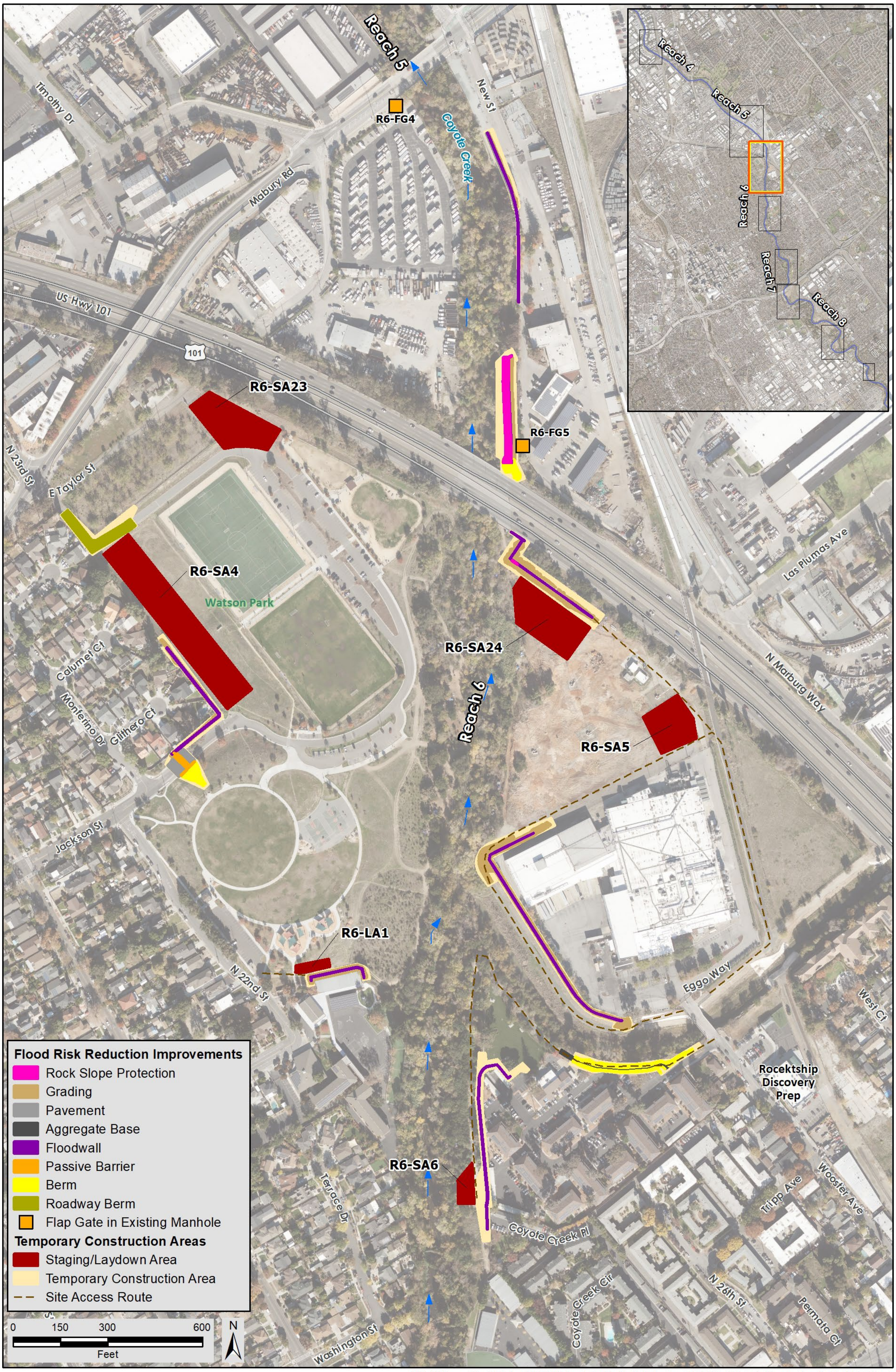

Figure 2.29. Reach 6 Construction Areas and Access Continued


Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
E Julian St
N 25th St
N 24th St
Bulldog Blvd
Roosevelt St
R6-SA7
N 19th St
Reach 6
E Saint James St
N 21st St
N 18th St
R6-SA8
R6-SA9
E St John St
R6-SA10
N 17th St
E Santa Clara St
S 21st St
Coyote Creek
S 20th St
S 19th St
Calhoun St
Reach 7
Flood Risk Reduction Improvements
Floodwall
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0
100
200
400
Feet
N

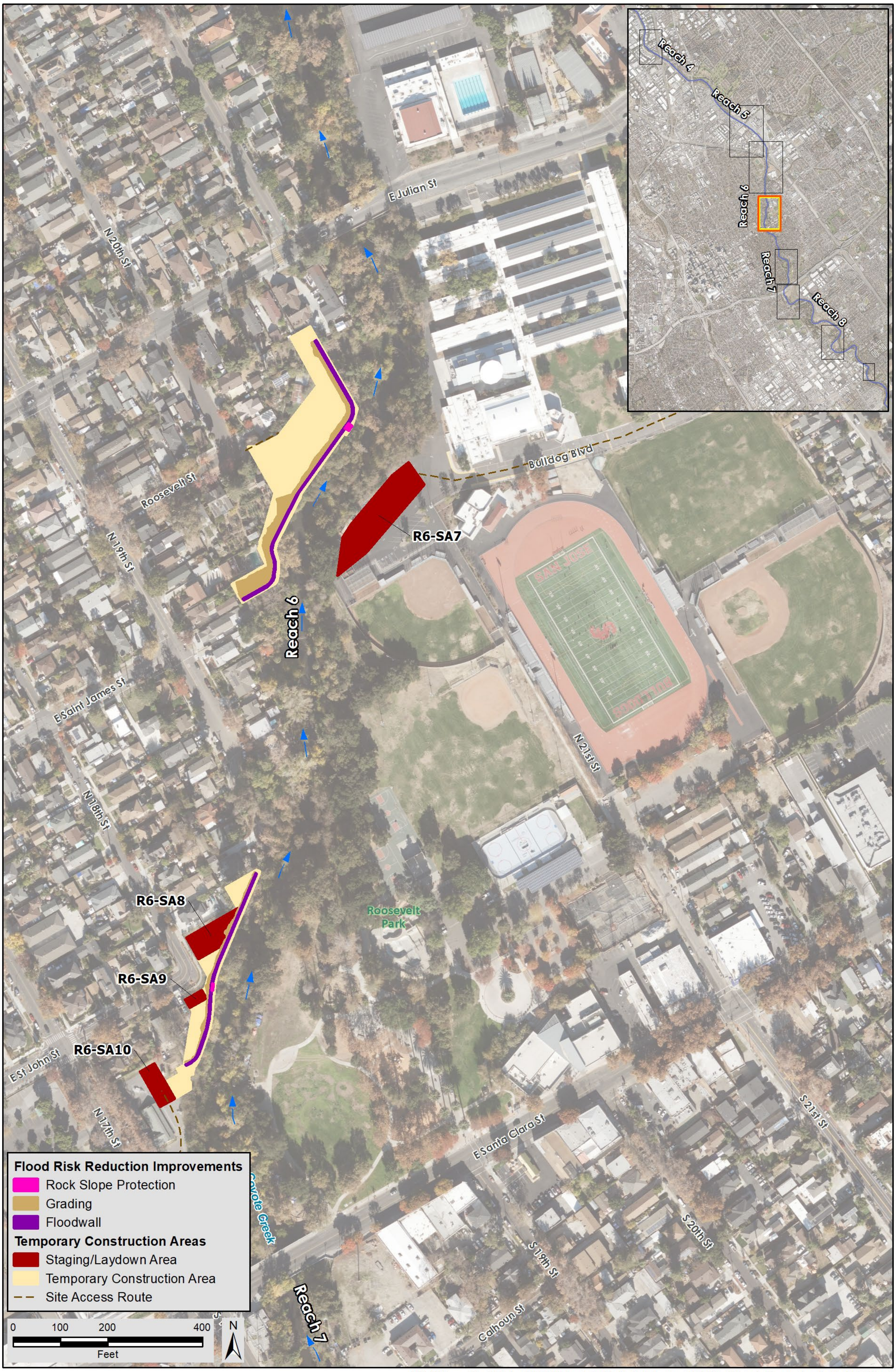

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Figure 2.30. Reach 7 Construction Areas and Access


R7-TB1
R7-TB2
Coyote Creek
S 17th St
S 18th St
Brookwood Ave
R7-SA11
R7-LA2
E San Salvador St
Reach 7
R7-SA1
E William
SA13
Woodborough Dr
S 15th St
S 16th St
R7-
R7-S
Woodborough Pl
E Reed St
S 14th St
R7-SA16
Margaret St
I- 280
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Flood Risk Reductio
Floodwall
Passive Ba
Berm
Constructio
cess
Site Access Route
Staging/Laydown Area
Temporary Cofferdam
Temporary Creek Crossing
Temporary Construction Area
0
100
200
400
Feet
N

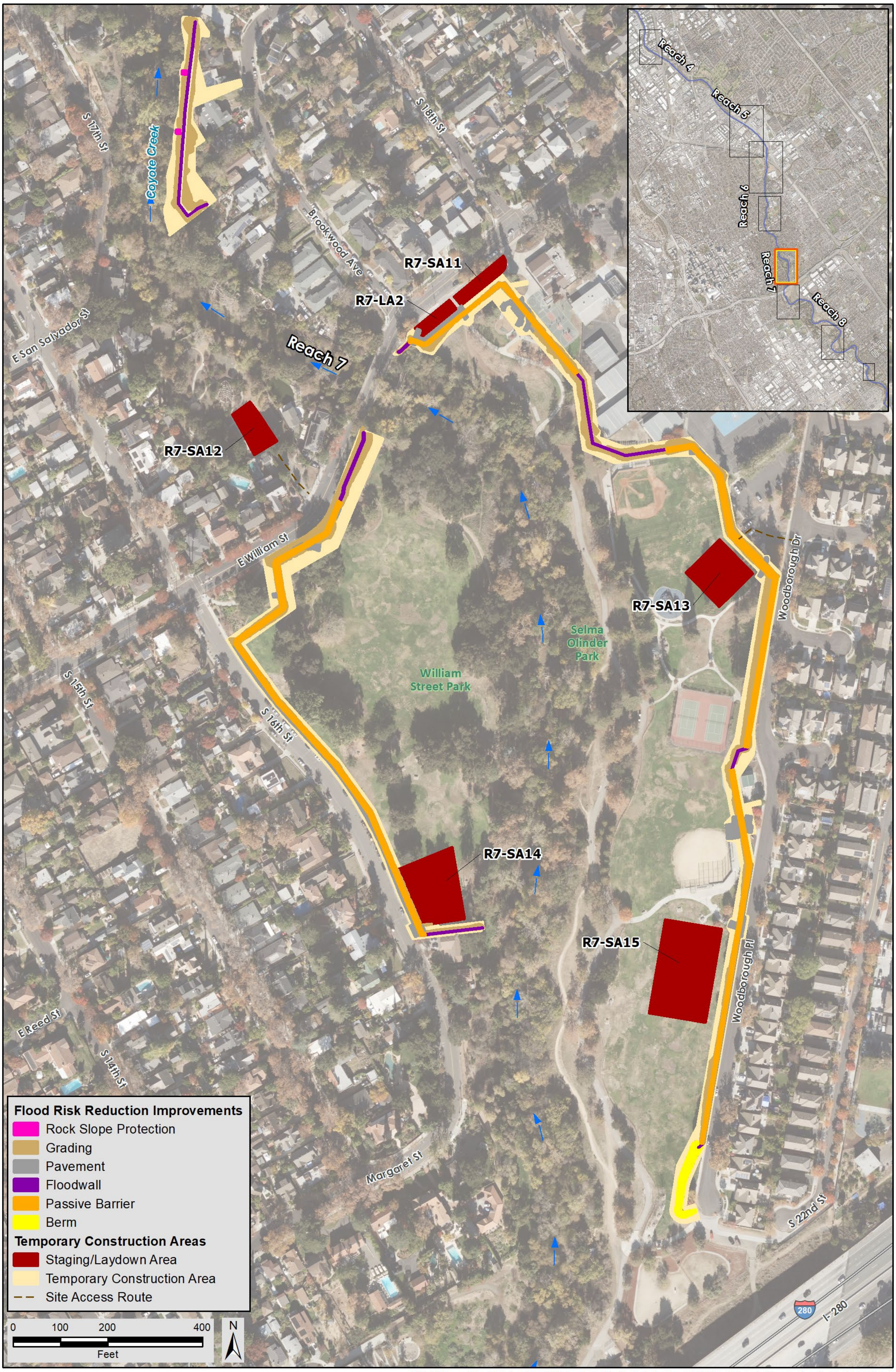


Figure 2.31. Reach 7 Construction Areas and Access Continued


Orvis Ave
Valley Oak Tr
Woodland Trl
Coyote Creek
Reach 7
280
I- 280
E Virginia St
Martha St
R8-SA17
Reach 8
R8-SA18
Story Rd
Bestor St
S 11th St
Keyes St
Spartan Ct
E Humboldt St
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Floodwall
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0
100
200
400
Feet
N

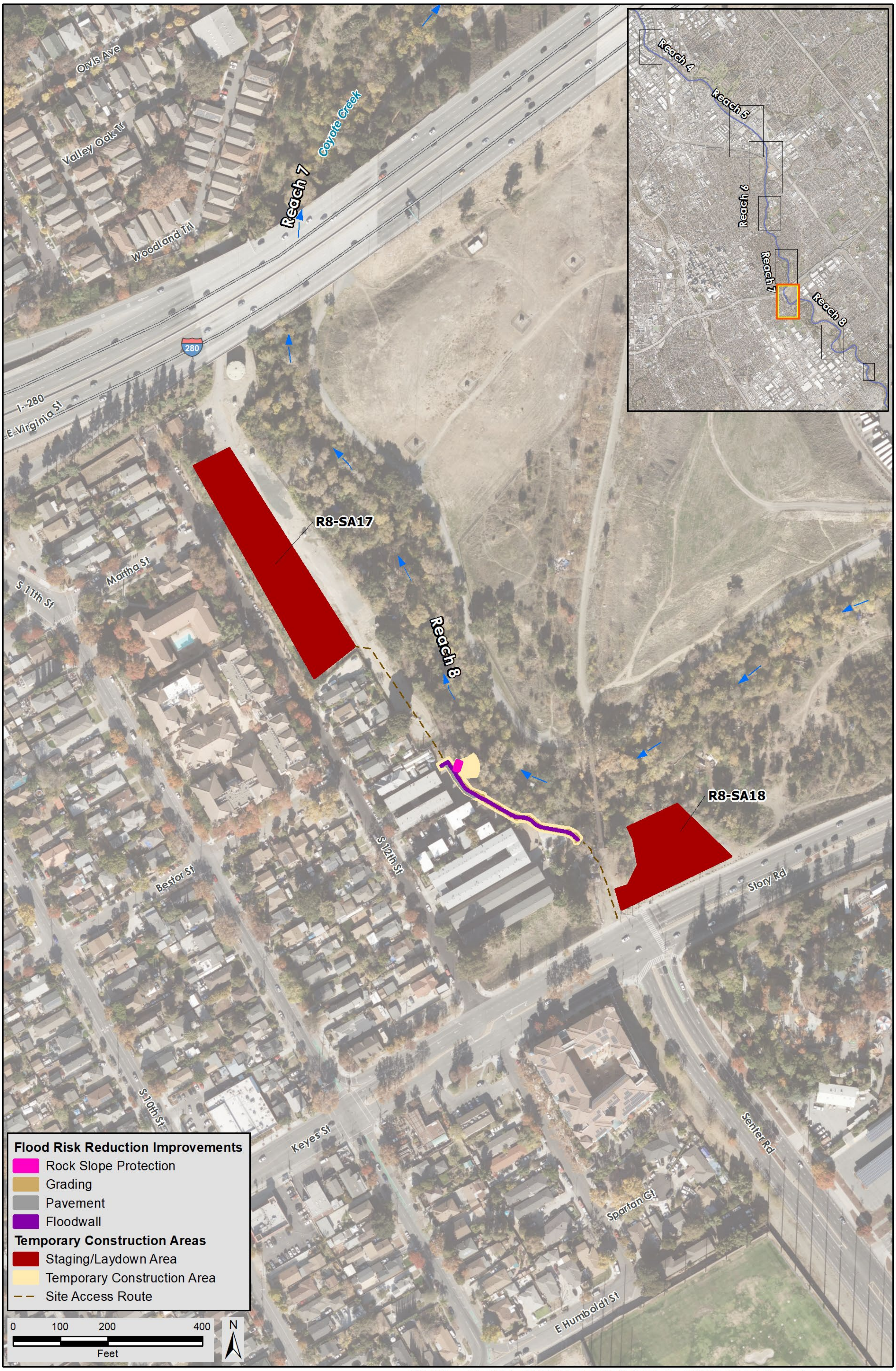
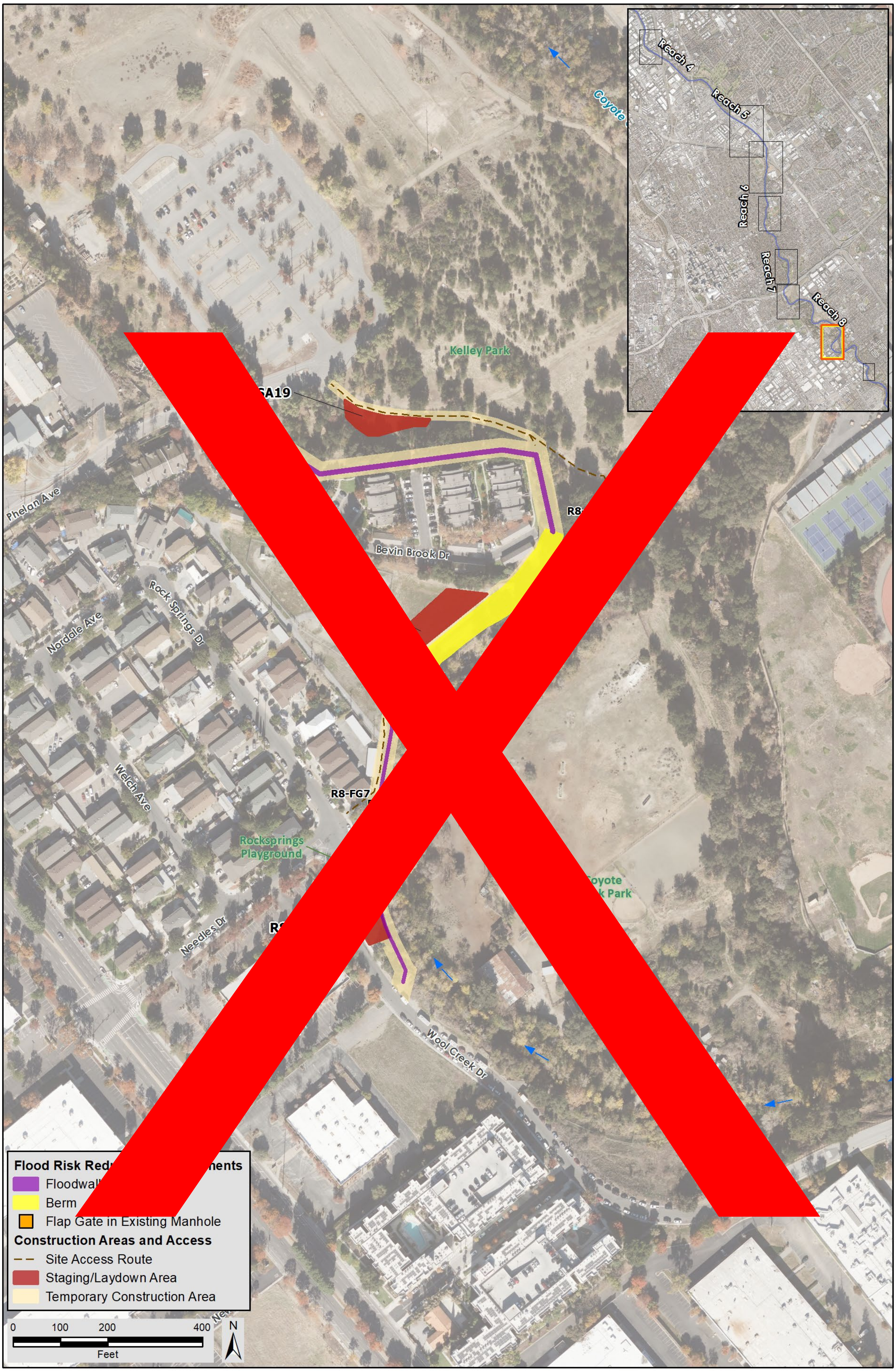


Figure 2.32. Reach 8 Construction Areas and Access



Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Coyote
Kelley Park
SA19
R8-FG7
Phelan Ave
Bevin Brook Dr
Rock Springs Dr
Nordale Ave
Welch Ave
Rockspring Playground
Needles Dr
Wool Creek Dr
Flood Risk Red ents
Floodwal
Berm
Flap Gate in Existing Manhole
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0 100 200 400
Feet
N

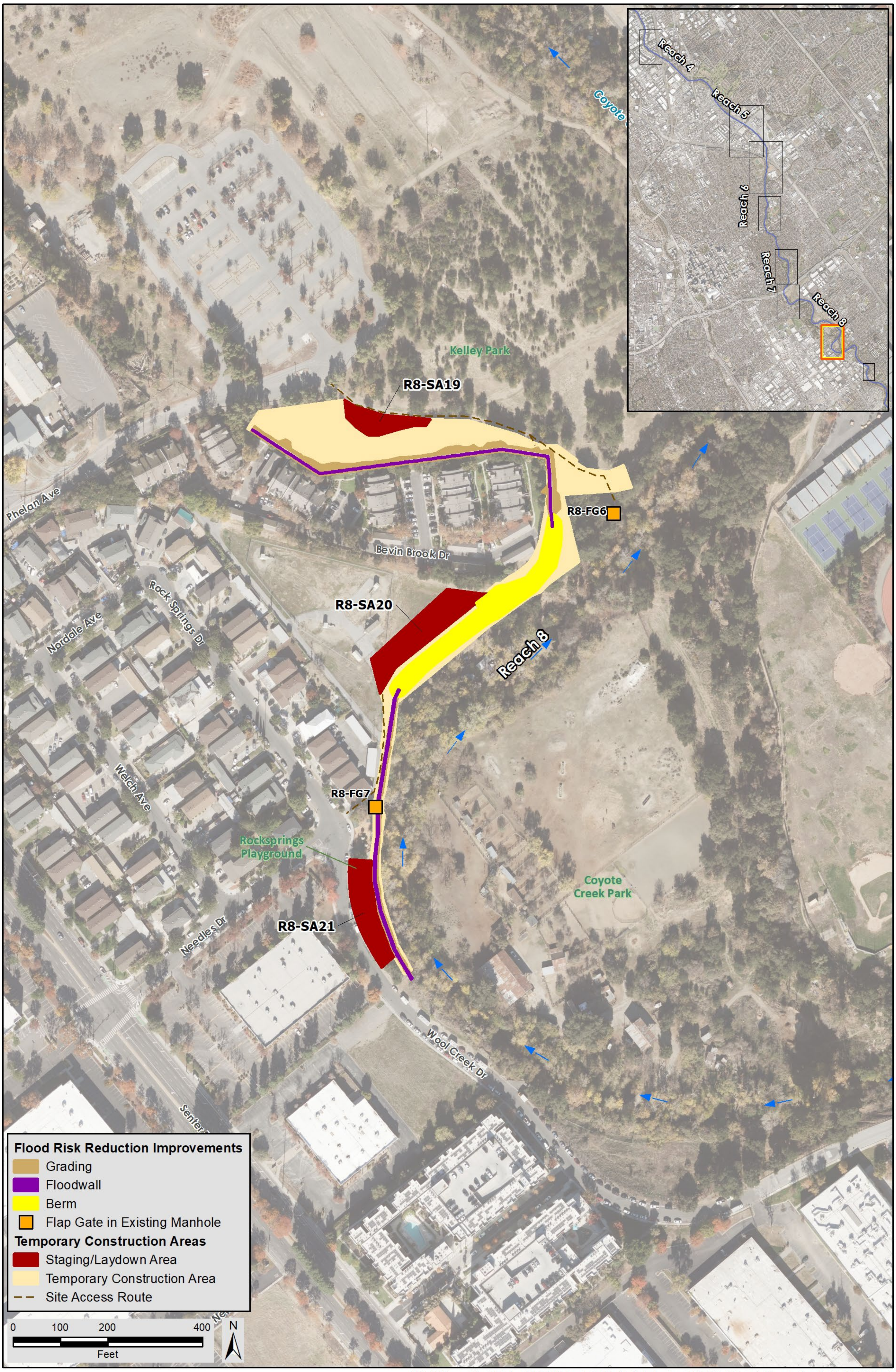


Figure 2.33. Reach 8 Construction Areas and Access Continued

Galveston Ave
Coyote Creek Park
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
R8-SA22
Tully Rd
Coyote Creek
Flood Risk R
ements
Floody
Construction Areas and Access
Site Access Route
Staging/Laydown Area
Temporary Construction Area
0
50
100
200
Feet
N

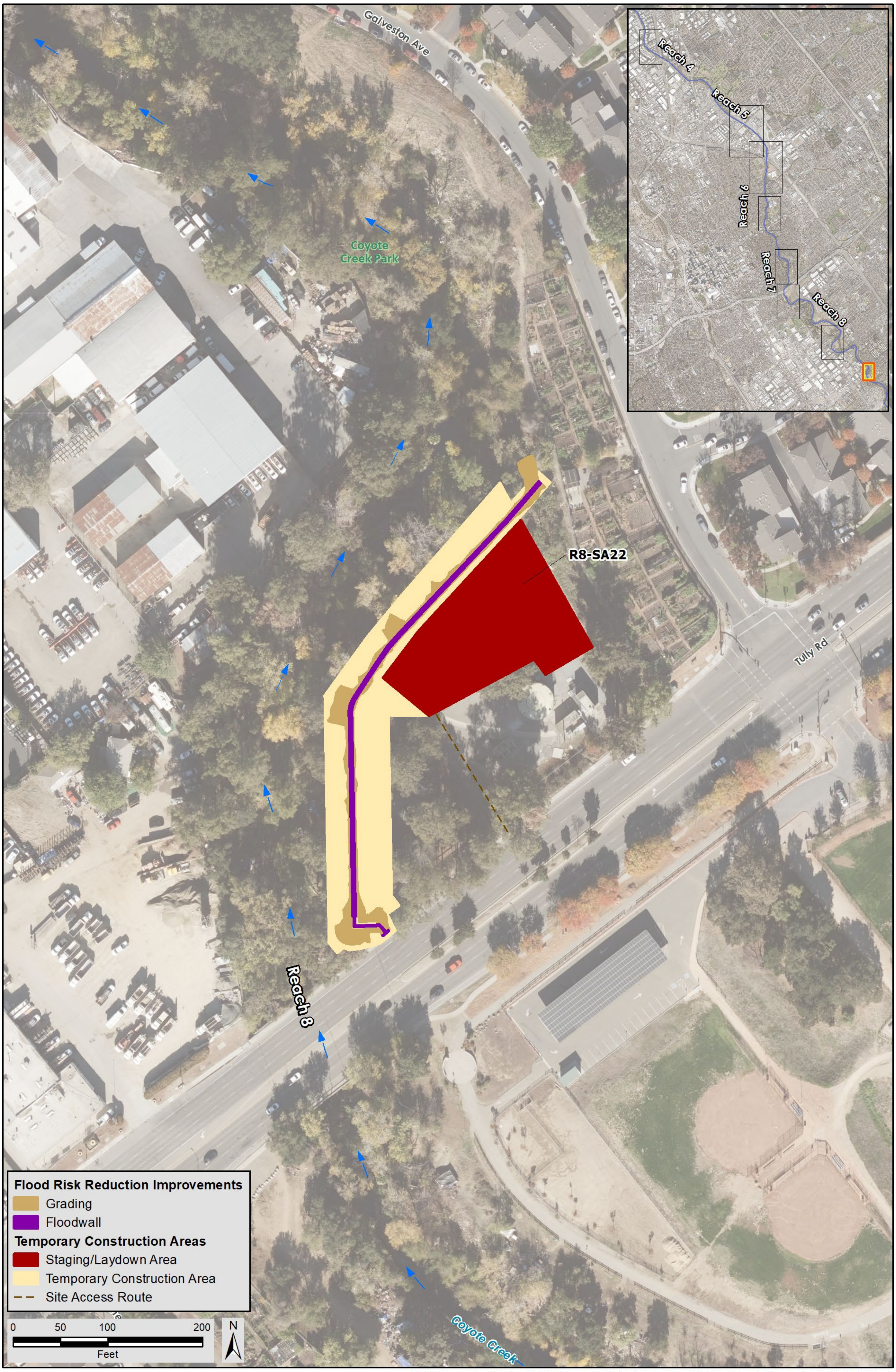


Figure 2.34. Reach 8 Construction Areas and Access Continued

Table 2.1. Staging/Laydown Area Locations

Staging/ Laydown Area	Location
Reach 4	
R4-SA1[a]	Adjacent to the west bank of Coyote Creek and all Reach 4 improvements
Reach 5	
R5-SA3	Adjacent to the east bank of Coyote Creek and north of R6-FW5
Reach 6	
R6-SA3	Adjacent to north corner of Watson Park in a construction staging area currently being used for a different project
R6-SA4	Within Watson Park and adjacent to R6-FW7
R6-SA5	North of Kellogg Factory building and between R6-FW6 and R6-FW8
R6-LA1	Southeast side of Watson Park and adjacent to R6-FW9
R6-SA6	Adjacent to east bank of Coyote Creek and west of R6-FW10
R6-SA7	Adjacent to east bank of Coyote Creek in the parking lot at the end of Bulldog Boulevard at Roosevelt Park and east of R6-FW19
R6-SA8	East of N 18th and ~~and~~ R6-FW20
R6-SA9	East of E St John Street and R6-FW20
R6-SA10	East of N 17th Street and R6-FW20
Reach 7	
R7-SA11	South side of E William Street in the Selma Olinder Park parking lot near R7-FW12 PB-B
R7-LA2	South side of E William Street in the Selma Olinder Park parking lot near R7-FW12 PB-B
R7-SA12	North side of E William Street and north of R7-PB4 FW1
R7-SA13	Adjacent to and southeast of R7-PB5 in the northeast portion of Selma Olinder Park
R7-SA14	Within William Street Park east of R7-PB4
R7-SA15	Within the eastern portion of Selma Olinder Park and adjacent to R7-PB5
R7-SA16	Within the southern portion of Selma Olinder Park and adjacent to R7-B5
Reach 8	
R8-SA17	Adjacent to the west bank of Coyote Creek and S 12th Street and north of R8-FW13
R8-SA18	Adjacent to southwest bank of Coyote Creek, Story Road, and R8-FW13
R8-SA19	Within Kelly Park adjacent to site access route and north of R8-B3
R8-SA20	Contiguous to the west of R8-B3
R8-SA21	In Rock Springs Park
R8-SA22	Adjacent to the west side of R8-FW15

Note: Numbering of staging/laydown areas is not sequential.

[a] The temporary construction area adjacent to this staging area was removed from the project description due to existing use by Valley Water for maintenance materials.

1. **Site Preparation** – Preliminary activities to prepare the improvement site for construction equipment access and construction activities.

2. **Excavation and Grading** – Excavation and grading activities required prior to the installation of the flood risk reduction improvement.
3. **Installation of Improvements** – Installation of the improvement foundation, if required, and the improvement itself.
4. **Site Cleanup and Restoration** – Activities to clean up the improvement site and restore temporarily impacted areas to as close to conditions that existed prior to construction as feasible.

Site Preparation

Visible markers and/or construction fencing, as needed, would be installed to delineate the construction area and access to each improvement site. Other site preparation activities are discussed below.

Clearing and Grubbing

Valley Water would prepare the work areas by clearing and grubbing the improvement sites to provide an area for construction personnel and required equipment. This would include removing vegetation and trees, to the extent necessary, within the construction disturbance area, which would consist of the footprint of the flood risk reduction improvement and the temporary construction areas depicted on **Figures 2.26** to **2.33**. Trees within the direct footprint of the improvements would be removed. Trees within the temporary construction areas would be removed or trimmed, as needed, to operate equipment and facilitate the installation of the improvements. Valley Water would also trim large tree limbs and shrubs, as needed, to allow construction access along the site access routes that are not on public roadways. Stumps of removed trees would be ground in place. Removed trees and trimmed tree limbs would be chipped onsite using trailer mounted tree chippers. Wood chips would be used onsite as mulch or hauled offsite for storage or disposal.

Protecting and Relocating Utilities

Utilities within and adjacent to improvement sites would be located, inspected, supported, and protected in place to the greatest extent possible. These underground utilities may include, but are not limited to, buried electrical conduits, fiber optical cables, natural gas pipelines, sewer pipelines, and water pipelines. Valley Water is currently conducting surveys to identify the location of underground utilities and potential conflicts with the project design to identify where protect in place methods would be required.

For sheet pile I-wall floodwalls, walers (horizontal beams) would be attached to sheet piles on cutoff walls where the walls intersect existing utilities below the ground surface. The walers would be located approximately 1 foot above finished grade and at the top of the wall to provide support for the structural load above the utility crossing. The walers would consist of steel welded to the water side of the sheet pile floodwall.

Existing utilities may need to be relocated within public roadways where excavation occurs for floodwall and passive barrier foundations. Utilities would be buried deeper or rerouted within the roadway. Utilities in public roadways would be protected in place or relocated following the requirements of encroachment permits obtained from the City for construction of the project. It is assumed that any relocations would be confined to adjacent roadways and/or within proximity to project flood risk reduction improvements – approximately 20 feet. If utility infrastructure relocation is required, new connections would be constructed prior to disconnecting the utilities within the construction alignment so there would be no interruption of services.

Excavation and Grading

Floodwalls and Passive Barriers

Grading of improvement sites for all types of floodwalls and passive barriers may be required to develop the design elevations. Construction of concrete T-Wall and L-Wall floodwalls and passive barriers requires excavation of trenches along the alignments of the improvements that are deep enough and wide enough for construction of the foundations of these improvements. A backhoe and grader would be used for excavation and grading activities. Although the project would include excavation during construction, excavations would not be more than 3 feet below ground surface (bgs) in areas where groundwater is shallow (i.e., at 9 feet bgs) and approximately 5 feet bgs excavation depths in areas where groundwater is deeper (e.g., below 9 feet bgs) dewatering would not be required due to limits on excavation depth. Excavated material would be spread to the greatest extent practicable onsite on the landside of floodwalls, used to construct areas for temporary equipment access (within temporary construction areas), and used to increase elevations that are required to be raised to support project implementation. All reuse of excavated materials would be subject to the results of suitability testing for onsite reuse. Excavated material that is not reused would be hauled offsite and disposed of at an approved landfill in accordance with local, State, and Federal laws. Approximately 29,000 cubic yards of excavated material and other construction debris and materials would require export.

Berms

The top few inches of soil would first be scraped at the berm sites. Excavated or imported soil would be hauled to the berm sites and graded to meet the height required for flood risk reduction and sloped appropriately for stability. Some excavation would be performed before placing the fill to remove organic materials from the surface that would not be suitable within the berm, and to facilitate a level surface fit for compacting the additional berm soil.

Installation of Improvements

Sheet Pile I-Wall Floodwalls

Sheet piles would be installed by a pile driver using standard crane and hammer or vibrational pile driving equipment. Where concrete encasing is applied to the sheet pile, concrete trucks and pumps would be used to finish the concrete floodwall facings once the sheet piles have been installed.

Concrete L-Wall and T-Wall Floodwalls

For concrete L-Wall and T-Wall floodwalls, frames and rebar would be installed in footings placed in the excavated trenches below the ground surface and concrete would be poured. After the curing of the concrete in the below ground footings, the above ground portions of the floodwalls would be framed with rebar and other structural features prior to the pouring of concrete into the frames. Concrete trucks and pumps would be used to pour concrete into the forms. Once curing of concrete is complete, other associated appurtenances to the floodwalls would be installed, such as access gates.

Passive Barriers

Construction of the passive barriers would include excavation of an area deep and wide enough to install internal stormwater drainage systems and pour foundations as the footings and foundation of the passive barriers would be buried below ground and the hinged passive barrier structure would be level with the ground surface during dry conditions. The footings and foundation of passive barriers would be constructed of concrete which is poured into the trenches and buried below ground. The hinged passive barrier structure would then be installed on top of the concrete foundation and level with the ground surface. Wiper walls would then be installed between passive barriers and adjacent floodwalls or structures.

Temporary lane closures would be required for construction of passive barriers within Jackson Street at the west end of Watson Park along Reach 6 (R6-PB3). Consistent with City of San José Municipal Code Sections 11.14.050 and 11.14.060, lane closures would not occur during peak commute hours, which are defined as from 6 a.m. to 8:30 a.m. and from 3:30 p.m. to 7 p.m. Monday through Friday.

Headwalls and Carbon Fiber Reinforced Strips

Construction of the headwalls on the Charcot Avenue Bridge would require demolition of the existing cement railings on each side of the bridge prior to constructing the new headwalls. Demolition of the existing railings would include cement cutting, jackhammering, and other techniques to remove the existing structures and prepare the bridge deck for installation of the new headwalls. Headwalls would be cast-in-place reinforced concrete. In addition, CRFS would be installed along the bridge deck after sawcut of grooves to the specific size for installation of the CRFS within and to be level with the bridge deck surface. Construction activities for these improvements would require closing one side of the bridge while allowing bi-directional traffic to continue during construction with appropriate traffic safety management measures. Construction of the headwalls and CRFS would occur in two stages to maintain traffic over the bridge at all times. Installation of the CRFS on the soffit of the bridge would require preparation of scaffolding or other structures (also known as false work areas) to allow workers to access the soffit areas. Prior to installing the CRFS, mobilization and installation of the false work structures, safety equipment, and debris capture materials would be installed.

Site Cleanup and Restoration

After construction is complete, all areas disturbed by construction activities, including staging areas, would be cleared of construction equipment and materials, and restored as close to pre-construction conditions as feasible (e.g., graded to compliment the adjacent land surface and topography). Disturbed areas would be seeded with an appropriate native seed mix for erosion protection and to minimize the colonization of non-native invasive vegetation. An erosion control native seed mix would be applied on slopes 3:1 and steeper and would include erosion control fabric and coir logs (rolls of meshed together and encased coir (coconut) fibers). Irrigation would be provided by hand or with water trucks, as needed, to facilitate seed establishment.

~~2.4.3 In-Channel Construction~~

~~Construction activities would be conducted outside of the wetted portion of the Coyote Creek channel with the exception of the establishment of a temporary access berm to provide access for construction equipment for floodwalls (R6-FW11) at properties on Brookwood Avenue along~~

~~Reach 6. The floodwall would be constructed in the backyards of single-family homes along the east bank of the channel. A temporary crossing of the Coyote Creek channel (R7-TB1) from the west bank over the channel to the east bank is required to provide access for large construction equipment, as shown in Figure 2.27. The crossing would require the installation of an upstream coffer dam (R7-TB2) and then piping or pumping water around (i.e., dewatering) or through the area of the temporary creek crossing (which is downstream of the cofferdam). After the creek flows have been bypassed/rerouted downstream, the temporary creek crossing would be constructed using temporary fill in the isolated area of the creek where water is not flowing. After the floodwalls are constructed, the crossing would be removed, and the channel would be restored to pre-construction conditions. Construction activities directly in the Coyote Creek channel where water is flowing, including the dewatering of water downstream, would be limited to June 15 to October 15. Water quality monitoring would also be undertaken within Coyote Creek throughout the duration of dewatering activities, in accordance with the San Francisco Bay Basin Plan and other federal and state requirements.~~

2.4.4 Construction Workers, Hauling, and Equipment

Approximately 8 to 10 crew members would work at each flood risk reduction improvement site and up to three improvements may be constructed simultaneously. Therefore, an estimated 30 crew members may be working on the project at one time.

Approximately 14,500 cubic yards of soil, 10,000 cubic yards of concrete, and 10,000 tons of construction materials would require import (personal communication from Valley Water on October 2, 2023). An estimated 3,580 one-way truck trips would be needed for hauling of soil and materials to the project area. It is assumed material hauling trips would originate from supply sources within 100 miles of the destination improvement site. <u>Valley Water's contractors would be required to apply for a Caltrans Transportation Permit for use of oversize or excessive load vehicles prior to travel on the State roadway system.</u>

Approximately 29,000 cubic yards of excavated material and other construction debris and materials would require export (personal communication from Valley Water on October 2, 2023). An estimated 2,500 one-way truck trips would be needed for hauling soil and materials from the project area. It is assumed that excavated material would be exported to a facility appropriate for disposal within 40 miles of the improvement sites where haul trucks are loaded with material.

Pickup trucks would be used by contractors throughout the duration of the implementation of project construction activities, including post-construction demobilization. Handheld equipment (e.g., chainsaws, limb pruners, etc.) would be used for limbing of trees and for tree removal. Stumps would be ground with stump grinders. Additionally, the following specialized construction equipment would be used during construction activities for the project.

- **Site Preparation, Excavation, Grading, and Site Cleanup and Restoration**
  - Excavator
  - Generator
- **Installation of Improvements**
  - Floodwalls
    - Excavator
    - Pile Driver
    - Crane

        - Dozer
        - Roller compactor
        - Concrete mixer
        - Generator
    - Passive barriers
        - Excavator
        - Roller compactor
        - Cement mixer
        - Generator
    - Berms
        - Backhoe
        - Dozer
        - Roller Compactor
        - Pneumatic Hammer
        - Generator

2.5 Project Operations and Maintenance Activities

Valley Water has the sole responsibility for maintaining the flood risk reduction improvements. Valley Water would obtain easements and access agreements where necessary for development and maintenance of flood risk reduction improvements. Property owners would be responsible for maintaining their property in a reasonably safe condition that does not interfere with Valley Water's ability to access or maintain the floodwalls.

Similar to current practice and consistent with *2019 – 2023 Valley Water's Stream Maintenance Program Manual* (SMP Manual, Valley Water 2019), maintenance activities would be conducted within Reaches 4 through 8 following project construction. These activities may include trash and debris removal, vegetation management (e.g., removing vegetation along maintenance roads), minor maintenance road repairs, management of wildlife conflicts, and graffiti removal. The newly installed flood risk reduction improvements would be visually inspected on a periodic basis (one to two times per year). If observed damage threatens the integrity of any structures, repairs would be completed to return them to the as-built design. In addition, event-driven inspections would take place during or immediately after a natural hazard such as a large storm event, flood, earthquake, or any other event having the potential to damage the project elements or create hazards for public safety.

After construction of the project, maintenance areas, which consist of a 10-foot area around each flood risk reduction improvement, would be maintained by Valley Water, as needed, to facilitate access to each improvement to conduct the maintenance activities discussed above in this section. Maintenance areas are shown on Figures 2.13 to 2.24. Vegetation would be removed within these maintenance areas, as needed, to access the flood risk reduction improvements. Vegetation would be preserved if the improvement may be accessed for maintenance without vegetation removal.

2.6 Avoidance and Minimization Measures

2.6.1 Valley Water Best Management Practices

Valley Water developed the *Best Management Practices Handbook* (Handbook) to provide general technical guidance and standardized procedures for all Valley Water projects. The Handbook contains a comprehensive list of standard BMPs that Valley Water incorporates into projects to avoid or minimize potential environmental impacts (Valley Water 2014). BMPs from the Handbook that are relevant to project construction activities and incorporated into the proposed project are identified below and described in **Appendix B** (in **Table B.1**).

- **Air Quality (AQ) BMPs**
  - AQ-1: Use Dust Control Measures
  - AQ-2: Avoid Stockpiling Odorous Materials
- **Biology (BI) BMPs**
  - ~~BI-2: Minimize Impacts to Steelhead~~
  - ~~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 Impacts to Nesting Migratory Birds from Pending Construction
  - BI-7: Minimize Impacts to Vegetation from Survey Work
  - BI-8: Choose Local Ecotypes Of Native Plants and Appropriate Erosion-Control Seed Mixes
  - ~~BI-9: Restore Riffle/Pool Configuration of Channel Bottom~~
  - BI-10: Avoid Animal Entry and Entrapment
  - BI-11: Minimize Predator-Attraction
- **Cultural (CU) BMPs**
  - CU-1: Accidental Discovery of Archeological Artifacts or Buria~~e~~l ~~Finds~~ Remains
- **Hazards (HM) BMPs**
  - HM-1: Comply with All Pesticide Application Restrictions and Policies
  - HM-2: Minimize Use of Pesticides
  - HM-3: Post Areas Where Pesticides Will Be Used
  - HM-4: Comply with All Pesticide Usage Requirements
  - 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
  - HM-11: Ensure Worker Safety in Areas with High Mercury Levels
  - HM-12: Incorporate Fire Prevention Measures
  - HM-13: Avoid Impacts from Naturally Occurring Asbestos
- **Hydrology and Water Quality (WQ) BMPs**
  - 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 Operation and Maintenance
- WQ-4: Limit Impacts from Staging and Stockpiling Materials
- WQ-5: Stabilize Construction Entrances and Exits
- WQ-6: Limit Impact of Concrete Near Waterways
- ~~WQ-7: Isolate Work in Tidal Areas with Use of Coffer Dam~~
- WQ-8: Minimize Hardscape in Bank Protection Design
- WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement
- ~~WQ-10: Prevent Scour Downstream of Sediment Removal~~
- WQ-11: Maintain Clean Conditions at Work Sites
- WQ-14: Backfill Completed Exploratory Borings
- WQ-15: Prevent Water Pollution
- WQ-16: Prevent Stormwater Pollution
- WQ-17: Manage Sanitary and Septic Waste

- **Transportation (TR) BMPs**
  - TR-1: Use Suitable Public Safety Measures

The following additional BMPs from Valley Water's *Stream Maintenance Program* [SMP] *Manual* (Valley Water 2012) relevant to project operation and maintenance activities incorporated into the project are identified below and described in **Appendix B** (in **Table B.1**).

- **Pre-Project Planning and General (GEN) BMPs**
  - GEN-1: In-Channel Work Window
  - GEN-2: Instream Herbicide Application Work Window
  - GEN-3: Avoid Exposing Soils with High Mercury Levels
  - GEN-4: Minimize the Area of Disturbance
  - ~~GEN-6: Minimize Impacts to Nesting Birds via Site Assessments and Avoidance Measures~~
  - ~~GEN-6.5: Protection of Nesting Least Bell's Vireos~~
  - ~~GEN-7: Protection of Burrowing Owls~~
  - ~~GEN-8: Protection of Sensitive Fauna Species from Herbicide Use~~
  - ~~GEN-9: Avoid Impacts to Special- Status Plant Species and Sensitive Natural Vegetation Communities~~
  - ~~GEN-10: Avoid Impacts to Bay Checkerspot Butterfly and Associated Critical Habitat~~
  - ~~GEN-12: Protection of Special-Status Amphibian and Reptile Species~~
  - ~~GEN-13: Protection of Bat Colonies~~
  - ~~GEN-14: Protection of San Francisco Dusky-footed Woodrat~~
  - ~~GEN-15: Salvage Native Aquatic Vertebrates from Dewatered Channels~~
  - GEN-16: In-Channel Minor Activities
  - GEN-17: Employee/Contractor Training
  - GEN-18: Paperwork Required On-Site
  - GEN-19: Work Site Housekeeping
  - GEN-20: Erosion and Sediment Control Measures
  - GEN-21: Staging and Stockpiling of Materials
  - GEN-22: Sediment Transport
  - GEN-23: Stream Access
  - GEN-24: On-Site Hazardous Materials Management

- GEN-25: Existing Hazardous Materials
- GEN-26: Spill Prevention and Response
- GEN-27: Existing Hazardous Sites
- GEN-28: Fire Prevention
- GEN-29: Dust Management
- GEN-30: Vehicle and Equipment Maintenance
- GEN-31: Vehicle Cleaning
- GEN-32: Vehicle and Equipment Fueling
- ~~GEN-35: Pump/Generator Operations and Maintenance~~
- GEN-36: Public Outreach
- GEN-37: Implement Public Safety Measures
- GEN-38: Minimize Noise Disturbances to Residential Areas
- GEN-39: Planning for Pedestrians, Traffic Flow, and Safety Measures
- GEN-40: Discovery of Cultural Remains or Historic or Paleontological Artifacts
- GEN-42: Investigation of Utility Line Locations

- **Vegetation Management (VEG) BMPs**
  - VEG-1: Minimize Local Erosion Increase from In-channel Vegetation Removal
  - VEG-2: Non-native Invasive Plant Removal
  - ~~VEG-3: Use Appropriate Equipment for Instream Removal~~

- **Management of Animal Conflict (ANI) BMPs**
  - ANI-1: Surface Barrier Applications to Prevent Burrowing
  - ~~ANI-3: Burrowing Owl, Bald Eagle and Golden Eagle Buffer Zone~~
  - ~~ANI-4: Animal Control in Sensitive Amphibian Habitat~~
  - ANI-5: ~~Animal Control in Sensitive Amphibian Habitat~~ Slurry Mixture Near Waterways
  - ~~ANI-6: Species Requiring Depredation Permit~~

- **Post-Project Restoration (REVEG) BMPs**
  - REVEG-1: Seeding
  - REVEG-2: Planting Material

- **Sediment Removal (SED) BMPs**
  - SED-1: Groundwater Management
  - ~~SED-2: Prevent Scour Downstream of Sediment Removal~~
  - ~~SED-3: Restore Channel Features~~
  - ~~SED-4: Berm Bypass~~

- **Use of Pesticides (HM) BMPs**
  - HM-4: Posting and Notification for Pesticide Use

The following additional BMPs are included in the project to reduce construction-related greenhouse gas (GHG) emissions consistent with the Bay Area Air Quality Management District's 2022 CEQA Guidelines (BAAQMD 2022) guidance on reducing GHGs, specifically from construction activities:

- Use zero-emission and hybrid-powered equipment to the greatest extent possible, provided that said equipment is available to replace a traditional diesel-powered piece of equipment and can accomplish the required construction task in a comparable manner (e.g., meets construction and engineering requirements) to its traditional counterpart. This measure shall be prioritized in locations where construction activities would be located in close proximity (i.e., within 500 feet) of residential receptors.

- Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract. Where specific equipment is required and an EPA-rated Tier 4 version is not available, other lower tiered equipment may be used, so long as it can be demonstrated that acquiring the Tier 4 equipment would not be feasible (defined as not being available in the market or resulting in schedule delays that could be detrimental to completion of the project). Alternatively, use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on road trucks.
- Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (a 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
- Prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Require all construction equipment to be maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and use electric tools whenever available, so long as they can accomplish the required task in comparable manner to their traditional non-electric counterpart.
- Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
- Provide carpools, shuttle vans, transit passes, and/or secure bicycle parking for construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.

2.6.2 Valley Water Monarch Butterfly and Crotch's Bumblebee Avoidance Plans

Valley Water prepared plans for the Federal Energy Regulatory Commission Order Compliance Project (FOCP) to specifically avoid impacts on two special status species: monarch butterfly and Crotch's Bumblebee. The following describes the FOCP avoidance plans that would also be implemented as part of the project.

Monarch Butterfly

~~Vegetation monitoring would be undertaken as part of the project through several approaches until completion of project construction. Vegetation monitoring efforts would include continuation of the FOCP monitoring plans, including the *Phytophthora Pathogen Management Plan* (Valley Water, 2020a), *Phytophthora Pathogen Monitoring Plan* (Valley Water, 2021), *Wetland and Riparian Habitat Dryback Monitoring Plan* (Valley Water, 2020b), and (unless and until the monarch butterfly is added to the VHP as a covered species) the *Milkweed Survey Plan* (Valley Water, 2020c).~~

Valley Water would ~~continue to~~ implement the monarch butterfly avoidance protocol established in the FOCP *Milkweed Survey Plan* (Valley Water 2020) that was ~~developed for the FOCP~~ approved by U.S. Fish and Wildlife Service (USFWS) through the completion of project construction, or until the monarch butterfly is added to the VHP as a covered species. Milkweed are known to be present at scattered locations along Coyote Creek in the project area. Valley Water would conduct surveys for milkweed prior to the start of any ground disturbance or vegetation removal activities. A qualified biologist would survey the footprint of all potential impact areas, plus a 25-foot buffer around each impact area, for milkweed plants. If any milkweed is found, it would be avoided, if feasible. If avoidance is infeasible, the milkweed would be inspected for monarch eggs or larvae, and if any are found, Valley Water would consult with USFWS to discuss recommendations and approaches to minimize impacts. If and when the monarch butterfly is added to the VHP as a covered species, as proposed in a VHP amendment currently being prepared, Valley Water's compliance with any future monarch-related VHP conditions would supersede continued implementation of the *Milkweed Survey Plan*.

Crotch's Bumblebee

During construction of the project, Valley Water would implement the Crotch's bumble bee avoidance protocol established in the ~~California Department of Fish and Wildlife-approved~~ FOCP *Crotch's Bumblebee Avoidance Plan* (Valley Water 2024), approved by the California Department of Fish and Wildlife, which includes measures to survey for Crotch's bumblebees and their nests, avoid active nests and individuals if they are detected, and minimize impacts on the species' floral resources. Valley Water would continue to implement this Plan during project construction, as long as the species is legally protected or unless and until the Crotch's bumblebee is added to the VHP as a covered species. If and when the Crotch's bumblebee is added to the VHP as a covered species, as proposed in a VHP amendment currently being prepared, Valley Water's compliance with any future VHP conditions related to this species would supersede continued implementation of the *Crotch's Bumblebee Avoidance Plan*.

2.6.3 Valley Habitat Plan Conditions, Avoidance and Minimization Measures, and Fees

The VHP is a joint Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) developed to serve as the basis for issuance of incidental take permits and authorizations pursuant to Section 10 of the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and Natural Community Conservation Plan Act (NCCPA). Valley Water is a permittee required to comply with the requirements for activities covered under the VHP. The VHP lists construction of flood protection projects and maintenance of roads associated with these kinds of project as one of many covered actions required to implement Avoidance and Minimization Measures (AMMs) and associated mitigation fees for permittees (i.e., Valley Water) to meet their legal obligations under the VHP. The project is a covered activity identified in the VHP. Valley Water will adhere to applicable VHP conditions, which will be based on the results of VHP biological surveys and VHP land cover field verification to be conducted, and all applicable VHP AMMs, including the aquatic habitat AMMs from the VHP, throughout implementation of the project. Valley Water will also pay applicable VHP impact fees for project activities, including fees for effects on stream, wetland, and riparian habitats.

All applicable VHP conditions and AMMs will be incorporated into the construction documents (plans and specifications). The following VHP conditions and AMMs are applicable and will be implemented as part of the project (Santa Clara Valley Habitat Agency 2012):

- Condition 1: Avoid Direct Impacts on Legally Protected Plant and Wildlife Species
- Condition 3: Maintain Hydrologic Conditions and Protect Water Quality
- Condition 4: Avoidance and Minimization for In-stream Projects
- Condition 5: Avoidance and Minimization for In-stream Operations and Maintenance
- Condition 11: Stream and Riparian Setbacks (note that although this condition is applicable to the project, the project meets the criteria of exemption 4: Covered activities that require work within or adjacent to streams such as bridges, levee maintenance and repair, flood-protection projects, stream maintenance, outfall installation and maintenance, flood-protection capital projects, dam-related capital projects.
- Condition 12: Wetland and Pond Avoidance and Minimization

VHP Aquatic AMMs[4] associated with water-related covered activities addressed in VHP Conditions 3, 4, and 5 and relevant to biological resources include the following:

- **VHP General Aquatic AMMs**
  - 1: Minimize the potential impacts on covered species most likely to be affected by changes in hydrology and water quality.
  - 2: Reduce stream pollution by removing pollutants from surface runoff before the polluted surface runoff reaches local streams.
  - 3: Maintain the current hydrograph and, to the extent possible, restore the hydrograph to more closely resemble predevelopment conditions.
  - 4: Reduce the potential for scour at stormwater outlets to streams by controlling the rate of flow into the streams.
  - 5: Invasive plant species removed during maintenance will be handled and disposed of in such a manner as to prevent further spread of the invasive species.
  - 6: Activities in the active (i.e., flowing) channel will be avoided. If activities must be conducted in the active channel, avoidance and minimization measures will be applied.

[4] AMMs are from VHP Table 6-2.

- 7: Personnel shall prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into channels.
- 8: Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations).
- 9: Personnel shall implement measures to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means when removing sediments from the streams.
- 11: Vehicles shall be washed only at approved areas. No washing of vehicles shall occur at job sites.
- 12: No equipment servicing shall be done in the stream channel or immediate flood plain, unless equipment stationed in these locations cannot be readily relocated (i.e., pumps, generators).
- ~~13: Personnel shall use the appropriate equipment for the job that minimizes disturbance to the stream bottom. Appropriately-tired vehicles, either tracked or wheeled, shall be used depending on the situation.~~
- 14: If high levels of groundwater in a work area are encountered, the water is pumped out of the work site. If necessary to protect water quality, the water shall be directed into specifically constructed infiltration basins, into holding ponds, or onto areas with vegetation to remove sediment prior to the water re-entering a creek.
- ~~15: If native fish or non-covered, native aquatic vertebrates are present when cofferdams, water bypass structures, and silt barriers are to be installed, a native fish and aquatic vertebrate relocation plan shall be implemented when ecologically appropriate as determined by a qualified biologist to ensure that significant numbers of native fish and aquatic vertebrates are not stranded.~~
- ~~16: When work in a flowing stream is unavoidable, the entire streamflow shall be diverted around the work area by a barrier, except where it has been determined by a qualified biologist that the least environmentally disruptive approach is to work in a flowing stream.~~
- ~~17: Coffer dams shall be installed both upstream and downstream not more than 100 feet from the extent of the work areas. Stream flow will be pumped around the work site using pumps and screened intake hoses.~~
- ~~18: Small in-channel berms that deflect water to one side of the channel during project implementation may be constructed of channel material in channels with low flows.~~
- ~~19: Sumps or basins may also be used to collect water, where appropriate (e.g., in channels with low flows).~~
- ~~20: Diversions shall maintain ambient stream flows below the diversion, and waters discharged below the project site shall not be diminished or degraded by the diversion. Normal flows shall be restored to the affected stream as soon as is feasible and safe after completion of work at that location.~~
- ~~21: To the extent that stream bed design changes are not part of the project, the stream bed will be returned to as close to pre-project condition as appropriate.~~

- ~~22: To the extent feasible, all temporary diversion structures and the supportive material shall be removed no more than 48-hours after work is completed.~~
- ~~23: Temporary fills, such as for access ramps, diversion structures, or cofferdams, shall be completely removed upon finishing the work.~~
- ~~24: To prevent increases in temperature and decreases in dissolved oxygen, if bypass pipes are used, they shall be properly sized (i.e., larger diameter pipes to better pass the flows). Alternatively, a low-flow channel or method to isolate the work area may be used.~~
- ~~25: Diversions shall maintain fish passage when the project meets the following conditions: 1) the length of the area dewatered exceeds 500 feet, and/or 2) the length of time the stream is dewatered exceeds 2-weeks.~~
- 26: Any sediment removed from a project site shall be stored and transported in a manner that minimizes water quality impacts.
- 28: Where practical, the removed sediments and gravels will be re-used.
- 29: Existing native vegetation shall be retained by removing only as much vegetation as necessary to accommodate the trail clearing width. Maintenance roads should be used to avoid effects on riparian corridors.
- 30: Vegetation control and removal in channels, on stream banks, and along levees and maintenance roads shall be limited to removal necessary for facility inspection purposes, or to meet regulatory requirements or guidelines.
- 31: When conducting vegetation management, retain as much understory brush and as many trees as feasible, emphasizing shade producing and bank stabilizing vegetation.
- 32: In-channel vegetation removal may result in increased local erosion due to increased flow velocity. To minimize the effect, the top of the bank shall be protected by leaving vegetation in place to the maximum extent possible.
- 33: Regional Board objectives for temperature change in receiving waters (measured 100 feet downstream of discharge point) shall not be exceeded.

VHP Project Design AMMs

- 34: Use the minimum amount of impermeable surface (building footprint, paved driveway, etc.) as practicable.
- 35: Use pervious materials, such as gravel or turf pavers, in place of asphalt or concrete to the extent practicable.
- 36: Use flow control structures such as swales, retention/detention areas, and/or cisterns to maintain the existing (pre-project) peak runoff.
- 38: Use flow dissipaters at runoff inlets (e.g., culvert drop-inlets) to reduce the possibility of channel scour at the point of flow entry.
- 39: Minimize alterations to existing contours and slopes, including grading the minimum area necessary.
- 40: Maintain native shrubs, trees, and groundcover whenever possible and revegetate disturbed areas with local native or non-invasive plants.

- 41: Combine flow-control with flood control and/or treatment facilities in the form of detention/retention basins, ponds, and/or constructed wetlands.
- 42: Use flow control structures, permeable pavement, cisterns, and other runoff management methods to ensure no change in post-construction peak runoff volume from pre-project conditions for all covered activities with more than 5,000 square feet of impervious surface
- 43: Site characteristics will be evaluated in advance of project design to determine if non-traditional designs, such as bioengineered bank treatments that incorporate live vegetation, can be successfully utilized while meeting the requirements of the project.
- 44: Maintenance of natural stream characteristics, such as riffle-pool sequences, riparian canopy, sinuosity, floodplain, and a natural channel bed, will be incorporated into the project design.
- ~~45: Stream crossings shall incorporate a free-span bridge unless infeasible due to engineering or cost constraints or unsuitable based on minimal size of stream (swale without bed and banks or a very small channel). If a bridge design cannot free-span a stream, bridge piers and footings will be designed to have minimum impact on the stream.~~
- 49: The project or activity must be designed to avoid the removal of riparian vegetation, if feasible. If the removal of riparian vegetation is necessary, the amount shall be minimized to the amount necessary to accomplish the required activity and comply with public health and safety directives.
- 51: All projects will be conducted in conformance with applicable county and/or city drainage policies.
- 52: Adhere to the siting criteria described for the borrow site covered activity.
- 53: When possible, maintain a vegetated buffer strip between staging/excavation areas and receiving waters.
- ~~54: When not within the construction footprint, deep pools within stream reaches shall be maintained as refuge for fish and wildlife by constructing temporary fencing and/or barrier so as to avoid pool destruction and prevent access from the project site.~~
- ~~55: For stream maintenance projects that result in alteration of the stream bed during project implementation, its low flow channel shall be returned to its approximate prior location with appropriate depth for fish passage without creating a potential future bank erosion problem.~~
- 56: Bank stabilization site design shall consider hydraulic effects immediately upstream and downstream of the work area. Bank stabilization projects will be designed and implemented to provide similar roughness and characteristics that may affect flows as the surrounding areas just upstream and downstream of the project site.
- 58: Existing access routes and levee roads shall be used if available to minimize impacts of new construction in special status species habitats and riparian zones.

- **VHP Construction AMMs**

- 61: Minimize ground disturbance to the smallest area feasible.
- 62: Use existing roads for access and disturbed area for staging as site constraints allow.
- 63: Prepare and implement sediment erosion control plans.
- 64: No winter grading unless approved by City Engineer and specific erosion control measures are incorporated.
- 65: Control exposed soil by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles).
- 66: Control sediment runoff using sandbag barriers or straw wattles.
- 67: No stockpiling or placement of erodible materials in waterways or along areas of natural stormwater flow where materials could be washed into waterways.
- 68: Stabilize stockpiled soil with geotextile or plastic covers.
- 69: Maintain construction activities within a defined project area to reduce the amount of disturbed area.
- 70: Only clear/prepare land which will be actively under construction in the near term.
- 71: Preserve existing vegetation to the extent possible.
- 72: Equipment storage, fueling and staging areas will be sited on disturbed areas or non-sensitive habitat outside of a stream channel.
- 73: Avoid wet season construction.
- 74: Stabilize site ingress/egress locations.
- 75: Dispose of all construction waste in designated areas and prevent stormwater from flowing onto or off these areas.
- 76: Prevent spills and clean up spilled materials.
- 77: Sweep nearby streets at least once a day.
- 78: In-stream projects occurring while the stream is flowing must use appropriate measures to protect water quality, native fish, and covered wildlife species at the project site and downstream of the project site.
- 80: All personnel working within or adjacent to the stream setback will be trained by a qualified biologist in avoidance and minimization measures and permit obligations.
- 81: Temporary disturbance or removal of aquatic and riparian vegetation will not exceed the minimum necessary to complete the work.
- ~~82: Channel bed temporarily disturbed during construction activities will be returned to pre-project or ecologically improved conditions at the end of construction.~~
- 83: Sediments will be stored and transported in a manner that minimizes water quality impacts. If soil is stockpiled, no runoff will be allowed to flow back to the channel.
- 84: Appropriate erosion control measures will be used on site to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian vegetation. Fiber rolls

used for erosion control will be certified as free of noxious weed seed. Filter fences and mesh will be of material that will not entrap reptiles and amphibians.

- 85: Seed mixtures applied for erosion control will not contain invasive nonnative species and will be composed of native species or sterile nonnative species. If sterile nonnative species are used for temporary erosion control, native seed mixtures must be used in subsequent treatments to provide long-term erosion control and slow colonization by invasive nonnatives.
- 86: Topsoil removed during soil excavation will be preserved and used as topsoil during revegetation when it is necessary to conserve the natural seed bank and aid in revegetation of the site.
- 87: Vehicles operated within and adjacent to streams will be checked and maintained daily to prevent leaks of materials that, if introduced to the water, could be deleterious to aquatic life.
- 88: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas.
- 89: The potential for traffic impacts on terrestrial animal species will be minimized by adopting traffic speed limits.
- 90: All trash will be removed from the site daily to avoid attracting potential predators to the site.
- 91: To prevent the spread of exotic species and reduce the loss of native species, aquatic species will be netted at the drain outlet when draining reservoirs or ponds to surface waters. Captured native fish, native amphibians, and western pond turtles will be relocated if ecologically appropriate. Exotic species will be dispatched.
- 92: To minimize the spread of pathogens all staff working in aquatic systems (i.e., streams, ponds, and wetlands) will adhere to the most current guidance for equipment decontamination provided by the Wildlife Agencies at the time of activity implementation.
- 93: When accessing upland areas adjacent to riparian areas or streams, access routes on slopes of greater than 20 percent should generally be avoided. Subsequent to access, any sloped area should be examined for evidence of instability and either revegetated or filled as necessary to prevent future landslide or erosion.
- 94: Personnel shall use existing access ramps and roads if available. If temporary access points are necessary, they shall be constructed in a manner that minimizes impacts to streams.
- 95: To prevent inadvertent entrapment of animals during excavation, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks.
- 96: Isolate the construction area from flowing water until project materials are installed and erosion protection is in place.
- 97: Erosion control measures shall be in place at all times during construction.

- 98: When needed, utilize in-stream grade control structures to control channel scour, sediment routing, and headwall cutting.

- **VHP Post-Construction AMMs**
  - 99: Conduct street cleaning on a regular basis.
  - 100: Potential contaminating materials must be stored in covered storage areas or secondary containment that is impervious to leaks and spills.
  - 101: Runoff pathways shall be free of trash containers or trash storage areas. Trash storage areas shall be screened or walled.
  - 102: Immediately after project completion and before close of seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets.
  - 103: All disturbed soils will be revegetated with native plants and/or grasses or sterile nonnative species suitable for the altered soil conditions upon completion of construction. All disturbed areas that have been compacted shall be de-compacted prior to planting or seeding.
  - 104: Measures will be utilized on site to prevent erosion along streams (e.g., from road cuts or other grading), including in streams that cross or are adjacent to the project proponent's property.
  - 107: On streams managed for flood control purposes, when stream reaches ~~the~~ require~~d~~ extensive vegetation thinning or removal, removal will be phased so that some riparian land cover remains and provides some habitat value. In addition, vegetation removal will be targeted and focused on removing the least amount of riparian vegetation as possible while still meeting the desired flood control needs.
  - 110: If debris blockages threaten bank stability and may increase sedimentation of downstream reaches, debris will be removed.
  - 111: If bank failure occurs due to debris blockages, bank repairs will only use compacted soil, and will be re-seeded with native grasses or sterile nonnative hybrids and stabilized with natural erosion control fabric.
  - 112: Pumps and generators shall be maintained and operated in a manner that minimizes impacts to water quality and aquatic species.
  - ~~113: The channel bottom shall be re-graded at the end of the work project to as close to original conditions as possible.~~
  - 114: Erosion control methods shall be used as appropriate during all phases of routine maintenance projects to control sediment and minimize water quality impacts.
  - 115: All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods will be thoroughly inspected for wildlife by properly trained construction personnel before the pipe is subsequently buried, capped, or otherwise used or moved in anyway.

2.7 Project Permits and Other Approvals

Agencies expected to use this EIR in their decision making for permits, approvals, and consultations required for implementation of the project are summarized in **Table 2.2**.

Table 2.2. Expected Project Permits, Approvals, and Consultations

Permit or Approval	Permitting or Approval Authority	Project Activities
Federal		
~~Clean Water Act Section 404 Permit~~	~~U.S. Army Corps of Engineers~~	~~Placement of dredge and fill materials into waters of the U.S., including wetlands~~
~~ESA Section 7 Consultation~~	~~National Marine Fisheries Service and U.S. Fish and Wildlife Service~~	~~In-channel crossing and construction activities in the Coyote Creek channel~~
National Historic Preservation Act Section 106 Consultation	State Historic Preservation Office	Effects to cultural resources
State		
Lake and Streambed Alteration Agreement	California Department of Fish and Wildlife	Compliance with California Fish and Game Code Section 1600 et seq. for alteration of creek bed or bank
National Pollutant Discharge Elimination System General Construction Activity Permit Coverage	San Francisco Bay Regional Water Quality Control Board	Disturbance totaling more than 1 acre or more of soil
Clean Water Act Section 401 Certification	San Francisco Bay Regional Water Quality Control Board	Water quality certification for placement of dredge and fill materials into waters of the U.S., including wetlands
Encroachment Permit	California Department of Transportation	Construction adjacent to highways within State highway rights-of-way
Regional and Local		
Encroachment Permit[1]	City of San José	Construction within roadways, rights-of-way, or easements managed by the City of San José
Tree Removal Permit[1]	City of San José	Removal of street trees and/or heritage trees as defined by the City of San José Tree ordinance
Grading Permit[1]	City of San José	Excavation and grading activities
Valley Habitat Plan Coverage (i.e., ESA and CESA take authorization)	Santa Clara Valley Habitat Agency	Compliance with Federal and State Endangered Species Acts for activities associated with a covered project within the Plan area

Notes: [1] Valley Water would comply with applicable City of San José permit requirements. As a special district and/or as a water agency, Valley Water may be exempt from some City of San José permits.

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Chapter 3. Environmental Setting, Impact Analysis, and Mitigation Measures

3.1 Introduction

This chapter describes the approach to identify relevant environmental and regulatory setting information, evaluate environmental impacts, and identify feasible mitigation measures for the CCFPP.

3.1.1 Regional Environmental Setting and Project Area

The regional setting for the purposes of this EIR is the Coyote Creek Watershed and urban area of the City of San José. The project area is defined as the area and immediate vicinity within which all construction-related activities or ground disturbance would occur, and the areas where maintenance activities would occur, through implementation of the project.

The project area is discussed further in Section 2.1.1 “Project Site” and shown in Figure 2.2. The project area extends along Coyote Creek from Reach 4 to Reach 8, specifically from the Montague Expressway bridge (north end of Reach 4) to the upstream face of the Tully Road bridge (south end of Reach 8) in the City of San José. The project area includes, Upper Penitencia Creek and Lower Silver Creek; and land uses surrounding Coyote Creek and its tributaries, which include a riparian corridor and densely developed urban land uses, the Coyote Creek Parkway, Watson Park, Roosevelt Park, William Street Park, Selma Olinder Park, Coyote Meadows, Rocksprings Park, and Kelley Park. Additionally, Highway 101, I-280 and I-880 are present within the project area. Specific study areas for each resource impact analysis are defined within the individual environmental resource topic sections in this chapter; these study areas of analysis can be larger than the project area in order to account for the project’s full range of direct and indirect impacts.

3.1.2 Environmental Baselines

Under CEQA, the physical baseline conditions are established and refer to a specific point in time, typically at the time the Notice of Preparation (NOP) is prepared and serve as the basis for which the incremental impacts of a project are measured. Each resource topic section includes a description of the environmental conditions in the project study area under baseline conditions and is referred to as the environmental setting. Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. CEQA Guidelines Section 15125(a).

Existing Conditions Baseline

The baseline for evaluating the construction and most operation impacts of the project at the date of publication of the NOP (December 2023) is established by searching publicly accessible databases and obtaining information from various published sources as well as observations documented in field surveys used in preparation of this Draft EIR. The data sources used in this document are listed in Chapter 7, "References,". The existing conditions baseline applies to all resource topics and is used to establish the level of impact from the project.

Operational Conditions Baseline for Hydrology/Water Quality and Certain Biological Resources

The baseline for evaluating the operational impacts of the project on hydrology and water quality, and certain biological resources, consists of the post-construction conditions of the project, the CCFMMP, and the Anderson Dam Tunnel Project (ADTP). This additional future baseline is appropriate given that the CCFMMP and ADTP began construction in 2023 and construction will be completed before the CCFPP is completed and operational. The CCFMMP and ADTP projects will directly affect hydrologic conditions within Coyote Creek; therefore, this baseline is used exclusively in the analysis of impacts on hydrology/water quality and certain biological resources. This baseline is consistent with the CEQA Guidelines Section 15125(a)(1)) guidance indicating that where necessary to provide the most accurate picture practically possible of the project's impacts, existing conditions may be defined by referencing conditions expected when the project becomes operational.

3.1.3 Approach

California environmental law is governed by CEQA, found in Public Resources Code (PRC) Section 21000 et seq. and the CEQA Guidelines (14 Cal. Code Regs. Section 15000 et seq.). CEQA requires that EIRs evaluate potentially significant effects on the physical environment associated with implementing a proposed project and identify feasible mitigation and alternatives to reduce those effects. A "[significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project (CEQA Guidelines, Section 15382).

CEQA Guidelines Section 15126.2 states:

"An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, and human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected."

An EIR also must discuss inconsistencies between the proposed project and applicable general plans and regional plans (CEQA Guidelines, Section 15125(d)). Furthermore, according to Section 15126.4 of the CEQA Guidelines, an EIR must describe potentially feasible measures that could avoid or minimize significant adverse impacts (CEQA Guidelines, Section 15126.4(a)(1)) that are fully enforceable through permit conditions, agreements, or other legally binding processes (CEQA Guidelines, Section 15126.4(a)(2)). Mitigation measures are not required for effects found to be less than significant.

CEQA Guidelines Section 15126.4(a)(1)(d) specifies that if a mitigation measure itself would cause a significant impact, the effects of the mitigation measure will be discussed. Each mitigation measure included in this EIR was considered as to whether it would cause a significant impact upon implementation.

3.1.4 Section Format

The following explains the organization and general assumptions used in developing the environmental and regulatory setting and the environmental analysis for each resource topic. The reader is referred to the individual resource sections regarding specific assumptions, methodology, and significance criteria (thresholds of significance) used in the analysis. Each resource topic analyzed in Chapter 3 contains the following components:

- ***Environmental Setting*** presents the existing environmental conditions within the proposed project boundaries and within the surrounding project area, as appropriate, to establish baseline conditions, in accordance with CEQA Guidelines Section 15125. The extent of the environmental setting area evaluated (the study area) differs among resources, depending on the locations where impacts would be expected. For example, water or air quality impacts are assessed for the basin (macro-scale), as well as the site vicinity (micro-scale), whereas aesthetic impacts are assessed for the project vicinity only.
- ***Regulatory Setting*** presents the federal, state, and/or local laws, regulations and policies that are relevant to each issue area.
- ***Applicable BMPs and VHP Conditions/AMMs*** describes any Valley Water BMPs or VHP conditions/AMMs that are part of the project and applicable to the resource topic that would avoid or reduce impacts prior to determining whether impacts are significant.
- ***Environmental Impacts and Mitigation Measures*** presents the thresholds of significance, analysis methodology, any impacts relevant to the resource not discussed further in this EIR, and impact analysis, as follows.
- ***Thresholds of Significance*** describes the basis for determining the significance of effects for this EIR and is typically based on professional standards and judgment using the criteria in Appendix G (Environmental Checklist) of the CEQA Guidelines.
- ***Analysis Methodology*** describes the methodology used to evaluate impacts, including quantitative methods developed for this Draft EIR.

- ***Impacts Not Discussed Further in this EIR*** identifies environmental impacts related to the resource where it is determined the project would have no impact. These project impacts are briefly described and not addressed further in this EIR.
- ***Impact Analysis*** discusses each remaining potential environmental impact from the project related to the thresholds of significance. Direct and indirect impacts, as well as temporary and long-term impacts, are identified by comparing the effects of the proposed project, and applicable Valley Water BMPs and VHP AMMs, to baseline conditions. Project impacts are organized numerically in each resource section (e.g., Impact BIO-1, Impact BIO-2, Impact BIO-3). A bold-font impact statement precedes the discussion of each impact while its level of significance follows the discussion of each impact. The discussion that follows the impact summary includes substantial evidence supporting the impact significance conclusion.
- ***Mitigation Measures*** include specific details of the proposed mitigation activities, with, timing and responsible parties identified. Mitigation measures are also organized numerically in each resource section, e.g., Mitigation Measure BIO-1, Mitigation Measure BIO-2, etc. When impacts are not significant, no mitigation measures are required.
- ***Significance after Mitigation*** discusses either why mitigation measures reduce the impact to less than significant or why the impact is significant and unavoidable.

3.1.5 Impact and Mitigation Measure Terminology

This EIR uses the following terminology to describe environmental impacts and mitigation measures for f the project.

- An impact is considered to be a beneficial impact if the analysis concludes that the impact would cause a positive change or improvement in a particular environmental resource or issue.
- A finding of ***no impact*** is made when the analysis concludes that the project would not affect the particular environmental resource or significance threshold.
- An impact is considered ***less than significant*** if the analysis concludes that the significance threshold would not be exceeded.
- An impact is considered ***significant*** if the analysis concludes that the significance threshold is exceeded.
- An impact is considered ***less than significant with mitigation*** if the analysis concludes that the significance threshold would be exceeded, but that measures would reduce the impact to less than significant levels.
- An impact is considered ***significant and unavoidable*** if the analysis concludes that the significance threshold would be exceeded, but either no feasible mitigation measures have been identified, or potentially feasible mitigation measures that have been identified do not reduce the impact to less than significant.
- ***Mitigation measures*** refer to potentially feasible specific measures that can be adopted by Valley Water to avoid, minimize, rectify, reduce, or eliminate, or compensate, for an impact.

- A mitigation measure is potentially feasible if it is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines Section 15364).

3.1.6 Impact Descriptors

Project impacts fall into the following categories:

- A **temporary or short-term impact** would occur primarily during construction activities and could last from several days at one site to up to approximately 3 years after the anticipated duration of construction activities for the project.
- A **long-term impact** would last longer than approximately 3 years following completion of construction. In some cases, a long-term impact could be considered a permanent impact.
- A **direct impact** is an impact that would be caused by an action and would occur at the same time and place as the action.
- An **indirect impact** is an impact that would be caused by an action but would occur later in time, or at another location, yet is reasonably foreseeable in the future. Examples of indirect impacts include growth-inducing impacts and other impacts related to changes in land use patterns and related effects on the physical environment.
- A **cumulative impact** is an impact resulting from the project when added to impacts of other past, present, and probable future actions (regardless of what agency or person undertakes the actions), referred to in this document as a “related project.” A significant cumulative impact occurs when the proposed project makes a “cumulatively considerable” incremental contribution to a significant cumulative impact. “Cumulative considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, current projects, and probable future or related projects (State CEQA Guidelines Section 15064(h)(1)). Cumulative impacts are evaluated in Draft EIR Chapter 5.

3.1.7 Resources Eliminated from Further Analysis

Pursuant to CEQA Guidelines, the discussion of the potential impacts on the physical environment can be focused on those impacts that may be significant. CEQA Guidelines Sections 15126.2(a) and 15128 allow a Lead Agency to limit the details of discussion of the environmental effects (impacts) that are not considered significant. The resource sections that would not result in a significant impact due to project implementation and have been eliminated from further analysis in this Draft EIR are agriculture and forestry resources, mineral resources, population and housing, public services, and wildfire. The discussion that follows includes the rationale for eliminating these resource topics from further evaluation in this Draft EIR. The criteria from Appendix G (Environmental Checklist) of the CEQA Guidelines relevant to each resource topic are addressed in this section.

Agriculture and Forestry

There is no land within the project area zoned for agriculture, forestry, timberland, or timberland production. Additionally, there is no land designated as Prime, Unique, or Farmland of Statewide Importance, nor is there any Williamson Act contracted lands within the project area.

Appendix G of the CEQA Guidelines defines “forest land” as land that can support 10 percent native tree cover and forest vegetation of any species—including hardwoods—under natural conditions and that allows for management of one or more forest resources—including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation—and other public benefits (PRC 12220(g)). By this definition, the riparian corridor along Coyote Creek qualifies as forestland.

The project includes tree removal and trimming limited to areas where construction and maintenance activities would be required within the riparian corridor of Coyote Creek. The removal of trees within the riparian corridor would not occur to allow for conversion of lands within the riparian corridor for other uses. Tree removal would occur intermittently at improvement sites, would generally be linear in nature and clustered, and would not be concentrated in any one area surrounding Coyote Creek. Vegetation, including trees, would be allowed to regrow within areas impacted temporarily during project construction and that are outside of the maintenance access areas (approximately 10 feet around improvements).~~,~~ ~~including where the temporary creek crossing, and coffer dam are installed along Reach 7~~. After the project is constructed, there would be fewer trees at discrete locations around improvements along the riparian corridor, but a substantial number of trees and riparian habitat would be located in the area around each improvement site within the riparian corridor. Therefore, the riparian corridor would continue to provide habitat supporting existing fish and wildlife species, biodiversity, water quality, and existing recreation uses. The project would not convert forest land to non-forest use and would not result in a substantial reduction of native tree cover.

Specifically, the project would not:

- 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;
- conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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));
- result in the loss of forest land or conversion of forest land to non-forest use; or,
- 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.

Mineral Resources

The project area is not located within a mineral, oil, or gas resource-producing area or recovery site (Department of Conservation [DOC] 1987). The project would not include activities that could directly affect mineral production sites or prevent future availability of mineral resources. The nearest area identified by the State Mining and Geology Board as containing regionally significant mineral deposits is located approximately one mile west of the project site (City of San José 2011). Further, the proposed project would use material excavated during project construction for some flood risk reduction improvements and would import any additional material from offsite sources, as needed. The quantity of these imported materials would be relatively small and within the capacity of existing regional mining resource sites. Specifically, the project 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; or,
- 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.

Population and Housing

The project does not include housing or commercial development or infrastructure that would directly or indirectly induce population growth or displace existing people or housing. Additionally, project construction would not displace people or housing. Specifically, the project would not:

- induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure), that was not anticipated in approved local or regional planning documents;
- displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or,
- displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Public Services

As stated above for population and housing, the project would not result in direct or indirect inducement of population growth or displace existing populations in the project area. Project construction would not result in a substantial increase in the need for police or fire services. Therefore, the project would not result in the need for new or altered government facilities and services as population would remain the same and would not result in an increase in demand for public services. Specifically, the project would not:

- result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
  - fire protection,
  - police protection,
  - schools,
  - parks, or,
  - other public facilities.

Wildfire

The project area is not located in or near a state responsibility area (SRA) or land classified as a very high fire hazard severity zone (VHFHSZ) (California Department of Forestry and Fire Protection [CALFIRE] 2007). The nearest SRA is a high hazard severity zone located approximately 5 miles east of the project site. The project would therefore not have significant wildfire impacts as defined by the CEQA Guidelines Appendix G checklist. since projects located outside of SRAs and VHFHSZs would not result in a significant impact related to wildfire. Specifically, within an SRA or VHFHSZ, the project would not:

- substantially impair an adopted emergency response plan or emergency evacuation plan;
- 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;
- 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; or,
- 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.

3.2 Aesthetics

This section describes the existing visual character, visual resources, viewer exposure and sensitivity, and visual quality of the project area to provide a basis for evaluating changes in aesthetics that would occur as a result of project implementation. This section also identifies scenic vistas, corridors, and highways in the project area and vicinity, and regional and local regulations related to aesthetics. The impact analysis identifies how implementing the project could adversely change existing aesthetics.

The area of visual effect, also known as the study area, is the area where the project is visible as determined by physical constraints of the environment and the physiological limits of human sight (FHWA 2015). Views within the project area are relatively flat due to the topography of the landscape, which limits prominent views. The landscape in the project area is characterized by Coyote Creek and its riparian corridor, and residential and urban development interspersed with recreational facilities, such as parks and trails. Therefore, the area of visual effect consists of a mixture of natural elements and the built environment.

Public viewing opportunities of the project include views from local parks including Watson Park, William Street Park, Selma Olinder Park, and Kelley Park, as well as from the Coyote Creek Trail, the Five Wounds Trail, public roads, views from a small segment of US 101, and nearby neighborhoods.

3.2.1 Environmental Setting

Visual Character

Both natural and created features in a landscape contribute to the overall visual character of an area. Landscape characteristics that influence visual character include geologic, hydrologic, botanical, cultural, recreational, and urban features. The basic elements that comprise the visual character of landscape features are form, line, color, and texture. The appearance of the landscape is described in terms of the dominance of each of these elements.

The project area is located within the City of San José (City), an expansive urban area that is surrounded by mountains to the east and west and bounded by South San Francisco Bay (Bay) to the north. The City is in the central and eastern portions of the Santa Clara Valley, with the Santa Cruz Mountains to the west, the Santa Teresa Hills to the south and the Diablo Mountain Range to the east, and the Bay and associated aquatic features such as salt marshes and ponds to the north. The landscape within the project area and vicinity is predominately urban and characterized by built environment associated with multiple land uses and building types (office buildings, commercial development, and industrial complexes). Several major highways, including US-101, Interstate I-880, I-280, and I-680 are present within the project area and vicinity. Additionally, the project area is surrounded by residential land uses, including single and multi-family homes.

The Coyote Creek channel and associated riparian corridor provides important visual features within the project area because it introduces a large natural element into a mostly developed urban landscape. The Coyote Creek riparian corridor includes a semi-permanent open water channel flanked by dense riparian vegetation spanning approximately 20-50 feet from the edges of the creek. The open channel is characterized by steep earthen slopes. Fences along the bank of the channel near residential properties is common. Additionally, areas along the creek banks are frequently used by unhoused individuals that create encampments and trash in the vicinity of the project area. These encampments are temporary and often relocate along the Coyote Creek corridor throughout the year. Areas where unhoused individuals camp impact the natural character of the Coyote Creek corridor and degrade the visually appealing character of the creek. The natural vegetative features along the riparian corridor are dominated by shades of brown, red, and green, which vary seasonally, and have a coarse texture. In the spring, vegetation tends to be vibrant and green; in the fall, leaves change to a brown or red until they eventually drop; in the winter, higher water levels tend to bring a greener landscape; and in summer, dry conditions lead to dried out and brown vegetation.

Several parks are intermixed throughout residential areas and are located within the project area, including Watson Park, William Street Park, Selma Olinder Park, and Kelley Park. Additionally, the Coyote Creek Trail follows along the Coyote Creek banks at several locations along Reaches 4 to 8, and the Five Wounds Trail is located adjacent to Reach 7. These parks and trails include a diverse mix of built environment and natural features, including paved and unpaved multi-use paths, large grassy areas, and recreational amenities such as the Olinder Community Center, the Kelley Park Disc Golf Course, and an assortment of basketball courts, soccer fields, tennis courts, bike racks, walking paths, public bathrooms, and playgrounds.

Landscape Units

Landscape units are the specific geographical areas within the study area for which visual impacts are assessed (Caltrans 2023). The landscape unit typically corresponds to a land use or place known by local viewers, and consists of characteristic patterns (e.g., town, agricultural fields, forest) and associated landscape character areas that are visibly more homogeneous. There are three distinct landscape units in the study area, which occur within a predominately urban landscape as described below.

- **Urban Industrial and Commercial.** Consists of many large commercial and industrial buildings, and appurtenances such as fencing and gates. Building designs are simple and mainly consist of gray and white plastering. Large trucks are regularly seen parked within or hauling material throughout these areas. Several office complexes are located within the general vicinity. There is a lack of residential or open space areas, with the exception of the Coyote Creek corridor. Natural elements include trees planted along roadways.
- **Urban Residential.** Consists of residential neighborhoods adjacent to mixed-use developments or stand-alone commercial uses including retail, offices, and private community gathering facilities. Residential neighborhoods consist of both single and multi-family homes. Fencing and gates are included between residences and adjacent to the Coyote Creek riparian corridor. Trees are planted throughout residential areas and along roadways.
- **Urban Open Space.** Consists of local parks interspersed between residential neighborhoods and the Coyote Creek riparian corridor. Additionally, trails such as the Coyote Creek Trail and Five Wounds Trail follow along the Coyote Creek riparian corridor. Parks include large open grassy areas with views of the Coyote Creek riparian corridor. Additionally, since these parks are interspersed between residential neighborhoods, they also have views of nearby residential homes. In addition to the mature vegetation seen within the Coyote Creek riparian corridor, trees are planted throughout the local parks.

The landscape units associated with the study area are designated by Coyote Creek reach or reach segment are listed below.

- **Reaches 4 and 5:** Urban Industrial and Commercial
- **Reach 6**:
  - Northern Reach 6 from approximately Mabury Road to the Kellogg facility: Urban Industrial and Commercial
  - Middle and southern Reach 6 along and within Watson Park: Urban Open Space
  - Middle and southern Reach 6 along the Parkside Terrace Apartment and adjacent to East St. John Street and Roosevelt Street: Urban Residential
- **Reach 7**:
  - Northern Reach 7 near South 17th Street: Urban Residential
  - Middle and southern Reach 7 along and within Williamson Park, Selma Olinder Park, Kelley Park, and Rocksprings Park: Urban Open Space
- **Reach 8**:
  - Northern Reach 8 near Story Road: Urban Residential
  - Middle Reach 8 near Bevin Brook Drive and Rock Springs Drive: Urban Open Space
  - Southern Reach 8 near Coyote Creek Community Garden: Urban Industrial and Commercial

Sensitive Viewer Groups

The following sensitive viewer groups have visual access to the study area: residents, workers, motorists, and recreational users. The general sensitivity of these viewer groups to visual changes is characterized below.

- **Recreational Users.** Recreationists include people engaging in passive and active recreational uses. Passive recreational uses in the study area include walking, jogging, biking, picnicking, bird watching, dog-walking within local parks and along the Coyote Creek Trail and Five Wounds Trail. Additionally, active recreational uses in the study area include use of baseball fields, tennis courts, soccer fields, and basketball courts located in local parks that are available for recreational use. Visual sensitivity is moderate to high among recreational users because they are more likely to place a higher value on the unchanged natural environment.
- **Residents.** Residents are individuals whose homes are near the project area. Similar to recreational users, viewer sensitivity is moderate to high among residents because they are likely to place a higher value on the visual resources near their home, appreciate the visual experience, and be more sensitive to changes in views. (Please note that CEQA does not require lead agencies to consider visual impacts on private views as significant, only impacts on public views [*Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App. 4th 477, 493]. Nevertheless, this EIR discusses visual impacts on private views for informational purposes.)

- **Motorists.** Motorists include those driving along highways and local roadways within the study area. Views are typically of short duration and fleeting. Motorists who frequently travel these routes have a low to moderate visual sensitivity to their surroundings and changes in views. Motorists using local roadways for sight-seeing purposes generally have a moderate to high visual sensitivity to their surroundings and changes in views because they place a higher value on the unchanged natural environment.
- **Workers.** Workers are individuals whose place of employment is near the study area, or who may encounter the study area as part of their work activities (e.g., delivery persons). Viewer sensitivity is low to moderate among workers because they do not generally place as high a value on visual resources surrounding their workplace and will be less sensitive to changes in views.

Existing Visual Resources

Key observation points (KOPs) are critical viewpoints that are accessible to the public and are commonly used by viewer groups in the study area. The KOPs show the visual character within the study area and are representative of the types of visual features or resources (i.e. Coyote Creek and open space areas) that are present in each reach. Fourteen KOPs in the study area have been identified and were selected due to the potential for sensitive public views. **Table 3.2.1** provides a summary of the characteristics of each KOP. The KOP locations are shown in **Figure 3.2.1**. Representative photos were taken from all KOPs and are shown in **Figures 3.2.2** through **3.2.15**, along with a description of the view provided at each KOP.

Photographs of KOPs were taken during a field investigation conducted on January 11, 2024. Before the field investigation was conducted, locations were evaluated for their potential to have views of the project area via Google Maps, in reference to project improvements. These locations were evaluated for views, affected viewer groups, and presence or absence of natural (vegetation, water, landforms) and cultural (buildings, infrastructure, and other urban design features) resources. Due to the urban nature of the study area, views of the study area are limited, and KOPs generally fall within 50 feet of the project improvements.

Table 3.2.1. Characteristics of Key Observation Points in the Project Area

KOP	Location	Coyote Creek Reach	Landscape Unit	Viewer Groups	Visible Flood Risk Reduction Improvements
1	37°21'26.06"N 121°52'38.40"W	Reach 6	Urban Open Space	Residents, motorists, recreational users	R6-PB7, R6-B7-FW1, R6-B7
2	37°20'15.59"N 121°52'1.75"W	Reach 7	Urban Open Space	Recreational users	R7-FW12
3	37°20'15.82"N 121°52'4.20"W	Reach 7	Urban Open Space	Motorists, residents, recreational users	R7-FW12, R7-FW12 PB-B
4	37°20'14.94"N 121°52'3.77"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-FW12
5	37°20'13.86"N 121°52'1.60"W	Reach 7	Urban Open Space	Recreational users	R7-FW12, R7-FW12 PB-B
6	37°20'7.55"N 121°52'10.00"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-PB4-D, E, F, and G
7	37°20'8.80"N 121°52'7.60"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-PB4-A through H
8	37°20'11.45"N 121°52'6.28"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-PB4-A through E, R7-PB4-FW1
9	37°20'9.54"N 121°51'59.40"W	Reach 7	Urban Open Space	Recreational users	R7-FW12, R7-PB5-A through I
10	37°20'8.74"N 121°51'55.59"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-PB5-D through E
11	37°20'3.69"N 121°51'55.94"W	Reach 7	Urban Open Space	Recreational users, motorists, residents	R7-PB5-F, R7-PB5-FW1
12	37°19'59.43"N 121°51'56.73"W	Reach 7	Urban Open Space	Recreational users, motorist, residents	R7-PB5-I, R7-B5
13	37°19'11.17"N 121°51'16.66"W	Reach 8	Urban Open Space	Recreational users, residents	R8-B3, R8-FW22, R8-B3
14	37°19'1.96"N 121°51'17.22"W	Reach 8	Urban Open Space	Recreational users, residents	R8-FW14

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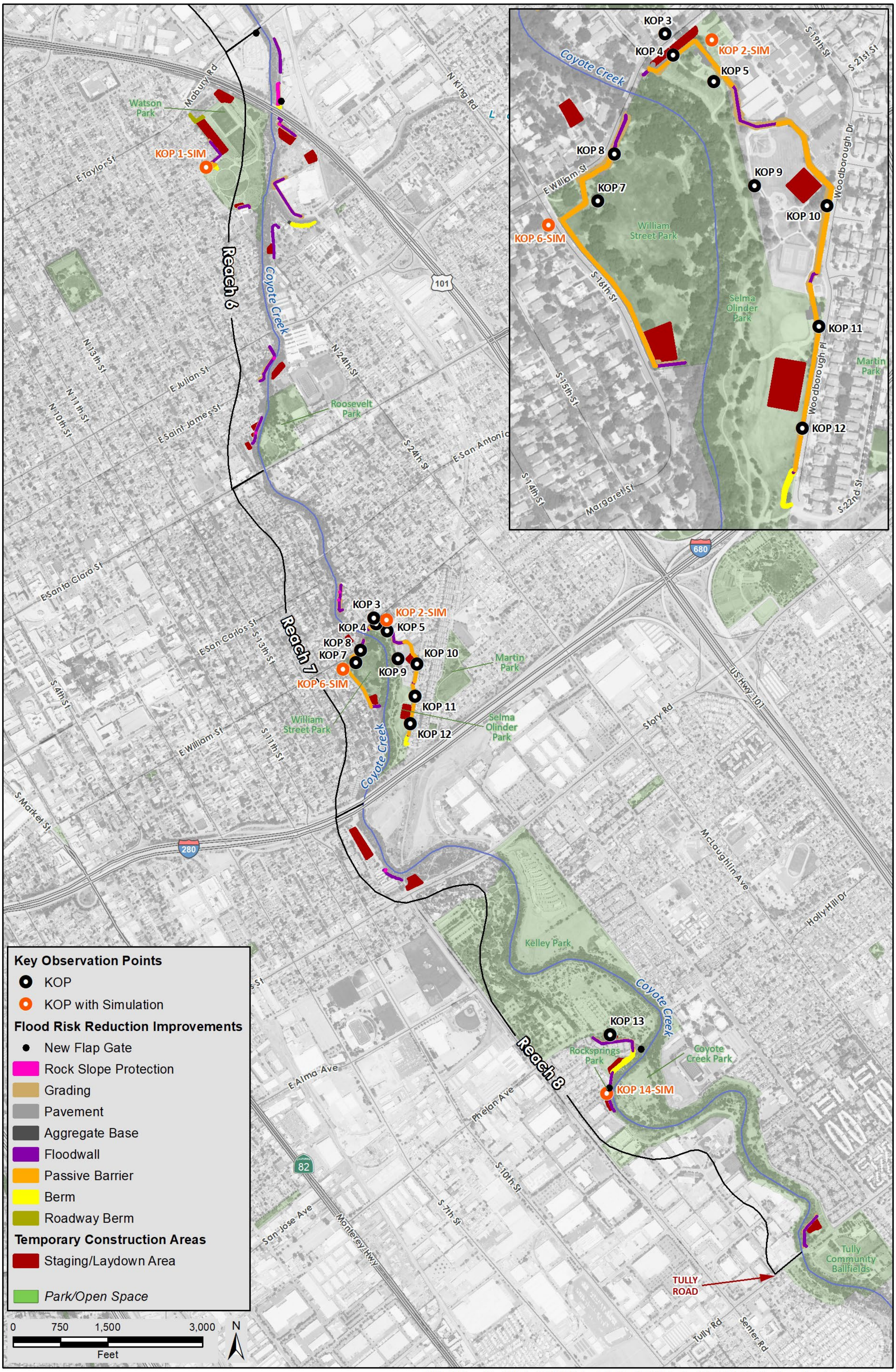

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Figure 3.2.1. Key Observation Point Locations

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Looking southeast from Jackson Street. View of the Watson Park soccer field.

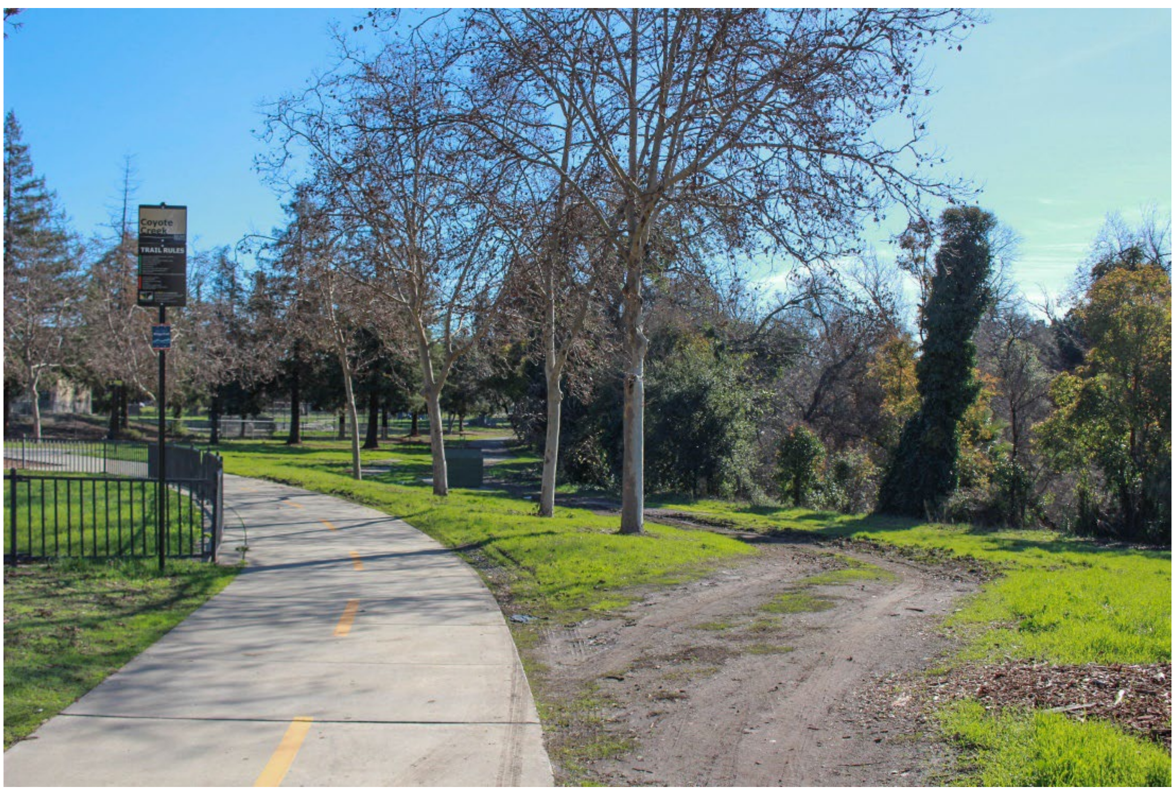
Figure 3.2.2. Views from Key Observation Point 1

Looking south from the Olinder Community Center. Views of the Olinder Park basketball court and playground.

Figure 3.2.3. Views from Key Observation Point 2

Looking south from East Williamson Street. View of a portion of Coyote Creek Trail which runs through the William Street Park.

Figure 3.2.4. Views from Key Observation Point 3



Looking southeast from the entrance of the Coyote Creek trail near East William Street.

Figure 3.2.5. Views from Key Observation Point 4

Looking northwest from the Coyote Creek trail within William Street Park, towards the Coyote Creek trail entrance at East William Street.

Figure 3.2.6. Views from Key Observation Point 5

Looking east from South 16th Street. Views of the William Street Park and a portion of the flowerbed located at the William Street Park gate.

Figure 3.2.7. Views from Key Observation Point 6

Looking northwest from within the William Street Park towards South 16th Street. Views include the nearby residential homes and the flowerbed at the William Street Park gate.

Figure 3.2.8. Views from Key Observation Point 7

Looking southwest from the east corner of the William Street Park near the Coyote Creek riparian corridor. Views include a portion of the William Street Park and East William Street.

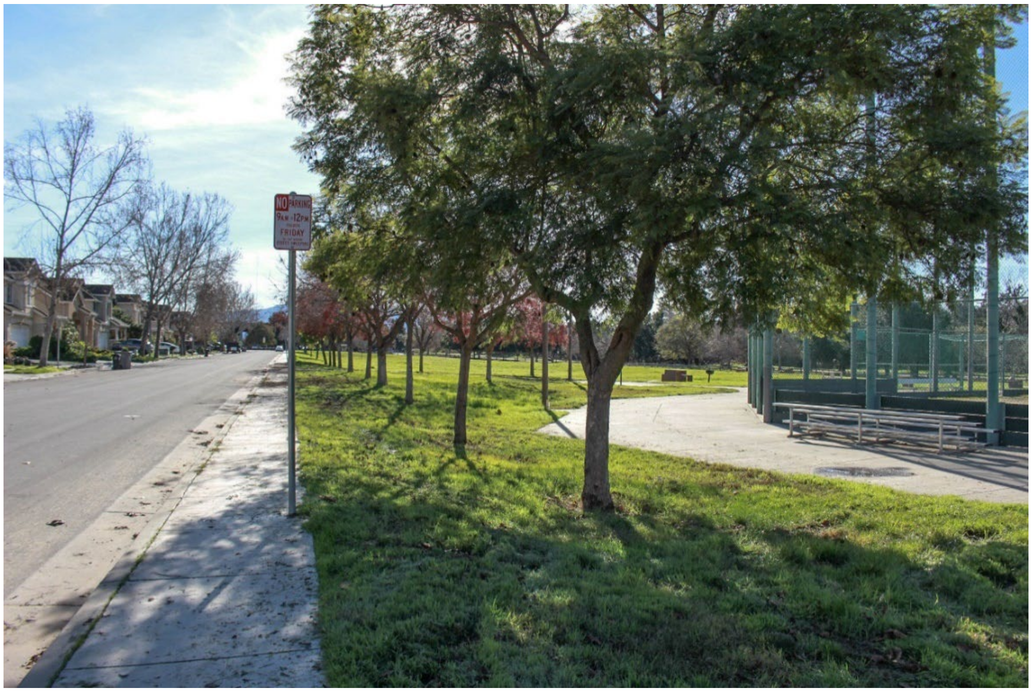
Figure 3.2.9. View from Key Observation Point 8

Looking northeast from the southwest edge of the Selma Olinder Park baseball field. Views include the baseball field and the Olinder Elementary School.

Figure 3.2.10. Views from Key Observation Point 9


Looking southwest along Woodborough Drive. View of the edge of Selma Olinder Park.

Figure 3.2.11. Views from Key Observation Point 10



Looking southwest along Woodborough Drive. View of the edge of Selma Olinder Park and baseball field.

Figure 3.2.12. Views from Key Observation Point11

Looking northeast along Woodborough Drive. View of the edge of Selma Olinder Park and baseball field.

Figure 3.2.13. Views from Key Observation Point 12

Looking south from an unnamed roadway. View of the Kelley Park Disc Golf Course.

Figure 3.2.14. Views from Key Observation Point 13

Looking south from Rock Springs Drive. View of the playground at Rocksprings Park.

Figure 3.2.15. Views from Key Observation Point 14

Viewer Exposure and Sensitivity

Viewer sensitivity is considered in assessing the effects of visual change and is a function of several factors. Viewer sensitivity is based on the visibility of resources in the landscape, proximity of the viewers to the visual resources, elevation of the viewers relative to the visual resources, frequency and duration of views, numbers of viewers, and types and expectations of individuals and viewer groups. Landscape features are considered higher or lower in visual importance based on their proximity to the viewer. Generally, the closer a resource is to the viewer, the more dominant and visually important the resource is to the view.

Reach 4

The study area follows along the Coyote Creek riparian corridor and adjacent land use is industrial and commercial. Viewer sensitivity in this area is low given the limited visual exposure due to the presence of large industrial and commercial buildings and dense vegetation bordering the project area on either side. The study area would only be visible for a short stretch along the Charcot Avenue Bridge. Viewers would primarily be office workers and motorists commuting to and from work. There are no residential or recreational land uses adjacent to the improvements located within Reach 4. Therefore, no KOPs were identified along this reach.

Reach 5

The study area includes a staging area within a bare patch of land adjacent to the upper limit of the Coyote Creek east side bank. Immediately adjacent to the staging area is the San José Flea Market parking lot. Additionally, industrial land use is present adjacent to the west bank of Coyote Creek. Dense, tall, vegetation borders the staging area to the west, and a short line of shrubs slightly obscures views of the staging area to the east side. Viewer sensitivity in this area is low. There is a moderate degree of visual exposure due to moderately unobscured views of Coyote Creek, however, there is a lack of sensitive viewers in the area. Views would primarily be from motorists using the parking lot and office workers. There are no residential or recreational land uses adjacent to the staging area within Reach 5. Therefore, no KOPs were identified along this reach.

Reach 6

Portions of the northern and southern study area in this reach follow along Coyote Creek (R6-FW5, R6-FG4, R6-FG-5, R6-FW19, R6-FW20). Watson Park is located within the study area in this reach and is shown in KOP 1. The Parkside Terrace apartments are also within the study area in this reach. Additionally, the Kellogg factory and the City of San José's Mabury Service Yard are located immediately adjacent to the project area, within the study area.

Viewer sensitivity in this reach is moderate to high given the relatively high visual exposure, which results from unobscured views of open space and the proximity to residences and recreational facilities. However, viewer sensitivity for motorists traveling along US-101 would be low, given that viewers are predominately commuters and views are moderately obscured by large trees located on both sides of US-101. Additionally, viewer sensitivity from industrial areas located in the northern portion of Reach 6, such as from the Kellogg factory and a portion of the study area located north of US-101, are considered low since views would predominately be from workers and commuters.

Single and multi-family homes are located adjacent to most improvements in this reach. Additionally, some of the improvements within this reach would be constructed within Watson Park, which provides recreational access in a predominately residential area. Residents along Jackson Road and bordering Watson Park have obscured views of the study area and Watson Park due to the presence of an approximately 5-foot-tall wall erected at the end of backyards, providing shielding between the residences and Watson Park. Residences along North 22nd Street, which also borders Watson Park, have unobscured views of Watson Park. Residents engaging in recreational activities at Watson Park also have unobscured views due to the open grassy fields and general lack of built environment (KOP 1). Residents residing at the Parkside Terrace apartments have slightly obscured views of Coyote Creek and Coyote Creek Trail due to the presence of a 5- to 7-foot-tall metal fence that follows along the property line and provides partial shielding between the apartments and the project area. Gaps in the gate allow for partial views of the natural area; however, a large parking lot along the perimeter of the property line also partially shields views of Coyote Creek.

Reach 7

The northern portion the study area in Reach 7 follows the Coyote Creek riparian corridor; however, most of the study area is located along the perimeter of William Street Park and Selma Olinder Park and KOPs 2 through 12. Viewer sensitivity in this reach is moderate to high given the degree of visual exposure which results from unobscured views of open space, moderately obscured to unobscured views of the Coyote Creek riparian corridor, and the proximity of residences and recreational users. Residences along the perimeter of William Street Park have unobscured views of this park and Coyote Creek. Residences along Selma Olinder Park have unobscured views of the park and heavily obscured views of Coyote Creek given the mature vegetation present throughout the park and recreational facilities, such as tennis courts, baseball field, and a parking lot. Recreational users using the Coyte Creek Trail, which goes through the William Street Park and Selma Olinder Park, have unobscured views of Coyote Creek. These views are localized and non-expansive; however, they provide a nice visual change in a predominately urban area.

Motorists driving along South 16th Street, Woodborough Drive, East William Street, and South 17th Street have views of the study area. However, viewer sensitivity from motorists is considered low as views are predominately from commuters.

Reach 8

The study area within this reach mostly follows the Coyote Creek riparian corridor, except for a portion of improvement R8-FW22, which goes through Kelley Park and abuts the nearby residences and KOP 13. Additionally, Rocksprings Park is located adjacent to the project area, within the study area, near improvement R8-FW14, R8-FG-7, and KOP 14.

Viewer sensitivity in this reach is low to moderate given the obscured views from nearby residences and recreational users along Coyote Creek Trail and Kelley Park. Additionally, an approximately 2- to 3-foot floodwall is present along Rockspring Park. Motorists driving along Tully Road, Rock Spring Drive, Story Road, and South 12th Street have views of the study area; however, viewer sensitivity from motorists is considered low as views are predominately from commuters.

Views from South 12th Street are blocked due to the presence of a 5- to 10-foot-tall wall between the muti-family homes and the project area. Views may be seen from the second story of the multi-family homes. However, due to the dense vegetation and slope of the project area, views would remain heavily obscured. Recreational users using the Five Wounds Trail may have views of the study area; however, these views are obscured due to the dense vegetation, and a 5- to 10-foot-tall gate that separates the trail from the project area.

Visual Quality

Visual quality is the viewer's overall aesthetic impression of a view or landscape (Caltrans 2023). Visual quality attributes of vividness, intactness, and unity are used when determining the degree of visual quality. Views that have low degrees of vividness, intactness, and unity tend to have low visual quality, whereas views that have high degrees of these attributes have high visual quality.

- **Vividness** is the visual power or memorability of landscape components, including landform, rock form, water form, vegetation, and built forms, as they combine in striking and distinctive visual patterns.
- **Intactness** is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements.
- **Unity** is the visual coherence and compositional harmony of the landscape considered as a whole.

Visual quality within the project area varies and is discussed below for each attribute.

Vividness

Views of the study area generally have low to moderate vividness. The urban area dominates the landscape in the study area and encroaches on the natural features of the Coyote Creek riparian corridor. The Coyote Creek riparian corridor spans an approximately 150-foot width, but it does not provide expansive views. Given the flat topography of the area, views are dominated by the nearby urban environment. Urban design features such as roadways, fencing, and gates are plain and unmemorable and generally take away from the natural elements of Coyote Creek. The Coyote Creek riparian corridor provides moderately vivid views given the mature vegetation and semi-permanent flowing water; however, nearby urban influences decrease the vividness and moderately detract from the natural views.

Intactness

Views of the study area have a moderate degree of intactness. The Coyote Creek riparian corridor remains largely intact as development surrounding the corridor has been managed to minimize the disturbance to the natural environmental. However, in some parts of the Coyote Creek corridor homeless encampments encroach and decrease the natural character of the corridor. Trails, walking paths, and picnic areas are present in the study area surrounding the Coyote Creek riparian corridor and aid in the functionality and visual interest of the site. There is a high degree of integrity of visual order in the natural and human-made landscape. However, fencing, roadways, parking lots, office buildings, and residences and homeless encampments encroach upon the natural landscape of Coyote Creek, and these elements cannot be avoided.

Unity

The study area has a moderate level of unity/visual coherence. Given the predominately urban development that surrounds the project area, the urban design features are functional and balanced well with the more natural elements of the landscape. Features such as signage, landscaping techniques, and infrastructure placement are consistent throughout the study area and contribute to a cohesive visual experience. Additionally, the presence of local parks around segments of Coyote Creek provides a nice buffer between the natural elements and the contrasting urban development. The local parks start to integrate urban features such as trash cans, picnic benches, restrooms, etc., without having the built environment dominate the landscape.

Scenic Vistas, Corridors, and Highways

A scenic vista is generally considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the public. The Envision San José 2040 General Plan does not identify any scenic vistas within the study area (City of San José 2011). While the Coyote Creek riparian corridor provides scenic quality to the study area, this feature is surrounded by a densely populated urban area and does not provide expansive views.

Scenic corridors are enclosed areas of landscape that when viewed as a single entity include the total field of vision from a specific point or series of points along a linear route. There are no scenic corridors located within the study area. State Route 9 is the only officially designated state scenic route in Santa Clara County. The full extent of US-101 that runs through Santa Clara County is identified as a state scenic route on the Santa Clara County General Plan Regional Parks and Scenic Highway Map (Santa Clara County 2008). However, based on Caltrans' list of state scenic routes (Caltrans 2019), portions of US-101 within Santa Clara County are listed as eligible state scenic routes, but have not been officially designated. Additionally, the portion of US-101 that goes through the City and is within the project vicinity, is not officially designated or eligible as a state scenic route. The nearest officially designated scenic highway is located approximately 10 miles west of the project area, and the nearest eligible scenic highway is located approximately 4.25 miles west of the project area (Caltrans 2019).

The City has designated scenic gateways within its boundaries, which announce to a visitor or resident that they are entering a city or a unique neighborhood and contribute towards the positive image of a designated area. Review of the scenic corridor map for the City indicates one designated attractive gateway in the study area along Charcot Avenue, including the Charcot Avenue Bridge, to the west of I-880 (in Reach 4) (San José 2016). Views of the study area within Reach 4 would be visible for a small stretch of Charcot Avenue; however, the project area would be heavily shielded by nearby industrial and commercial buildings and dense vegetation.

3.2.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies related to aesthetic resources apply to the project area.

State Laws, Regulations, and Policies

No state laws, regulations, or policies related to aesthetic resources apply to the project area.

Regional/Local Plans, Laws, Regulations, and Policies

Envision San José 2040 General Plan

The Envision San José 2040 General Plan (City of San José 2011) contains goals and policies regarding visual resources. These goals, supporting policies, and actions are primarily addressing access to scenic resources (Goal CD-9) and maintaining attractive gateways within the city boundaries (Goal CD-10), particularly along “Grand Boulevards” and “Rural Scenic Corridors.”

The following goals and policies in the Envision San José 2040 General Plan apply to the project:

Goal CD-10: Attractive Gateways. Create and maintain attractive Gateways into San José and attractive major roads through San José, including freeways and Grand Boulevards, to contribute towards the positive image of the City.

- **Policy CD-10.1.** Recognize the importance of Gateways in shaping perceptions of San José

3.2.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, “Project Description”, Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that could result from the project. All relevant BMPs for the project are included in Appendix B. No VHP Conditions are applicable to aesthetics. The BMPs and AMM’s relevant to aesthetics are the following:

- **BI-8: Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes** – When native species are prescribed for installation, a qualified biologist or vegetation specialist will evaluate if the plant species currently grows wild in Santa Clara County and, if so, determine if any need to be local natives. The most ecologically appropriate and effective seeding option will be determined.
- **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. The seed mix should consist of California native grasses or annual, sterile hybrid seed mix.
- **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. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. 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 construction-related materials will be removed from the work site.

The following Valley Water SMP BMP is applicable to aesthetics during operations and maintenance of the project:

> **GEN-19: Work Site Housekeeping** – Work sites will be maintained in a neat and orderly condition on a daily basis and will be left neat, clean, and orderly when work is completed. All debris, including slash, sawdust, cuttings, and vegetation debris will be removed and paved access roads and trail will be swept and cleared of and residual debris or dirt created from maintenance work. Materials stored at work site will be neatly arranges and stored inconspicuously to the extent feasible. All trash generated by maintenance activities will be collected and removed daily. Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.

In addition, the following VHP AMMs apply to aesthetics.

- **VHP Project Design AMMs**
  - 40: Maintain native shrubs, trees and groundcover whenever possible and revegetate disturbed areas with local native or non-invasive plants.
- **VHP Construction AMMS**
  - 71: Preserve existing vegetation to the extent possible.
- **VHP Post-Construction AMMS**
  - 103: All disturbed soils will be revegetated with native plants and/or grasses or sterile nonnative species suitable for the altered soil conditions upon completion of construction.

3.2.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The proposed project would have a significant impact on aesthetics if implementing the project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway;
- Substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are accessible from a publicly accessible vantage point);
- Conflict with applicable zoning and other regulations governing scenic quality; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Analysis Methodology

This impact analysis uses a qualitative approach for characterizing and evaluating the visual resources of the area that could be affected by project implementation. This approach is based on guidance provided by the U.S. Department of Transportation (DOT) *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA 2015). Impacts are based on the changes to the environment (measured by the compatibility of the impact) or to viewers (measured by sensitivity to the impacts). Together, the compatibility of the impact and the sensitivity of the impact yield the degree of the impact to visual quality. These concepts are defined further below.

- **Compatibility of the Impact**: Defined as the ability of the environment to absorb a proposed project as a result of the project and the environment having compatible visual characters. A proposed project can be considered compatible or incompatible. By itself, compatibility of the impact should not be confused or conflated with the value of the impact.
- **Sensitivity to the Impact**: Defined as the ability of viewers to see and care about a project's impacts. The sensitivity to impact is based on viewer sensitivity to changes in the visual character of visual resources. Viewers are either sensitive or not sensitive to impacts. By itself, the sensitivity of the impact should not be confused or conflated with the value of the impact.
- **Degree of the Impact**: Defined as either a beneficial, adverse, or neutral change to visual quality. A proposed project may benefit visual quality by either enhancing visual resources or by creating better views of those resources and improving the experience of visual quality by viewers. Similarly, it may adversely affect visual quality by degrading visual resources or obstructing or altering desired views.

The following references were used when evaluating the degree of impact of the project:

- Scenic corridor maps from the Envision San José 2040 General Plan and Santa Clara County General Plan,
- Aerial maps (i.e., Google Earth and GIS maps) showing the study area and vicinity, and
- Representative photographs of the project area at KOPs and photo-simulations of project elements at select KOPs.

As described in Section 3.2.1, "Environmental Setting," areas adjacent to the project area are highly urbanized and densely developed and only allow for a limited number of direct views. Portions of the study area share the same visual character and visual conditions that allow for visual impacts associated with project improvements to be analyzed in conjunction with one another under a broader visual landscape unit, which is consistent with the general approach outlined in the *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA 2015). Therefore, permanent impacts are addressed as a whole under these landscape units (urban industrial and commercial, urban residential, and urban open space). This approach avoids undue repetition of analysis. Impact significance for each landscape unit is determined based on visual changes from project improvements. KOPs and photo-simulations are used to determine the degree of visual change to reach a conclusion regarding the level of impact.

Photo Simulations

Computer-generated photo simulations were produced at four KOPs using digitized photographs and computer modeling and rendering techniques to document and evaluate the visual changes that would result from implementing the project. These four KOPs were selected to provide representative public views from which improvements would be most visible. The existing view at the KOP is shown first, followed by the same view with the simulation of the project flood risk reduction improvements at that location, as shown in **Figures 3.2.16** through **3.2.23**.

The simulations include locations where floodwalls, passive barriers, and berms would be highly visible to a large number of recreationists using the Selma Olinder Park (KOP 2 and **Figures 3.2.18** through **3.2.19**), Watson Park (KOP 1 and **Figures 3.2.16** and **3.2.17**[1]), William Street Park (KOP 6 and **Figures 3.2.20** and **3.2.21**), and Rocksprings Park (KOP 14 and **Figures 3.2.22** and **3.2.23**). These simulation locations and features represent visual effects across the length of the project area, illustrate a representative sample of potential visual changes, and serve to help readers correlate how visual effects would translate to other project improvement locations for which photo-simulations were not prepared.

The before and after simulations provide images of the location, scale, and visual appearance of the project improvements. The simulations were developed through an analytical and computer modeling process and are accurate within the constraints of the available data of project design and the project area. A 3-dimensional computer model was created using a combination of AutoCAD Civil 3D files and geographic information system layers and exported to Autodesk's 3-InfraWorks to illustrate its relationship to the existing landscape). Design data—engineering drawings, elevations and cross sections, site and topographical contour plans, concept diagrams, and reference pictures—were used as a platform from which digital models were created. In cases where detailed design data were unavailable, more general descriptions about improvements and their locations were used to prepare the digital models.

[1] Note that Figure 3.2.17 depicts the previous design of the berm and floodwall that was presented in the Draft EIR. The new design for the berm and wiper wall presented in this Revised Draft EIR (see Chapter 2, "Project Description" would include a berm that would be a slightly different shape and in a slightly different location with a wiper wall. The difference in the view of the previous berm and wall compared to the revised berm and wiper wall would not be significant and impacts at this viewpoint would be less than or equal to the former project design.

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Looking southeast from Jackson Street towards Watson Park soccer field.

Figure 3.2.16. Existing Views at Key Observation Point 1

Looking southeast from Jackson Street towards Watson Park soccer field, with implementation of R6-B7 and R6-B7 FW1.

Figure 3.2.17. Simulated Views of Floodwall and Berm at Key Observation Point 1

Looking south from the Olinder Community Center towards the Selma Olinder Park basketball court and play area.

Figure 3.2.18. Existing Views at Key Observation Point 2

Looking south from the Olinder Community Center towards the Olinder Park basketball court and play area.

Figure 3.2.19. Simulated Views at Key Observation Point 2

Looking east from South 16th Street towards the western corner of the William Street Park.

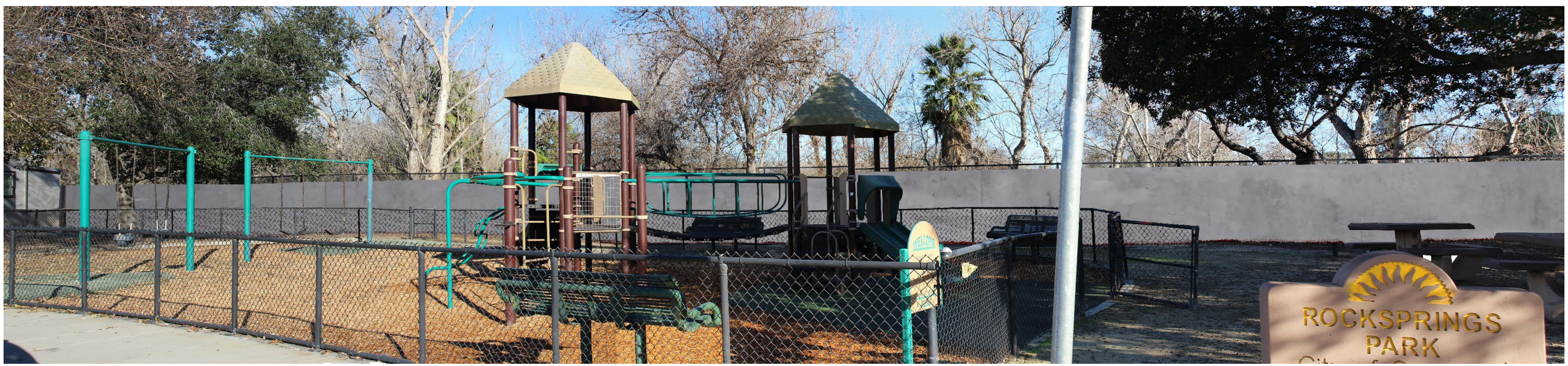
Figure 3.2.20. Existing Views at Key Observation Point 6

Looking east from South 16th Street towards the western corner of the William Street Park, with implementation of R7-PB-D and -E.

Figure 3.2.21. Simulated Views at Key Observation Point 6

Looking south from Rock Springs Drive towards the play area at Rocksprings Park.

Figure 3.2.22. Existing Views at Key Observation Point 14



Looking south from Rock Springs Drive towards the play area at Rocksprings Park, with implementation of R8 FW14.

Figure 3.2.23. Simulated Views at Key Observation Point 14

Impacts Not Discussed Further in the EIR

Adverse Effects on Scenic Vistas

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Scenic vistas are also typically designated by an agency or department that actively manages the scenic vista to maintain or protect the public view through the provision of public access, information, safety, and protection of resources (e.g., signage, parking area, and safety fencing/rails). The study area does not provide expansive views of a highly valued landscape for the benefit of the general public, and no scenic vistas have been officially designated within the study area in the Envision San José 2040 General Plan (City of San José 2024a) and Santa Clara County General Plan (Santa Clara County 1994). Therefore, no impact to scenic vistas would occur, and this issue is not discussed further.

Damage of Scenic Resources within State Scenic Highways

The study area is not located within or adjacent to, nor is it visible from, any state-designated scenic highways. Therefore, no impact to scenic resources within a state scenic highway would occur, and this issue is not discussed further.

Adverse Effects on Aesthetics from Operation and Maintenance Activities

Routine maintenance activities would continue along the Coyote Creek corridor, including on project flood improvements, that could temporarily alter aesthetics. These activities include trash and debris removal, vegetation maintenance within a 10-foot area around all project improvements, maintenance road repairs, management of wildlife conflicts, and graffiti removal. Additionally, visual inspections of project flood risk reduction improvements would occur approximately twice per year, and during or immediately after a natural hazard. If damage is observed, repairs would be made to return improvements to as-built design. Maintenance activities would be temporary, occur within limited areas at any one location, and maintain project improvement appearance equivalent to post-construction conditions. Further the project would implement SMP BMP GEN-19 (Work Site Housekeeping) to keep work sites clean and devoid of debris created during maintenance activities. Therefore, the project would result in no impact on aesthetics from operation and maintenance activities, and this impact is not discussed further.

Impact Analysis

Impact AES-1: ***Substantially degrade the existing visual character or quality of public views of the site and its surroundings temporarily during construction. (Less than significant)***

The visual character of the study area would be affected by the staging and use of heavy equipment over an approximately 2-year construction period. However, construction within each improvement site would occur for a much shorter amount of time. The construction timeframe for each reach is as follows: Reach 4 approximately 17 weeks, Reach 6 approximately 32 weeks, Reach 7 approximately ~~38~~ 50 weeks, and Reach 8 approximately 15 weeks. Construction within the reaches would not occur concurrently and only a maximum of 3 improvement sites would be under construction at any given time during the 2-year construction period. Additionally, temporary features that would be visible during construction activities include sandbags within Reach 4 (R4-SB) which would be in place for up to 4-years when the ~~ADTP~~ ADSRP is under construction.~~, and a temporary creek crossing and coffer dam within Reach 7 (R7-TB1 and TB2) from the west bank over the Coyote Creek channel to the east bank to provide access for equipment and within Reach 4 where scaffolding would be installed during construction along the Charcot Avenue Bridge.~~

Construction activities and equipment would be temporarily visible to travelers along a small portion of US-101 and I-280, local roadways, residences, and workers adjacent to portions of the project area, and recreational facilities adjacent to or within the project area such as Watson Park, William Street Park, Selma Olinder Park, Rocksprings Park, Coyote Creek Trail, and Five Wounds Trail. Additionally, temporary staging areas would be located near the project area and would be visible. Construction of project improvements at certain locations, such as public parks, have a higher visual quality and more sensitive views and viewer groups, and therefore, impacts would be slightly higher.

Nearby urban development and trees from the Coyote Creek riparian corridor would provide partial shielding of construction activities at improvement sites. After construction is complete, temporarily impacted areas, including staging areas, would be restored to approximate pre-existing contours by matching the adjacent grade and seeding with a native seed mix to establish ground vegetation for erosion protection.

While construction activities and the presence of staging equipment would temporarily alter the visual character and quality of the project site within the Coyote Creek riparian corridor, it would not substantially degrade the visual character or quality within the project area because of the short-term nature of the impact. Additionally, the surrounding urban area would continue to dominate available views for motorists, workers, recreational users, and residents. Implementing Valley Water BMPs BI-8, WQ-9, and WQ-11, which include reseeding temporarily disturbed areas with native vegetation and maintaining clean work sites, as well as AMM 40, 71, and 103, which includes maintaining vegetation to the extent possible and revegetating disturbed areas, would reduce temporary visual impacts from construction activities. Therefore, the presence of construction equipment in the study area over the 2-year construction period would not substantially degrade visual character or the quality of public views, and this impact would be **less than significant**.

Impact AES-2: ***Substantially permanently degrade the existing visual character or quality of public views of the site and its surroundings from development of project elements. (Less than significant)***

This impact discusses permanent impacts to each landscape unit in the study area. Landscape units were previously described and defined within the study area in **Section 3.2.1**, "Environmental Setting."

Urban Industrial and Commercial

This landscape unit includes Reach 4, Reach 5, the northern portion of Reach 6, and the southern portion of Reach 8. There are no representative KOPs in these areas because there are no sensitive views available to the public. This landscape unit consists predominately of large gray and white plastered buildings associated with industrial and commercial uses, as well as offices, regular use of large trucks, and trees planted along roadways. Viewer sensitivity in this landscape unit is primarily low.

Permanent Improvements proposed within this landscape unit include sheet pile floodwalls at several locations, headwalls, wingwalls, and passive barriers along the Charcot Avenue Bridge, and earthen berms located along the Coyote Creek corridor, a new manhole with flap gate located adjacent to I-880, and flap gates that would be installed within existing manhole vaults and would not be visible to the public and therefore are not discussed further. Temporary improvements within this landscape unit include a 240-foot-long sandbag berm that would be installed along the Coyote Creek corridor just downstream of the Charcot Avenue Bridge on the west bank maintenance road. Floodwalls (metal sheet pile or concrete encasing), headwalls and wingwalls (concrete), a new manhole (concrete and metal), passive barriers (metal), and berms (comprised of earthen materials where installed permanently and sandbags where installed temporarily) would present materials that are compatible with other built-environment features in this landscape unit, including plaster buildings, fences, and gates. Additionally, tree removal would be required at many improvement sites to construct improvements, and vegetation would be permanently maintained within 10 feet of floodwalls. Reach 5 contains a staging area but no improvements are proposed along this reach.

Reach 4

Floodwalls along Reach 4 (R4-FW1 through R4-FW4) would be up to 6 feet tall and situated on top of the Coyote Creek levee crest adjacent to industrial and commercial buildings. These floodwalls may be briefly visible to motorists passing along the Charcot Avenue Bridge, who would be provided limited views of the ends of the floodwalls on both sides of the road and both sides of the bridge. To install floodwalls, trees would be removed at the top of the levee crest adjacent to industrial and commercial buildings. This would marginally increase visibility of the ends of floodwalls to motorists passing over the bridge. The floodwalls may also be visible to workers when outside of buildings, such as when they are walking to vehicles. Trees remaining in the Coyote Creek riparian corridor would remain visible above the floodwalls and may provide partial shielding of floodwalls as they extend away from Charcot Avenue Bridge.

Motorists passing along Charcot Avenue Bridge would also be exposed to new approximately 5- to 6-foot headwalls (R4-HW1 and R4-HW2) along both sides of the bridge crossing over Coyote Creek, as well as passive barriers constructed across maintenance roads. The headwalls may block existing views of the Coyote Creek riparian corridor from the bridge. However, the change in views would be brief, as the bridge is approximately 200 feet long, and the concrete headwalls would be similar to other materials common in this landscape unit. The passive barriers (R4-PB1 through PB4) would be level with the ground and only raised during flood conditions. Each of the four passive barriers would collect stormwater that enters through the small gaps between the passive barrier wall and the foundation and drain out through a pipe to an outfall equipped with riprap slope protection at the top of the bank of the creek. The passive barriers would connect to small support wiper walls, which are typically made of aluminum and would be compatible with existing design appurtenances (metal and concrete entrance gate). Wiper walls would connect to adjacent floodwalls (R6-FW7 and R6-B1 FW1).

Office workers whose employment buildings are located adjacent to improvements in Reach 4 would have views of the up to 3-foot-tall berms (R4-B2 and B4) located on both sides of Coyote Creek. Materials used to construct the berms would be consistent with materials already present on site (i.e. dirt and rocks), and therefore, would not create a visual change to the landscape. In addition, the temporary 240-foot-long sandbag berm would be approximately 0.5-foot tall and would be barely visible to motorists or workers in the area and would not be inconsistent with the maintenance road materials (soil and rock).

Motorists and workers commuting to and from work along East Brokaw Road would have views of the new manhole (R4-FG1). The flap gate would be constructed within the manhole and would not be visible. The manhole would be a small metal feature consistent with other materials common in the landscape unit (stop lights, power poles, etc.), would not be easily visible among the surrounding grass landscape and, therefore, would not create a visual change to the landscape.

Northern Reach 6

An approximately 250-foot-long and 4-foot-tall floodwall would extend along the east bank of Coyote Creek from south of Mabury Road (Taylor Street) before connecting to the existing City recreational trail wall. From this connection, a concrete extension would be added to the top of the existing City recreational trail wall for approximately 300 feet and to a height of 4-feet-tall. Approximately 168 feet from the end of the City recreational trail wall, an approximately 349-foot-long and 4-foot-tall floodwall would extend to the downstream face of Highway 101 and adjacent to the City's Mabury Service Yard. An approximately 15-foot-wide strip of riprap slope protection would be installed along this segment of floodwall on the creekside. These proposed segments are collectively referred to as R6-FW5. These segments are between the outside edge of the east bank of Coyote Creek and industrial and commercial buildings and their parking lots. The floodwall would be visible to workers when outside of their buildings. A 8-foot-tall floodwall (R6-FW6) would also be located parallel to the south side of Highway 101 and east of the Coyote Creek riparian corridor. Both floodwalls would be briefly visible to motorists on Highway 101, but floodwalls would be similar to other materials associated with built environment features in the area.

An approximately ~~0.20~~ 0.16-mile long and 5.5-foot-tall floodwall (R6-FW8) would be constructed along the western perimeter of the Kellogg factory and would only be visible to workers at the Kellogg factory.

Southern Reach 8

An approximately 0.10-mile long and 10-foot-tall floodwall (R8-FW15) would be located along the east bank of the Coyote Creek riparian corridor from Tully Road until it intersects with the Coyote Creek Community Garden. The floodwall would briefly be visible to motorists driving along Tully Road. Tree removal and trimming would occur to facilitate construction and would increase visibility of the portion of the floodwall near Tully Road; however, the tree canopy would remain relatively dense.

Conclusions

The improvements proposed within the Urban and Industrial and Commercial landscape unit would be compatible with the design features noted throughout this area (buildings, fences, and gates) and would not result in an obvious or out-of-place feature that would deter from the visual character or quality of the area. Viewers in this area consist of workers at businesses or commuting to and from work. Due to the lack of sensitive viewers and the availability of partial shielding, viewers would not be sensitive to changes in views from the proposed improvements. Given that improvements would be compatible, and viewers would not be sensitive to improvements, the overall degree of visual impact in this landscape unit is adverse but not significant, and flood risk reduction improvements in this landscape unit would not deter from the visual character or quality. Therefore, impacts associated with visual quality degradation and the permanent alteration of public views in the Urban Industrial and Commercial landscape unit would be **less than significant**.

Urban Residential

This landscape unit includes areas in the middle and southern portions of Reach 6, the northern portion of Reach 7, and areas in the northern and middle portions of Reach 8. There are no representative KOPs in these areas because there are no sensitive views available to the public. This landscape unit consists primarily of single and multi-family homes. Additionally, the Coyote Creek corridor is visible within this landscape unit; however, it is partially blocked by urban design features such as fencing, gates, and parking lots. Viewer sensitivity in these areas is low to moderate.

Improvements proposed within this landscape unit include sheet pile and concrete encased floodwalls and earthen berms at several locations. Floodwalls and earthen berms would present materials that are compatible with other built environment features in this landscape unit including fences and gates. No other improvements are proposed within this landscape unit. Additionally, tree removal would be required at improvement sites to construct floodwalls, and vegetation would be permanently maintained within 10 feet of floodwalls.

Middle and Southern Reach 6

An approximately 0.1~~5~~2-mile long and 8-foot-tall floodwall (R6-FW10) would be constructed along the east bank of Coyote Creek adjacent to the Parkside Terrace apartments, with a small portion continuing into the Parkside Terrace apartment complex and bordering the parking lot and an open grassy area with a small playground. An approximately 0.0~~9~~8-mile long and 3-foot-tall earthen berm (R6-B21) would also be located along the northern boundary of the Parkside Terrace apartments. Both the floodwall and berm would be visible to residents at the Parkside Terrace apartments; however, views on the first floor would be partially blocked by parked cars in the parking lot. Additionally, a fence is present between the Parkside Terrace and the Coyote Creek riparian corridor which partially blocks views.

An approximately 0.07-mile long and 10.5-foot-tall floodwall (R6-FW20) would be located along the west bank of Coyote Creek, adjacent to East St. John Street. Additionally, an approximately 0.1~~3~~2-mile long and 13-foot-tall floodwall (R6-FW19) would be located along the west bank of the Coyote Creek, adjacent to Roosevelt Street. Both floodwalls would include pipes equipped with flap gates to drain any stormwater that collects on the land side of the floodwalls. Stormwater would discharge where the pipe daylights on riprap bank protection that would be installed on the creek bank. These floodwalls and drainage features would be visible to a nearby residence and motorists driving along East St. John Street and Roosevelt Street. Vegetation in these areas is dense and a fence is present along the western bank of the Coyote Creek riparian corridor which provides partially blocked views of Coyote Creek and project improvements.

Northern Reach 7

An approximately ~~0.07~~ 0.08-mile long and up to 8-foot-tall floodwall (R7-FW11) would be located along the east bank of Coyote Creek, behind residences located along Brookwood Avenue. Two stormwater discharge pipes with flap gates would be installed through the floodwall to discharge stormwater that collects on the landside of the floodwall. The pipes would daylight on the creek bank and discharge stormwater on installed riprap bank protection.

~~During construction, this improvement site would be accessed from South 17th Street, on the opposite bank of Coyote Creek from the improvement location, by a temporary crossing (R7-TB1) over the Coyote Creek channel. The crossing would also require a small upstream cofferdam (R7-TB2) and piping or pumping water around or through the area where the temporary creek crossing would be installed.~~ The floodwall ~~and creek crossing~~ and drainage features would be visible to the adjacent residents; however, due to dense vegetation, it is unlikely that these improvement~~s~~ would be visible to motorists driving along South 17th Street or Brookwood Avenue. A small proportion of existing trees would be removed and could moderately increase visibility to residences. ~~The construction of the temporary creek crossing includes using fill in isolated areas of the creek where water is not flowing. Following construction, the crossing would be removed, and the channel would be restored to pre-project conditions to the extent feasible. Therefore, small visual changes to the channel could occur due to the use of the temporary creek crossing, but~~ However, the overall visual character and quality of public views of the channel would remain the same.

Northern Reach 8

An approximately 0.07-mile long and up to 10-foot-tall floodwall (R8-FW13) would be located along the west bank of Coyote Creek, at the rear of multi-family homes located along South 12th Street. A stormwater collection grate and pipeline would be installed adjacent and along the landside of the floodwall and connect to a stormwater discharge pipe with flap gates that would be installed through the floodwall to discharge any stormwater that collects on the landside of the floodwall. The pipe would daylight on the creek bank and discharge stormwater on installed riprap bank protection. A small proportion of existing trees would be removed, and trimming would occur along the west bank of Coyote Creek; however, this would not substantially increase visibility of R8-FW13. Fencing is present along the sidewalk of Keyes Street and continues along the west bank of the Coyote Creek riparian corridor, providing a barrier between the multi-family homes and Coyote Creek and limiting visibility of the floodwall to first floor residences. An unhoused encampment is also present within this portion of the Coyote Creek corridor and decreases the overall natural views of the area due to associated structures, trash, and debris. There would be limited views of the floodwall from second story residences and recreational users along the Five Wounds Trail due to dense vegetation, built-environment appurtenances, and site topography, which slopes downward from the trail at a steep angle.

Conclusion

The improvements would be compatible with design features throughout the area (fences and gates) and would not result in an obvious or out-of-place feature that would deter from the visual character or quality of the area. Views in this area would be from residences and recreational uses along a very short segment of the Five Wounds Trail. While residents and recreational users are typically considered sensitive viewers, visual sensitivity is low due to the presence of natural and man-made barriers, which partially or fully obscure views. Given that flood risk reduction improvements would be compatible with existing features, and viewers would not be sensitive to project improvements, the overall visual impact in this landscape unit is adverse but not significant and flood reduction improvements in this landscape unit would not deter from the visual character or quality. Therefore, impacts from permanent alteration of visual quality or permanent alteration of public views in the Urban Residential landscape unit from the project would be **less than significant**.

Urban Open Space

This landscape unit includes areas in the middle and southern portions of Reach 6, middle and southern portions of Reach 7, and the middle portion of Reach 8. This landscape unit includes all KOPs (KOP 1 through 14). The landscape unit consists of local parks interspersed throughout residential neighborhoods, including Watson Park, Williamson Park, Selma Olinder Park, Kelley Park, and Rocksprings Park. Viewer sensitivity in this area is low to moderate. The project improvements would cause the most notable visible changes in the Urban Open Space landscape unit.

Project improvements in this landscape unit include sheet pile and concrete encased floodwalls, passive barriers, and earthen berms at several locations, minor roadway recontouring at the northern entrance to Watson Park, and flap gates which would be constructed within existing manholes and would not be visible to the public. Additionally, native trees would be planted in several areas along the eastern side of William Street Park between the existing footpath and the Coyote Creek riparian corridor Local parks within this landscape unit contain large open space areas, walking paths, and recreation facilities and amenities such as soccer fields, basketball courts, tennis courts, picnic benches, bike racks, restrooms, etc. Additionally, tree removal would be required for construction at many improvement sites, and vegetation would be permanently maintained within 10 feet of improvements.

Middle and Southern Reach 6

An approximately 0.09-mile long and 9-feet-tall floodwall (R6-FW7) would be located along the perimeter of Watson Park, contiguous to residential homes extending from Jackson Street to Calumet Court. Additionally, project improvements include roadway recontouring at the northern entrance to Watson Park to create a high point (R6-B8) within North 23rd Street to provide additional flood protection at this location. A 5-foot-tall wall is present at the rear end of residential backyards that border Watson Park and provides a visual barrier between residential homes and the proposed improvements. However, since the ~~improvements~~ floodwall ~~are~~ is taller than the existing wall, the top 1 to 3 feet of the floodwall would be visible to residents. The recontoured roadway would not be visible from residential properties. Tree removal would occur within and adjacent to Watson Park, including removal of large mature trees adjacent to homes on Jackson Street. Since mature trees in the area are relatively sparse, removal of these trees along Jackson Street would result in a very noticeable visual change to nearby residences. However, this would not result in a significant change in the public views given the general lack of vegetation in the area.

~~A second approximately 0.02-mile long and 8-foot-tall floodwall (R6-B7-FW1) would be located near the Watson Park entrance and concrete signage, on the east side of Jackson Street (KOP 1). This floodwall would be encased in concrete and would resemble the existing signage.~~ An earth berm up to approximately 9-foot-tall (R6-B7) with a wiper wall oriented parallel to Jackson Street would be constructed in Watson Park near the entrance sign to Watson Park. ~~behind the floodwall (R6-B7-FW1).~~ The earthen berm would be constructed with earthen material that is compatible to materials located throughout the park (i.e. dirt and grass) and would be reseeded with an erosion-control seed mix. Additionally, these improvements would be located on the western edge of Watson Park and views would be limited to adjacent areas. A photo simulation of the changes in views at KOP 1 from the proposed improvements was developed (see Figures 3.2.16 and 3.2.17).

A passive barrier would be installed near the entrance gate to Watson Park (R6-PB7), extending across Jackson Street. The passive barrier would be level with the ground and only raised during flood conditions. The passive barriers would connect to small support wiper walls, which are typically made of aluminum and would be compatible with existing design appurtenances (metal and concrete entrance gate). Wiper walls would connect to adjacent floodwalls (R6-FW7 and R6-B7 FW1).

A small floodwall (R6-FW9), approximately ~~0.02 to~~ 0.04-mile long and up to ~~8~~5-feet-tall would be located around existing ~~utilities and~~ design features within and immediately adjacent to Watson Park. ~~R6-FW16 would be constructed around an existing utility box and~~ R6-FW9 would be constructed along the north site of an enclosed trash bin storage area associated with the adjacent Empire Gardens Elementary School. A few trees would be removed to facilitate construction.

Viewers in the area consist mainly of recreational users at Watson Park and nearby residents. While the proposed improvements within Watson Park could slightly decrease visibility to open space areas at specific locations, most of the park would remain unchanged and expansive views would remain. Additionally, the proposed improvements are located near compatible existing design features, which limit contrasting views. Therefore, these improvements would not deter from the existing visual character or quality of public views at Watson Park.

Middle and Southern Reach 7

Floodwalls and passive barriers would be located throughout the William Street Park and Selma Olinder Park. Three segments of passive barriers totaling approximately 0.11-mile long and 6-foot-tall (R7 FW12 PB-A through -C) would extend from East William Street on the east bank of Coyote Creek, continue along the west perimeter of Selma Olinder Park. This passive barrier would connect with an approximately 0.12-mile long and 6-foot-tall floodwall (R7-FW12) which would extend from passive barrier R7 FW12 PB-C, at the paved Coyote Creek Trail within the Selma Olinder Park, and then continue along the west perimeter of the Olinder Elementary School. This floodwall is visible from KOPs 2 through 5 and 8. A photo simulation of the changes in views at KOP 2 from the proposed improvements was developed (see Figures 3.2.18 and 3.2.19). Existing design features at the Selma Olinder Park include metal fencing around the west perimeter of the park and around the playground. Benches and trash bins are located throughout the play area, and a basketball court is located adjacent to the playground. A small proportion of existing trees would be removed within this alignment; however, the adjacent Coyote Creek corridor would continue to dominate public views in the northern portion of the park. Trees located along the perimeter of the Olinder Elementary School and auxiliary buildings are secondary to existing urban development features (buildings, parking lot, fencing), and therefore, a small proportion of existing trees being removed and would not substantially change public views. Overall, the removal of a small proportion of existing trees within the Selma Olinder Park would not create a substantial visible change.

An approximately 0.3-mile-long passive barrier (R7-PB5) would be located along the east side of the Selma Olinder Park, following the path of the existing paved sidewalk along Woodborough Drive, which includes KOPs 9 through 12. An approximately 0.02-mile-long and 7-foot-tall floodwall (R7-PB5-FW1) would be constructed within the alignment of the passive barrier near an existing public restroom. At the eastern edge of Selma Olinder Park at the southern limits of Woodborough Drive an approximately 0.02-mile long and 1-foot-tall berm (R7-B5) would be constructed and would be adjacent to existing residential properties.

An approximately 0.04-mile long and 7-foot-tall floodwall (R7-PB4 FW1) would be constructed from the western bank of Coyote Creek and follow along East William Street before connecting with an approximately 0.2-mile-long passive barrier (R7-PB4). This passive barrier would continue along East William Street before following the south side of the existing William Street Park entrance gate flower garden, and then continue along the paved sidewalk on the east side of South 16th Street, which includes KOPs 8 through 10. A photo simulation of changes in views at KOP 6 from these improvements was developed (see Figures 3.2.20 and 3.2.21). At the southern end of R7-PB4, an approximately 0.02-mile long and 8-foot-tall floodwall (R7-FW18) would be constructed adjacent to an existing residential property.

The improvements discussed above would be visible to recreational users at the parks and nearby residences. Passive barriers would be constructed at ground level and would only raise during flood conditions. Since flood conditions are not common, passive barriers would typically be at ground level, would be compatible with existing design features, and would not deter from existing visual character or quality. When passive barriers are deployed above ground, public views within the parks would be partially blocked, although vegetation would remain visible above the barriers. However, due to flood conditions, recreational users who are sensitive to these changes would not be present in the parks and would return once flood conditions have subsided and passive barriers have returned to ground level.

Floodwalls would decrease the visibility of the Coyote Creek riparian corridor; however, due to the relatively short height of floodwalls, views of the Coyote Creek riparian corridor would be visible above and around these improvements. Additionally, existing and compatible urban design features are present, which lowers the contrasting views with the incorporation of the urban design appearance of the project improvements. Urban development in the study area includes the Empire Garden Elementary School and Olinder Community Center, which are located adjacent to the Selma Olinder Park.

Residences are located along the west perimeter of William Street Park and the east perimeter of Selma Olinder Park, near the passive barriers (R7-PB4 and R7-PB5), two short floodwalls (R7-FW18 and R7-PB5 FW1), and one berm (R7-B5). Given the nature of the passive barriers and the compatibility with urban design features, views from residences would not be substantially changed and project improvements would not create substantially contrasting views.

Middle Reach 8

An approximately 0.15-mile long and 3-foot-tall floodwall (R8-FW22) would be located along the southwest perimeter of Kelley Park, adjacent to a residential community, and where KOP 15 is located. An approximately 3-foot-tall wooden fence separates the residential community from Kelley Park. The overall tree canopy in the area would remain relatively dense after construction of the improvements and tree removal.

An approximately 0.1-mile long and 3-foot-tall earthen berm (R8-B3) would be constructed from the southern end of the floodwall (R8-~~B3-~~FW22 ~~1~~), adjacent to a large parking lot associated with the residential community and a maintenance yard. An approximately 0.1-mile long and 5-

foot-tall floodwall (R8-FW14) would be constructed from the southern end of the earthen berm and continue along the west bank of the Coyote Creek riparian corridor. The Rocksprings Park is located adjacent to the proposed R8-FW14 and at KOP 14. A photo simulation of changes in views at KOP 14 from these improvements was developed (see **Figures 3.2.22** and **3.2.23**). An existing 10-foot-tall metal fence provides a barrier between the Rocksprings Park and the project improvements. Additionally, an approximately 2- to 3-foot floodwall is present along the park. An unhoused encampment is present within the portion of the Coyote Creek corridor where the earthen berm would be constructed that decreases the overall natural views of the area due to associated structures, trash, and debris. Implementing the project improvements would block views of the Coyote Creek riparian corridor. However, views of the corridor would be visible above and around these improvements.

Conclusion

Viewers in the Urban Open Space landscape unit would consist of recreational users and residents. Improvements in the Urban Open Space landscape unit would create some visual disruptions and would be moderately noticeable with current design features, mostly by creating visual barriers where none previously existed. Recreational users would likely be highly sensitive to visual changes. However, because views would not be fully blocked due to the relatively short floodwalls, and similar existing urban development (schools and community center) and some compatible existing design features (fences, gates, restrooms) are present nearby, these improvements would not substantially detract from the existing visual character or quality. The visual sensitivity is considered low to moderate. The overall visual impact in this landscape unit is adverse but not significant and flood risk reduction improvements in this landscape unit would not substantially degrade the existing visual character or quality. Therefore, impacts from permanent alteration of visual quality and permanent alteration of public views in the Urban Open Space landscape unit would be **less than significant**.

Impact AES-3: ***Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality. (Less than significant)***

Implementing the project would not conflict with applicable zoning, or other regulations governing scenic quality. One designated attractive gateway is located within in the study area along Charcot Avenue, including along the Charcot Avenue Bridge, to the west of I-880 (in Reach 4) (San José 2016). Project components within Reach 4 would only be visible for a small stretch of Charcot Avenue, specifically along the Charcot Avenue Bridge, and would be heavily shielded by nearby industrial and commercial buildings and dense vegetation. Bridge reinforcement would be required for the Charcot Avenue Bridge in addition to construction of headwalls along the upstream and downstream sides of the bridge which would connect with floodwalls and passive barriers along the banks of Coyote Creek. Bridge reinforcement would use carbon fiber reinforcement strips (CFRS) installed along the bridge deck (road on top of bridge) and on the soffit (underside surface) of the bridge. Headwalls would be approximately 5 to 6 feet tall and would be constructed of reinforced concrete. The new design features would not be substantially different than the current design of the concrete bridge railings and other features in the project area (i.e. railing, fencing, access gates, etc.), and would not conflict with any regulations governing scenic quality since the project would maintain the attractive gateway along Charcot Avenue. Based on the above analysis, the project would have a **less-than-significant** impact related to conflicts with regulations governing scenic quality.

Impact AES-4: Introduce New Sources of Light and Glare. ***(Less than significant)***

The project would not require the addition of any new permanent lighting or other potential sources of substantial light or glare. The types of materials used to construct project improvements include metal sheet piles, metal walls, earthen material, concrete, and aluminum. Aluminum and metal sheet piles could create daytime glare. However, concrete encasing, would be used as needed to avoid any potential glare-related impacts. Additionally, aesthetic treatments may be applied to concrete floodwalls and concrete encasings around sheet pile floodwalls. Aesthetic treatments would be determined in coordination with landowners. Additionally, metal walls could create glare; however, the metal walls that would be used to construct passive barriers would remain at ground level most of the time and would only be activated during flood conditions. During flood conditions, weather conditions are usually cloudy and overcast; therefore, passive barriers would not introduce a new source of glare.

The majority of construction activities would occur during daylight hours and would not require temporary lighting. Lighting used at dusk during months when daylight ends before 7 p.m. would be temporary and would not be significant in length of time during the remaining work hours within 500 feet of residences. Construction may occur at nighttime when construction activities are more than 500 feet from residential units and would require temporary lighting. However, given the distance to residential units, construction activities would not be visible to residences. Further, as described in Chapter 2, “Project Description,” any nighttime construction within 100 feet of the Coyote Creek channel would focus lighting only to the areas of active work and shield those light sources to decrease light levels around the light sources. The presence of construction equipment during the construction phase could generate minor amounts of daytime glare in the area. Such glare could be experienced by the residents closest to the project area; however, this impact is not significant due to the relatively minor amount of daytime glare that could be generated and the temporary and short-term nature of construction in any one location. Therefore, the project’s light and glare impacts are **less than significant**.

3.3 Air Quality

This section examines the degree to which implementing the project may result in adverse changes in air quality. This section describes existing air quality conditions, summarizes applicable regulations, and analyzes construction- and operation-related air quality impacts from the project. The analysis of criteria air pollutant and toxic air contaminant (TAC) emissions is consistent with guidance from the Bay Area Air Quality Management District (BAAQMD).

3.3.1 Environmental Setting

Regional Setting

The project is located in the City of San José (City) in Santa Clara County within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the western portion of Solano County; and the southern portion of Sonoma County. The BAAQMD is responsible for obtaining and maintaining air quality conditions in Santa Clara County. The project area is located within the Santa Clara Valley, which is bounded by mountain ranges to the east and west, and San Francisco Bay to the north (BAAQMD 2017a).

The Mediterranean climate of the SFBAAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 82°F (an average of 66°F). The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 50°F. Also characteristic of SFBAAB winters are periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north (BAAQMD 2017a).

The mountains surrounding the SFBAAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are often present over the SFBAAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable metrological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground (BAAQMD 2017a).

May through October is ozone season in the SFBAAB. This period is characterized by warmer months with high ozone concentrations. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_X), which result in ozone formation (BAAQMD 2017a).

Criteria Air Pollutants

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) as being of concern on both the nationwide and statewide levels: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because these are the most prevalent air pollutants known to be harmful to human health, and extensive health effects criteria documentation is available for these pollutants, they are commonly referred to as "criteria air pollutants." Each criteria air pollutant is described below (EPA 2023a).

- **Ozone** is the principal component of smog and is formed in the atmosphere through a series of reactions involving ROG and NO_X in the presence of sunlight. ROG and NO_X are called ozone precursors. The main sources of ROG and NO_X include combustion processes (including motor vehicle engines), the evaporation of solvents, paints, and fuels, and natural sources (e.g., decomposing materials). Automobiles are the single largest source of ozone precursors in the SFBAAB (BAAQMD 2017). NO_X includes various combinations of nitrogen and oxygen, such as nitric oxide and NO_2. Ozone is a principal cause of lung and eye irritation in the urban environment. Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment. Emissions of the ozone precursors ROG and NO_X have decreased over the past two decades because of BAAQMD regulations, more stringent motor vehicle standards, and cleaner burning fuels. Large ozone concentrations are usually produced only in summer, when atmospheric inversions are greatest and temperatures are high. ROG and NO_X emissions are both critical in ozone formation (EPA 2023a).
- **Carbon monoxide** is a colorless and odorless gas that, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high CO concentrations are limited to locations within a relatively short distance (300- to 600-feet) of heavily traveled roadways. Vehicle traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels called "hot spots," which can be hazardous to human receptors adjacent to the intersections. Acute health effects of CO exposure include headache, fatigue, nausea, vomiting and death. Chronic exposure can lead to permanent heart and brain damage (EPA 2023a).
- **Nitrogen dioxide** is a product of combustion and is generated in vehicles and stationary sources such as power plants and boilers. It is also formed when ozone reacts with nitric oxide in the atmosphere. As noted above, NO_2 is part of the NO_X family and is a principal contributor to ozone and smog generation. NO_2 can cause lung damage. Acute health effects of exposure to NO_X include coughing, difficulty breathing, vomiting, headache, eye

irritation, chemical pneumonitis, pulmonary edema, breathing abnormalities, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include bronchitis and decreased lung function. (EPA 2023a).

- **Sulfur dioxide** is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO_2 is also a product of diesel engine combustion. The health effects of SO_2 include lung disease and breathing problems for asthmatics. SO_2 in the atmosphere contributes to the formation of acid rain. Acute exposure to SO_2 may lead to irritation of the upper respiratory tract and exacerbation of asthmatic episodes. The adverse effects of chronic exposure to SO_2 are unclear (EPA 2023a).
- **Lead** is a highly toxic metal that may cause a range of human health effects. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers (BAAQMD 2017a). The EPA began working to reduce lead emissions soon after its inception, issuing the first reduction standards in 1973. Lead emissions have decreased substantially as a result of the near-elimination of leaded-gasoline use. Lead exposure has been linked to reproductive and developmental impairments in fetuses and children, as well as long-term neurological, endocrine, and cardiovascular effects (EPA 2023a).
- **Particulate matter** is a complex mixture of extremely small particles and liquid droplets. PM is made up of several components: acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural PM sources include windblown dust and pollen, and ocean spray. In the SFBAAB most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates (BAAQMD 2017a). The size of PM is directly linked to the potential for causing health problems. The EPA is concerned about particles that are 10 micrometers in diameter or smaller (PM_{10}), because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Individuals particularly sensitive to fine-particle exposure include older adults, people with heart and lung disease, and children. As discussed previously, EPA groups PM into two categories (EPA 2023a).
- **$PM_{2.5}$** consists of fine particles, such as those found in smoke and haze. Sources of fine particles include all types of combustion activities (e.g., motor vehicles, power plants, wood burning) and certain industrial processes. $PM_{2.5}$ is also formed through reactions of gases such as SO_2 and NO_X in the atmosphere. $PM_{2.5}$ is the major cause of reduced visibility (haze) in California. For $PM_{2.5}$, short-term exposure (up to 24-hour duration) has been associated with premature mortality, increased hospital admissions for heart or lung cases, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term

exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.

- **PM_{10}** encompasses both fine and coarse dust particles; the fine particles are $PM_{2.5}$. Coarse particles, such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter. Sources of coarse particles include crushing or grinding operations and dust from paved or unpaved roads. Control of PM_{10} is achieved primarily by controlling dust at construction and industrial sites, cleaning paved roads, and wetting or paving frequently used unpaved roads. Acute health effects of exposure to PM_{10} include breathing and respiratory symptoms; aggravation of existing respiratory and cardiovascular diseases, including asthma and chronic obstructive pulmonary disease; and premature death. Chronic health effects include alterations to the immune system and carcinogenesis.
    - Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used in the process of making polyvinyl chloride (PVC) plastic and vinyl products, thus may be emitted from industrial processes. Vinyl chloride has been detected near landfills, sewage treatment plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents, although levels above the standard have not been measured in California since the 1970's. Today, vinyl chloride exposure is primarily an occupational concern (CARB 2024a).
    - Sulfates are a family of chemicals that contain the fully oxidized ionic form of sulfur (SO_4^{2-}), in combination with metal and/or hydrogen ions. In California, emissions of sulfur-containing compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. A small amount of sulfate is directly emitted from combustion of sulfur-containing fuels, but most ambient sulfate is formed in the atmosphere. First, emitted sulfur in the fuel is oxidized to SO_2 during the combustion process and subsequently converted to sulfate particulate matter through chemical reactions in the atmosphere. Thus, sulfates are a sub-fraction of ambient particulate matter. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological characteristics (CARB 2024a).
    - Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. It is also formed during bacterial decomposition of human and animal wastes and is present in emissions from sewage treatment facilities and landfills. Industrial sources include petrochemical plants, coke oven plants, and kraft paper mills (CARB 2024a).
    - Visibility reducing particulate environmental impacts occur from PM pollution decreasing visibility (haze). These particles vary greatly in shape, size, and chemical composition, and come from a variety of natural and manmade sources. Some haze-causing particles are directly emitted to the air such as windblown dust and soot. Others are formed in the air from the chemical transformation of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of fine PM. These fine

particles, caused largely by combustion of fuel, can travel hundreds of miles causing visibility impairment (CARB 2024a).

Air Quality Standards

Health-based air quality standards have been established for these pollutants by the EPA at the national level and by CARB at the state level. These standards were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. California has also established standards for sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. A brief description of each criteria air pollutant is provided above, in the previous section. Provided below are the most current monitoring station data, and attainment designations for the study area. **Table 3.3.1** presents the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS).

California and National Area Designations

Both the EPA and CARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. An “attainment” designation for an area signifies that pollutant concentrations did not exceed the established standard. In most cases, areas designated or redesignated as attainment must develop and implement maintenance plans, which are designed to ensure continued compliance with the standard.

In contrast, a “nonattainment” designation indicates that a pollutant concentration has exceeded the established standard. Nonattainment may differ in severity. To identify the severity of the problem and the extent of planning and actions required to meet the standard, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe, extreme).

An “unclassified” designation indicates that insufficient data exist to determine attainment or nonattainment. The California designations also include a subcategory called “nonattainment-transitional,” a designation given to nonattainment areas that are progressing and nearing attainment.

Table 3.3.1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standardsa Concentrationc	National Standardsb Primaryc,d	National Standardsb Secondaryc,e
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m^3)	–	Same as primary standard
Ozone (O_3)	8 hours	0.070 ppm (137 μg/m^3)	0.070 ppm (137 μg/m^3)	Same as primary standard
Respirable particulate matter (PM_{10})[f]	24 hours	50 μg/m^3	150 μg/m^3	Same as primary standard
Respirable particulate matter (PM_{10})[f]	Annual arithmetic mean	20 μg/m^3	–	Same as primary standard
Fine particulate matter ($PM_{2.5}$)[f]	24 hours	–	35 μg/m^3	Same as primary standard
Fine particulate matter ($PM_{2.5}$)[f]	Annual arithmetic mean	12 μg/m^3	9 μg/m^3	15 μg/m
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
Carbon monoxide (CO)	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	None
Nitrogen dioxide (NO_2)[g]	Annual arithmetic mean	0.030 ppm (57 μg/m^3)	53 ppb (100 μg/m^3)	Same as primary standard
Nitrogen dioxide (NO_2)[g]	1 hour	0.18 ppm (339 μg/m^3)	100 ppb (188 μg/m^3)	None
Sulfur dioxide (SO_2)[h]	Annual Arithmetic Mean	–	0.030 ppm (for certain areas) [h]	–
Sulfur dioxide (SO_2)[h]	24 hours	0.04 ppm (105 μg/m^3)	0.14 ppm (for certain areas) [h]	–
Sulfur dioxide (SO_2)[h]	3 hours	–	–	0.5 ppm (1,300 μg/m^3)
Sulfur dioxide (SO_2)[h]	1 hour	0.25 ppm (655 μg/m^3)	75 ppb (196 μg/m^3)	–
Lead (Pb)[i,j]	30-day average	1.5 μg/m^3	–	–
Lead (Pb)[i,j]	Calendar quarter	–	1.5 μg/m^3 (for certain areas)[j]	Same as primary standard
Lead (Pb)[i,j]	Rolling 3-month average	–	0.15 μg/m^3	Same as primary standard
Visibility-reducing particles[k]	8 hours	See footnote j	No national standards	No national standards
Sulfates	24 hours	25 μg/m^3	No national standards	No national standards
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m^3)	No national standards	No national standards
Vinyl chloride[i]	24 hours	0.01 ppm (26 μg/m^3)	No national standards	No national standards

Notes: μg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), SO_2 (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards.

[c] Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

[f] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from 100 ppb to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

[i] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[j] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[k] In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and the “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

Source:CARB 2016 and EPA 2024.

Santa Clara County does not meet state or federal ambient air quality standards for $PM_{2.5}$ and ozone. Additionally, the area is considered nonattainment for ozone, PM_{10}, and $PM_{2.5}$ under state standards. All other criteria air pollutants are considered in attainment or unclassified (EPA 2023 and CARB 2024b). **Table 3.3.2** summarizes the attainment designations for Santa Clara County.

Table 3.3.2. Attainment Status Designations for Santa Clara County

Pollutant	National Ambient Air Quality Standards	California Ambient Air Quality Standards
Ozone	(No federal standard for 1-hour)	Nonattainment (1-hour) Classification=Serious
	Nonattainment (8-hour) Classification=Moderate	Nonattainment (8-hour)
Respirable particulate matter (PM_{10})	Unclassified (24-hour)	Nonattainment (24-hour)
		Nonattainment (Annual)
	Nonattainment (24-hour)	(No state standard for 24-Hour)

Pollutant	National Ambient Air Quality Standards	California Ambient Air Quality Standards
Fine particulate matter ($PM_{2.5}$)	Nonattainment (Annual)	Nonattainment (Annual)
Carbon Monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur Dioxide (SO_2)	(Attainment Pending) (1-hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (Particulate)	Attainment (3-month rolling avg.)	Attainment (30-day average)
Hydrogen Sulfide	No federal standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibility Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

Source: CARB 2024b and EPA 2023

CARB maintains ambient air monitoring stations for criteria pollutants throughout California. The air monitoring station closest to the project area is located on San José-Jackson Street. **Table 3.3.3** summarizes available data from the San José-Jackson Street Station during the last 3 years. As shown, multiple exceedances of the NAAQS and CAAQS, primarily for ozone and $PM_{2.5}$, have recently been recorded.

Table 3.3.3. Summary of Annual Ambient Air Quality Data (2020 to 2022)

Pollutant and Criteria	2020	2021	2022
Ozone			
Maximum concentration (1-hour/8-hour, ppm)[a]	0.106/0.085	0.098/0.084	0.090/0.074
Number of days state standard exceeded (1-hour/8-hour)	1/2	3/4	0/1
Number of days national standard exceeded (1-hour/8-hour)	0/2	0/4	0/1
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour ppm)	51.9/51	47.8/47	46.8/46
Number of days state standard exceeded (1-hour)	0	0	0
Annual average (ppm)	0	0	0
Respirable Particulate Matter (PM_{10})			
Maximum concentration (µg/m^3) (national/California[a])	134.9/137.1	42.8/45.1	41.1/44.5
Number of days state standard exceeded (estimated)	0	0	0
Number of days national standard exceeded (estimated[a])	*	0	0

Pollutant and Criteria	2020	2021	2022
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration (μg/m^3) (national/California[a])	120.5/120.5	38.1/38.1	36.2/36.2
Number of days national standard exceeded (estimated)[b]	12	1	2
National/California annual average (μg/m^3)[a]	13	12	12

Notes: μg/m3 = micrograms per cubic meter; ppm = parts per million; * = data not available.

a California and national statistics may differ for the following reasons: California statistics are based on California-approved samplers, whereas national statistics are based on samplers using national reference or equivalent methods. State and national statistics may therefore be based on different samplers. California statistics are based on local conditions, and national statistics are based on standard conditions. California criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

b EPA updated the concentration based national standard for PM2.5 to 9 micrograms per cubic meter; however, the data presented in this table represent exceedances of the previous standard of 12 micrograms per cubic meter.

Source: CARB 2024c.

Toxic Air Contaminants

TACs are those air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations According to the 2013 Edition of the *California Almanac of Emissions and Air Quality*, health risks from TACs can largely be attributed to relatively few compounds, the most important being diesel PM. Other TACs that pose high ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene (CARB 2013). Diesel PM poses the greatest health risk among the 10 TACs mentioned. TACs are further described in the below regulatory setting section.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, and genetic damage, or short-term acute effects, such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Odors

Odors generally do not cause direct health impacts. However, a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivity to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition occurs only with an alteration in the intensity.

Common odor sources with the potential to adversely affect people in the surrounding population include, but are not limited to, stationary sources such as wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, coffee roasters, rendering plants, food packaging plants, and cannabis. Short-term odor sources that could result in temporary nuisances include exhaust emissions associated with gasoline and diesel combustion from construction equipment/vehicles and odors associated with off-gassing of solvents, paints, cement, and chemicals used for various construction activities. None of these stationary sources of odors are located within the vicinity of the project area.

Sensitive Receptors

Sensitive receptors are people who are more susceptible to poor air quality, typically children, the elderly, and those with serious pre-existing health conditions. Land uses where sensitive receptors are most likely to spend time include schools, residences, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project area consists of improvement sites intermittently located along the banks of the Coyote Creek Reaches 4 to 8. Sensitive receptors include several residential neighborhoods located adjacent to the project area including residences along Notting Hill Drive, Empire Street, Terrace Drive, Arroyo Way, East San Antonio Street, and South 17^{th} street, among others. The project area is also located within the vicinity of other sensitive receptors: San José Middle School, San José High School, Olinder Elementary School, Empire Gardens Elementary School, and Watson Park Soccer Field.

3.3.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Clean Air Act and National Ambient Air Quality Standards

The federal Clean Air Act (CAA) required the EPA to establish the NAAQS (42 United States Code Section 7409). As shown in Table 3.3.1, the EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The primary standards protect public health, and the secondary standards protect public welfare. The CAA also requires each state to prepare a state implementation plan (SIP) for attaining and maintaining the NAAQS. The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Emission Standards for On-Road Vehicles

The Corporate Average Fuel Economy (CAFÉ) program was established to determine vehicle manufacturers' compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance.

In March 2022, CAFE standards were finalized for model years 2024 through 2026. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. Current rulemaking is working on establishing (NHTSA 2022):

- standards for model years 2027 and beyond for passenger cars and light trucks,
- fuel efficiency standards for model years 2029 and beyond for heavy-duty pickup trucks and vans, and
- fuel efficiency standards for model years 2030 and beyond for medium and heavy-duty on-highway vehicles and work trucks.

Emission Standards for Off-Road Vehicles

EPA has adopted emission standards for different types of non-road engines, equipment and vehicles. For nonroad diesel engines, the EPA has adopted multiple tiers of emission standards.

EPA signed a final rule on May 11, 2004, introducing the Tier 4 emission standards, to be phased in between 2008 and 2015 (69 Code of Federal Regulations (CFR) 38957–39273, June 29, 2004). The Tier 4 standards require that emissions of PM and NO_X be reduced by about 90 percent. Such emission reductions can be achieved through the use of control technologies, including advanced exhaust gas after-treatment. To enable sulfur-sensitive control technologies in Tier 4 engines, EPA also mandated reductions in sulfur content in nonroad diesel fuels. In most cases, federal nonroad regulations also apply in California, which has limited authority to set emission standards for new nonroad engines. The CAA preempts California's authority to control emissions from new farm and construction equipment less than 175 horsepower (hp) (CAA Section 209[e][1][A]) and requires California to receive authorization from the EPA for controls over other off-road sources (CAA Section 209[e][2][A]). New engines built in and after 2015 across all horsepower sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

Hazardous Air Pollutants

TACs, or, in federal terms, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. A substance that is listed as a hazardous air pollutant (HAP) pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Section 7412[b]) is considered a TAC. TACs are usually present in minute quantities in the ambient air;

however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established (Table 3.3.1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

The EPA regulates TACs through statutes (i.e., 42 United States Code Section 7412[b]) and regulations that generally require the use of the maximum achievable control technology or best available control technology for toxics to limit emissions. The emissions standards enumerated above also have a measurable effect on emissions of TACs, particularly diesel PM.

State, Laws Regulations, and Policies

California Clean Air Act and Ambient Air Quality Standards

The California Clean Air Act (CCAA) (California Health and Safety Code 42501) requires CARB to establish health-based air quality standards at the state level. The CAAQS were established for the following criteria pollutants: ozone, CO, SO_2, NO_2, PM_{10}, $PM_{2.5}$, lead, sulfate, visibility reducing particles, hydrogen sulfide, and vinyl chloride. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the CCAA. CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and it provides air districts with the authority to regulate indirect emission sources.

CARB regulates emission of criteria air pollutants through several programs, regulations, and plans. The 2022 State SIP Strategy (2022 SIP) serves as a compilation document of all actions taken by CARB and local air districts to further the attainment of the NAAQS (CARB 2022a). Pertinent regulations to the project in the 2022 SIP include, but are not limited to, the Advanced Clean Cars II Program, Advanced Clean Fleets, and Zero-Emissions Trucks Measure, which all serve to electrify the transportation sector through sales requirements for benchmark years (discussed further below).

Advanced Clean Cars Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 (CARB 2017a). The program requires a greater number of zero-emission vehicle (ZEV) models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the low-emissions vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles and the ZEV regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025. CARB recently adopted the new Advanced Clean Car II regulations in August 2022, which dramatically reduces emissions from passenger vehicles for model years 2026 through 2035. Advanced Clean Cars II would require more aggressive tailpipe emission standards for gasoline cars and heavier passenger trucks and require all new vehicles sold by 2035 be ZEVs (CARB 2023b).

Mobile Source Strategy

CARB's Mobile Source Strategy (2020) includes an expansion of the Advanced Clean Cars program and further increases the stringency of GHG emissions for all light-duty vehicles, and 4.2 million zero-emission and plug-in hybrid light-duty vehicles by 2030. It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for classes 3 through 7 "last mile" delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions and a 50 percent reduction in the consumption of petroleum-based fuels. CARB's Mobile Source Strategy includes measures to reduce total light-duty vehicle miles travelled (VMT) by 15 percent compared to business-as usual in 2050 (CARB 2021a).

Zero Emission Vehicles Executive Orders

In March 2012, then-Governor Brown issued Executive Order (EO) B-16-12 establishing a goal of 1.5 million ZEVs on California roads by 2025.In addition to the ZEV goal, the executive order stipulated that by 2015 all major cities in California will have adequate infrastructure and be "zero-emission vehicle ready"; that by 2020 the state will have established adequate infrastructure to support 40 million ZEVs; and that by 2050, virtually all personal transportation in the state will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

On January 26, 2018, then-Governor Brown issued EO B-48-18 establishing a goal of 5 million ZEVs on California roads by 2030 and spurred the installation and construction of 250,000 plug in electric vehicle chargers, including 10,000 direct current fast chargers, and 200 hydrogen refueling stations by 2025.

In September 2020, Governor Newsom signed EO N-79-20, which sets a new state goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035; that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations, where feasible, and by 2035 for drayage trucks; and that 100 percent of off-road vehicles and equipment will be zero emission by 2035, where feasible. This order calls upon state agencies, including CARB, the CEC, the California Public Utilities Commission (CPUC), the Department of Finance, and others to develop and propose regulations and strategies to achieve these goals (Baroody et al. 2020).

Regulations Addressing Diesel Emissions

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 hp such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions through the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (Title 13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. Current rulemaking of this regulation was adopted in August 2023 and became effective on October 1, 2023 and includes additional updates to ensure fleet compliance by requiring public agencies and prime contractors to verify compliance with these fleet requirements annually and to report non-compliant fleets. In addition, starting in 2024, fleets will be required to use 99 or 100 percent renewable diesel.

The California Standards for Diesel Fuel Regulations require diesel fuel with a sulfur content of 15 parts per million (ppm) or less (by weight) to be used for all diesel-fueled vehicles that are operated in California. The standard also applies to non-vehicular diesel fuel, other than diesel fuel used solely in locomotives or marine vessels. The regulations also contain standards for the aromatic hydrocarbon content and lubricity of diesel fuels (CARB 2014).

Additional Heavy-Duty Vehicle Regulations

Additionally, CARB's Heavy-Duty Vehicle Inspection program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering and for compliance with engine certification labels. Any heavy-duty vehicle (i.e., a vehicle with a gross vehicle weight rating greater than 14,000 pounds) traveling in California, including vehicles registered in other states and foreign countries, may be tested. Tests are performed by CARB inspection teams at border crossings, California Highway Patrol weigh stations, fleet facilities, and randomly selected roadside locations. Owners of trucks and buses found to be in violation are subject to penalties starting at $300 per violation. Heavy-duty trucks used during Project construction or operations would be subject to the inspection program (CARB 2023a).

In 2004, CARB adopted regulations requiring on-board diagnostic (OBD) systems on all 2007 and later model year heavy-duty engines and vehicles (i.e., vehicles with a gross vehicle weight rating greater than 14,000 pounds) in California. CARB subsequently adopted a comprehensive OBD regulation for heavy-duty vehicles model years 2010 and beyond. The heavy-duty OBD regulations were updated in 2010, 2013, and 2016 with revisions to enforcement requirements, testing requirements, and implementation schedules. Heavy-duty trucks used during Project construction or operations would be required to comply with the heavy-duty OBD regulatory requirements (CARB 2019).

California Control Measures for Airborne Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, PM exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an ATCM for sources that emit that a particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

ATCMs, including the following relevant measures, are implemented to address sources of TACs:

- ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 hp and Greater,
- ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling,
- ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines – Standards for Nonvehicular Diesel Fuel,
- ATCM for Stationary Compression Ignition Engines,

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators) (discussed above). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., LEV/Clean Fuels and gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB 2024d). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, risks associated with exposure to the emissions will also be reduced.

At the regional level, air pollution control or management districts may adopt and enforce the CARB's control measures and adopt their own TACs regulations. BAAQMD (discussed below) limits emissions and public exposure to TACs primarily through Regulation 2-5 (New Source Review of Toxic Air Contaminants) and other rules.

Regional/Local Laws, Regulations, and Policies

Bay Area Air Quality Management District

BAAQMD maintains and manages air quality conditions in the SFBAAB, including Santa Clara County, through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of BAAQMD includes the preparation of plans and programs for the attainment of the NAAQS and CAAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. BAAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and CCAA.

Projects located in the SFBAAB are subject to BAAQMD's rules and regulations. The following rules and regulation are applicable to the project:

- Regulation 2, Rule 1, General Permit Requirements. This rule includes criteria for issuance or denial of permits, exemptions, and appeals against decisions of the Air Pollution Control Officer and BAAQMD actions on applications.
- Regulation 6, Rule 1, General Requirements. This rule limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions, and opacity.
- Regulation 6, Rule 6 (Trackout). This rule limits the quantity of PM in the atmosphere through control of trackout of solid materials onto paved public roads outside the boundaries of large construction sites.
- Regulation 7, Odorous Substances. Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. BAAQMD staff investigate and track all odor complaints it receives, make attempts to visit the site and identify the source of the objectionable odor, and assist the owner or facility in finding a way to reduce the odor.
- Regulation 8, Rule 3 (Architectural Coating). This rule limits the quantity of volatile organic compounds that can be supplied, sold, applied, and manufactured within the BAAQMD region.
- Regulation 8, Rule 15 (Emulsified and Liquid Asphalts). This rule limits the reactive organic gases content of asphalt available for use during construction through regulating the sale and use of asphalt and limits the ROG content of asphalt.
- Regulation 11, Rule 14 (Asbestos-Containing Serpentine). The purpose of this rule is to control emissions from asbestos from unpaved road surfaces and other surfacing operations. This rule limits the use of serpentine material with >5 percent asbestos content for covering roads or paths.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS in their region by the earliest practical date. It specifies that local air districts should focus attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources. To achieve the CAAQS, BAAQMD prepares and updates air quality plans on a regular basis. The air quality plans published by BAAQMD and other local air districts in the state are incorporated into California's 2022 SIP and meet CAA requirements.

BAAQMD also provides guidance for CEQA practitioners for evaluating the significance of proposed projects and plans. BAAQMD's most recent 2022 CEQA Air Quality Guidelines (2022 BAAQMD CEQA Guidelines) include nonbinding recommendations intended to assist lead agencies with navigating the CEQA process (BAAQMD 2022a). The 2022 BAAQMD CEQA Guidelines provide numerical thresholds to measure a project's average daily and annual emissions of criteria air pollutants and ozone precursors during the construction and operational phases of a project. The 2022 BAAQMD CEQA Guidelines also recommend a numerical threshold for evaluating project-level and cumulative TAC impacts. Significance thresholds in the 2022 BAAQMD CEQA Guidelines are described in the "Thresholds of Significance" section below.

BAAQMD 2017 Clean Air Plan

For state air quality planning purposes, the SFBAAB is classified as a serious nonattainment area with respect to the 1-hour CAAQS ozone standard. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that BAAQMD update its Clean Air Plan every 3 years to reflect progress in meeting the NAAQS and CAAQS and to incorporate new information regarding the feasibility of control measures and new emission inventory data. BAAQMD's record of progress in implementing previous measures must also be reviewed. On April 19, 2017, BAAQMD adopted the most recent revision to the Clean Air Plan, titled the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (BAAQMD 2017b). This plan serves to:

- define a vision for transitioning the region to a post-carbon economy needed to achieve 2030 and 2050 greenhouse gas reduction targets;
- decrease emissions of air pollutants most harmful to Bay Area residents, such as particulate matter, ozone, and TACs;
- reduce emissions of methane and other potent climate pollutants; and
- decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* (2040 General Plan) includes the following goals and policies that may be applicable to the project:

Goal MS-10: Air Pollutant Emission Reduction

- **MS-10.1** Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- **MS-10.8** Minimize vegetation removal required for fire prevention. Require alternatives to discing, such as mowing, to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.

Goal MS-11: Toxic Air Contaminants

- **MS-11.2** For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, requiring new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
- **MS-11.3** Review projects generating significant heavy duty truck traffic to designate truck routes that minimize exposure of sensitive receptors to TACs and particulate matter.

3.3.3 Applicable BMPs and VHP Conditions/AMMs

Valley Water would incorporate BMPs to avoid and minimize adverse effects on the environment that may result from the project. No VHP Conditions or AMMs are applicable to air quality. All relevant Valley Water BMPs for the project are included in Appendix B and incorporated in the project, as described in Chapter 2, "Project Description". Valley Water BMPs relevant to air quality are:

- **AQ-1: Use Dust Control Measures** – The following 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.

The following Valley Water SMP BMPs are applicable to air quality emissions during operation and maintenance of the project:

- **GEN-29: Dust Management** – Valley Water will implement BAAQMD's required dust control measures (see Handbook BMP above).

3.3.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The proposed project would have a significant impact on air quality if implementing the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As stated in Appendix G, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the above determinations. Therefore, according to the 2022 BAAQMD CEQA Guidelines, a project would have a significant impact on air quality if implementing it would:

- Conflict with the 2017 Clean Air Plan;
- Generate construction-related emissions that exceed:
  - ROG, Nox, and $PM_{2.5}$ (exhaust): 54 pounds per day (lb/day) (average daily);
  - PM10 (exhaust): 82 lb/day (average daily);
- Generate operation-related emissions that exceed:
  - ROG, NO_X, and $PM_{2.5}$ (exhaust): 54 lb/day (average daily) or 10 tons/year (tpy)
  - PM10 (exhaust): 82 lb/day (average daily) or 15 tpy;

- Exclude the implementation of fugitive dust-related BMPs outlined in Table 5-2 “Basic Best Management Practices for Construction-related Fugitive Dust Emissions,” detailed in the 2022 BAAQMD CEQA Guidelines;
- Result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm, as determined by the 2022 BAAQMD CEQA Guidelines screening criteria for determining whether project operations would result in a localized CO hotspot include (BAAQMD 2022a):
  - consistency with an applicable congestion management program established by the county congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans;
  - Project-generated traffic not increasing traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
  - Project-generated traffic not increasing traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway);
- Project level incremental increase in cancer risk (i.e., the risk of contracting cancer) greater than 10 in one million at any off-site receptor, a noncarcinogenic hazard index of 1.0 or greater, or $PM_{2.5}$ concentrations greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) (annual average), or compliance with a qualified community risk reduction plan;
- Cumulative incremental increase in cancer risk (i.e., the risk of contracting cancer) greater than 100 in one million at any off-site receptor, a noncarcinogenic hazard index of 10.0 or greater, or $PM_{2.5}$ concentrations greater than 0.8 $\mu g/m_3$ (annual average), or compliance with a qualified community risk reduction plan; /or
- Result in five confirmed odor-related complaints per year averaged over 3 years (operations).

Analysis Methodology

The methods used to evaluate criteria air pollutants, ozone precursors, TACs, CO, and odors are described below.[1]

Criteria Air Pollutants and Ozone Precursors

Construction emissions of criteria air pollutants and ozone precursors were quantified using a combination of methods, including the use of published emissions factors from EPA’s AP-42: Compilation of Air Emissions Factors from Stationary Sources (EPA 1972) for various sources of construction activities (e.g., material handling, dust on paved/unpaved roads), emissions factors for off-road construction equipment available from Appendix G of the California Emissions Estimator Model (CalEEMod) Version 2022.1 (CAPCOA 2022), and emissions factors for on-road vehicles (e.g., worker commute, haul and delivery trucks) were obtained from

[1] Modeling of air quality emissions was based on the original project description in the Draft EIR. Minor modifications to the project description included in this Attachment 1 of the Final EIR would not meaningfully change the modeling results, and would not change impact analyses and significance conclusions.

CARB's Emissions Estimator Model (EMFAC 2021) (CARB 2021b). Refer to Appendix C for detailed model input parameters and outputs.

Overall, modeling parameters were based on available project-specific information, including equipment lists and anticipated hours of use for each feature type (e.g., berm/demolition, passive barriers, floodwalls), number of workers per day, quantities of concrete, soil export/import, vendor deliveries (e.g., sheet piles, construction material, vegetation planting), and duration of overall construction activities. Where certain project-specific details were not available, default assumptions from CalEEMod were used. Specific inputs by project activity are provided in greater detail below.

Offroad Heavy-Duty Equipment

Activity use data was available for the entire project, based on the anticipated equipment type that would be required for construction of the various project feature types. Equipment horsepower and load factors (i.e., portion of the rated power that is utilized during operation, factored into the emissions calculations as a percent of the maximum power rating of each piece of equipment) were obtained from Appendix G of CalEEMod. Based on the anticipated construction hours per day (i.e., 10 hours), total equipment hours were estimated. Emissions factors for criteria air pollutants and ozone precursors were obtained from Appendix G of CalEEMod. Total mass emissions associated with a heavy-duty equipment use were calculated and divided by the total number of workdays (i.e., 462 based on the anticipated required work duration of 22 months, 4 weeks per month, 5 workdays per week, and 22 Saturdays) to derive average daily emissions. Dust emissions from excavation and stockpiling activities were estimated using AP-42 emissions factors and the anticipated stockpiling quantity for the entire project (i.e., 1,000 cubic yards) and averaged over the duration of the project work schedule. Dust emissions are presented in Appendix C for informational purposes. **Table 3.3.4** provides detailed inputs and outputs for construction equipment that were used to estimate construction emissions.

Table 3.3.4. Offroad Heavy-Duty Equipment Assumptions

Construction Type	Equipment	Horsepower	Total Equipment Days	Hours/ Day	Load Factor
Passive Barrier	Excavator	158	130	10	38%
	Roller	80	130	10	38%
	Cement Mixer	9	130	10	56%
Berm/ Demolition	Backhoe	97	150	10	37%
	Dozer	247	150	10	40%
	Roller	80	150	10	38%
	Pneumatic Hammer	93	150	10	42%
T-Wall and L-Wall	Excavator	158	130	10	38%
	Dozer	247	130	10	40%
	Concrete Truck	376	130	10	38%
	Roller	80	130	10	38%
Type 1 and Type 2 Wall	Pile Driver	300	400	10	20%
	Crane	231	60	10	29%

Entire Project	Generator	84	570	10	74%

Source: Young, pers. comm., 2023.

On-Road Truck Travel

Delivery and haul trucks would be required to deliver construction materials, import soil, deliver vegetation for replanting, and off-haul waste and soil excavation. Quantity estimates were available for all import and export deliveries, and emissions were estimated based on anticipated total quantity of material, haul truck capacity, and distance to supply/haul sites to obtain total VMT of each truck trip type. Using the estimated VMT, exhaust emissions factors for haul trucks were obtained from EMFAC 2021 for haul trucks within Santa Clara County. The on-road VMT was also used to estimate dust emissions using emissions factors from AP-42. Note that dust emissions are presented in Appendix C for informational purposes. Based on an average daily work crew of 30 workers/day, worker commute VMT was also estimated. On-road emissions were summed based on the total anticipated VMT calculated for the project for each trip type and averaged over the anticipated number of workdays (i.e., 462) to obtain average daily emissions. **Table 3.3.5** provides a summary of mobile input parameters for on-road truck travel.

Table 3.3.5. On-Road Truck Travel Assumptions

Trip Type	One-Way Travel Distance (miles)	Quantity	Truck Capacity	One-Way Trips	Vehicle Miles Traveled
Export (soil/waste)	40	29,000 CY	10 CY	5,800	232,000
Export (trees)	40	500 Trees	13 Tons	154[1]	6,160
Import (soil/fill)	100	14,500 CY	10 CY	2,900	290,000
Import (concrete)	100	10,000 CY	9 CY	2,222	222,222
Import (vendor)	100	10,000 CY	13 Tons	1,540	154,000
Import (trees)	100	500 Trees	13 Tons	154	15,400
Worker Commute	20	30 workers/day	NA	27,720	554,400[2]

Notes: CY= Cubic Yards; NA= Not Applicable.

[1] Assumed weight of 2 tons per tree removed/delivered.

[2] Worker Commute VMT calculated based on an average of 30 workers per day for 462 total project work days.

Source: Young, pers. comm., 2023, Modeled by Ascent Environmental 2024.

Toxic Air Contaminants, Carbon Monoxide, and Odors

Emissions associated with TACs, CO, and odors were evaluated qualitatively in consideration of project-specific construction activities and duration, and in accordance with BAAQMD and Office of Environmental Health Hazard Assessment (OEHHA) guidance (OEHHA 2015). No health risk assessment (HRA), CO hotspot dispersion modeling, or odor dispersion modeling was conducted.

Impacts Not Discussed Further in the EIR

Generation of Significant Operational Emissions of Criteria Air Pollutants, Ozone Precursors, and Toxic Air Contaminants

Operation of the project would entail some maintenance activities, as well as vegetation removal of approximately 10-foot around each flood risk reduction improvement, to facilitate access to the improvements to conduct maintenance activities. Operation and maintenance activities would result in a marginal increase in vehicle trips due to accessing the improvements one to two times annually – a maximum of approximately 62 truck trips or fewer per year. As discussed in Chapter 2, “Project Description,” maintenance activities would include trash and debris removal, periodic vegetation management, minor maintenance road repairs, management of wildlife conflicts, and graffiti removal. Also, as discussed in Section 3.13, “Transportation and Traffic,” these maintenance activities would generate a very small number of new vehicle trips resulting in a negligible increase in daily and annual VMT (i.e., approximately 62 trips or fewer per year).

Vehicle trips from operational activities would be far lower than those from construction. Further, implementation of SMP BMP GEN-29 (Dust Management) would reduce dust emissions during maintenance activities. Given that the project would result in a minor increase in new trips compared to baseline conditions, does not introduce any new sources of natural gas, and would entail minor use of hand-held gasoline- or electrically-powered equipment, the project would not generate operational emissions of criteria air pollutants, ozone precursors, or TACs that would exceed BAAQMD’s average daily or annual mass emissions or health-based thresholds of significance, nor would operation of the project conflict with the 2017 Clean Air Plan. Therefore, these issues are not discussed further in this EIR.

Local CO Hotspots Generated by Operational Activities

As noted above, maintenance activities conducted at improvements in the project area, which comprises the only operational activity associated with project implementation, would introduce a very small number of new trips. Moreover, those trips would be distributed throughout the region depending on the origin of the trip. CO hotspots occur when a high volume of vehicles (i.e., 44,000 vehicles per hour or more) are travelling within a localized point, as indicated by BAAQMD in its 2022 CEQA Guidelines. The project would not introduce new vehicle trips that would conflict with the screening criteria summarized above. Therefore, the project would not result in a CO hotspot, and this impact is not discussed further in this EIR.

Exposure to Operational Sources of Odors Affecting a Substantial Number of People

Operation of the project would entail some maintenance activity to manage vegetation for access and to retain the improvements in the project area. To implement these actions, hand-held equipment would be used. The project would not introduce any stationary sources of odors, and operation of the project would not introduce odorous emissions affecting a substantial number of people. Therefore, this impact is not discussed further in this EIR.

Impact Analysis

Impact AIR-1: Conflict with Applicable Air Quality Plan from Construction Activities. (Less than significant)

The most recently adopted air quality plan for the SFBAAB is the 2017 Clean Air Plan. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors (ROG and NO_X) and reduce the transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Clean Air Plan builds upon and enhances BAAQMD’s efforts to reduce emissions of $PM_{2.5}$ and TACs. The 2017 Clean Air Plan does not include control measures that apply directly to individual development projects.

Instead, the control strategy includes measures related to stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-greenhouse gas pollutants (GHG) (i.e., GHG pollutants with very high global warming potentials) (BAAQMD 2017b).

A project that would not support the 2017 Clean Air Plan's goals would not be considered consistent with the plan. On an individual project basis, consistency with BAAQMD's quantitative thresholds is interpreted as demonstrating support for the 2017 Clean Air Plan's goals. As shown in the discussion under Impact AIR-2, the project would not result in exceedances of BAAQMD's thresholds for criteria air pollutants, and therefore, would not conflict with the 2017 Clean Air Plan's goal to attain air quality standards. Similarly, as shown in Impact AIR-3, the project would not result in exceedances of BAAQMD's thresholds for TACs. Further, the project does not result in new land use development that would increase regional emissions sources (e.g., vehicular exhaust, area wide source). The project would also not result in land use development and associated operational emissions (e.g., vehicular use, areawide sources, stationary sources) and, as discussed under Impact AIR-2 below, construction activities would be short-term and temporary, not exceeding adopted BAAQMD thresholds of significance. Construction activities would also be required to adhere to Valley Water's BMP AQ-1, which is consistent with dust reducing BMPs recommended by BAAQMD, which would reduce entrained dust emissions of particulate matter in line with objectives of the 2017 Clean Air Plan to reduce these emissions sources. For these reasons, the project would not conflict with the 2017 Clean Air Plan. This impact would be **less than significant.**

Impact AIR-2: Result in Cumulatively Considerable Net Increase of Any Criteria Pollutant from Construction Activities. (Less than significant)

Although the impacts from construction related air pollutant emissions are temporary in duration, such emissions can become a significant air quality impact. Construction activities such as grading, excavation, construction, and paving can generate substantial amounts of air pollution. Emissions from construction equipment engines also contribute to elevated concentrations of ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Several pieces of diesel-powered heavy equipment would operate during the construction of the project. Exhaust and fugitive dust emissions would be generated from the use of construction equipment during excavation, site preparation/vegetation clearing, construction activities such as sheet piling, paving, earthmoving, demolition, and floodwall construction. Vehicle use associated with material transport (e.g., cut/fill, building materials, vegetation removal/deliveries) and worker commutes would result in exhaust emissions and dust from travel on paved and unpaved roads.

Dust from construction activities can cause impacts both locally and regionally. The dry climate of the area during the summer months, combined with regional fine, silty soils, creates a high potential for dust generation. Increased dust fall and locally elevated PM_{10} levels near the construction activity are likely. Depending on the weather, soil conditions, the amount of activity taking place at any one time, and the nature of dust control efforts, these impacts could affect existing land uses near the project area. However, as discussed above, Valley Water BMP AQ-1, which includes BAAQMD-recommended dust control practices (e.g., watering exposed surfaces daily, reducing onsite truck travel speeds) would be adhered to during all construction activities, reducing dust emissions to the greatest extent feasible. See the previous discussion in the “Applicable BMPs and VHP Conditions/AMMs” section, and Appendix C for additional modeling information which shows the reduction in dust emissions.

Based on the outputs of the modeling conducted for the project, construction of the project would generate the emissions shown in **Table 3.3.6**. This table shows estimates as average daily values compared to applicable BAAQMD's thresholds of significance. Note there are no BAAQMD thresholds for dust emissions.

Table 3.3.6. Average Daily Emissions of Criteria Pollutants and Ozone Precursors Associated with Project Construction

Category	ROG (lb/day)	NOX (lb/day)	PM10 Exhaust (lb/day)	PM2.5 Exhaust (lb/day)
Average Daily Emissions	2	24	<1	<1
BAAQMD Threshold of Significance	54	54	82	54
Exceeds Threshold?	No	No	No	No

Notes: ROG= reactive organic gasses; NOx= oxides of nitrogen; PM10= respirable particulate matter; PM2.5= fine particulate matter; lb/day = pounds per day, BAAQMD = Bay Area Air Quality Management District
Source: Modeled by Ascent Environmental 2024.

As shown in Table 3.3.6, the project's construction emissions would not exceed BAAQMD's average daily mass emissions thresholds of significance, which are tied to long-term regional air quality planning in the SFBAAB. As such, the project's emissions would not considerably contribute to potential adverse health outcomes from exposure to concentrations of criteria air pollutants in exceedance of the NAAQS and CAAQS. Therefore, the project's construction emissions of criteria pollutants would be **less than significant.**

Impact AIR-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations. (Less than significant)

The focus of this TAC analysis is diesel PM. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project would not include any industrial sources. TACs from diesel PM are of particular importance because the potential cancer risk from inhalation of diesel PM outweighs the risk for all other health impacts (i.e., noncancer chronic risk, short-term acute risk) and health impacts from other TACs.

Construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for construction activities (e.g., excavation, foundation/concrete work); on-road truck travel; and other miscellaneous activities. On-road diesel-powered haul trucks traveling to and from the construction areas to deliver materials and equipment are less of a concern because they would not stay on the site for long periods of time.

When evaluating TAC concentrations and associated health risks, the primary factors influencing risk exposure include relative mass of emissions generated, duration of exposure of such emissions at receptor locations, and proximity of sources to receivers, because health risk increases with increased exposure duration and pollutant concentrations reduce with increasing distance from the source.

Regarding the relative mass of emissions, as shown in Table 3.3.6, $PM_{2.5}$ exhaust would average less than 1 lb/day (considered as a surrogate for diesel PM) and would be minimal. While BAAQMD provides screening criteria for the purpose of evaluating operational stationary and mobile TAC sources of emissions, BAAQMD does not provide guidance on when short-term emissions (such as those that would be generated by the project) should be quantified. In lieu of guidance from BAAQMD for short-term TAC emissions, in accordance with guidance from the OEHHA, due to the uncertainty in assessing cancer risk from very short-term exposures on receptors, it is not recommended to assess health risks quantitatively from projects lasting less than two months (OEHHA 2015).

The anticipated duration of all construction activities would be two years, with approximately 462 workdays. As shown previously in Figures 2.11 to 2.20, construction activities would occur along Coyote Creek at varying distances from nearby existing residential and non-residential uses, in many cases within 500 feet from construction activities. However, due to the linear nature of the project, construction activity would not remain in any one location for the entire duration of the project construction. Further, depending on the specific construction contractor's specific work plan, crew, and equipment availability, up to three construction crews at three individual locations could be working simultaneously, resulting in reduced construction duration, and associated exposure, at any nearby receptor near active construction work. However, due to unknowns regarding the order of feature construction and exact number of crews/equipment that would be available for the construction, a conservative scenario (i.e. longer estimated duration of construction), applying one crew at one feature was assumed for this assessment to determine duration of construction for each reach of the project. To further illustrate the potential construction duration, and associated exposure time at any nearby receptor, the total anticipated linear feet of floodwalls (the improvements that require the most intense and longer construction activities) to be constructed for each reach were compared to the anticipated total duration of construction for each reach to obtain a rate of construction in linear feet per day (LF/day). **Table 3.3.7** summarizes the anticipated rate of construction for each reach.

Table 3.3.7. Construction Rate Calculation

Reach	Construction Weeks	Construction Days	Linear Feet to Be Constructed	Construction Rate (LF/Day)
Reach 4	17	96	~~4,079~~ 4,132	32
Reach 6	32	174	~~5,651~~ 5,062	34
Reach 7	50	150	~~4,495~~ 4,579	31
Reach 8	15	90	~~2,781~~ 2,855	52

Notes: LF= linear feet
Source: Modeled by Ascent Environmental 2024.

As shown above, the rate of construction would range from as fast as 52 LF/day to as slow as 31 LF/day across all reaches and accounting for all construction activity. Assuming the slowest rate (resulting in the longest duration of emissions at receptors) and based on a review of the longest (in feet) features to be constructed that are also near existing residential uses (i.e., R7-PB5 of 1,634 feet), the project would result in a construction duration of 54 days (i.e., less than two months) for the longest project feature. Moreover, the duration periods used in this assessment also include mobilization and decommissioning of equipment and crews; and therefore, anticipated active construction duration would be less. Applying the same construction rate to a distance of 1,000 feet (stationary source TAC screening distance used by BAAQMD), active construction would move beyond 1,000 feet from any one receptor in 32 days, meaning that as equipment and crews move along the linear construction area, associated emissions would disperse from the source, not exposing any individual receptor to substantial TAC concentrations for extended periods of time. Regarding staging and stockpiling areas, these locations would not include the use of heavy-duty equipment to the extent required during active construction; thus, emissions at these locations would be anticipated to be far lower than those associated with equipment use at construction sites.

Regarding $PM_{2.5}$ (exhaust) emissions, as shown in Table 3.3.6, average daily emissions would be substantially below adopted mass emissions thresholds of 54 lb/day. And, for the same reasons discussed above relating to exposure duration and the linear nature of the project which would result in emissions sources moving about in a linear fashion with individual sites not being constructed for extended periods of time, $PM_{2.5}$ concentrations would also fluctuate and disperse across individual sites, not resulting in substantial concentrations at any one receptor.

Regarding cumulative risk and $PM_{2.5}$ concentrations, BAAQMD provides screening level data on existing TAC and $PM_{2.5}$ emissions from stationary sources and mobile sources, in the Stationary Source Screening Map and Mobile Source Screening Map (BAAQMD 2022b, BAAQMD 2023). While data is available, it is not refined to the project level such that accurate risk values at individual receptors can be determined. This is primarily because risk estimates were conducted at a regional scale using generalized data and represent emissions levels at individual TAC emitting sources/land uses (e.g., roadways, industrial and commercial emitters), not nearby receptors, which is an important clarification because risk values decrease with increasing distance from the source. Nonetheless, the resources were reviewed and indicate that existing cancer risk within 1,000 feet of Coyote Creek ranges from as low as zero to as high as 204 chances in one million ($PM_{2.5}$ from as low as zero to as high as 16.1 $\mu g/m^3$) and chronic hazard from as low as zero to as high as 0.8 (combined stationary and mobile sources). The project would not result in a considerable contribution to the cumulative risk at any single receptor location considering that: 1) project-level TAC concentrations would be minimal, not exceeding the project-level risk thresholds; 2) project-level concentrations would reduce with increasing distance between sources and sensitive receptors; and 3) project-generated sources would be dispersed linearly across 9 miles of Coyote Creek. Therefore, construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds BAAQMD's threshold of 10 in 1 million for carcinogenic risk, $PM_{2.5}$ concentrations above 0.3 $\mu g/m^3$, noncancer hazard risk above 1.0 at the project-level or result in cumulatively considerable contribution to the existing cumulative risk levels in the project area. This impact would be **less than significant.**

Impact AIR-4: Other Construction Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People. (Less than significant)

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the affected receptors. While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

When evaluating potential impacts to sensitive receptors from new odor sources, the primary focus is on new odor-generating land uses, such as landfills, wastewater treatment plants, composting facilities, and other industrial and commercial uses or processes. This is because these uses generate odors on a constant or relatively constant basis over the life of the operations, which can lead to increased disturbance, annoyance, or nuisance, to nearby sensitive receptors, increasing the potential for odor complaints from the public. In fact, BAAQMD does not have adopted thresholds or guidance for evaluating odors from short-term temporary construction phase of a project. Nonetheless, in accordance with BAAQMD's 2022 CEQA Guidelines, the following considerations should be taken into account when evaluating potential odor impacts from odor-generating sources:

- Type of odor sources produced by the project (e.g., wastewater treatment plant, landfill, food manufacturing plant),
- Frequency of odor events generated by the project's odor sources (e.g., operating hours, seasonal),
- Distance and landscape between the project's odor sources and the sensitive receptors (e.g., topography, land features), and
- Predominant wind direction and speed and whether the sensitive receptors in question are upwind or downwind from the project's odor sources.

The primary source of odors from the project includes fumes from diesel exhaust of construction equipment/vehicles and construction solvents, paints, and other chemicals. The project would not include any new land use development or stationary odor sources that would operate indefinitely, thus, would be less likely to result in odors in the duration and frequency that could result in complaints from the public. Generation of construction-related odor emissions would vary on a day-to-day basis depending on the duration and magnitude of construction equipment used at any one location. The odors would be limited to the construction period (i.e., 2 years) and would be temporary. Further, as explained in detail under Impact AIR-3, construction activities for individual project features would last less than two months, meaning that individual receptors surrounding project construction activities would be exposed to odor sources for an even shorter duration than the overall anticipated duration of two years for project construction.

The criteria of distance/landscape and wind direction/speed are more suitable for the purposes of evaluating a single stationary odor source or odor-generating land use (e.g., landfill, wastewater treatment plant) that can emit odors over a long period of time affecting the receptors nearest to the source more than the receptors further away, upwind, or blocked by land features. In comparison, the project's primary odor source would be associated with fuel exhaust fumes from construction vehicles which would fluctuate throughout the day and occur at various locations, not resulting in frequent odors over a long period of time affecting any individual receptor. Moreover, the project does not include any of the odor sources identified by BAAQMD as sources generally associated with increased odor complaints.

Because odors associated with project activities would occur intermittently throughout the construction period and would not be located at any one site for the tenure of the construction schedule, the project would not generate objectionable odors affecting a substantial number of people. Per BMP AQ-2, Valley Water would avoid stockpiling odorous materials in stockpile areas, further reducing exposure to odors. This impact would therefore be **less than significant.**

3.4 Biological Resources

This section provides an overview of the existing biological resource conditions in the biological study area (BSA), identifies the regulatory framework, and analyzes impacts from the project on biological resources. Valley Water will~~plans to~~ use the Santa Clara Valley Habitat Plan (VHP) for take authorization for VHP covered species. Consistent with VHP standards, the BSA is defined by a 250-foot buffer surrounding the proposed flood risk improvements and associated construction access, staging, and laydown areas depicted in Chapter 2, “Project Description” (refer to Figures 3.4.1 through 3.4.10, under “Existing Land Cover Types”). Appendix D provides documentation supporting this section, including an aquatic resources delineation report (GEI 2024), a table of all special-status species that were evaluated, and species lists generated from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2024a) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2024).

3.4.1 Environmental Setting

The discussion presented in this section is based on information gathered during field surveys and from a variety of sources that address biological resources in the BSA. The following sources were reviewed to support descriptions of existing biological conditions in the BSA:

- Aerial imagery (Esri 2023, Google Earth 2023)
- Milpitas, San Jose West, and San Jose East United States Geological Survey (USGS) topographical maps
- California Department of Conservation Maps Data Viewer: Geologic Map of California (DOC 2023)
- U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey (2023)
- National Hydrography Dataset (USGS 2024)
- National Wetlands Inventory map (USFWS 2023a)
- CNPS Inventory of Rare and Endangered Plants of California (CNPS 2024)
- CDFW CNDDB (CDFW 2024a)
- CDFW Biogeographic Information and Observation System (BIOS 6 Viewer) (CDFW 2024b)
- Bumble Bee Watch (The Xerces Society et al. 2024)
- iNaturalist (2024) online public database of species observations[1]
- USFWS Critical Habitat Mapper (USFWS 2023b)
- National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS) Species and Habitat App (NOAA Fisheries 2024a), Endangered Species Act (ESA) Critical Habitat Mapper (NOAA Fisheries 2024b) and Essential Fish Habitat (EFH) Mapper (NOAA Fisheries 2024c)

[1] Used only for Crotch’s bumble bee occurrences, all of which were verified by a Valley Water biologist with extensive Crotch’s bumble bee survey and identification experience.

- Santa Clara Valley Habitat Agency (SCVHA) Geobrowser (SCVHA 2023) and VHP (ICF 2012)
- Anderson Dam Seismic Retrofit Project Draft EIR (Valley Water 2023a)

A query of the CNDDB provided a list of special-status species with documented occurrences in the three California USGS 7.5-minute quadrangles that overlap the BSA (Milpitas, San Jose East, and San Jose West) or the 12 additional quadrangles that surround these overlapping quadrangles. These 15 quadrangles were also queried in the CNPS Inventory of Rare and Endangered Plants of California.

The NMFS ESA Critical Habitat Mapper and EFH Mapper were queried to identify critical habitat for fish and EFH in the relevant reaches of Coyote Creek. The USFWS Critical Habitat Mapper was queried to determine the location and extent of proposed and designated critical habitat for species managed by USFWS in or near the BSA.

Field surveys of the BSA were conducted by GEI biologists on December 2, 3, 6, and 7, 2021; March 17-19, 2023; and May 21, 2024. VHP land cover classes in the BSA were mapped during the field surveys and suitability of habitat to support sensitive plant and wildlife species was evaluated. The 250-foot buffer associated with the BSA was applied to the project footprint with the goal of capturing indirect effects on special-status plants and wildlife, such as increased levels of noise, visual disturbance, dust, water quality degradation and other potential project-related effects. A formal aquatic resources delineation of the BSA was also conducted in accordance with U.S. Army Corps of Engineers (USACE) methods. The riparian limits and extent of waters of the state were mapped concurrently with the aquatic resources mapping. Given limited access to portions of the BSA, jurisdictional limits were digitized using a combination of data collected in the field and interpretation of aerial imagery, topographic contours, and other available data.

Regional Setting

The BSA is located at the north-central end of the Santa Clara Valley, between the Santa Cruz Mountains to the west and the Diablo Range to the east. The valley floor is largely urbanized, with small patches of open space and a network of intersecting creeks that flow north, eventually draining into the South San Francisco Bay (Bay). The foothills around the valley support a mosaic of communities, including nonnative annual and native perennial grasslands, chaparral scrub, and oak woodland. Open space areas bordering the Bay support wetland communities, including salt marsh and fresh emergent wetland. Creeks flowing through the valley are largely channelized, but support riparian woodland, creating pockets of habitat for common and special-status species and facilitating wildlife movement through otherwise urban areas.

Local Setting

The following section describes the physical and biological setting of the BSA, including topography, hydrology, soils, land cover, sensitive habitats, and special-status plant and wildlife species.

Topography, Hydrology, and Soils

The BSA is largely centered around the Coyote Creek channel and associated riparian corridor, with some extension into surrounding flatlands. Topography in the BSA is primarily flat to gently sloping, ranging in elevation from approximately 35 to 140 feet above mean sea level. Most of the surface water in the BSA flows into Coyote Creek, which then flows northwest, eventually draining into the Bay. Although the creek is constrained by development, most of the channel is unlined, with earthen, vegetated banks, and typically has water present year-round. Stormwater in the urban area surrounding the BSA is collected in municipal stormwater collection systems and discharged into the creek. Soils in the BSA are a mix of sandy loam and urban/anthropogenic fill complexes. No serpentine or other unique soil types are present in the BSA (USDA 2023).

Existing Land Cover Types

The BSA supports a mix of eight developed and undeveloped land cover types including (in order of cover acreage): urban – suburban; golf courses/urban parks; mixed riparian woodland and forest; riverine; ornamental woodland; coast live oak woodland and forest; grain, row-crop, hay and pasture, disked/short-term fallowed; and seasonal wetland. These cover types have been defined and named in accordance with VHP conventions. Each of these land cover types is described below, and their distributions are depicted on **Figures 3.4.1 through 3.4.10**. Land cover acreages in the BSA, including those that overlap the flood risk reduction improvements ~~(including long-term maintenance access areas)~~ and temporary construction areas, are provided in **Table 3.4.1**. The temporary construction areas include areas adjacent to the flood risk reduction improvements in which long-term maintenance activities would occur periodically. The newly installed flood risk reduction improvements would be visually inspected on a periodic basis (one to two times per year) and during or immediately after a natural hazard with potential to damage the improvement or create hazards for public safety. If observed damage threatens the integrity of any structures, repairs would be completed to return them to the as-built design. Vegetation in these areas would be preserved if the improvement can be accessed for maintenance; vegetation would only be impacted if and when necessary for access, and impacts would likely be limited to trimming.

Table 3.4.1. Land Cover Types in the Biological Study Area

Land Cover Type	Area (acres) Biological Study Area[1]	Area (acres) Flood Risk Reduction Improvements	Area (acres) Temporary Construction Areas
Urban – Suburban	244.45 ~~258.49~~	2.33 ~~6.72~~	11.46 ~~17.30~~
Golf Courses/Urban Parks	78.40 ~~77.47~~	0.77 ~~2.81~~	7.12 ~~8.41~~
Mixed Riparian Woodland and Forest	37.00 ~~37.97~~	0.06 ~~0.51~~	0.67 ~~1.15~~
Riverine[2]	28.05 ~~29.0303~~	–	– ~~0.32~~
Ornamental Woodland	5.91 ~~5.88~~	0.32 ~~0.91~~	1.39 ~~0.82~~
Coast Live Oak Woodland and Forest	2.61 ~~2.57~~	0.10 ~~0.43~~	1.52 ~~0.28~~
Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed	0.77	–	–
Seasonal Wetland	0.12	–	– ~~0.12~~
Total	**397.31 ~~412.29~~**	**3.58 ~~11.38~~**	**25.74 ~~28.41~~**

[1]~~Notes:~~ The Biological Study Area includes the flood risk reduction improvements, temporary construction areas, and surrounding 250 feet.

[2] Flood risk reduction improvement and temporary construction area shown overlapping riverine land cover in Figure 3.4.2 is Charcot Avenue Bridge work that is limited to the bridge span. No work would occur within the riverine land cover. Therefore, landcover overlapping the bridge work is included under Urban-Suburban.

Source: Field surveys and aerial imagery mapping conducted by GEI Consultants, Inc. in 2023 and 2024.

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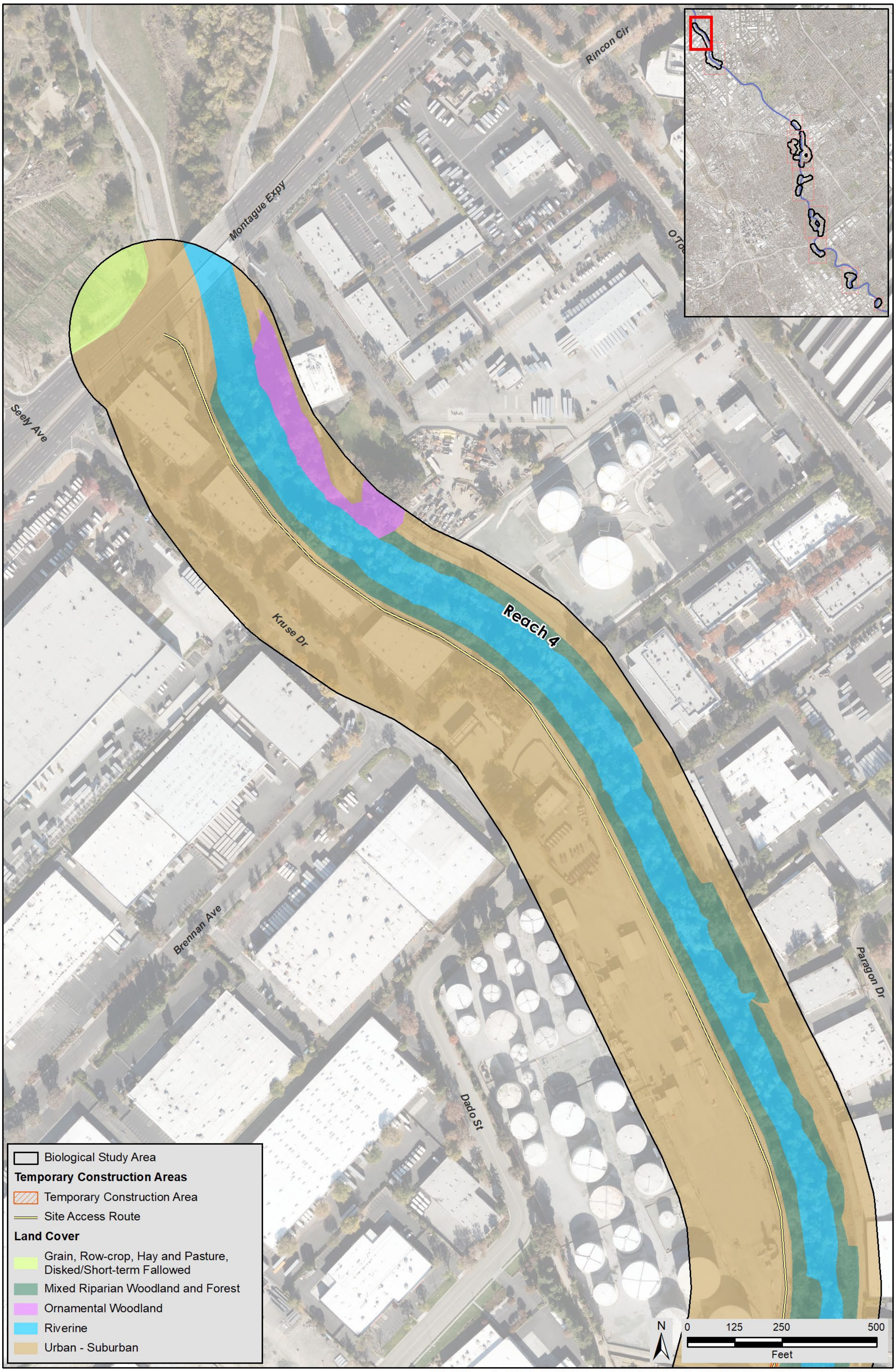

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Figure 3.4.1. Reach 4 (Downstream) Land Cover Types in the Biological Study Area

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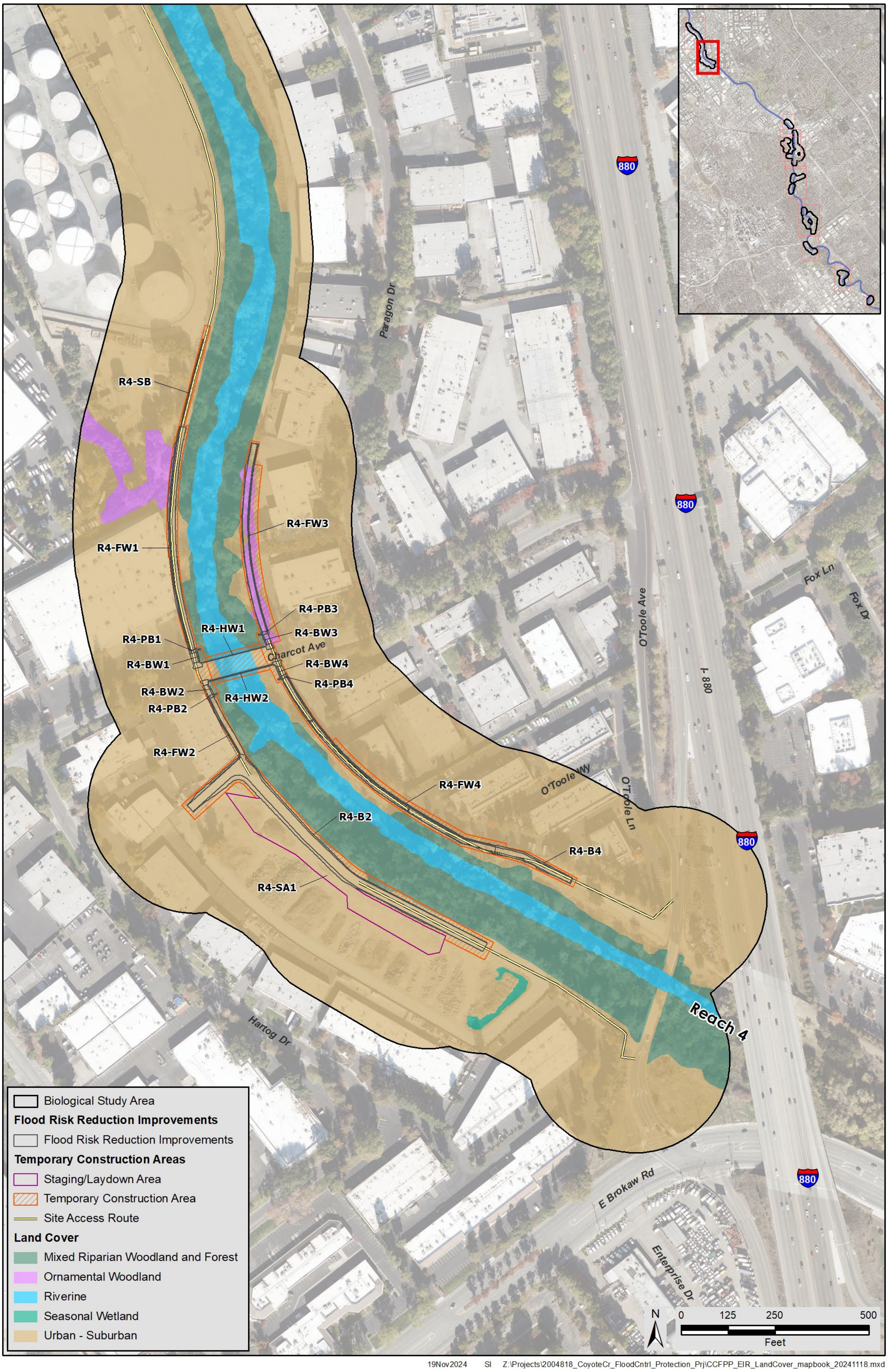

Figure 3.4.2. Reach 4 (Upstream) Land Cover Types in the Biological Study Area

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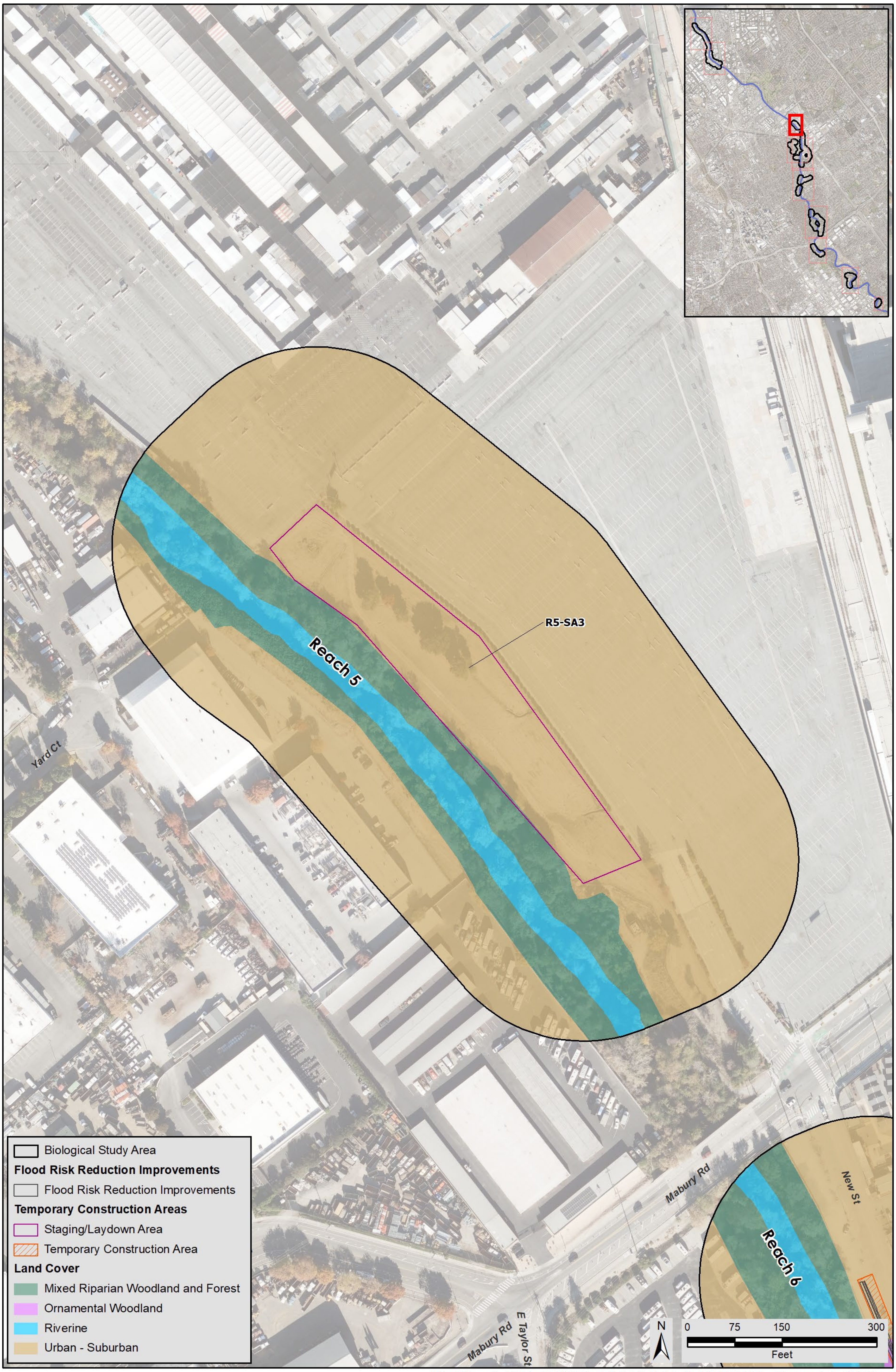

Figure 3.4.3. Reach 5 Land Cover Types in the Biological Study Area

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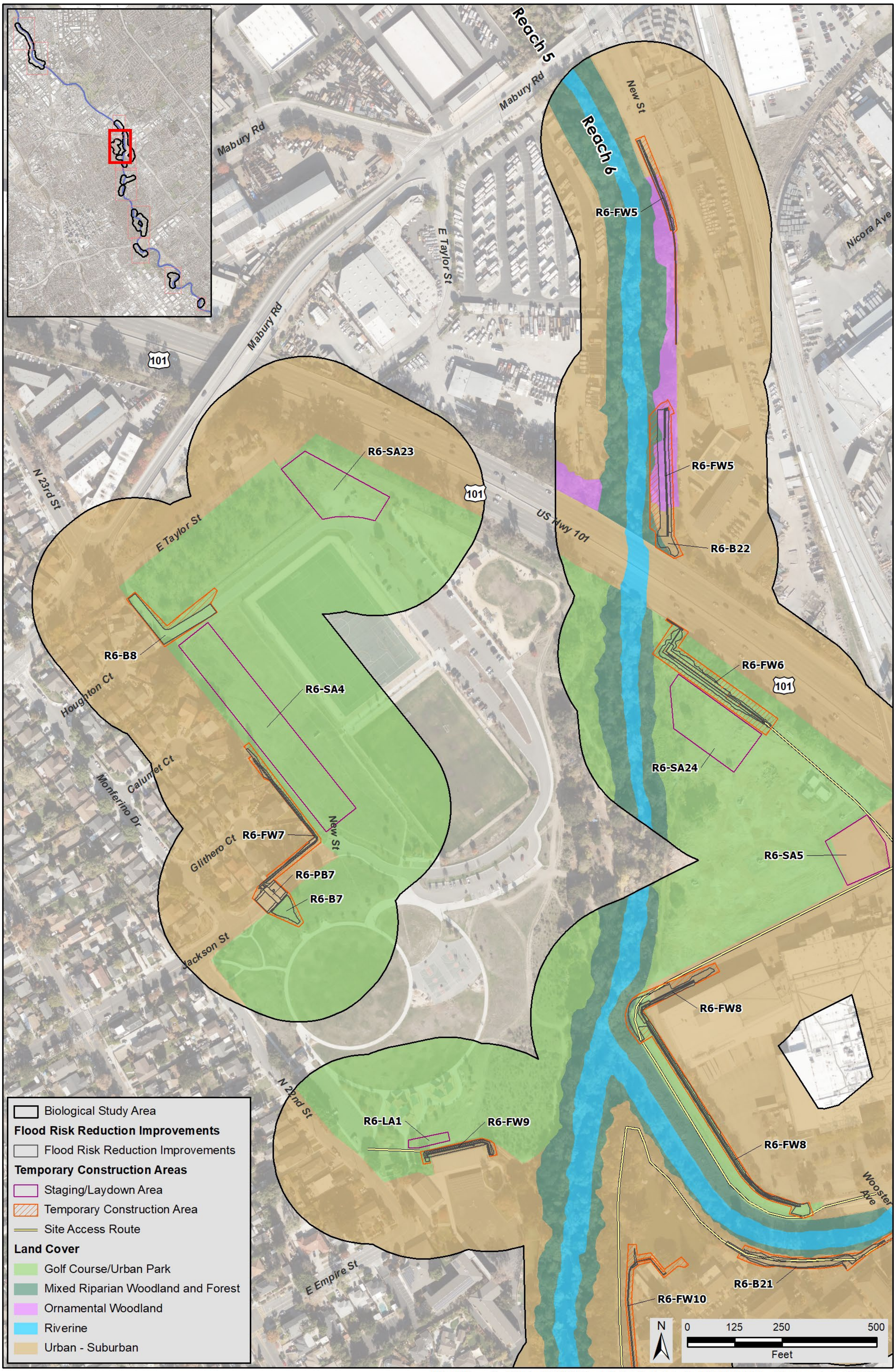

Figure 3.4.4. Reach 6 (Downstream) Land Cover Types in the Biological Study Area

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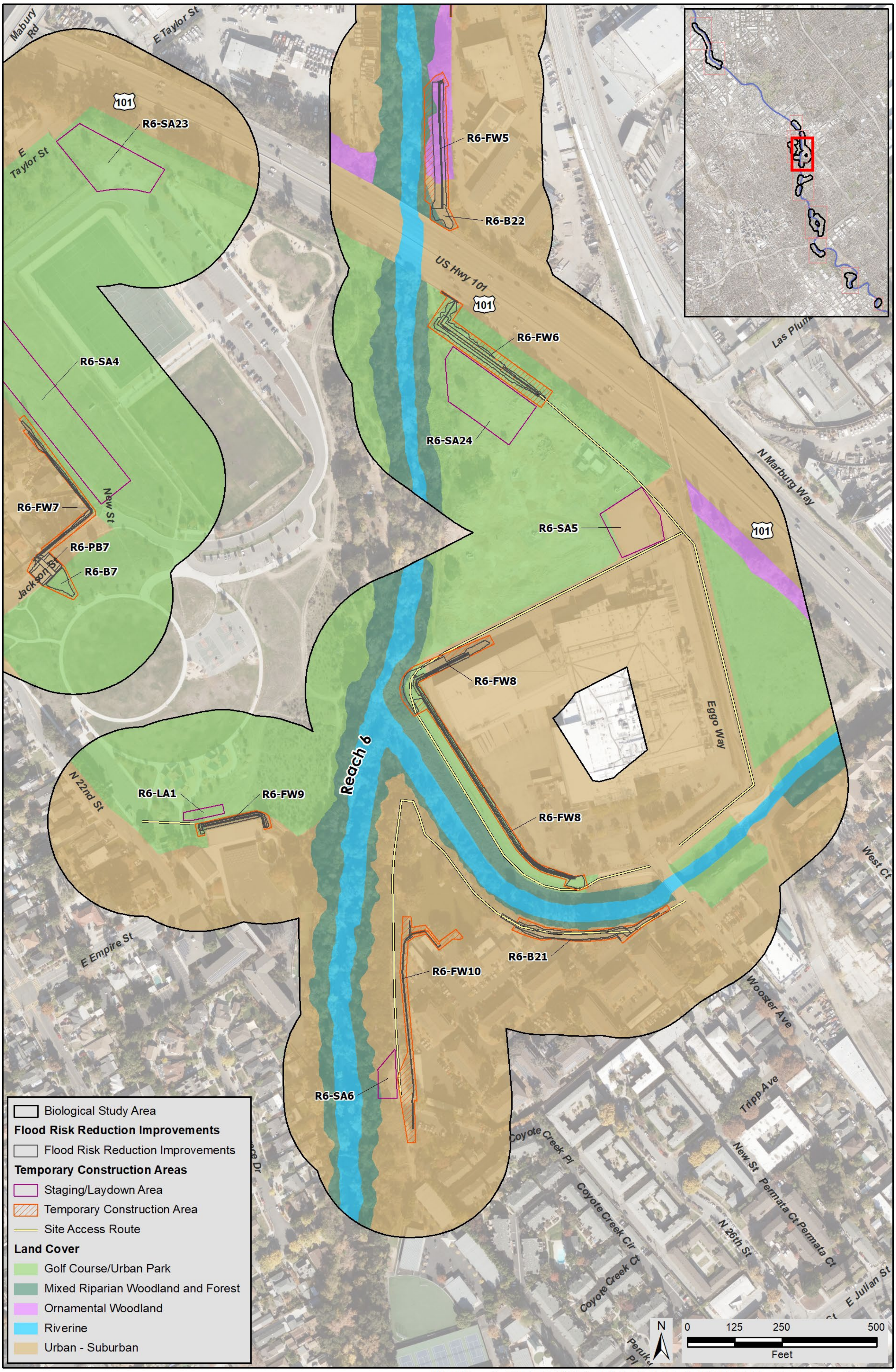

Figure 3.4.5. Reach 6 (Middle) Land Cover Types in the Biological Study Area


Matchline Page R6-B
Reach 6
Reach 7
R6-FW19
R6-SA7
R6-SA8
R6-SA9
R6-SA10
E Julian St
E Saint James St
E Santa Clara St
E St John St
Roosevelt St
N 16th St
N 17th St
N 18th St
N 19th St
N 20th St
N 21st St
N 24th St
N 26th St
S 16th St
S 17th St
S 19th St
S 21st St
S 22nd St
N 15th St
Calhoun St
Coyote Creek Ct
Coyote Creek Cir
Peruka Pl
Staging/Laydown Area
Temporary Construction Area
Land Cover
Golf Course/Urban Park
Mixed Riparian Woodland and Forest
Riverine
Urban - Suburban
0
125
250
500
Feet
N
18Jun2024
SI
Z:\Projects\2004818_CoyoteCr_FloodCntrl_Protection_Prj\CoyoteCreek_CCFPP_LandCover_mapbook_20240618.mxd

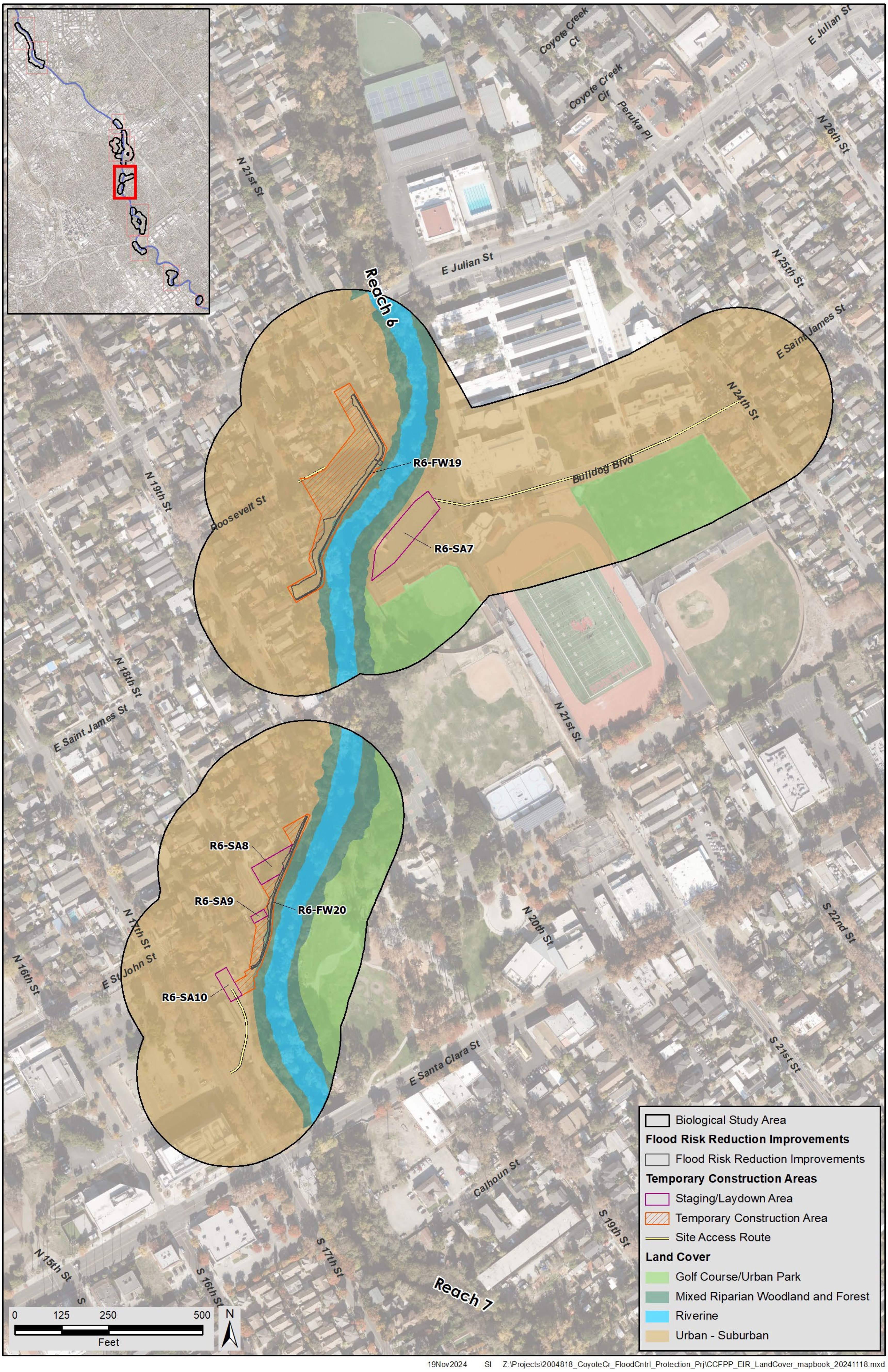

Figure 3.4.6. Reach 6 (Upstream) Land Cover Types in the Biological Study Area

E San Antonio St
Brookwood Ave
S 20th St
S 18th St
S 17th St
E San Carlos St
S 19th St
R7-TB1
R7-FW11
E William St
R7-SA11
R7-LA2
R7-FW12 PB-A
R7-FW12
R7-FW12 PB-B
Reach 7
E San Salvador St
R7-SA12
R7-PB4 FW1
R7-PB5-A
R7-PB5-B
Woodrow Ct
R7-PB5-C
Woodholy Ct
R7-PB5-D
R7-SA13
S 16th St
R7-PB4-D
R7-PB4-E
Woodpark Ct
R7-PB5-E
Woodborough Dr
R7-PB5 FW1
S 22nd St
R7-PB5-F
R7-LA3
R7-SA14
R7-PB5-G
Woodborough Pl
R7-FW18
S 14th St
E Reed St
Jeanne Ave
Forestdale Ave
R7-SA16
I-280
280
Matchline Page R8-A
Valley Oak Tr
Woodland Trl
Biological Study Area
Maintenance Access
Flood Risk Reduction
Construction Area
Temporary Construction Area
Land Cover
Golf Course/Urban Park
Mixed Riparian Woodland and Forest
Ornamental Woodland
Riverine
Urban - Suburban
N
0
125
250
500
Feet
18Jun2024
SI
Z:\Projects\2004818_CoyoteCr_FloodCntrl_Protection_Prj\CoyoteCreek_CCFPP_LandCover_mapbook_20240618.mxd

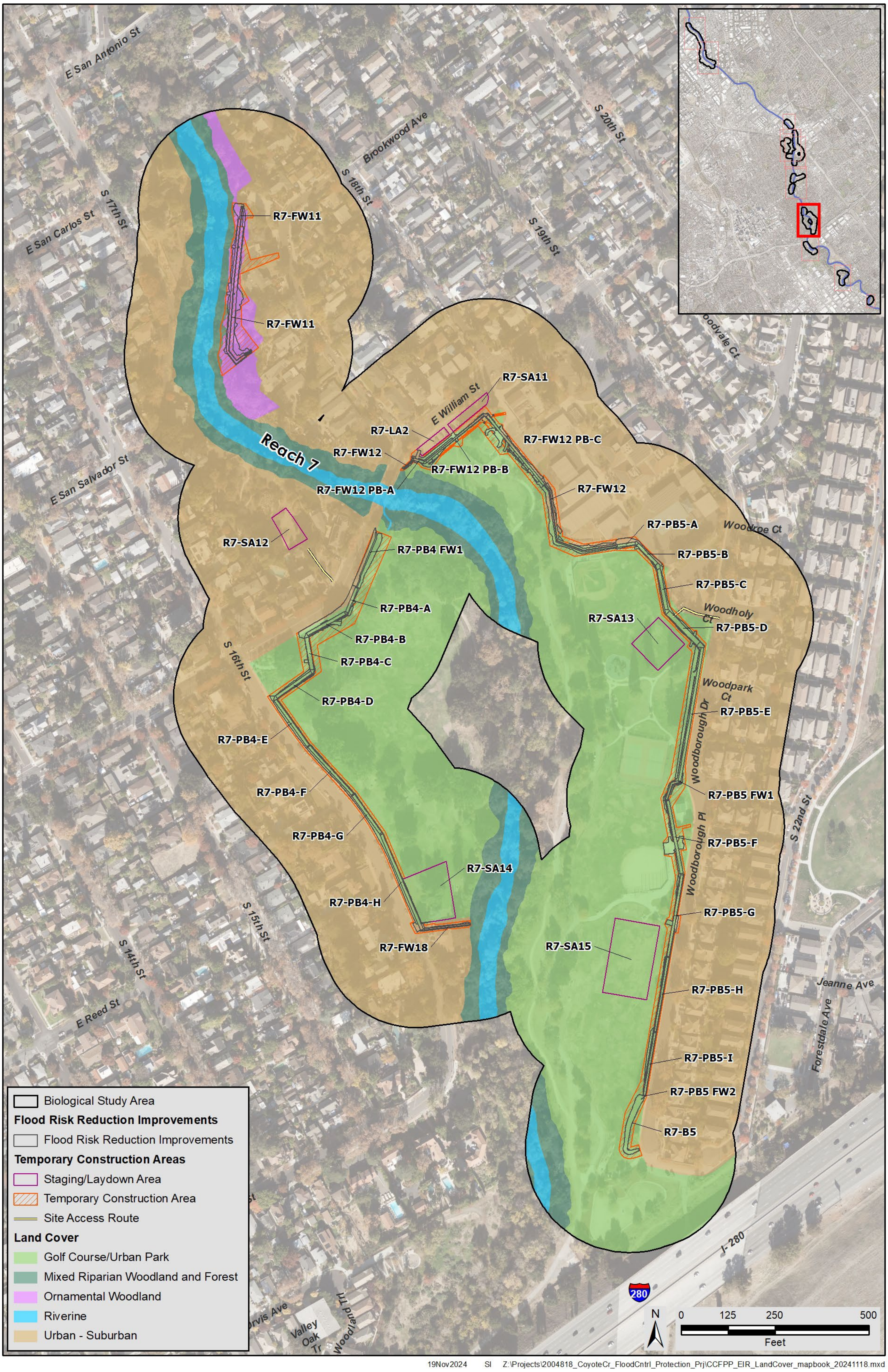

Figure 3.4.7. Reach 7 Land Cover Types in the Biological Study Area

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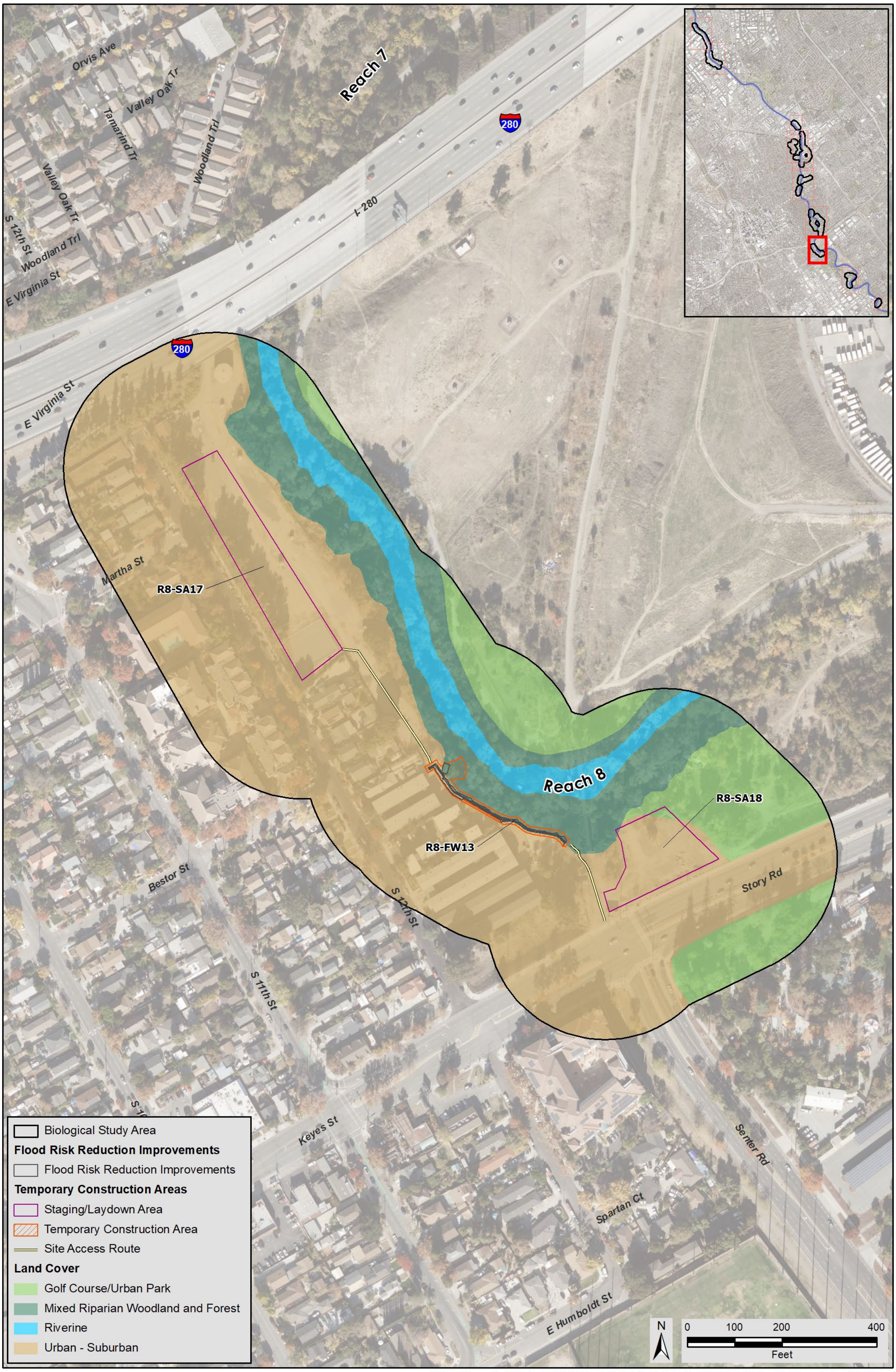

Figure 3.4.8. Reach 8 (Downstream) Land Cover Types in the Biological Study Area

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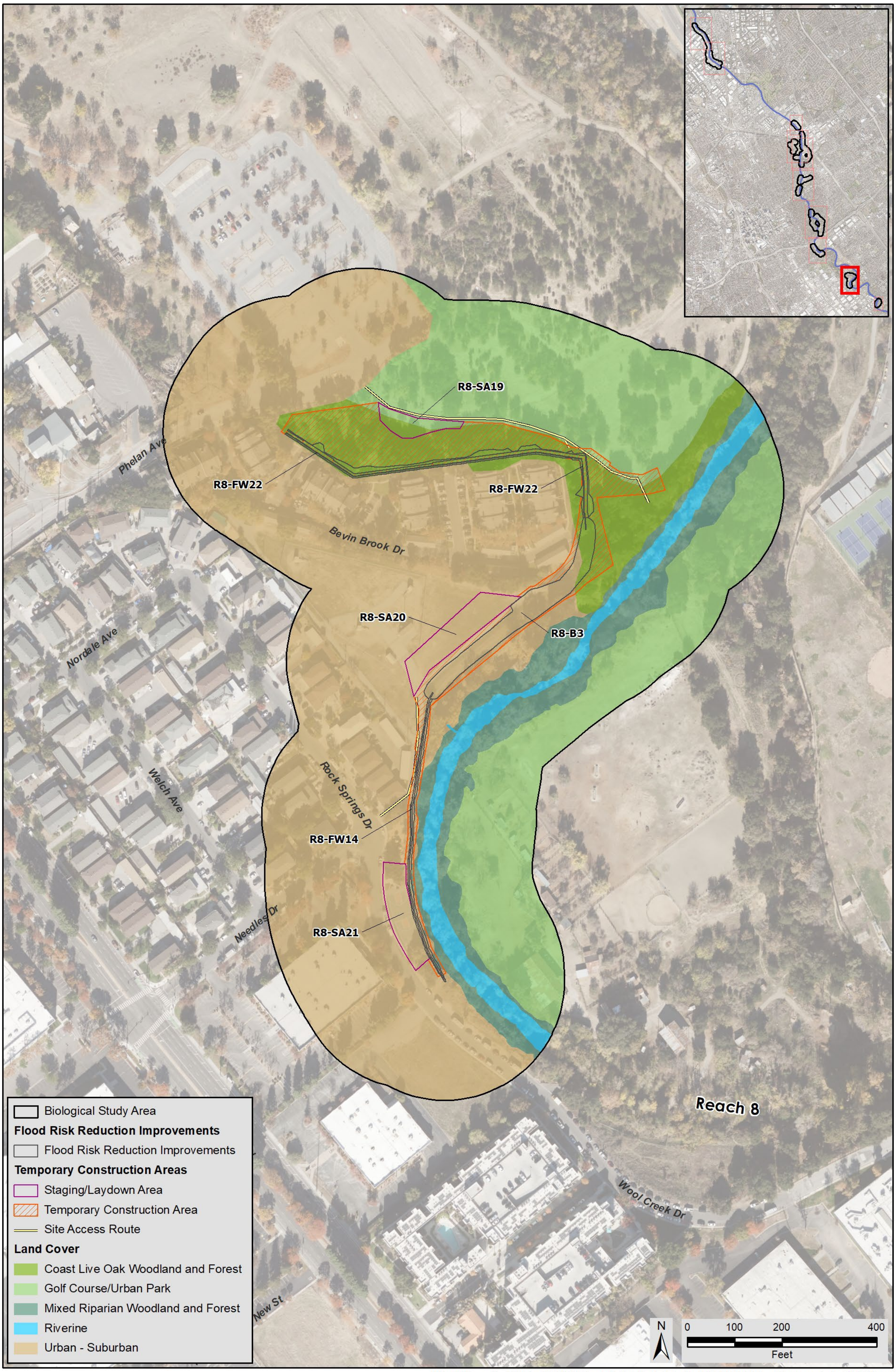
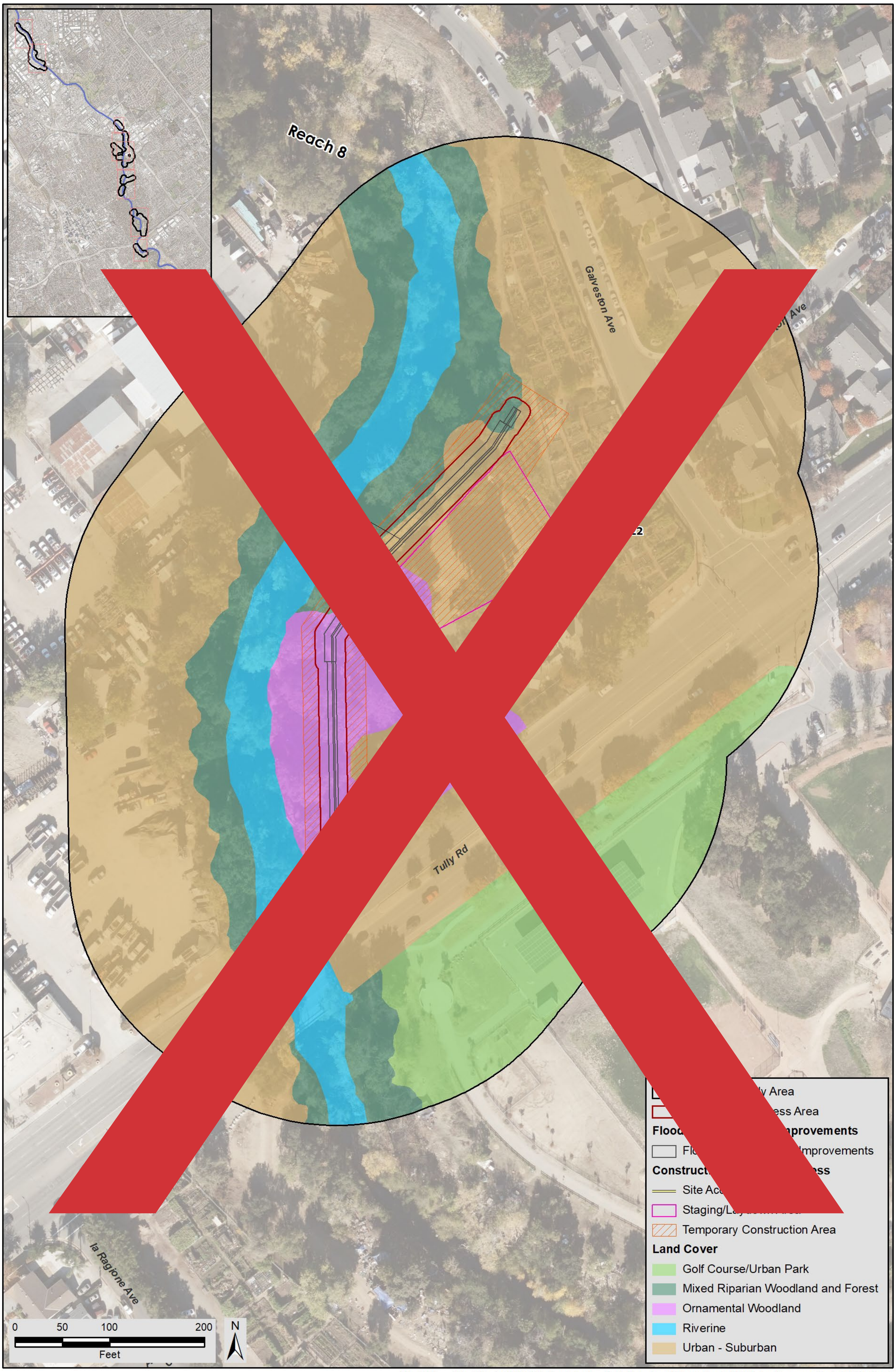


Figure 3.4.9. Reach 8 (Middle) Land Cover Types in the Biological Study Area



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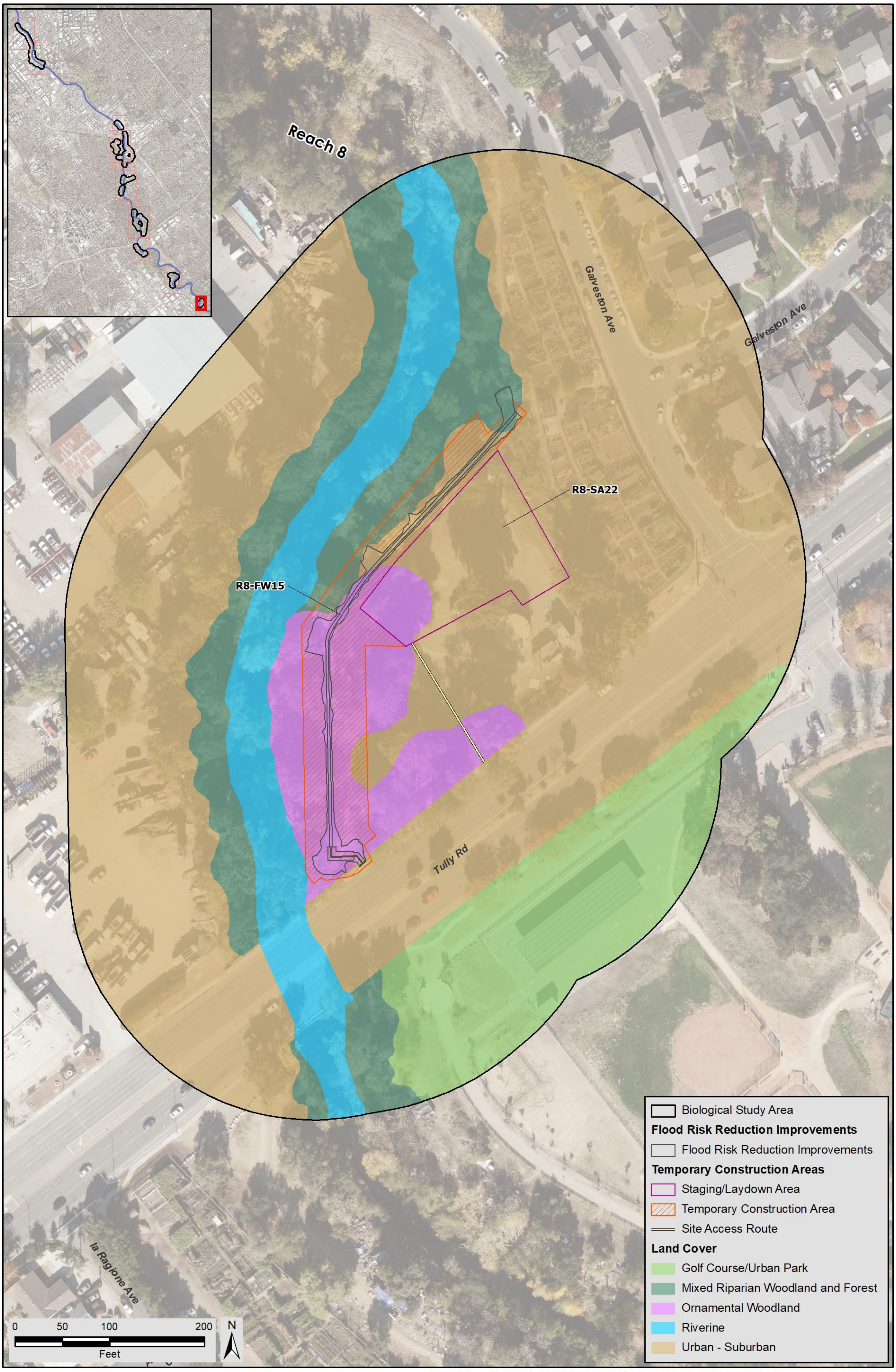

Figure 3.4.10. Reach 8 (Upstream) Land Cover Types in the Biological Study Area

Coast Live Oak Woodland and Forest

Coast live oak woodland and forest is located adjacent to riparian corridors and in flat undeveloped uplands adjacent to urban areas and parks in Reach 8. The tree canopy is dominated by coast live oak (*Quercus agrifolia*) with other associates including Fremont's cottonwood (*Populus fremontii*), Northern California black walnut (*Juglans hindsii*), and red willow (*Salix laevigata*). Less frequently encountered tree species include box elder (*Acer negundo*), valley oak (*Q. lobata*), and interior live oak (*Q. wislizeni*). Scattered shrub species include California coffeeberry (*Frangula californica*), blue elderberry (*Sambucus mexicana*), and nonnative glossy privet (*Ligustrum lucidum*). Woody vines include nonnative English ivy (*Hedera helix*) with occasional patches of Himalayan blackberry (*Rubus armeniacus*). Annual grassland species such as wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft brome (*B. hordeaceus*), and annual hairgrass~~ annual hairgrass~~(*Deschampsia danthnioides*) occur in the herbaceous understory.

Mixed Riparian Woodland and Forest

Mixed riparian forest and woodland occurs along the banks of Coyote Creek and Lower Silver Creek in all reaches of the BSA. The tree canopy is generally closed and multi-storied. Co-dominant tree species include red willow, black walnut, coast live oak, and Fremont's cottonwood. Other less frequently associated trees include white alder (*Alnus rhombifolia*), bigleaf maple (*Acer macropyllum*), California sycamore (*Platanus racemosa*), weeping willow (*S. babylonica*), interior live oak, valley oak, and California bay laurel (*Umbellularia californica*). California buckeye (*Aesculus californica*), box elder, and Oregon ash (*Fraxinus latifolia*) occur infrequently along bank slopes. The shrub layer is dense to intermittent. Where present, this layer primarily consists of toyon (*Heteromeles arbutifolia*), hollyleaf cherry (*Prunus ilicifolia*), California rose (*Rosa californica*), poison oak (*Toxicodendron diverslobum*), and nonnative species such as tree-of-heaven (*Ailanthus altissima*), giant reed (*Arundo donax*), tree tobacco (*Nicotiana glauca*), and Himalayan blackberry. The herbaceous layer consists primarily of California mugwort (*Artemisia douglasiana*), nonnative periwinkle (*Vinca major*), and annual grasses. Fringing forested floodplain wetlands are present along Reach 4 of Coyote Creek. These areas are not mapped as their own cover type but are discussed in more detail below under "Aquatic Resources."

Ornamental Woodland

Ornamental woodland, consisting of planted eucalyptus (*Eucalyptus* ssp.) groves, incense cedar (*Calocedrus decurrens*), several species of pine (*Pinus* spp.), Peruvian pepper tree (*Schinus molle*), and English elm (*Ulmus minor*), occurs in isolated patches across all reaches of the BSA. This woodland is characterized by trees that were planted as landscaping adjacent to urban-suburban areas.

Seasonal Wetland

A single seasonal wetland occurs within the BSA but outside the flood risk reduction improvements and temporary construction areas~~in the staging area adjacent to and outside of the riparian corridor of Coyote Creek~~ in Reach 4. This wetland is highly disturbed and in an area that has been used for spoils and other material storage. The wetland is in a topographically low area at the base of a gravel pile. A review of aerial imagery shows that this depression has ponded regularly over the last 10 years. The seasonal wetland is dominated by a combination of semi-hydrophytic species such as Italian ryegrass (*Festuca perennis)*, hyssop loosestrife (*Lythrum hyssopfolia*), curly dock (*Rumex crispus*), and tall flatsedge (*Cyperus eragrostis*). Some encroachment of upland species such as horseweed (*Erigeron canadensis*) and milk thistle (*Silybum marinum*) was observed. Surrounding upland vegetation includes non-native annual grasses. Given the highly disturbed nature of this feature, it does not provide suitable habitat for special-status species that would typically be associated with seasonal wetland habitats.

Riverine

Coyote Creek and Lower Silver Creek are characterized as riverine land cover. Riverine extends between the ordinary high-water mark of the two creek banks and in many places has over-hanging riparian vegetation. For mapping purposes, riverine land cover was prioritized over adjacent land cover types, meaning all areas below the ordinary high-water mark were mapped as riverine. Some portions of the riverine channels are unvegetated and can be characterized as open water. Other areas support emergent or floating vegetation such as floating water primrose (*Ludwigia peploides*), water cress (*Nasturtium officinale*), duckweed (*Lemna minor*), and smartweed (*Persicaria amphibia*). Some riparian trees are rooted below the ordinary high-water mark and are incorporated into this cover type. Riverine runs through the entire BSA and occurs across all reaches.

Grain, Row-crop, Hay and Pasture, Disked/Short-term Fallowed

One patch of agricultural area characterized as VHP cover type grain, row-crop, hay and pasture, disked/short-term fallowed is present at the northern end of the BSA, in Reach 4. This area is associated with a small farm along Montague Expressway. The portion of the property overlapping the BSA appears to be used for row crops. The edges of the agricultural field are characterized by annual grassland bordered by patchy stands of Northern California black walnut.

Golf Courses/Urban Parks

Golf courses/urban parks occur between Coyote Creek and the urban–suburban surroundings in Reaches 6, 7, and 8. Vegetation consists of turf grasses or lawn and ornamental trees such as incense cedar, glossy privet, maidenhair tree (*Gingko biloba*), magnolia (*Magnolia virginiana*), and coast redwood (*Sequoia sempervirens*). Native trees occasionally present in the urban parks include oaks (*Q.* ssp.) and California sycamore. Although the VHP cover type is golf courses/urban parks, all areas mapped as such in the BSA are better described only as urban parks. Other areas mapped as this land cover type include undeveloped lots and disturbed roadsides, as well as the banks of Coyote Creek that do not support riparian vegetation. These areas are subject to frequent disturbance and maintenance and are characterized by dense nonnative herbaceous cover.

Urban-Suburban

Urban–suburban cover in the BSA includes developed areas such as residential and commercial structures, paved and unpaved roads, bridges, and other buildings. These areas are largely devoid of vegetation, except for sparsely distributed, primarily nonnative plants. Residential areas within this land cover type can support a variety of planted nonnative and native trees including eucalyptus, Mexican fan palm (*Washingtonia robusta*), Peruvian pepper tree, and pine. Urban–suburban land cover occurs in all project reaches and is the primary upland land cover in the BSA.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration under state and federal regulations.

Aquatic Resources

Aquatic resources in the BSA include Coyote Creek and Lower Silver Creek up to their ordinary high-water marks. Both creeks are perennial channels and mapped as riverine land cover in Figures 3.4.1 through 3.4.10. A couple of unnamed ephemeral tributaries to Coyote Creek are also present and shown as riverine on the land cover figures.

Three wetlands were mapped as part of the aquatic resources' delineation effort, including two forested wetlands and one seasonal wetland. The forested wetlands fringe the Coyote Creek perennial channel and are part of the contiguous riparian corridor. They occur along a low terrace adjacent to Coyote Creek in Reach 4. The seasonal wetland is in a disturbed ~~staging~~ area outside the Coyote Creek top of bank. At the time of the delineation, all wetlands had ponded water and were dominated by hydrophytic vegetation. Soils in the seasonal wetland had hydric soil indicators. Soils in the forested wetlands were not sampled but were presumed to be hydric based on the presence of other strong wetland indicators and the topographic position just above the ordinary high-water mark of the creek.

Table 3.4.2 summarizes the aquatic resources, as mapped in the Aquatic Resources Delineation Report (Appendix D.1), by feature class[2]. The perennial channels (Coyote Creek and Lower Silver Creek) and adjacent forested wetlands are likely considered waters of the U.S. and waters of the state due to their relatively permanent flow and/or continuous connection to downstream traditional navigable waters (lower Coyote Creek and San Francisco Bay). All other features in the aquatic resources' delineation survey area, including the ephemeral channels and seasonal wetland, likely do not meet the definition of waters of the U.S. because they either lack relatively permanent flow or are isolated features with no direct connection to traditional navigable waters. These features would likely only be considered waters of the state. The aquatic resources delineation is subject to verification by the USACE. All parties should treat this information as preliminary for permitting purposes until USACE provides written verification of the extent of its jurisdiction.

Table 3.4.2. Aquatic Resources in the Delineation Survey Area

Feature Class	Area (acres)	Length (linear feet)	Potential Waters of the U.S.[1]
Ephemeral Channel	0.01	98	No
Forested Wetland	2.36	-	Yes
Perennial Channel	26.95	20,660	Yes
Seasonal Wetland	0.12	-	No

[2] The BSA and the aquatic resources delineation survey area differ slightly, because the BSA includes locations where isolated project components such as flap gates would be installed. The delineation survey area includes all potentially jurisdictional features that would be affected by project implementation.

Feature Class	Area (acres)	Length (linear feet)	Potential Waters of the U.S.[1]
Total	29.45[2]	20,758	-

[1]This is a preliminary jurisdiction conclusion. Determination of aquatic resources meeting the definition of waters of the U.S. for permitting purposes is not final until verified by USACE.
[2]Total is 0.01 acre greater than sum of the individual classes due to decimal rounding.

Sensitive Natural Communities

CDFW identifies and ranks natural communities of special concern that are of limited distribution statewide or within a county or region. Specifically, communities assigned a S1 (critically impaired) through S3 (vulnerable) ranking are considered sensitive. Although communities in the BSA were not mapped to the association level matching the characterizations in the Sensitive Natural Communities list (CDFW 2023a), all vegetation communities growing on the banks of Coyote Creek and Lower Silver Creek are considered riparian habitat, and potentially regulated by CDFW, and thus a sensitive community. None of the other land cover types mapped in the BSA are considered sensitive communities according to the S1 through S3 ranking.

Critical Habitat and Essential Fish Habitat

The Coyote Creek reaches within the BSA are designated critical habitat for the Central California Coast steelhead (*Oncorhynchus mykiss*) distinct population segment (DPS) and EFH for coho salmon (*O. kisutch*) and Chinook salmon (*O. tshawytscha*). Although Coyote Creek downstream of Anderson Dam is designated as EFH for coho salmon, this species does not occur in the Coyote Creek watershed (CDFW 2015). In addition, Chinook salmon was not known to occur in the creek historically (Snyder 1905) and was not observed in Santa Clara County prior to the 1980s. Genetic analysis indicates Chinook salmon in Santa Clara County streams originated as strays from the Feather River Hatchery (Garcia-Rossi and Hedgecock 2002).

Movement Corridors

Movement corridors refer to established routes commonly used by resident and/or migratory fish or wildlife species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented locations of undisturbed areas. Maintaining the continuity of established corridors is important to sustain access to breeding and foraging areas, preserve species distributions, and retain genetic diversity. The CDFW BIOS 6 Viewer (2024b) California Essential Habitat Connectivity [ds620], Bay Area Critical Linkages [ds852], and Terrestrial Connectivity – Areas of Conservation Emphasis [ds2734] layers were reviewed for identified connectivity areas and linkages in the region. The BSA is outside the California Essential Habitat Connectivity and Bay Area Critical Linkages and is mapped as Limited Connectivity Opportunity. Connectivity areas and linkages occur in the rural hills east and west of the BSA and Coyote Valley to the south. The BSA provides habitat for resident terrestrial species and breeding and stop-over habitat for some long-distance migratory terrestrial species but is not an important corridor for movement between key habitat areas. Coyote Creek, including the portion in the BSA, is an important migratory corridor for some special-status fish species discussed below.

Invasive Species and Pathogens

Invasive, nonnative plant and animal species can threaten the diversity and abundance of native species through predation, competition for resources, transmission of disease, parasitism, and habitat alteration. The effects of some invasive species can lead to clogged waterways and water delivery systems, weakened flood risk reduction structures, crop damage, and diminished sport fish populations.

Several invasive plant species (Cal-IPC 2024) are present in portions of the BSA. The more common and widespread of these species include yellow star-thistle (*Centaurea solsticialis*), bull thistle (*Cirsium vulgare*), milk thistle, oats, ripgut brome, Himalayan blackberry, tree-of-heaven, perennial pepperweed (*Lepidium latipes*), poison hemlock (*Conium maculatum*), fennel (*Foeniculum vulgare*), Bermuda grass (*Cynodon dactylon*), periwinkle, English ivy, medusa head (*Elymus caput-medusae*), and black mustard (*Brassica nigra*). These plants easily colonize disturbed areas or substrates that are not otherwise dominated by native plants.

Plant and animal pathogens, which can spread by human activities, can also adversely affect native species and communities. *Phytophthora* (also known as water molds) can cause disease such as root rot, stem cankers, and fruit and leaf blights. *Phytophthora* is transmitted through the movement of contaminated soil and water, and some species are known to be airborne. Once introduced into native habitats, *Phytophthora* persists in soil and infected host roots and is very difficult to impossible to eradicate. Spread of *Phytophthora* can result in long-term impairment of native vegetation and declines in abundance of sensitive plant species and communities. *Phytophthora* has been detected at Anderson Dam and Reservoir (Phytosphere Research 2018). Because *Phytophthora* can disperse in water and water runoff, downstream portions of Coyote Creek, including the BSA, may be contaminated. Guidelines and best management practices for reducing the spread of *Phytophthora* can be found through the California Oak Mortality Task Force.

Invasive animal species including American bullfrog (*Lithobates catesbeianus*) and red-eared slider (*Trachemys scripta elegans*) have been observed in Coyote Creek. Bullfrogs are known to occur upstream of the BSA at Hellyer County Park on Coyote Creek, approximately 3 miles upstream of Reach 8. The large size, diverse diet, and aggressive behavior of American bullfrogs threatens native species, including sensitive amphibians such as the federally threatened California red-legged frog (*Rana draytonii*), which is known to occur in Upper Penitencia Creek. Similarly, nonnative turtles, particularly the red-eared slider, compete with the native northwestern pond turtle (*Actinemys marmorata*). Red-eared sliders are known to occur in Coyote Creek, immediately adjacent to Reaches 4 and 8. Nonnative mammals, such as feral house cats, occur in the BSA and are predators of native birds and small mammals.

New Zealand mudsnail (NZMS, *Potamopyrgus antipodarum*) has been documented in mainstem Coyote Creek downstream of Anderson Dam (Valley Water, unpublished data). Surveys for the species have also been conducted in Upper Penitencia Creek, where the species has not been detected. NZMS are highly prolific, can reproduce asexually, and it is not possible to e~~ir~~radicate the species once it has been introduced to a system. The species may have impacts on native benthic macroinvertebrate communities and fish resources, as well as clog water infrastructure. NZMS easily attach to a variety of substrates such as boots, waders, watercrafts, vegetation, etc., and can easily be transported unnoticed due to their small size.

Therefore, care must be taken to reduce further spread of the species in Coyote Creek watershed and other waterways.

Other pathogens can adversely affect animals. Strains of Ranavirus can cause impaired health or mortality of amphibians, turtles, and fish. These viruses are transmitted through direct contact between infected and uninfected animals, contaminated water, or predation. Chytridiomycosis is an infectious disease in amphibians caused by the chytrid fungi (*Batrachochytrium dendrobatidis*). Chytrid is a water-borne fungus that can infect the skin of amphibians and impair their health, eventually causing death. Chytridiomycosis outbreaks have been linked to substantial declines in some amphibian populations. Chytrid fungus may be spread by the dispersal of zoospores by other animals or humans (including equipment and machinery) among waterbodies. Valley Water collected eDNA water samples upstream of the BSA at eight locations on the mainstem of Coyote Creek downstream of Anderson Dam, as well as from Upper Penitencia Creek and Arroyo Aguague. Chytrid fungus was not detected at any site on Coyote Creek, Upper Penitencia Creek, or Arroyo Aguague during the 2023 sampling effort. Ranavirus was detected at two locations on Coyote Creek during the May sampling event but was not detected during the September sampling effort. Ranavirus was detected at one location on Upper Penitencia Creek during the May sampling event and at one location in September (Valley Water 2024a). Pathogens occurring in the upper watershed have potential to occur downstream in the BSA.

Special-Status Plant and Animal Species

CEQA requires an assessment of the effects of a project on species that are “threatened, rare, or endangered,” typically referred to as “special-status species.” Some special-status species are also regulated by federal and state laws and ordinances that are described below in Section 3.4.2, “Regulatory Setting.” For the purposes of this analysis, special-status species considered in this section include taxa (distinct taxonomic categories or groups) that fall into any of the following categories:

- officially listed, candidates for listing, or proposed for listing by the U.S. or the State of California as endangered, threatened, or rare;
- identified by CDFW as species of special concern;
- considered by CDFW to be "rare, threatened, or endangered in California;"
- designated as Fully Protected in the California Fish and Game Code (CFGC);
- afforded protection under local or regional planning documents, such as the VHP; or
- meet the definition of rare or endangered under CEQA (14 CCR Section 15380), including California Rare Plant Rank 1B, 2B, 3 and 4.

The results of CDFW, CNPS, and NMFS database queries identified special-status species that occur in the region. **Table 3.4.3** provides information, including habitat requirements, for special-status species identified in the database results and other biological information sources determined to have potential to occur in the BSA. In cases where a determination was made that there is no potential for a given species to occur in the BSA, that species is not analyzed further in this document. Please see Appendix D.2 for a full list of special-status species that were evaluated, including those with no potential to occur in the BSA.

Table 3.4.3. Special-Status Species with the Potential to Occur in the Biological Study Area

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Invertebrates						
Bombus crotchii	Crotch's bumble bee	–	–	CE	Open grasslands and scrub habitats. Nesting biology is poorly known (The Xerces Society 2018); known nests to date have been in abandoned rodent burrows, though only six nests have been found in total, all in 2023 (Shawn Lockwood, pers. comm. 2024).	Low; occurrences known from the project vicinity (CDFW 2024a, iNaturalist 2024[3]). Individuals could occur throughout the BSA and Santa Clara County observations have occurred March-August.
Danaus plexippus	monarch butterfly	–	PT~~C~~	–	Variety of habitats with suitable nectar plants. Requires milkweed for egg laying and larval feeding; overwinters in wind-protected groves of large trees along the coast (USFWS 2020).	Moderate; occurrences known from the project vicinity (Western Monarch and Milkweed Occurrence Database 2024) but no overwintering locations or suitable overwintering habitat occurs in the BSA~~or elsewhere in Santa Clara County~~. Monarch overwintering occurs at two locations in Santa Clara County, in the north portion of the county, north of Highway 237 (Xerces Society 2024). Individuals could occur throughout the BSA, typically from March through October.
Fish						
Entosphenus tridentatus	Pacific lamprey	–	–	SSC	Anadromous fish that migrates from riverine spawning habitats to marine waters. In Santa Clara County, upstream migration typically occurs between January and June, and downstream migration between December and May. Adults spawn in low gradient, gravel-bottomed streams. Ammocoetes (larvae) burrow into silty substrates where they filter-feed and grow in freshwater for up to 6 years before outmigrating.	Moderate; most recently detected moving both up- and downstream in Coyote Creek between Metcalf Road and Highway 101 in April 2023 (Valley Water 2024b). Spawning is not known or expected to occur in the BSA but lamprey could be present year-round, including adults during pre-spawning holding and upstream migration, larvae during rearing, and juveniles during outmigration.

[3] All iNaturalist occurrences were verified by a Valley Water biologist with extensive Crotch's bumble bee survey and identification experience.

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Hesperoleucus venustus subditus	southern coastal roach	–	–	SSC	Generally found in small, warm streams, including intermittent streams, but also occur in larger cooler streams; tolerant of a relatively wide range of temperatures and dissolved oxygen levels (Moyle et al. 2015, University of California 2024).	Moderate; low numbers have been detected in Coyote Creek downstream of Anderson Dam and upstream of the BSA (Valley Water 2021a, 2023b). Adults or juveniles could occur year-round in the BSA.
Lavinia exilicauda exilicauda	Sacramento hitch	–	–	SSC	Occurs in slow, warm, lowland, waters in lakes and streams; occurs in fresh- to brackish water up to 9 parts per thousand (University of California 2024).	High; regularly detected in Coyote Creek upstream of Ogier Ponds during Valley Water's annual monitoring efforts since 2019 (Valley Water 2024b). Monitoring efforts have been limited lower in the system; however, the species was known to occur in the system historically (Snyder 1905). Adults or juveniles could occur year-round in the BSA.
Oncorhynchus tshawytscha	Chinook salmon – Central Valley fall/ late fall-run ESU	–	FSC, EFH	SSC[4]	Anadromous fish that occurs in marine, estuary, and freshwater habitats. Spawning substrate includes large gravel and small cobble (Moyle et al. 2015). Upstream migration typically occurs from mid-October through January, and outmigration from February through June.	High; documented in Coyote Creek up to Metcalf Dam. Genetic analysis indicates Chinook salmon in Santa Clara County originated as strays from the Feather River hatchery (Garcia-Rossi and Hedgecock 2002). Spawning could occur in the BSA and individuals may be present mid-October through June, including adults during upstream migration and spawning or smolts during outmigration.

[4] The Central Valley fall/late fall-run evolutionarily significant unit is considered a state Species of Special Concern, but this designation refers to populations spawning in the Sacramento and San Joaquin rivers and their tributaries (CDFW 2024c).

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Oncorhynchus mykiss	steelhead – Central California Coast DPS	–	T, CH	SSC	Anadromous fish that requires perennial streams, estuaries, and marine systems where it is possible to migrate from riverine spawning habitats to marine foraging areas. Requires cool, well-oxygenated streams with suitable spawning gravel and habitat complexity (cover, deep pools, riffles, and runs). Upstream migration typically occurs from December through April, and outmigration from February through May. Juveniles may rear in freshwater year-round.	High; spawning and rearing are known to occur in Coyote Creek upstream of Metcalf Road and the BSA (Valley Water 2024b). Spawning is not known or expected to occur in the BSA but steelhead could be present year-round, including adults during upstream and downstream migration, smolts during outmigration, and rearing juveniles.
Amphibians						
Rana draytonii	California red-legged frog	X	T	SSC	Occurs primarily in ponds, but also in marshes, streams, and lagoons. Also occurs in various upland habitats with moist refuges (e.g., burrows, logs, rocks) (Thomson et al. 2016).	Low; BSA provides poor-quality habitat due to urban setting and likely potential presence of bullfrogs and non-native predatory fish. No documented occurrences from Coyote Creek channel downstream of Anderson Dam; occurrences along lower Coyote Creek are limited to off-channel tributaries, ponds (e.g., in Coyote Canal, stock ponds, mitigation site ponds), quarry pits, and Anderson Dam spillway plunge pool (CDFW 2024a); considered extirpated from urbanized lowland Santa Clara County, including the BSA, though Coyote Creek is mapped as breeding habitat in the VHP (ICF 2012).

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Reptiles						
Actinemys marmorata	northwestern pond turtle	X	PT	SSC	Various water bodies including permanent and ephemeral; requires at least moderately undisturbed upland habitat for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016). Females in the Bay Area were found to lay their eggs between late April and August, in sunny areas with grass approximately 1.5 feet high and covering approximately 85 percent of the ground (Jones 2013).	High; occurrences known from Coyote Creek near BSA (CDFW 2024a). Individuals could occur year-round throughout the BSA, but potentially suitable nesting habitat is likely limited to Reaches 5, 6, and 7.
Birds						
Aquila chrysaetos	golden eagle	–	–	FP	Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops (Polite et al. 1990). Primarily nests on cliffs in steep canyons, but also in large trees in open areas.	Absent as breeder; could occur occasionally in BSA at any time of year, but BSA does not provide suitable nesting habitat and foraging quality is poor.
Haliaeetus leucocephalus	bald eagle	–	–	E, FP	Occurs primarily along seacoasts, rivers, and large lakes and streams. Nests in mature or old-growth trees, snags (dead trees), cliffs, rock promontories, occasionally on electrical and communication towers, typically within sight of water body where the eagles usually forage (USFWS 2007).	Absent as breeder; nearest nesting location is downstream of the BSA at Curtner Elementary School in Milpitas (CDFW 2024a), BSA does not provide suitable nesting habitat and foraging habitat quality is poor, but individuals could occur occasionally at any time of year.
Buteo swainsoni	Swainson's hawk	–	–	T	Breeds in grasslands, riparian areas, savannahs, and agricultural or ranch lands with suitable nest trees. Requires adjacent foraging habitat such as grasslands and suitable agricultural crops (CDFW 2024a).	Absent as breeder; may occur in the BSA as a transient during migration and the breeding season (March-October). Rarely nests in Santa Clara County; nearest known nest sites are more than 12 miles to the south in Coyote Valley, where active nests have occurred at four locations in 2013-2021 (CDFW 2024a).

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Circus hudsonius	northern harrier	–	–	SSC	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, rivers and streams, grasslands, pastures, and croplands (Shuford and Gardali 2008).	Absent as breeder; BSA provides poor-quality foraging habitat and is not suitable for nesting, but individuals could occur occasionally as transients at any time of year.
Elanus leucurus	white-tailed kite	–	–	FP	Nests in woodland, savannah, and other open areas with scattered trees near foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands (CWHR Program Staff 2005).	Moderate; BSA provides potentially suitable nest sites and foraging habitat. Could occur throughout the BSA at any time of year.
Athene cunicularia	burrowing owl	X	–	~~SS~~C	Preferred habitat, such as open grassland, is typified by short, sparse vegetation with few shrubs, gentle topography and well-drained soils. Also occurs in agricultural areas, ruderal fields, vacant lots, etc. if vegetation structure is suitable, there are useable mammal burrows or artificial burrows, and foraging habitat is present in proximity (CDFG 2012).	Absent as breeder; known to occur at the San Jose Airport along the Guadalupe River to the west, near the Bay shore downstream of the BSA, and at Meadow Fair Park approximately 1.5 miles east of the BSA (CDFW 2024a). Habitat quality in the BSA is poor and possible use of the BSA is likely limited to itinerant burrowing owls moving through or briefly stopping. Potentially suitable habitat occurs primarily in Reaches 5, 6, and 7.
Lanius ludovicianus	loggerhead shrike	–	–	SSC	Occurs in shrublands and open woodlands with grass cover and bare ground. Requires large shrubs or trees for nesting and thorny vegetation or barbed wire fences for impaling prey (Shuford and Gardali 2008).	Absent as breeder; BSA provides limited and poor-quality habitat and there are no known records of nesting in the BSA in recent years. Non-breeding individuals could occur occasionally in the BSA at any time of year.

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Agelaius tricolor	tricolored blackbird	X	–	T	Nests in dense cattails and tules, riparian scrub, grain crops, and other low dense vegetation; forages in grasslands and agricultural fields.	Absent as breeder; riparian habitat along Coyote Creek within the BSA is generally late-successional riparian habitat consisting of mature closed-canopy trees; cattails and tules limited to relatively small and intermittent patches. BSA provides only intermittent fragments of marginal foraging habitat amid extensively urbanized landscape. Habitat quality in the BSA is poor and possible use of the BSA is likely limited to itinerant individuals moving through or briefly foraging.
Progne subis	purple martin	–	–	SSC	Can occur in a variety of habitats but has very specific nesting requirements, including concentrations of nesting cavities in low-elevation woodland or coniferous forest, relatively open-air space above accessible nest sites, and relatively abundant aerial insect prey (Shuford and Gardali 2008).	Absent as breeder; the species has always been rare in Santa Clara County, and records show a contraction in the range, now limited to a segment of Summit Ridge in the Santa Cruz Mountains (Bousman 2007). There is low potential for migrants to occur in the BSA.
Riparia riparia	bank swallow	–	–	T	A colonial nester in riparian and lakeside bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks and sand and gravel pits (CWHR Program Staff 1999).	Absent as breeder; BSA does not provide suitable nesting habitat. Bank swallows were documented nesting in the Pacheco Creek-Pajaro River basin in the 1930s but there are no other breeding records in Santa Claras County. Could occur as a rare spring/fall migrant (Bousman 2007).
Icteria virens	yellow-breasted chat	–	–	SSC	Occurs primarily in early-successional riparian habitat with a well-developed shrub layer and an open canopy along borders of streams, creeks, sloughs, and rivers (Shuford and Gardali 2008).	Absent as breeder; BSA provides poor-quality habitat and is unsuitable for nesting, but migrant and dispersing individuals could occur rarely. Only known breeding documentation along Coyote Creek was approximately 2 miles upstream of the BSA and documented nesting habitat in Santa Clara County supports dense willow and bramble understory (Bousman 2007).

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Setophaga petechia	yellow warbler	–	–	SSC	Riparian vegetation in close proximity to water along streams and in wet meadows (Shuford and Gardali 2008).	Moderate; fairly common spring/summer migrant in BSA but nesting habitat quality is marginal and, if present, few pairs are likely to nest in the BSA. On the Santa Clara Valley floor, riparian corridors in which the species has been documented nesting typically support multi-story vegetation with a substantial understory of vines, blackberries, and forbs; creek sections where understory vegetation is reduced because of grazing or urban development, or where the larger trees had been removed, are generally not used for nesting (Bousman 2007).
Mammals						
Antrozous pallidus	pallid bat		–	SSC	Occurs in a wide variety of habitats but most common in open, dry habitats with rocky areas for roosting. Roosts primarily in caves, crevices, and mines, and occasionally in hollow trees and buildings. Very sensitive to disturbance. May roost alone or in groups up to 100s of individuals. Prefer to forage over open grasslands or oak habitats. Typically travel 1-3 miles to water sources and foraging sites at night (Harris et al. 1990).	Low; a long-term colony has persisted near Anderson Reservoir, approximately 15 miles southeast of the upstream extent of the BSA. Given the urban nature of the project site and extent of nighttime lighting, this species is unlikely to occur in the BSA.
Corynorhinus townsendii	Townsend's big-eared bat		–	SSC	Prefers mesic habitats but known to occur in all non-alpine habitats of California. Roosting occurs in caves, tunnels, mines, buildings, or other structures (CWHR Program Staff 2000). Distribution is associated with cavernous roosting features (WBWG 2017). May forage in edge habitats along streams or wooded habitats at night. Very sensitive to disturbance.	Low; cavernous roosting features are not present in the BSA. The species is unlikely to occur in the BSA due to the urban nature of the BSA and extent of nighttime lighting.

Scientific Name	Common Name	VHP	Federal Status	State Status	General Habitat Characteristics	Potential to Occur in Biological Study Area
Lasiurus frantzii	western red bat		–	SSC	Solitary rooster, primarily in ~~tree~~ foliage of trees with appropriate structure. Individuals have low roost site fidelity and are not known to breed in Santa Clara County. Forages in and among vegetation, including oak woodlands and riparian corridors; may forage in urban areas (e.g., streetlights). Associated with mature trees (cottonwood/sycamore riparian, eucalyptus, orchards, or other non-native trees).	Moderate: absent as a breeder; the species was detected visually/acoustically on Coyote Creek at East Santa Clara Street (south end of Reach 6) using the creek channel as a movement corridor (H.T. Harvey & Associates 2019). Low numbers could occur transitioning through the habitat at night or roosting short-term during the day in suitable habitat.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat		–	SSC	Scrub and wooded areas with evergreen/live oaks and other thick-leaved trees and shrubs providing adequate food resources. Nests are typically on the ground in dense brush, often poison oak or blackberry, or against logs or tree trunks, and sometimes elevated in trees (Kelly 1990).	Moderate; known occurrences along urban creeks in the region are limited to western Santa Clara Valley (CDFW 2024a); BSA supports potentially suitable habitat, but suitability may be somewhat limited by high levels of disturbance from unhoused encampments and limited areas of forest and woodland with adequate understory cover.

Notes:
VHP
(X) Covered Species

Federal Status
(C) Candidate for listing as threatened or endangered
(CH) Designated Critical Habitat
(EFH) Essential Fish Habitat
(FSC) Federal Species of Concern
(PT) Proposed Threatened
(T) Threatened

State Status
(C) Candidate for listing as threatened or endangered
(CE) Candidate for listing as endangered
(E) Endangered
(T) Threatened
(SSC) Species of Special Concern
(FP) Fully Protected

None of the special-status plants that were evaluated were determined to have potential to occur in the BSA, and thus protocol-level surveys for special status plants were not conducted. These species are not analyzed in detail in this EIR because the BSA is outside their documented elevation range or distribution, does not support suitable cover types, and/or does not support specific habitat conditions (e.g., serpentine soils) required by the species. In addition, the entire BSA is highly disturbed and surrounded by dense urban development, resulting in decreased potential for establishment and persistence of special-status plant populations.

Potential for many of the special-status wildlife species to occur in the BSA was ruled out for similar reasons. For example, species were eliminated from further consideration because they have been extirpated from (no longer occur in) the urban area or larger region, they do not occur upstream of the zone of tidal influence, and/or the BSA does not provide suitable cover types or microhabitat conditions.

Monarch Butterfly

Monarch butterfly (*Danaus plexippus*) is proposed~~a candidate~~ for federal listing as threatened~~ or endangered~~. This species is dependent on milkweed (*Asclepias* spp.) host plants for development of eggs, larvae, and pupae. Woodland and forest communities in the BSA support some plant species, such as willows, likely to provide nectar habitat for monarch butterfly. Milkweed was not observed in the BSA during the field surveys, but a focused milkweed survey was not conducted. Monarchs appear to occur primarily as migrants in the project region and the relatively few breeding locations near the BSA appear to be associated with residential gardens (Western Monarch and Milkweed Occurrence Database 2024). Only two larvae were documented during focused surveys of nearly 500 milkweed clusters conducted for the Anderson Dam Seismic Retrofit Project in May and June 2022 along Coyote Creek between Anderson Dam and the Coyote Creek Golf Course area (Valley Water 2021b). This golf course is more than 10 miles upstream of the BSA and general habitat conditions in the surveyed upstream reaches are better than conditions in the BSA. If milkweed occurs in the BSA, it is likely sparse, based on the habitat conditions along Coyote Creek (i.e., narrow, well-shaded corridor). Monarch overwintering occurs in groves of trees at two locations in Santa Clara County, approximately 5 miles and 9 miles west-northwest of the BSA (Xerces Society 2024). The nearer site is on both sides of Moffett Park Drive at Baylands Park in Sunnyvale and the other site is in the Google Complex on Charleston Road in Mountain View. Therefore, potential for monarch butterfly to occur in the BSA is likely primarily limited to migrants.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a candidate for state listing as endangered. These bees require foraging, nesting, and overwintering habitats. Primary land cover types that provide the three habitat requirements are grassland, chaparral, and scrub (i.e., open habitats); oak woodland and forest likely provide suitable habitat as well. Secondarily, riparian areas, coastal and valley freshwater marshes, seasonal wetlands, and agricultural areas can provide foraging habitat, and drier sites within these habitats can provide nesting or overwintering habitat. There are a few recent records from urban areas, suggesting that urban parks or suburban/residential areas may provide habitat as well. This species lives in colonies that are annual, with all individuals except new queens (gynes) dying each fall. The nesting biology is poorly known, though known nests have been in abandoned rodent burrows. Nests have mostly been found in grasslands or chaparral to date, but only six nests have been found total, all in 2023 (Shawn Lockwood, pers. comm. 2024).

Bumble bee queens overwinter in cavities below the ground or in loose soil and leaf litter and occasionally in other refugia such as wood piles or rock walls and emerge in early spring. February-March is the Queen Flight Season, when queens forage on pollen and nectar and establish a nest. The first workers typically emerge from the nest in late March and are active through summer, with peak in abundance in July. The highest detection period for Crotch's bumble bee is April through August, known as the Colony Active Period, when workers are most abundant (with males being most abundant July through August). Crotch's bumble bee has been recorded in Santa Clara County from early March to late August. However, the species can be active later into fall as well, depending on the annual environmental conditions. From September to October (the Gyne Flight Season), gynes leave their natal colony to search for an overwintering site and restart the annual cycle when they emerge the following spring (CDFW 2023b).

Until recently, there was little survey effort for Crotch's bumble bee in the project region. However, since the species was petitioned for state listing as endangered in 2018, interest in seeking and reporting bumble bees has increased. Since 2019, Crotch's bumble bee has been recorded at nearly 20 Santa Clara County locations; in particular, Valley Water and H. T. Harvey & Associates biologists detected more than 80 individuals at 12 locations in 1 year, between July 2022 and August 2023 (The Xerces Society et al. 2024, CDFW 2024a, iNaturalist 2024[5]). These Santa Clara County occurrences have been recorded from early March to late August. Most occurrences are from grassland and scrub habitats in the low foothills of the Diablo Range and Santa Cruz Mountains on either side of the Santa Clara Valley and between Coyote Reservoir in the south and southern San Jose in the north. However, locations where Crotch's bumble bee has been detected are limited by survey effort and accessibility and, given the broad distribution of recent records and lack of survey effort over most of the County, the species is likely distributed more widely than these records indicate.

Habitat quality for Crotch's bumble bee in the BSA is considered low due to the lack of grasslands, chaparral, and scrub and prevalence of urban development. However, an individual Crotch's bumble bee was recorded in 2021 at a residence on North 19th Street approximately 0.20 mile from the BSA (iNaturalist 2024[4]), the species is known from the region, and focused surveys have not been conducted in the BSA. Therefore, Crotch's bumble bee could occur in the BSA.

Chinook Salmon

Central Valley fall-run and late fall-run Chinook salmon are considered by NMFS to be the same evolutionarily significant unit (ESU) and a species of concern. CDFW classifies this ESU as a California Species of Special Concern but indicates it refers to populations that spawn in the Sacramento and San Joaquin rivers and their tributaries (CDFW 2024c). Chinook salmon are anadromous fish that occur in marine, estuary, and freshwater habitats and migrate from marine waters to spawn in freshwater. Spawning substrate includes large gravel and small cobble (Moyle et al. 2015). Upstream migration typically occurs from mid-October through January and smolt outmigration from February through June. Chinook salmon were not documented in Santa

[5] All iNaturalist occurrences were verified by a Valley Water biologist with extensive Crotch's bumble bee survey and identification experience.

Clara County prior to the mid-1980s, but since that time have been documented in Coyote Creek up to Metcalf Dam. The onset of their presence in the county coincides with initiation of San Francisco Bay hatchery release points, and genetic analysis indicates Chinook salmon in Santa Clara County are of Feather River hatchery origin (Garcia-Rossi and Hedgecock 2002). The extent of Chinook salmon spawning in Coyote Creek is unknown but could include areas in the BSA with suitable substrate and flow conditions. Adults and smolts are likely to migrate through the BSA and juveniles could rear in the BSA seasonally, but no life stages are present July to mid-October.

Steelhead

The Central California Coast steelhead DPS occurs in the BSA and is a federally threatened population and a California Species of Special Concern. This anadromous fish requires perennial streams, estuaries, and marine systems where it is possible to migrate from riverine spawning habitats to marine foraging areas. Spawning occurs in cool, well-oxygenated streams with suitable spawning gravel and habitat complexity in the form of cover, deep pools, riffles, and runs. Spawning is known to occur in Coyote Creek (Valley Water 2024b) upstream of Metcalf Road and the BSA; however, the BSA is unlikely to provide suitable spawning habitat. Adults migrate upstream through the BSA to suitable spawning habitats and smolts and adults may migrate downstream through the BSA. Adult migration to upstream spawning areas typically occurs from December through April, and smolt outmigration typically occurs from February through May. Juveniles may rear in freshwater year-round and are known to rear in Coyote Creek upstream of the BSA (Valley Water 2024), but juveniles could rear seasonally in the BSA.

Pacific Lamprey

Pacific lamprey (*Entosphenus tridentatus*) is a California Species of Special Concern that migrates from riverine spawning habitats to marine waters. In Santa Clara County, upstream migration typically occurs between January and June, and downstream migration typically occurs between December and May. Adults spawn in low gradient, gravel-bottomed streams; the BSA is unlikely to provide suitable spawning habitat. Ammocoetes (larvae) drift downstream where they burrow into silty substrates to filter-feed and grow in freshwater for up to 6 years before migrating to marine waters. Pacific lamprey is known to occur in Coyote Creek and was most recently detected moving both upstream and downstream in April 2023 near Metcalf Road, approximately 8 miles upstream of the BSA (Valley Water 2024b). Spawning is not known or expected to occur in the BSA, but adults migrate upstream through the BSA and juveniles migrate downstream through the BSA. Pre-spawning adults and rearing ammocoetes could also occur in the BSA.

Southern Coastal Roach

Southern coastal roach (*Hesperoleucus venustus subditus*) is a resident California Species of Special Concern typically found in small, warm streams, including intermittent streams. This species is tolerant of a relatively wide range of temperatures and dissolved oxygen levels (Moyle et al. 2015, University of California 2024). Low numbers of roach have been detected in Coyote Creek downstream of Anderson Dam and upstream of the BSA (Valley Water 2021a, 2023) and it is reasonable to assume individuals could occur in the BSA at any time of year.

Sacramento Hitch

Sacramento hitch (*Lavinia exilicauda exilicauda*) is a resident California Species of Special Concern that occurs in warm, lowland freshwater to brackish water lakes and slow-flowing streams (University of California 2024). Since 2019, this species has been regularly detected in Coyote Creek upstream of Ogier Ponds during Valley Water's annual monitoring efforts (Valley Water 2024b). Monitoring efforts lower in the system have been limited; however, the species was known to occur in the system historically (Snyder 1905) and could occur in the BSA. Sacramento hitch can spawn in a variety of habitats and water temperatures; spawning and incubation typically occurs between February and July. Adults or juveniles could occur throughout the BSA year-round in areas with suitable water quality parameters.

California Red-legged Frog

California red-legged frog is federally listed as threatened, a California Species of Special Concern, and a VHP covered species. This species is primarily associated with perennial ponds or pools and slow-moving perennial or seasonal streams. Breeding adults are commonly found in deep (more than 2 feet) still or slow-moving water with dense, shrubby riparian or emergent vegetation, Generally, streams with high flows and cold temperatures in spring are unsuitable for eggs and tadpoles (ICF 2012). During summer, California red-legged frogs often disperse from their breeding habitat to forage and seek summer habitat if water is not available (USFWS 2002).

Habitat modeling conducted for the VHP (ICF 2012) identifies breeding habitat for California red-legged frog in Coyote Creek, including the BSA. However, the VHP considered all ponds and streams in the VHP study area potential breeding habitat, regardless of habitat conditions and surrounding land use. The nearest dispersal and refugia habitat mapped in the VHP is more than 2 miles south of the BSA. The project reaches of Coyote Creek are likely occupied by non-native American bullfrogs and predatory fish, generally lack emergent aquatic vegetation, and provide poor aquatic habitat for California red-legged frog that is likely unsuitable for breeding. Occurrences of California red-legged frog documented in the CNDDB (CDFW 2024a) closest to the BSA are at the edge of the urban area. Based on the current habitat conditions and lack of documented occurrences of the species, California red-legged frog is unlikely to occur in the BSA.

Northwestern Pond Turtle

Northwestern pond turtle is proposed for federal listing as threatened, a California Species of Special Concern, and a VHP covered species. These turtles require aquatic and terrestrial habitats that are connected to each other. As habitat generalists, northwestern pond turtles occur in a broad range of permanent and ephemeral aquatic water bodies, such as flowing rivers and streams, lakes, ponds, reservoirs, settling ponds, marshes, vernal pools, and irrigation ditches. Preferred aquatic conditions are those with abundant basking sites, underwater shelter sites (undercut banks, submerged vegetation, mud, rocks, and logs), and standing or slow-moving water. Pond turtle nesting habitat is typically characterized by sparse, short grasses and forbs and little or no canopy cover. Females excavate nests between late April and August in compact, dry soils located approximately 10-1,300 feet from water. Overwintering habitat generally occurs in upland locations above ordinary high-water lines and/or beyond the riparian zone (USFWS 2023c).

Habitat modeling conducted for the VHP (ICF 2012) identifies primary habitat for northwestern pond turtle in Coyote Creek, including the BSA. Trees overshadow much of the creek within the BSA, limiting potential pond turtle basking sites with~~site~~ exposure to sunshine, and bank erosion, trash, and unhoused camps greatly limit suitability of creekside upland habitat. Several northwestern pond turtle occurrences are known from near the BSA (CDFW 2024a); these are primarily unprocessed occurrences reported via CNDDB online field survey forms from between Reach 4 and Reach 5, with one occurrence reported from Coyote Creek adjacent to the staging area along Reach 5. Land cover types other than urban-suburban in the BSA provide potential habitat for northwestern pond turtle. However, the highest potential for pond turtles to occur in areas in which project activities would occur is likely limited to ~~very small portions of Reaches 4 and 7, where work would occur in the channel, and~~ undeveloped urban and park areas adjacent to some of the creek reaches that may provide suitable nesting habitat, primarily staging areas in Reaches 5, 6, and 7.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a candidate for state listing as threatened or endangered ~~California Species of Special Concern~~ and a VHP covered species that occurs in grasslands, deserts, sagebrush scrub, agricultural areas (including pastures and untilled margins of cropland), earthen levees and berms, coastal uplands, urban vacant lots, and margins of airports, golf courses, and roads. This species requires open, well-drained terrain; short, sparse vegetation generally lacking trees; and mammal burrows or artificial burrow facsimiles (Shuford and Gardali 2008). Burrowing owls are known to occur at the San José Airport along the Guadalupe River west of the BSA, near the Bay shore downstream of the BSA, and at Meadow Fair Park approximately 1.5 miles east of the BSA (CDFW 2024a).

The burrowing owl breeding season is February through August, but breeding burrowing owls are not expected to occur in the BSA. Urban park habitats in the BSA provide low-quality habitat for western burrowing owl because the generally narrow fragments of habitat with low vegetation typically abut trees and shrubs along Coyote Creek. Burrowing owls are unlikely to use these areas because trees provide vantage points for predatory raptors and shrubs provide cover for mammalian predators. Possible burrowing owl use of the BSA is likely limited to itinerant individuals moving through or briefly stopping.

Other Special-status Birds

Eleven ~~Ten~~ special-status bird species in addition to burrowing owl are known or were determined to have potential to occur in the BSA: golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), tricolored blackbird (*Agelaius tricolor*), purple martin (*Progne subis*), bank swallow (*Riparia riparia*), yellow-breasted chat (*Icteria virens*), and yellow warbler (*Setophaga petechia*). Bald eagle is state-listed as endangered, and Swainson's hawk, tricolored blackbird, and bank swallow are state-listed as threatened; golden eagle, bald eagle, and white-tailed kite are Fully Protected under the CFGC; and the remaining species are California Species of Special Concern.

White-tailed kite and yellow warbler are the only special-status birds with potential to nest in the BSA; the BSA is outside the breeding range or does not provide suitable nesting habitat for the remaining species, which would only occur in the BSA as migrant, dispersing, or otherwise non-breeding individuals. Yellow warbler was confirmed breeding at one location along Coyote Creek between the Reach 4 and 5 work areas, and white-tailed kite was confirmed breeding at one location in Reach 8, both during the Santa Clara Breeding Bird Atlas (Bousman 2007) survey efforts. Based on the relatively limited amount of suitable nesting habitat for these species in the BSA, and few known breeding locations, if these species do nest in the BSA, the number of nesting pairs is expected to be low.

Special-status Bats

Three special-status bat species are known or were determined to have potential to occur in the BSA: pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Laziurus frantzii*). All of these are California Species of Special Concern. Few confirmed or potential occurrences of pallid bat and Townsend's big-eared bat have been documented in the BSA or surrounding urban area in recent decades. Both these species are highly sensitive to disturbance, and potential for occurrence is limited due to extensive urbanization in surrounding areas, including associated nighttime lighting. In Santa Clara County, known roost sites of Townsend's big-eared bat and pallid bat have primarily been documented in barns and other buildings in grassland, oak savannah, and agricultural environments. Further, cavernous roost features preferred by Townsend's big-eared bat are lacking in the BSA. Valley Water and H.T. Harvey biologists visually and acoustically identified a western red bat in the BSA, traveling along Coyote Creek at East Santa Clara Street, the upstream end of Reach 6 (H.T. Harvey 2019); this sighting is currently shown as an unprocessed occurrence in the BIOS 6 Viewer (CDFW 2024b). Western red bat is a solitary roosting species with low roost site fidelity and is only anticipated to occur in low numbers in the BSA, migrating over the creek channel at night, or present as a short-term daytime rooster in trees with suitable structure. This species is not known to breed in Santa Clara County.

San Francisco Dusky-footed Woodrat

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is a California Species of Special Concern. No woodrat nests were observed in the BSA during the field surveys; however, focused searching for nests was not conducted and visibility and access were limited in portions of the riparian corridor. CNDDB occurrences along urban creeks in the region are primarily limited to western Santa Clara Valley, and Coyote Creek occurrences are more than 5 miles south of the BSA, at the edge of the urban area and adjacent to large expanses of grassland and oak woodland habitats (CDFW 2024a). However, because dusky-footed woodrat is known to occur along urban creeks in the region and suitable habitat is present in the BSA, the species could occur in portions of the BSA that support forest and woodland habitats. Habitat suitability in the BSA may be somewhat limited by high levels of disturbance from unhoused encampments and limited areas of forest/woodland habitat with adequate understory cover.

3.4.2 Regulatory Setting

This section summarizes the federal, state, regional, and local laws, regulations, policies, and plans relevant to evaluation of the proposed project's impacts on biological resources.

Federal Laws, Regulations, and Policies

Clean Water Act

The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 United States Code [USC] Section 1251, et seq.), and at this time the CWA became the act's commonly used name. The intent of the CWA is the regulation of pollutant discharges into waters of the U.S., as well as the establishment of surface water quality standards.

Section 404

USACE has primary federal responsibility for administering regulations that concern waters of the U.S., including wetlands and drainages. USACE acts under two statutory authorities: the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters of the U.S.," and the CWA Section 404, which governs specified activities in waters of the U.S. USACE requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters and/or discharging dredged or fill material into waters of the U.S., including wetlands.

On May 25, 2023, the U.S. Supreme Court rendered a decision on the *Sackett vs. U.S. Environmental Protection Agency* case regarding waters of the U.S. In that decision, the U.S. Supreme Court determined that CWA jurisdiction extends only to wetlands that have a continuous surface connection with a relatively permanent body of water, which is connected to traditional interstate navigable waters, such that it is difficult to determine where the water ends, and the wetland begins. The U.S. Environmental Protection Agency (EPA) and USACE subsequently released the *Revised Definition of "Waters of the United States;" Conforming* Final rule (88 Federal Register 61964) on September 8, 2023, to reflect these changes. In addition, the amended rule confirmed that linear features with no relatively permanent flow would likely be excluded from the definition of Waters of the U.S.

Section 401

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the U.S., unless a state or tribe where the discharge originates either grants or waives CWA Section 401 certification. A Section 401 water quality certification is required for all Section 404 permitted activities. CWA Section 401 provides states with the ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit or license to be issued and remain consistent with any conditions set forth in the CWA Section 401 certification. Decisions made by states are based on a project's compliance with EPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board (SWRCB), including its nine Regional Water Quality Control Boards (RWQCBs), is the primary regulatory authority for CWA Section 401 requirements (additional details in the following subsections).

Endangered Species Act

The federal ESA provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 USC §§ 1531–1544). The ESA defines take to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Section 222 of the CFR (50 CFR Section 222) further defined harm to include an act that actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering.

ESA Section 7(a)(1) requires federal agencies to use their authority to further the conservation of listed species. ESA Section 7(a)(2) requires consultation with USFWS and/or NMFS if a federal agency undertakes, funds, permits, or authorizes (termed the federal nexus) any action that may impact endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a Section 10(a)(1)(b) incidental take permit can be obtained from USFWS and/or NMFS if a project-specific Habitat Conservation Plan (HCP) is prepared.

For VHP covered terrestrial species and covered activities, incidental take approval is provided by the VHP.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act requires federal agencies to consult with USFWS if the agency plans to conduct, license, or permit an activity involving the impoundment, diversion, deepening, control, or modification of a stream or body of water. This act also requires consultation with the head of the state agency that administers wildlife resources in the affected state. The purpose of this process is to promote conservation of wildlife resources by preventing loss of and damage to such resources and to provide for the development and improvement of wildlife resources in connection with the agency action.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC Section 668-668d) prohibits import, export, take, sell, purchase, or of 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 disturbing. The Department of the Interior has interpreted the BGEPA to authorize the taking of eagles for various purposes, provided the taking is compatible with the preservation of the bald eagle or the golden eagle.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation Management Act, as amended by the Sustainable Fisheries Act (Public Law 104-297), was enacted primarily to establish a management system for conserving and managing commercial fisheries within 200 nautical miles of the coastal boundary of the U.S. The act also requires that all federal agencies consult with NMFS on activities or proposed activities authorized, funded, or undertaken by that agency that may adversely affect EFH of commercially managed marine and anadromous fish species. EFH includes specifically identified waters and substrate necessary for fish spawning, breeding, feeding, or growing to maturity. EFH also includes all habitats necessary to allow the production of commercially valuable aquatic species, to support a long-term sustainable fishery, and to contribute to a healthy ecosystem (16 U.S.C. Section 1802(10)). The geographic extent of freshwater EFH includes all water bodies currently or historically occupied by PFMC-managed salmon in Washington, Oregon, Idaho, and California. Coyote Creek within the BSA is designated EFH for Chinook salmon and Coho salmon.

Migratory Bird Treaty Act of 1918

Migratory birds are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21).

Executive Order 13112 – Invasive Species

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. USACE would issue project approvals and, therefore, would be responsible for ensuring that the project complies with Executive Order 13112 and does not contribute to the spread of invasive species.

Executive Order 11990 – Protection of Wetlands

Executive Order 11990 (42 Federal Register 26961) requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless: 1) no practicable alternative exists and 2) all practical measures have been taken to minimize harm to wetlands.

State Laws, Regulations, and Policies

Porter-Cologne Water Quality Control Act

The Porter -Cologne Water Quality Control Act (Porter-Cologne Act) of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the SWRCB at the state level and at the local level by one of nine RWQCBs. The RWQCBs carry out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Section 401 certification is required by the RWQCBs for activities that can affect water quality. The San Francisco Bay RWQCB (SFBRWQCB) enforces the Porter-Cologne Act regulations within Santa Clara County and the Bay region.

Under California law, waters of the state include “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050(e)). Therefore, water quality laws apply to both surface water and groundwater. The state regulates discharges of dredged or fill material into waters of the state.

Waters of the state are defined under the Porter-Cologne Act and are further described for wetlands in the SWRCB’s Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2020).

SWRCB uses the following definitions, similar those described in the CWA to define wetlands and "other waters:"

- Wetlands: Wetlands are considered waters of the state when features meet the three parameters/criteria used by the USACE (i.e., prevalence of hydrophytic vegetation, hydric soils, and hydrology). The state definition differs for wetlands in cases where features are naturally devoid of vegetation (i.e., features with less than 5 percent cover) where the hydric substrate indicators (i.e., hydric soils and hydrology) can act as a substitute for a dominance of hydrophytic vegetation. Under the state definition, isolated wetlands are also considered waters of the state (i.e., non-adjacent features are jurisdictional).
- Other Waters: Similar to the waters of the U.S. definition, all "other water" features must have an Ordinary High-Water Mark; however, unlike waters of the U.S., the state definition extends the jurisdiction to include ephemeral and isolated other water features as waters of the state.

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of endangered and threatened species (CFGC Section 2070). CDFW also maintains a list of candidate species, which are formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of species of special concern, which serve as a species watch lists.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species and candidates may be present and determine whether the proposed project would result in take of such species. Take of listed and candidate species incidental to otherwise lawful management activities may be authorized under CFGC Section 206.591. Authorization from CDFW is in the form of a Section 2081 incidental take permit. For VHP covered terrestrial species and covered activities, incidental take approval is provided by the VHP.

California Fish and Game Code

Rivers, Lakes, and Streams

Under CFGC Section 1602, it is unlawful for any entity to substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or to deposit or dispose of debris, waste, or other material where it may pass into any river, stream, or lake, without first notifying CDFW of such activity and obtaining an agreement authorizing the activity. In practice, CDFW may exert authority over any feature that holds water at least periodically or intermittently, and associated habitat (e.g., riparian vegetation), that supports fish, other aquatic life, or terrestrial wildlife.

California Native Plant Protection Act

The California Native Plant Protection Act (CFGC §§ 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). An exception in the act allows landowners, under specified circumstances, to take listed plant species if the owners first notify and give CDFW at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (CFGC § 1913).

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the CFGC provide protection from take for 37 fish and wildlife species referred to as fully protected species. Except for take related to scientific research, incidental take authorized as part of an approved Natural Communities Conservation Plan (NCCP), or take authorized under Senate Bill 147 of 2023, take of fully protected species is prohibited. Under Senate Bill 147 of 2023, incidental take permits for fully protected species can be authorized for certain specific categories of projects, including maintenance, repair, or improvement projects for critical regional and local water agency infrastructure.

Protection of Birds

Sections 3503 and 3503.5 of the CFGC provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the CFGC. Specifically, these sections of the CFGC make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

Protection of Non-game Mammals

Bats and other nongame mammals are protected by CFGC 4150, which states that all nongame mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the Fish and Game Commission. Activities resulting in mortality of nongame mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered take by CDFW.

Regional/Local Laws, Regulations, and Policies

Santa Clara Valley Habitat Plan

The VHP protects, enhances, and restores natural resources in specific areas of Santa Clara County and contributes to the recovery of threatened and endangered species. Instead of evaluating and permitting projects and activities individually, which could result in disjointed conservation efforts, the plan enables evaluation of natural resource impacts and mitigation requirements comprehensively. It provides an efficient process for protecting natural resources and at-risk species and their habitats by creating large habitat reserves that are ecologically valuable and easier to manage than smaller reserves. At full plan implementation, the reserve system would protect over 45,000 acres for the benefit of covered species, natural communities, biological diversity, and ecosystem function.

USFWS has issued six local agencies and the Habitat Agency (collectively referred to as Co-Permittees) a 50-year permit that authorizes incidental take of covered listed species under the federal ESA, and CDFW has issued a 50-year permit that authorizes take of all covered listed species under the Natural Communities Conservation Planning Act. The public agency co-permittees are authorized to permit their projects through the VHP but are required to record their covered project compliance. In addition, the three cities and the County can extend take authorization to private project applicants under their jurisdiction.

The VHP is currently undergoing a major amendment, expected to be finalized by 2026~~2025~~. The amendment is anticipated to make changes related to co-permittees, covered activities, covered species, the plan area boundary, and the conservation strategy. Species currently anticipated to be added for coverage include: Hall's bush mallow (*Malacothamnus hallii*), woodland woolythreads (*Monolopia gracilens*), Crotch's bumble bee, western monarch butterfly, large marble butterfly[6] (*Euchloe ausonides ausonides*), Swainson's hawk, loggerhead shrike, American badger (*Taxidea taxus*), and central coast mountain lion (*Puma concolor*).

Although the VHP does not provide take authorization for fish species, it identifies conservation objectives for aquatic and riparian resources, and several VHP Conditions~~conditions~~ would avoid and minimize impacts on aquatic habitat and species. On January 28, 2021, the USACE (San Francisco District) issued a Regional General Permit (RGP 18)[7] to the Habitat Agency and its Co-Permittees for impacts to waters of the U.S. resulting from projects covered by the VHP. This permit provides a framework for integrating and streamlining waters permitting under CWA Section 404, with endangered species permitting already in place under the VHP. In issuing RGP 18, USACE determined that the VHP establishes a watershed plan sufficient and appropriate under federal compensatory mitigation regulations. USACE further determined that mitigation consisting of payment of VHP fees to SCVHA for implementation of aquatic habitat restoration, creation, enhancement, and preservation fully complies with the federal CWA Mitigation Rule (33 CFR Part 332) ("Federal Mitigation Rule"). Further, on June 30, 2023, the USACE Interagency Review Team approved an In-Lieu Fee Enabling Instrument, which may provide compensatory mitigation credits for CWA impacts through payment of VHP fees received for covered projects. The credits may satisfy mitigation requirements for both USACE and the RWQCB and may be issued on a case-by-case basis subject to approval by the Interagency Review Team and the Habitat Agency.

Similarly, the Porter-Cologne Act authorizes the provision of permittee-responsible mitigation to offset impacts to aquatic habitat types within the VHP Plan Area by payment of VHP fees. Pursuant to Section V of SWRCB Procedures for Discharge of Dredge or Fill Material to Waters of the State (April 2, 2019), the VHP, which was approved by USFWS and CDFW before December 31, 2020, and includes biological goals for wetland and aquatic resources, "shall be used by the permitting authority as a watershed plan for such aquatic resources." Therefore, the VHP sets a framework for compensatory mitigation determinations in the issuance of 401 certifications for impacts on aquatic resources. The SWRCB Procedures also incorporate the Federal Mitigation Rule almost verbatim into Appendix 1, Subpart J of the Regulations. Therefore, payment of VHP fees to restore, create, enhance, and preserve aquatic habitat types as described in the VHP may constitute acceptable compensatory mitigation for impacts to aquatic resources under Subpart J, Section 230.93(b)(4) of those regulations.

Valley Water is a permittee under the VHP and must comply with VHP requirements for VHP covered activities. The proposed project is a covered activity identified in the VHP, which includes construction of flood protection projects and maintenance of roads associated with such projects as one of many covered activities required to implement Avoidance and Minimization Measures (AMMs) and pay associated mitigation fees to meet permittee legal obligations under the VHP.

[6] Large marble butterfly is not addressed elsewhere in this section because it does not meet the definition of special-status species presented in Section 3.4.1, "Environmental Setting."

[7] USACE first issued RGP 18 November 18, 2015, then renewed and reissued the regional permit on January 28, 2021.

Envision San José 2040 General Plan

The City of San José General Plan (2011) contains the following goals and policies relevant to biological resources and the project:

Goal ER-1: Preserve, protect, and restore the ecological integrity and scenic characteristics of grasslands, oak woodlands, chaparral, and coastal scrub in hillside areas.

- **Policy ER-1.4:** Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodland, chaparral, and coastal scrub during development and grading for projects within the City.
- **Policy ER-1.5:** Preserve and protect oak woodlands, and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.
- **Policy ER-1.7:** Prohibit planting of invasive nonnative plant species in oak woodlands, grasslands, chaparral, and coastal scrub habitats, and in hillside areas.

Goal ER-2: Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.

- **Policy ER-2.1:** Ensure that new public and private development adjacent to riparian corridors in San José are consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/ Natural Communities Conservation Plan (HCP/NCCP).
- **Policy ER-2.2:** Ensure that a 100-foot setback from riparian habitat is the standard to be achieved in all but a limited number of instances, only where no significant environmental impacts would occur.
- **Policy ER-2.4:** When disturbances to riparian corridors cannot be avoided, implement appropriate measures to restore, and/or mitigate damage and allow for fish passage during construction.
- **Policy ER-2.5:** Restore riparian habitat through native plant restoration and removal of nonnative/ invasive plants along riparian corridors and adjacent areas.

Goal ER-4: Preserve, manage, and restore habitat suitable for special-status species, including threatened and endangered species.

- **Policy ER-4.1:** Preserve and restore, to the greatest extent feasible, habitat areas that support special-status species. Avoid development in such habitats unless no feasible alternatives exist, and mitigation is provided of equivalent value.
- **Policy ER-4.3:** Prohibit planting of invasive nonnative plant species in natural habitats that support special-status species.

Goal ER-5: Protect migratory birds from injury or mortality.

ER-5.1: Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.

City of San José Tree Regulations

The City of San José Municipal Code includes several regulations regarding tree planting, pruning, and removal. Section 13.32 requires a permit for removal of all trees on private property over 38 inches in circumference, measured at 54 inches above natural grade slope. To obtain a tree removal permit, a tree removal application must be submitted, indicating the number, type, size and location of each tree and the reason for removal of each tree. The applicant also may be required to submit a Certified Arborist's Report. The San Jose tree ordinance does not apply to trees on public property.

Also, a "Permit Adjustment Application" is required to remove non-ordinance-sized trees on multifamily, commercial, or industrial properties (City of San José 2024). Under the City's zoning code (see Section 20.100.500), a Permit Adjustment Application authorizes the director to approve minor changes to certain elements of previously issued permits; these include minor modifications of landscape details.

In addition, Section 13.44.220 of the Municipal Code prohibits removing trees from City parks "unless authorized in writing by the director of the department of recreation, parks and community services."

Further, the City has authority under Chapter 13.28 of the Municipal Code to regulate removal of street trees, which are defined as trees located on public right of way owned or controlled by the City. Section 13.28.310 requires a permit from the City before pruning or removing any street tree or do any construction work or activity that may affect the critical root zone of a street tree.

Valley Water may be exempt from compliance with the City tree ordinance and other City tree regulations under Hall v. Taft (1956) 47 Cal. 2d 177,189 (which holds that water districts are exempt from municipal police power regulation). Nevertheless, Valley Water seeks to comply with applicable provisions of local tree regulations when feasible.

3.4.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, "Project Description", Valley Water would incorporate measures from their BMP Handbook (2014), Stream Maintenance Program (SMP) Manual, and VHP Conditions and AMMs, to avoid and minimize adverse effects on the environment that may result from the project. All relevant Valley Water BMPs and VHP Conditions and AMMs for the project are included in Appendix B.

Valley Water Handbook BMPs relevant to biological resources include the following:

- **AQ-1: Use Dust Control Measures** – Implement Bay Area Air Quality Management District Dust Control Measures, Dust control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.
- ~~**BI-2: Minimize Impacts to Steelhead** – Minimize potential impacts to salmonids by avoiding routine use of vehicles and equipment in salmonid streams between January 1 - June 15.~~
- ~~**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 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 Valley Water's Pest Control Advisor and Biologist.
- **BI-5: Avoid Impacts to Nesting Migratory Birds** – Nesting birds and their nests will be protected 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 nests with hatchlings will be left undisturbed.
- **BI-6: Avoid Impacts to Nesting Migratory Birds from Pending Construction** – Nesting exclusion devices 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-7: Minimize Impacts to Vegetation from Survey Work** – Survey cross-sections will be moved, within acceptable tolerances, to avoid cutting dense riparian vegetation and minimize cutting of woody vegetation, taking advantage of natural breaks in foliage. If the cross-section cannot be moved within the established acceptable tolerances to avoid impacts to dense riparian or woody vegetation, the survey section will be abandoned.
- **BI-8: Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes** – When native species are prescribed for installation, a qualified biologist or vegetation specialist will evaluate if the plant species currently grows wild in Santa Clara County and, if so, determine if any need to be local natives. The most ecologically appropriate and effective seeding option will be determined.
- ~~**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 in diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2 inches in diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or trained construction personnel before the pipe is buried, capped, used, or moved. 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.

- **BI-11: Minimize Predator-Attraction** – Remove trash daily from the worksite to avoid attracting potential predators to the site.
- **HM-1: Comply with All Pesticide Application Restrictions** – 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. All pesticide use will be consistent with approved product specifications.
- **HM-2: Minimize Use of Pesticides** – In all cases where some form of pest control is deemed necessary, evaluate alternative pest control methods and pesticides.
- **HM-5: Comply with Restrictions on Herbicide Use in Upland Areas** – Application of pre-emergence (residual) herbicides to upland areas will not be made within 72-hours of predicted significant rainfall (i.e., local rainfall greater than 0.5 inch in a 24-hour period with greater than a 50 percent probability of precipitation according to the National Weather Service.
- **HM-6: Comply with Restrictions on Herbicide Use in Aquatic Areas** – Only herbicides and surfactants registered for aquatic use will be applied within the banks of channels within 20 feet of any water present. Aquatic herbicide use will be limited to June 15 through October 31 with an extension through December 31 or until local rainfall greater than 0.5 inch is forecasted within a 24-hour period from planned application events according to the National Weather Service or when steelhead begin migrating upstream and spawning, as determined by a qualified biologist (typically in November/December). If rain is forecast, 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). For stationary equipment that must be fueled or serviced onsite, containment will be provided to prevent any spill from entering any waterway or damaging riparian vegetation. 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 floodplain.
- **HM-9: Ensure Proper Hazardous Materials Management** – Measures will be implemented to ensure that hazardous materials are properly stored and handled, and the quality of water resources is protected by all reasonable means.
- **HM-10: Utilize Spill Prevention Measures** – Accidental release of chemicals, fuels, lubricants, and non-storm drainage water will be prevented by training field personnel, providing spill cleanup equipment and materials onsite and spills will be cleaned up immediately and disposed of according to applicable regulatory requirements.
- **HM-12: Incorporate Fire Prevention Measures** – All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. During the high fire danger period (April 1 through December 1), work crews will have appropriate fire suppression equipment available at the work site. An extinguisher shall be available when

welding or other repair activities that can generate sparks occur. Smoking shall be prohibited except in designated staging areas and at least 20 feet from any combustible chemicals or vegetation.

- **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.~~
- **WQ-3: Limit Impact of Pump and Generator Operation and Maintenance** – Pumps and generators will be maintained and operated in a manner that minimizes impacts to water quality and aquatic species. Pump intakes will be screened to prevent uptake of fish and other vertebrate; those in steelhead creeks will meet NMFS criteria.
- **WQ-4: Limit Impacts from Staging and Stockpiling Materials** – To protect onsite vegetation and water quality, staging areas should occur in disturbed areas that are already compacted and only support ruderal vegetation. Equipment and materials will be stored in the existing service roads, paved roads, or other pre-determined staging areas. Materials will not be stockpiled or stored where they could spill into water bodies or storm drains. No runoff from staging areas may be allowed to enter waterways adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). During the wet season, no stockpiled soils will remain exposed, unless protected by erosion control.
- **WQ-5: Stabilize Construction Entrances and Exits** – Measures will be implemented to minimize soil from being tracked onto streets near work sites. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by gravel on unsurfaced access roads. Access will be provided as close to the work area as possible, using existing ramps where available and minimizing disturbance to water body bed and banks and the surrounding land uses.
- **WQ-6: Limit Impact of Concrete Near Waterways** – Fresh, uncured concrete will be isolated until it no longer poses a threat to water quality. An area outside of the channel and floodplain will be designated to clean out concrete transit vehicles.
- **WQ-8: Minimize Hardscape in Bank Protection Design** – Bank repair techniques appropriate to a given site based on hydraulic and other site conditions will be selected. Biotechnical repair methods include construction with living materials, willow wattling, erosion control blankets, brush matting, and root wads and boulders in banks. Repair will be designed and installed to be self-sustaining and will use vegetation that adds structural integrity to the stream bank.
- **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. The seed mix should consist of California native grasses or annual, sterile hybrid seed mix.

- ~~**WQ-10: Prevent Scour Downstream of Sediment Removal** – After sediment removal, the channel will be graded so that the transition between the existing channel both upstream and downstream of the work area is smooth, and continuous between the maintained and non-maintained areas, and does not present a sudden vertical transition (wall of sediment) or other blockage that could erode once flows are restored to the channel.~~
- **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. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. 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 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. Turbidity levels will be measured and project-related increases in turbidity monitored and limited.
- **WQ-16: Prevent Stormwater Pollution** – 1. Soils exposed due to project activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric prior to significant rainfall. 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. All temporary construction-related erosion control methods shall be removed at the completion of the project.
- **WQ-17: Manage Sanitary and Septic Waste** – All temporary sanitary facilities will be located where overflow or spillage will not enter a watercourse directly or indirectly.

Valley Water SMP Manual BMPs relevant to biological resources include the following:

- <u>**ANI-1: Surface Barrier Applications to Prevent Burrowing** – Surface barrier applications installed as a method of animal conflict management will be installed in an area no longer than 300 feet and only above ordinary high water. Inboard and outboard areas will only have installations set in an alternating pattern, such that no inboard and outboard levee faces would have erosion control blankets along the same levee stationing.</u>
- **ANI-5: Slurry Mixture near Waterways** – All slurry type mixes used to fill rodent burrows will be prevented from entering any waterway by using appropriate erosion control methods and according to the manufacturer’s specifications. If the creek bed is dry or has been dewatered, any material that has entered the channel will be removed.
- **GEN-1: In-Channel Work Window** – All ground-disturbing maintenance activities (i.e., sediment removal, bank stabilization, tree removal, and mechanized vegetation management) occurring in the channel (below bankfull) will take place between June 15 and October 15. No new instream sediment removal projects and bank protection work will be initiated after October 15. Requests for work window extensions must be submitted to the

regulatory agencies by October 1. An extension through December 31 may apply if specific requirements are met and regulatory agency approval is received.

- **GEN-2: Instream Herbicide Application Work Window** – Would limit application of herbicides to the dry season only (between June 15 and October 15) or until the first occurrence of local rainfall greater than 0.5 inch is forecasted within a 24-hour period from planned application events or when steelhead begin migrating upstream and spawning, as determined by a qualified biologist (typically in November/December). In addition, no herbicides applications are allowed directly into water and when wind conditions may result in drift.
- **GEN-4: Minimize the Area of Disturbance** – Would require soil disturbance to be kept to the minimum footprint necessary to complete the maintenance operation.
- **GEN-16: In-Channel Minor Activities** – For in-channel minor work activities, work will be conducted from the top of the bank if access is available and there are flows in the channel.
- **GEN-17: Employee/Contractor Training** – All appropriate Valley Water staff and contractors will receive annual training on SMP BMPs and an overview of special-status species identification and habitat requirements.
- **GEN-20: Erosion and Sediment Control Measures** – Would reduce the potential for erosion and sedimentation. This BMP describes measures to recover disturbed and exposed soils with seeding or erosion control materials. These measures would capture soil affected by erosion and keep it on the site and out of downslope waterways, where it could affect water quality as well as sedimentation.
- **GEN-21: Staging and Stockpiling of Materials** – Would reduce the potential for erosion and sedimentation. This BMP specifies that staging must occur on surfaces that are either paved or already compacted, stockpiled materials must be hydrologically disconnected from waterways, and stockpiled soils will remain covered during the wet season. These measures would ensure that any sediments remain onsite and do not migrate to downslope waterways.
- **GEN-22: Sediment Transport** – To prevent sediment-laden water from being released back into waterways during transport of spoils to disposal locations, truck beds will be lined with an impervious material (e.g., plastic), or the tailgate blocked with wattles, hay bales, or other appropriate filtration material. Trucks may then drain excess water within the active project area of the creek where the sediment is being loaded into the trucks or within an identified vegetated area (swale) that is separated from the creek.
- **GEN-23: Stream Access** – District personnel will use existing access ramps and roads to the extent feasible. If necessary to avoid large mature trees, native vegetation, or other significant habitat features, temporary access points will be constructed in a manner that minimizes impacts.
- **GEN-24: On-Site Hazardous Materials Management** – Would reduce the potential for release of hazardous materials. This BMP specifies handling, storing, and disposing of all hazardous materials used or expected to be used at maintenance work sites. This BMP also specifies that all portable toilets will be placed outside the creek channel and floodplain and regularly cleaned and/or replaced and inspected daily for leaks and spills.

- **GEN-25: Existing Hazardous Materials** – Would reduce hazardous materials from entering the creek. This BMP specifies that all hazardous materials found during maintenance (e.g. batteries, oil, paint cans, etc.) will be removed from the maintenance work sites and disposed~~dispose~~ of according to applicable regulatory requirements.
- **GEN-26: Spill Prevention and Response** – Would reduce the release of chemicals, fuels, lubricants, and non-storm drainage water into channels, drains, or on the ground. This BMP specifies measures~~measure~~ to prevent accidental release of hazardous materials and response measures in the event that spills occur to minimize the area affected by any release of hazardous materials. This BMP also includes measures to respond to spills that cannot be contained immediately with materials on the work site and for large spills, including contacting all responsible regulatory and emergency response agencies.
- **GEN-28: Fire Prevention** – All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site.
- **GEN-29: Dust Management** – Would ensure dust and air quality management measures, including implementation of BAAQMD's (Bay Area Air Quality Management District's) BMPs for dust suppression. Removal of ground cover, including both vegetation and structures, would expose soil to erosive forces. Dust control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.
- **GEN-30: Vehicle and Equipment Maintenance** – Would reduce the release of fuel, oil, lubricants, and other hazardous materials. This BMP specifies measures to inspect vehicles for leaks and clean from excessive build-up of grease and oil. This measure also specifies where vehicle maintenance will be done to prevent spills or leaks from leaking on the ground or entering surface water or the storm drain system.
- **GEN-31: Vehicle Cleaning** – Would reduce the spread of soil and other contaminants from entering surface waters. This BMP prohibits vehicle wash-water from entering water bodies by requiring vehicles to be washed at designated and approved wash areas in Valley Water's corporation yard.
- **GEN-32: Vehicle and Equipment Fueling** – Would prevent the release of fuels onto the ground and from entering surface waters. This BMP prohibits fuels in the channel, unless equipment cannot be easily relocated (e.g., pumps and generators), and requires secondary containment for all in-field equipment fueling to prevent spills from reaching soil, surface water, or the storm drain system.
- ~~**GEN-35: Pump/Generator Operations and Maintenance** – When needed to assist in channel dewatering, pumps and generators will be maintained and operated in a manner that minimizes impacts to water quality and aquatic species.~~
- **REVEG-1: Seeding** – Would reduce the potential for erosion. Similar to Valley Water BMP BI-8 discussed above, seeding reduces the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place in the face of erosive forces.
- **REVEG-2: Planting Material** – Revegetation and replacement plantings will consist of locally collected native species. Species selection will be based on surveys of natural areas

on the same creek that have a similar ecological setting and/or as appropriate for the site location.

- **SED-1: Groundwater Management** – If high levels of groundwater (visible water) are encountered during excavations in a work area, the water will be pumped out of the work site or left within the work area if the work activity is not causing water quality degradation in a live stream. If necessary to protect water quality, the extracted water will be discharged into specifically constructed infiltration basins, holding ponds, or areas with vegetation to remove sediment prior to the water re-entering a creek.
- ~~**SED-2: Prevent Scour Downstream of Sediment Removal** – After sediment removal, the channel will be graded so that the transition between the existing channel both upstream and downstream of the maintenance area is smooth and continuous between the maintained and non-maintained areas and does not present a sudden vertical transition (wall of sediment) or other blockage that could erode once flows are restored to the channel.~~
- ~~**SED-3: Restore Channel Features** – Low-flow channels within non-tidal streams will be contoured to facilitate fish passage and will emulate the pre-construction conditions as closely as possible within the finished channel topography.~~
- ~~**SED-4: Berm Bypass** – Where sediment removal is accomplished without a bypass by creating isolated, alternating cells, the berm between the work and the live channel will be wide enough to prevent introduction of turbid water from the cell into the live channel.~~
- **VEG-1: Minimize Local Erosion Increase from In-channel Vegetation Removal** – To minimize the potential effect of localized erosion, the toe of the bank will be protected by leaving vegetation to the maximum extent possible and consistent with the maintenance guidelines or original design requirements.
- **VEG-2: Non-native Invasive Plant Removal** – Invasive species (e.g., cape ivy [*Delairea odorata*], giant reed [*Arundo donax*]) will be disposed of in a manner that will not contribute to the further spread of the species. Cape ivy removed during a project shall be bagged and disposed of in a landfill. *Arundo* canes will be prevented from floating downstream or otherwise entering the creek or waterway.
- ~~**VEG-3: Use Appropriate Equipment for Instream Removal** – When using heavy equipment to cut or remove instream vegetation, low ground pressure equipment, such as tracked wheels will be utilized to reduce impacts to the streambed.~~

VHP Conditions and AMMs relevant to biological resources include the following:

- Condition 1: Avoid Direct Impacts on Legally Protected Plant and Wildlife Species
- Condition 3: Maintain Hydrologic Conditions and Protect Water Quality
- Condition 4: Avoidance and Minimization for In-stream Projects
- Condition 5: Avoidance and Minimization for In-stream Operations and Maintenance
- Condition 11: Stream and Riparian Setbacks (note that although this condition is applicable to the project, the project meets the criteria of exemption 4: Covered activities that require work within or adjacent to streams such as bridges, levee maintenance and repair, flood-protection projects, stream maintenance, outfall installation and maintenance, flood-protection capital projects, dam-related capital projects.

- Condition 12: Wetland and Pond Avoidance and Minimization

VHP Aquatic AMMs[8] associated with water-related covered activities addressed in VHP Conditions 3, 4, and 5 and relevant to biological resources include the following:

- **VHP General Aquatic AMMs**
  - 1: Minimize the potential impacts on covered species most likely to be affected by changes in hydrology and water quality.
  - 2: Reduce stream pollution by removing pollutants from surface runoff before the polluted surface runoff reaches local streams.
  - 3: Maintain the current hydrograph and, to the extent possible, restore the hydrograph to more closely resemble predevelopment conditions.
  - 4: Reduce the potential for scour at stormwater outlets to streams by controlling the rate of flow into the streams.
  - 5: Invasive plant species removed during maintenance will be handled and disposed of in such a manner as to prevent further spread of the invasive species.
  - 6: Activities in the active (i.e., flowing) channel will be avoided. If activities must be conducted in the active channel, AMMs will be applied.
  - 7: Personnel shall prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into channels.
  - 8: Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations).
  - 9: Personnel shall implement measures to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means when removing sediments from the streams.
  - 11: Vehicles shall be washed only at approved areas. No washing of vehicles shall occur at job sites.
  - 12: No equipment servicing shall be done in the stream channel or immediate flood plain, unless equipment stationed in these locations cannot be readily relocated (i.e., pumps, generators).
  - ~~13: Personnel shall use the appropriate equipment for the job that minimizes disturbance to the stream bottom. Appropriately-tired vehicles, either tracked or wheeled, shall be used depending on the situation.~~
  - 14: If high levels of groundwater in a work area are encountered, the water is pumped out of the work site. If necessary to protect water quality, the water shall be directed into specifically constructed infiltration basins, into holding ponds, or onto areas with vegetation to remove sediment prior to the water re-entering a creek.
  - ~~15: If native fish or non-covered, native aquatic vertebrates are present when cofferdams, water bypass structures, and silt barriers are to be installed, a native fish~~

[8] AMMs are from VHP Table 6-2.

~~and aquatic vertebrate relocation plan shall be implemented when ecologically appropriate as determined by a qualified biologist to ensure that significant numbers of native fish and aquatic vertebrates are not stranded.~~

- ~~16: When work in a flowing stream is unavoidable, the entire streamflow shall be diverted around the work area by a barrier, except where it has been determined by a qualified biologist that the least environmentally disruptive approach is to work in a flowing stream.~~
- ~~17: Coffer dams shall be installed both upstream and downstream not more than 100 feet from the extent of the work areas. Stream flow will be pumped around the work site using pumps and screened intake hoses.~~
- ~~18: Small in-channel berms that deflect water to one side of the channel during project implementation may be constructed of channel material in channels with low flows.~~
- ~~19: Sumps or basins may also be used to collect water, where appropriate (e.g., in channels with low flows).~~
- ~~20: Diversions shall maintain ambient stream flows below the diversion, and waters discharged below the project site shall not be diminished or degraded by the diversion. Normal flows shall be restored to the affected stream as soon as is feasible and safe after completion of work at that location.~~
- ~~21: To the extent that stream bed design changes are not part of the project, the stream bed will be returned to as close to pre-project condition as appropriate.~~
- ~~22: To the extent feasible, all temporary diversion structures and the supportive material shall be removed no more than 48-hours after work is completed.~~
- ~~23: Temporary fills, such as for access ramps, diversion structures, or cofferdams, shall be completely removed upon finishing the work.~~
- ~~24: To prevent increases in temperature and decreases in dissolved oxygen, if bypass pipes are used, they shall be properly sized (i.e., larger diameter pipes to better pass the flows). Alternatively, a low-flow channel or method to isolate the work area may be used.~~
- ~~25: Diversions shall maintain fish passage when the project meets the following conditions: 1) the length of the area dewatered exceeds 500 feet, and/or 2) the length of time the stream is dewatered exceeds 2-weeks.~~
- 26: Any sediment removed from a project site shall be stored and transported in a manner that minimizes water quality impacts.
- 28: Where practical, the removed sediments and gravels will be re-used.
- 29: Existing native vegetation shall be retained by removing only as much vegetation as necessary to accommodate the trail clearing width. Maintenance roads should be used to avoid effects on riparian corridors.
- 30: Vegetation control and removal in channels, on stream banks, and along levees and maintenance roads shall be limited to removal necessary for facility inspection purposes, or to meet regulatory requirements or guidelines.

- 31: When conducting vegetation management, retain as much understory brush and as many trees as feasible, emphasizing shade producing and bank stabilizing vegetation.
- 32: In-channel vegetation removal may result in increased local erosion due to increased flow velocity. To minimize the effect, the top of the bank shall be protected by leaving vegetation in place to the maximum extent possible.
- 33: Regional Board objectives for temperature change in receiving waters (measured 100 feet downstream of discharge point) shall not be exceeded.

▪ **VHP Project Design AMMs**

- 34: Use the minimum amount of impermeable surface (building footprint, paved driveway, etc.) as practicable.
- 35: Use pervious materials, such as gravel or turf pavers, in place of asphalt or concrete to the extent practicable.
- 36: Use flow control structures such as swales, retention/detention areas, and/or cisterns to maintain the existing (pre-project) peak runoff.
- 38: Use flow dissipaters at runoff inlets (e.g., culvert drop-inlets) to reduce the possibility of channel scour at the point of flow entry.
- 39: Minimize alterations to existing contours and slopes, including grading the minimum area necessary.
- 40: Maintain native shrubs, trees, and groundcover whenever possible and revegetate disturbed areas with local native or non-invasive plants.
- 41: Combine flow-control with flood control and/or treatment facilities in the form of detention/retention basins, ponds, and/or constructed wetlands.
- 42: Use flow control structures, permeable pavement, cisterns, and other runoff management methods to ensure no change in post-construction peak runoff volume from pre-project conditions for all covered activities with more than 5,000 square feet of impervious surface
- 43: Site characteristics will be evaluated in advance of project design to determine if non-traditional designs, such as bioengineered bank treatments that incorporate live vegetation, can be successfully utilized while meeting the requirements of the project.
- 44: Maintenance of natural stream characteristics, such as riffle-pool sequences, riparian canopy, sinuosity, floodplain, and a natural channel bed, will be incorporated into the project design.
- ~~45: Stream crossings shall incorporate a free-span bridge unless infeasible due to engineering or cost constraints or unsuitable based on minimal size of stream (swale without bed and banks or a very small channel). If a bridge design cannot free-span a stream, bridge piers and footings will be designed to have minimum impact on the stream.~~
- 49: The project or activity must be designed to avoid the removal of riparian vegetation, if feasible. If the removal of riparian vegetation is necessary, the amount shall be

minimized to the amount necessary to accomplish the required activity and comply with public health and safety directives.

- 51: All projects will be conducted in conformance with applicable county and/or city drainage policies.
- 52: Adhere to the siting criteria described for the borrow site covered activity.
- 53: When possible, maintain a vegetated buffer strip between staging/excavation areas and receiving waters.
- ~~54: When not within the construction footprint, deep pools within stream reaches shall be maintained as refuge for fish and wildlife by constructing temporary fencing and/or barrier so as to avoid pool destruction and prevent access from the project site.~~
- ~~55: For stream maintenance projects that result in alteration of the stream bed during project implementation, its low flow channel shall be returned to its approximate prior location with appropriate depth for fish passage without creating a potential future bank erosion problem.~~
- 56: Bank stabilization site design shall consider hydraulic effects immediately upstream and downstream of the work area. Bank stabilization projects will be designed and implemented to provide similar roughness and characteristics that may affect flows as the surrounding areas just upstream and downstream of the project site.
- 58: Existing access routes and levee roads shall be used if available to minimize impacts of new construction in special status species habitats and riparian zones.

- **VHP Construction AMMs**
  - 61: Minimize ground disturbance to the smallest area feasible.
  - 62: Use existing roads for access and disturbed area for staging as site constraints allow.
  - 63: Prepare and implement sediment erosion control plans.
  - 64: No winter grading unless approved by City Engineer and specific erosion control measures are incorporated.
  - 65: Control exposed soil by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles).
  - 66: Control sediment runoff using sandbag barriers or straw wattles.
  - 67: No stockpiling or placement of erodible materials in waterways or along areas of natural stormwater flow where materials could be washed into waterways.
  - 68: Stabilize stockpiled soil with geotextile or plastic covers.
  - 69: Maintain construction activities within a defined project area to reduce the amount of disturbed area.
  - 70: Only clear/prepare land which will be actively under construction in the near term.
  - 71: Preserve existing vegetation to the extent possible.

- 72: Equipment storage, fueling and staging areas will be sited on disturbed areas or non-sensitive habitat outside of a stream channel.
- 73: Avoid wet season construction.
- 74: Stabilize site ingress/egress locations.
- 75: Dispose of all construction waste in designated areas and prevent stormwater from flowing onto or off these areas.
- 76: Prevent spills and clean up spilled materials.
- 77: Sweep nearby streets at least once a day.
- 78: In-stream projects occurring while the stream is flowing must use appropriate measures to protect water quality, native fish, and covered wildlife species at the project site and downstream of the project site.
- 80: All personnel working within or adjacent to the stream setback will be trained by a qualified biologist in AMMs and permit obligations.
- 81: Temporary disturbance or removal of aquatic and riparian vegetation will not exceed the minimum necessary to complete the work.
- ~~82: Channel bed temporarily disturbed during construction activities will be returned to pre-project or ecologically improved conditions at the end of construction.~~
- 83: Sediments will be stored and transported in a manner that minimizes water quality impacts. If soil is stockpiled, no runoff will be allowed to flow back to the channel.
- 84: Appropriate erosion control measures will be used on site to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian vegetation. Fiber rolls used for erosion control will be certified as free of noxious weed seed. Filter fences and mesh will be of material that will not entrap reptiles and amphibians.
- 85: Seed mixtures applied for erosion control will not contain invasive nonnative species and will be composed of native species or sterile nonnative species. If sterile nonnative species are used for temporary erosion control, native seed mixtures must be used in subsequent treatments to provide long-term erosion control and slow colonization by invasive nonnatives.
- 86: Topsoil removed during soil excavation will be preserved and used as topsoil during revegetation when it is necessary to conserve the natural seed bank and aid in revegetation of the site.
- 87: Vehicles operated within and adjacent to streams will be checked and maintained daily to prevent leaks of materials that, if introduced to the water, could be deleterious to aquatic life.
- 88: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas.
- 89: The potential for traffic impacts on terrestrial animal species will be minimized by adopting traffic speed limits.

- 90: All trash will be removed from the site daily to avoid attracting potential predators to the site.
- 91: To prevent the spread of exotic species and reduce the loss of native species, aquatic species will be netted at the drain outlet when draining reservoirs or ponds to surface waters. Captured native fish, native amphibians, and western pond turtles will be relocated if ecologically appropriate. Exotic species will be dispatched.
- 92: To minimize the spread of pathogens all staff working in aquatic systems (i.e., streams, ponds, and wetlands) will adhere to the most current guidance for equipment decontamination provided by the Wildlife Agencies at the time of activity implementation.
- 93: When accessing upland areas adjacent to riparian areas or streams, access routes on slopes of greater than 20 percent should generally be avoided. Subsequent to access, any sloped area should be examined for evidence of instability and either revegetated or filled as necessary to prevent future landslides or erosion.
- 94: Personnel shall use existing access ramps and roads if available. If temporary access points are necessary, they shall be constructed in a manner that minimizes impacts to streams.
- 95: To prevent inadvertent entrapment of animals during excavation, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks.
- 96: Isolate the construction area from flowing water until project materials are installed and erosion protection is in place.
- 97: Erosion control measures shall be in place at all times during construction.
- 98: When needed, utilize in-stream grade control structures to control channel scour, sediment routing, and headwall cutting.

- **VHP Post-Construction AMMs**
  - 99: Conduct street cleaning on a regular basis.
  - 100: Potential contaminating materials must be stored in covered storage areas or secondary containment that is impervious to leaks and spills.
  - 101: Runoff pathways shall be free of trash containers or trash storage areas. Trash storage areas shall be screened or walled.
  - 102: Immediately after project completion and before close of seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets.
  - 103: All disturbed soils will be revegetated with native plants and/or grasses or sterile nonnative species suitable for the altered soil conditions upon completion of construction. All disturbed areas that have been compacted shall be de-compacted prior to planting or seeding.

- 104: Measures will be utilized on site to prevent erosion along streams (e.g., from road cuts or other grading), including in streams that cross or are adjacent to the project proponent's property.
- 107: On streams managed for flood control purposes, when stream reaches ~~the~~ require~~d~~ extensive vegetation thinning or removal, removal will be phased so that some riparian land cover remains and provides some habitat value. In addition, vegetation removal will be targeted and focused on removing the least amount of riparian vegetation as possible while still meeting the desired flood control needs.
- 110: If debris blockages threaten bank stability and may increase sedimentation of downstream reaches, debris will be removed.
- 111: If bank failure occurs due to debris blockages, bank repairs will only use compacted soil and will be re-seeded with native grasses or sterile nonnative hybrids and stabilized with natural erosion control fabric.
- 112: Pumps and generators shall be maintained and operated in a manner that minimizes impacts to water quality and aquatic species.
- ~~113: The channel bottom shall be re-graded at the end of the work project to as close to original conditions as possible.~~
- 114: Erosion control methods shall be used as appropriate during all phases of routine maintenance projects to control sediment and minimize water quality impacts.
- 115: All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods will be thoroughly inspected for wildlife by properly trained construction personnel before the pipe is subsequently buried, capped, or otherwise used or moved in anyway.

3.4.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The proposed project would have a significant impact on biological resources if implementing the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW;
- Have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected aquatic resources (waters and wetlands) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

Analysis Methodology

The analysis of impacts on biological resources focuses on evaluating the project's potential to adversely affect special-status species and their habitats, and other habitats and migratory/movement corridors considered sensitive by federal, state, or local agencies. Impact conclusions consider the habitat quality, impact extent, impact duration, and impact intensity (e.g., level of harm, injury/loss, or degradation suffered by the resource). The impact analysis is based on the results of the field surveys and desktop research in relation to the baseline habitat conditions, known and potential species occurrence, and species natural history traits that influence how they may be impacted by project activities.

Impacts on biological resources were evaluated to qualitatively describe how project activities could adversely affect biological resources, and where applicable, to quantify the extent of regulated habitat that would be impacted. Potential impact mechanisms that were evaluated include habitat removal, injury or mortality of special-status wildlife, indirect habitat degradation, and wildlife disturbance (i.e., from noise, vibration, lighting, glare, and other visual disturbance). The project does not include new permanent lighting. Therefore, lighting impacts would be limited to locations where nighttime work could occur and brief periods at dusk when lighting would be used in months that daylight ends before construction activities end at 7 p.m. As stated in Section 2.4, "Project Construction," these impacts would be minimized by directing and/or shielding lighting to limit illumination of adjacent habitat. As discussed further in Section 3.2, "Aesthetics," the project would not create new sources of substantial glare. In summary, treatments and encasing would be used to minimize glare from above-ground project features and passive barriers would remain at ground level most of the time and only be activated during flood conditions when weather conditions are usually overcast. Therefore, glare is not discussed further in the impact analyses below.

The impact evaluation also considered whether impacts to land cover types would be temporary or permanent. Because the project is a covered activity under the VHP, the VHP's definitions of temporary and permanent impacts are followed in this section for VHP compliance (where they apply to a land cover type). The VHP defines a temporary impact as direct impacts that alter land cover for less than 1 year and allow the disturbed area to recover to pre-project or ecologically improved conditions within 1 year of completing construction. Permanent impacts are defined by the VHP as those that alter land cover for more than 1 year or that take more than 1 year, following construction, to recover to pre-project or improved conditions. Construction-related impacts on land cover types are considered permanent impacts if they involve permanent vegetation removal to accommodate the project improvements. In contrast, impacts associated with staging areas that would quickly revert to pre-project conditions are considered temporary. Similarly, impacts from project-related noise, equipment, and personnel are considered temporary.

The VHP's conservation program was developed to ensure impacts on VHP-covered species and habitats from covered projects, including the project's contribution to cumulative impacts, are offset through VHP compliance. Therefore, VHP compliance is considered an integral part of the project and no additional mitigation is necessary for many impacts on biological resources, due to VHP compliance. After qualitative and, where applicable, quantitative analysis of an impact was conducted, the impact was then evaluated with the application of Valley Water BMPs and VHP Conditions and AMMs with which the project is legally required to comply, as well as payment of required VHP impact fees that will contribute to implementation of the VHP Conservation Program (e.g., population or habitat restoration, acquisition, preservation, and management). A determination was then made regarding whether the resulting impact is significant, and therefore, requires mitigation. For impacts that would remain significant even with implementation of BMPs, compliance with applicable VHP Conditions~~conditions~~ and AMMs, and payment of VHP impact fees, feasible mitigation measures were identified, and the impact significance was re-evaluated to determine if mitigation measures would reduce the impact to less than significant.

Impact Analysis

Impact BIO-1: Substantial Adverse Effect on Special-Status Plants. (Less than significant)

None of the special-status plants that have been documented in the BSA vicinity were determined to have potential to occur in the BSA because of the lack of appropriate habitat and/or microhabitat conditions. The Coyote Creek riparian corridor is very narrow, surrounded by high-density urban development, and subject to high levels of human disturbance. Portions of the BSA beyond the creek are primarily associated with developed recreational facilities or parks and are also highly disturbed. These circumstances render the habitat quality and potential for persistence or colonization by special-status plants in the BSA extremely unlikely. In addition, the project area is not within the VHP rare plant survey area. Furthermore, relevant Valley Water BMPs and VHP AMMs would be implemented during construction to minimize any adverse habitat impacts. Consequently, potential for project construction or operations and maintenance activities to result in a substantial adverse effect on a special-status plant population is extremely low, and this impact would be **less than significant**.

Impact BIO-2: Substantial Adverse Effect on Monarch Butterfly. (Less than significant)

Potential for project construction and long-term operations and maintenance activities, including vegetation management around the improvements for access, to impact monarch butterflies by removing milkweed and/or killing eggs, larvae, or pupae is very low because of the absence, or scarcity at best, of milkweed and breeding monarchs in the project reaches. While milkweed removal would reduce the availability of the larval host plant, this would likely have very limited impacts on monarch because the species occurs in the urban area primarily as a migrant and in relatively low numbers. Project construction and long-term vegetation maintenance would remove vegetation including flowering plants that may provide nectar sources for this species, but the extent of this habitat loss is unlikely to have a substantial adverse impact. Project activities could result in mortality and disturbance (from noise, vibration, and visual impacts of equipment and personnel) of adult monarchs, if present during vegetation removal with heavy equipment and other operation of heavy equipment near monarch habitat. However, the number of monarchs potentially present is likely low, based on distribution of known occurrences (Western Monarch and Milkweed Occurrence Database 2024).

Implementing Valley Water BMPs and compliance with applicable VHP Conditions and AMMs would reduce impacts on monarch butterfly. BMP AQ-1 (Use Dust Control Measures) would reduce potential for construction activities to mobilize dust onto larval host plants and adult nectar sources, thus reducing adverse effects of dust on plants that could be used by monarch. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas), HM-6 (Comply with Restrictions on Herbicide Use in Aquatic Areas), WQ-1 (Conduct Work from Top of Bank), and SMP BMPs REVEG-1 (Seeding), and REVEG-2 (Planting Material) would minimize the potential impacts of pesticide and herbicide use and vegetation removal on monarchs and their habitat. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on monarch and its habitat through numerous AMMs, including 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities and associated vegetation removal, and require planting of native and/or sterile species to promote native land cover beneficial to monarchs.

Monarch butterfly is not a VHP-covered species, but the SCVHA is proposing to add it as a covered species during the upcoming VHP amendment. Although the species is not currently covered, the VHP's conservation program includes the acquisition, enhancement, and management of lands providing suitable habitat that supports and benefits monarch. Specifically, narrow-leaved milkweed is common and widespread in rural portions of the county, and it occurs on a variety of lands in the VHP conservation areas. Therefore, Valley Water's payment of VHP impact fees for the project would contribute to the VHP's conservation program, which includes acquisition, enhancement, and management of lands providing grassland, scrub, and other natives habitats that benefit monarch butterfly.

Potential for loss of individual Monarch butterflies during project construction and long-term vegetation maintenance is low. In addition, implementing the protocol established in the *FOCP Milkweed Survey Plan* (H.T. Harvey & Associates 2024a) (as stated in Section 2.6, "Avoidance and Minimization Measures," ~~and~~ unless and until the species is added to the VHP as a covered species), Valley Water BMPs and complying with VHP Conditions~~conditions~~, including payment of impact fees, would minimize impacts on Monarch butterfly habitat and avoid direct loss of individuals, including eggs, larvae, pupae, and adults. Therefore, the project would not have a substantial adverse effect on the Monarch butterfly and this impact would be **less than significant.**

Impact BIO-3: Substantial Adverse Effect on Crotch's Bumble Bee.
(Less than significant)

Although habitat quality for Crotch's bumble bee is low in the BSA ~~is low~~, there is potential for individuals to occur and be impacted by the project. Project construction and operations and maintenance activities would remove vegetation that provides potential pollen and nectar sources and could result in mortality and disturbance (from noise, vibration, and visual impacts of equipment and personnel) of foraging Crotch's bumble bees. Ground disturbing activities could destroy subterranean nests and gyne overwintering sites, if present, and their occupants.

As stated in Section 2.6, "Avoidance and Minimization Measures," as long as legally protected or unless and until Crotch's bumble bee is added to the VHP as a covered species (at which point any incidental take of the species resulting from the project would be provided via the VHP), Valley Water will implement the protocol established in the *FOCP Crotch's Bumble Bee Avoidance Plan* (H.T. Harvey & Associates 2024b) to avoid take of the species. This plan includes contractor training, methods for habitat assessments and surveys, and avoidance measures if foraging Crotch's bumble bee or their nests are encountered (e.g., no-disturbance buffers and biological monitoring). In addition, implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would reduce impacts on Crotch's bumble bee. BMP AQ-1 (Use Dust Control Measures) would reduce potential for construction activities to mobilize dust onto pollen and nectar sources. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas), HM-6 (Comply with Restrictions on Herbicide Use in Aquatic Areas), WQ-1 (Conduct Work from Top of Bank), and SMP BMPs REVEG-1 (Seeding), and REVEG-2 (Planting Material) would minimize the potential impacts of pesticide and herbicide use and vegetation removal. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on Crotch's bumble bee and its habitat through numerous AMMs, including 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities and associated vegetation removal, and require planting of native and/or sterile species to promote native land cover.

Crotch's bumble bee is not a VHP-covered species currently, but the SCVHA is proposing to add it as a covered species during the upcoming VHP amendment. Although the species is not currently covered, Valley Water's payment of VHP fees for the project would contribute to the VHP's conservation program, which includes acquisition, enhancement, and management of lands providing grassland, scrub, and other natives habitats that benefit Crotch's bumble bee.

Potential for loss of individual Crotch's bumble bee during project construction and long-term vegetation maintenance is low. In addition, implementing the protocol established in the *FOCP Crotch's Bumble Bee Avoidance Plan* (unless and until the species is added to the VHP as a covered species) and Valley Water BMPs and complying with VHP Conditions~~conditions~~ and AMMs, including payment of impact fees, would minimize impacts on Crotch's bumble bee habitat and avoid direct loss of individuals, including active nests. Therefore, the project would not have a substantial adverse effect on the Crotch's bumble bee and this impact would be **less than significant.**

Impact BIO-4: Substantial Adverse Effect on Special-Status Fish, Critical Habitat, and Essential Fish Habitat. ***(Less than significant)***

Construction Impacts

Project construction could have ~~direct and~~ indirect impacts on special-status fish in Coyote Creek, including~~. Direct impacts could result from activities associated with the temporary creek crossing and cofferdam in Reach 7, which could cause injury or mortality from stranding and direct contact with equipment if special-status fish are present when work occurs. Indirect impacts could include~~ disturbance from noise, vibration, lighting, and visual presence of equipment and personnel associated with the ~~Reach 7 crossing and the~~ Charcot Avenue Bridge modifications in Reach 4, as well as from water quality degradation and vegetation removal ~~at~~

~~those and~~ in other portions of the BSA where construction activities would occur along the creek. The Charcot Avenue Bridge work would be limited to the bridge span and would not directly impact the riverine habitat below.

Construction activities along Coyote Creek could result in erosion and short-term increases in suspended sediment and turbidity levels and accidental exposure to hazardous materials (e.g., construction equipment leaking fluids). At high levels, suspended solids can adversely affect the physiology and behavior of aquatic organisms. Fish responses to increased turbidity and suspended sediment can range from behavioral changes to sublethal effects and, at high suspended sediment concentrations for prolonged periods, lethal effects (Newcombe and Jensen 1996).

Project-related vegetation removal would primarily occur along the top of the creek bank and farther away from the creek corridor ~~and would not alter the aquatic habitat or reduce shaded creek habitat~~. Riparian vegetation removal would extend slightly into the creek channel (i.e., below the top of bank) at several locations along floodwalls in Reaches 6, 7, and 8~~at one floodwall location in Reach 6 and two floodwall locations in Reach 8~~. This vegetation removal would be limited to very small areas at each location and would occur very near the top of bank. The only locations where vegetation removal may result in canopy loss extending over areas below the ordinary high-water mark and potentially reduce shaded aquatic habitat are an approximately 100-foot-long area of R6-FW19 on the west side of Coyote Creek in Reach 6 and an approximately 50-foot-long area at the upstream end of R8-FW15 on the east side of Coyote Creek in Reach 8. These areas combined would result in approximately 0.1 acre of canopy loss over areas below the ordinary high-water mark, which would have a very minor effect on shaded aquatic habitat and special-status fish in the BSA. Additional information on trees that would be removed from below the top of bank is provided under Impact BIO-10, which addresses riparian habitat. ~~The primary location where vegetation removal would extend into the creek channel is at the temporary creek crossing in Reach 7 near Brookwood Avenue. Approximately 26 trees, as well as understory vegetation, are anticipated to be removed from the temporary crossing area; eight additional trees are close to the ground disturbance area and may suffer root damage or other adverse impacts severe enough to kill them. Half of the trees that would be removed or otherwise impacted are nonnative species such as elm and eucalyptus; native species anticipated to be removed include one box elder, one buckeye, four cottonwoods, and four willows. Trees that would be removed/impacted range in size from 4 to 52 inches in diameter at breast height, with 16 less than 10 inches in diameter and six 30 inches or greater. This tree removal would reduce shaded riverine aquatic habitat for special-status fish along an approximately 200-foot section of the creek. After the crossing is removed, this area would be revegetated with appropriate native species and shaded aquatic habitat would be reestablished. However, there would be a temporal loss of this habitat until the vegetation matures.~~

All life stages of Chinook salmon could occur in the BSA, but none are present from July to mid-October. The extent of Chinook salmon spawning distribution in Coyote Creek is unknown but could include portions of the BSA where suitable habitat is present (e.g., spawning gravels and adequate flow), and adults and smolts are likely to migrate through the BSA to and from spawning areas between mid-October and June. Juvenile Chinook salmon could rear in the BSA seasonally, between January and June. The BSA is also in EFH for Chinook salmon, though the species was not known to be present in Coyote Creek historically (Snyder 1905), or present in the county prior to the 1980s. Chinook salmon in Santa Clara County are Central

Valley fall-run fish of hatchery origin, with a genetic affinity to the Feather River Hatchery (Garcia-Rossi and Hedgecock 2002). The Central Valley fall-run/late fall-run refers to populations spawning in the Sacramento and San Joaquin rivers and their tributaries (CDFW 2024c~~CNDDB 2024~~). Chinook salmon could be impacted by Charcot Avenue Bridge reinforcement in Reach 4, depending on the time of year when bridge improvements are conducted. All work on the bridge would be conducted from the bridge deck, and no creek dewatering or equipment operation would be required in this area. However, fish present in the creek could be disturbed by noise, vibration, lighting, and visual presence of equipment and personnel immediately above the creek channel, causing individuals to avoid the area. As stated in Section 2.4, "Project Construction," impacts from nighttime lighting would be minimized by directing and/or shielding lighting to limit illumination of adjacent habitat. ~~Chinook salmon would not be present in Coyote Creek when the temporary creek crossing and cofferdam are in place in Reach 7, and therefore, would not be directly affected by that construction activity. However,~~ Chinook salmon also could be impacted by water quality degradation and vegetation removal resulting from project construction activities elsewhere along the creek, depending on the time of year when bridge improvements are conducted.

Steelhead are unlikely to spawn in the BSA because it is low in the watershed. Juvenile salmonid rearing is known to occur higher in the watershed, between Metcalf Road and Anderson Dam on Coyote Creek, but juvenile steelhead may rear in the BSA seasonally. Coyote Creek within the BSA, however, is primarily used as a migratory corridor by steelhead. ~~In addition, a~~Adults and/or smolts may migrate through the BSA between December and May. The BSA is also in designated steelhead critical habitat. Effects on all steelhead adults or juveniles could result from improvements at Charcot Avenue Bridge, as described above for Chinook salmon (e.g., noise, vibration, lighting, and visual presence of equipment and personnel)~~, depending on the time of year when bridge improvements are conducted~~. ~~In addition, steelhead could be affected by installation, use, and removal of the temporary creek crossing in Reach 7. Potential impacts would be minimized by limiting use of the temporary creek crossing and cofferdam to between June and October; during this period, the only steelhead life stage/activity with potential to occur is juvenile rearing. If present, rearing juvenile steelhead could experience stranding, direct contact with equipment, and disturbance (e.g., noise, vibration, and visual presence of equipment and personnel) from creek dewatering, diversion, crossing construction/removal and use, and channel restoration.~~ Steelhead also could be impacted by water quality degradation and vegetation removal resulting from project construction activities conducted elsewhere along the creek.

Pacific lamprey is also not expected to spawn in the BSA but migrating adults and/or juveniles could be present between December and June. It is also possible pre-spawning adults could be present between June and April, and rearing ammocoetes could occur in the BSA at any time of year in areas with suitable substrate. Effects on adults and juveniles could result from improvements at Charcot Avenue Bridge, as described above for Chinook salmon (e.g., noise, vibration, lighting, and visual presence of equipment and personnel), depending on the time of year when bridge improvements are conducted. ~~Pacific lamprey could also be affected by the temporary creek crossing in Reach 7, as described above for steelhead. Potential effects of the crossing would primarily be limited to ammocoetes, but the crossing could also be in place for the last month of the typical adult immigration period.~~ Lamprey also could be impacted by water quality degradation and vegetation removal resulting from project construction activities conducted elsewhere along the creek.

Southern coastal roach and Sacramento hitch are resident fish which have been documented in Coyote Creek, approximately 8 miles upstream of the BSA (Valley Water 2021). Monitoring has been limited lower in the system, but these species could occur year-round where suitable habitat is present, including in the BSA, and the BSA could provide suitable spawning habitat. These species could be affected by the Charcot Avenue Bridge improvements in Reach 4~~ and temporary creek crossing and cofferdam in Reach 7~~. Impacts would be similar to those described above for the other species (e.g., noise, vibration, lighting, and visual presence of equipment and personnel) and could affect any life stage. Roach and hitch also could be impacted by water quality degradation and vegetation removal resulting from project construction activities elsewhere along the creek.

Construction-related impacts on special-status fish habitats (including steelhead designated critical habitat and Chinook salmon EFH) would primarily be temporary~~ and limited to Reach 7 where the temporary creek crossing and cofferdam are required to provide access from the west to the east side of the creek~~. ~~Less extensivep~~However, permanent in-channel vegetation removal would occur at several floodwall locations. There is also potential for fish to be disturbed by construction equipment and personnel during construction activities at the Charcot Avenue Bridge in Reach 4~~. However~~, but these construction activities would not require in-channel equipment use or dewatering of the creek channel. ~~Construction impacts would be minimized by limiting in-channel construction activities, including the period during which the Reach 7 crossing would be in place, from June 15 through October 15. Crossing construction would require flows to be diverted around this portion of the creek channel, and the channel to be dewatered and a cofferdam installed. When flood improvements along Brookwood Avenue, which require this access route, are complete, the crossing would be removed and conditions at the temporary creek crossing and cofferdam site would be restored to pre-project contours.~~

As discussed below, implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would reduce the construction-related impacts on fisheries and fish habitat described above.

Operational Impacts

The current drainage pattern within the BSA results in overtopping and flooding of portions of the City on either side of the creek during the 100-year flood event. The project would result in changes to the hydrology within Coyote Creek during extreme events by retaining flood flows within the constructed project improvements, including within the creek channel and adjacent open space areas at some locations. This confining of flood waters would increase the water volume, velocity, and surface elevation in the creek channel under flood conditions to varying extents depending on the location but would substantially reduce the aerial extent of flooding.

Hydrologic and hydraulic modeling results presented in Section 3.9, “Hydrology and Water Quality,” show that after construction of project improvements, estimated maximum water depths during a 100-year flood event, in areas of 1 foot or greater water depth under the current operational baseline conditions, would generally increase in the Coyote Creek channel (because water is being contained by the project improvements) and decrease in the adjacent floodplain (see Figures 3.9.12 through 3.9.15). Water depth increases under this flood scenario would generally be greater in the downstream reaches and less in the upstream reaches, ranging from up to 0.5 foot in Reaches 6, 7, and 8 to up to 1.3 feet in Reach 4 in the vicinity of the Charcot Avenue Bridge. There would be minimal or no change upstream of Reach 8 and 0.5 to 1 foot of increase downstream of Reach 4 to approximately State Route 237.

The project would also result in flow velocity changes during a 100-year flood event. Under the operational baseline flood condition, velocities range from 0 to greater than 13.5 feet per second (fps) in the BSA and within the extended upstream and downstream model boundaries. Post-project changes to maximum flow velocities during a 100-year flood would range from decreases of up to 2 fps to increases of up to 1 fps (see Figures 3.9.20 through 3.9.23), a relatively small change compared to baseline conditions. To evaluate potential for increased post-project flow velocities to result in greater shear stress along the creek banks and potential scour or erosion effects on the bank leading to sedimentation in water flowing downstream, areas where specific post-project increases in velocity were identified were compared to the threshold level of velocity at which point scour and erosion could occur. This analysis concluded that post-project velocities would result in less than significant erosion or sedimentation. The post-project maximum velocities range between approximately 3 and 11.5 fps. Increases primarily occur where the post-project maximum velocity is maintained below the 7.5 fps permissible velocity. Additionally, increases occur where the maximum velocity already exceeds the 7.5 fps permissible channel velocity in the operational baseline condition, in a very short reach (approximately 185 ft) of the channel in Reach 5 and in Reach 4 and downstream of Reach 4, between Old Oakland Road and Highway 237. The increase in post-project maximum velocity at these locations is less than 10 percent. which is considered to have a minor risk of increased erosion and scour.

Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change habitat conditions for special-status fish, these changes would occur very infrequently and only under conditions when fish and habitat would already be subjected to changed circumstances resulting from flood conditions. Therefore, project-related changes in flow conditions would not have a substantial adverse effect on special-status fish or their habitat. In addition, confining most flood flows to the creek channel and reducing the extent of flooding outside the creek channel could reduce the number of fish, including special-status species, that are transported outside the creek during flood events and potentially reduce fish stranding.

Post-construction maintenance activities would require on-going vegetation trimming and management to maintain access to project improvements but would not affect vegetation not previously affected during project construction. In addition, because no permanent in-stream project improvements would be constructed, no in-stream maintenance activities would be required. However, maintenance activities could cause erosion or loss of topsoil and would require equipment that uses lubricants, fuels, and other hazardous materials in small amounts. As discussed below, implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would reduce potential adverse impacts on fisheries and fish habitat during maintenance activities.

Impact Conclusion

Implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs during construction and maintenance activities would reduce impacts on special-status fish and fish habitat. Implementing BMPs AQ-1 (Use Dust Control Measures) and SMP

BMP GEN-29 (Dust Management) would reduce potential for activities to mobilize dust into aquatic habitat. ~~BMP BI-2 (Minimize Impacts to Steelhead) requires minimizing impacts on steelhead, and BI-3 (Remove Temporary Fill) and BI-9 (Restore Riffle/Pool Configuration of Channel Bottom) require removing the temporary creek crossing and associated coffer dam and restoring the channel to pre-project habitat conditions.~~ SMP BMPs GEN-2 (Instream Herbicide Application Work Window), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Materials), GEN-26 (Spill Prevention and Response), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), REVEG-1 (Seeding), REVEG-2 (Planting Material), and BMPs 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-3 (Limit Impact of Pump and Generator Operation and Maintenance), and WQ-6 (Limit Impact of Concrete Near Waterways) would restrict herbicide use in and along Coyote Creek, minimize the potential for hazardous materials and other pollutants to impact the creek, and minimize effects of vegetation removal. SMP BMPs GEN-4 (Minimize the Area of Disturbance), GEN-21 (Staging and Stockpiling of Materials), and BMPs 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 from Staging and Stockpiling Materials), and WQ-11 (Maintain Clean Conditions at Work Sites) would minimize the area of disturbance and use and impacts of vehicles and equipment below the top of bank~~in Coyote Creek~~, require establishing appropriate staging and stockpiling areas and construction access areas, and require keeping the work site clean, thus minimizing impacts on the creek channel. BMP WQ-3 (Limit Impact of Pump and Generator Operation and Maintenance) requires pump intakes to be screened according to NMFS criteria to prevent uptake of fish and other vertebrates. SMP BMP GEN-20 (Erosion and Sediment Control Measures), and BMPs WQ-15 (Prevent Water Pollution) and WQ-16 (Prevent Stormwater Pollution) would reduce erosion potential, prevent water and stormwater pollution, and monitor turbidity levels and ensure project activities minimize turbidity increase.

Implementing VHP Condition 3 would protect water quality by reducing project-related runoff. VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through numerous AMMs, including 1, 2, 6-8, 11~~-15,17, 20-25~~, 12, 14, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities, minimize impacts of in-channel activities~~ including diversions~~, ~~require implementation of a native fish and aquatic vertebrate capture and relocation plan during coffer dam installation, require maintenance of fish passage when the temporary crossing and diversion are in place,~~ reduce the potential for pollutants to impact aquatic habitat, and require planting of native and/or sterile plant species to promote land cover and reduce potential erosion/sedimentation.

Although the VHP does not provide take authorization for fish species, it identifies conservation objectives for aquatic and riparian resources that benefit fish species. With implementation of applicable Valley Water BMPs and VHP Conditions and AMMs (e.g., ~~avoiding in-channel work when special-status fish are most likely to be present, maintaining fish passage when the temporary creek crossing is in place~~ minimizing in-channel disturbance, reducing potential for pollutants to impact aquatic habitat, and monitoring and limiting potential project-related turbidity increases), potential for effects to ~~construction impacts on~~ fish, including special-status species and protected habitats, as a result of construction would be ~~temporary,~~ minor~~,~~ and less than significant. Operational changes in water surface elevations and flow velocities during flood events would occur infrequently under flood conditions and not have a substantial adverse effect on special-status fish or their habitat. In addition, with implementation of applicable Valley Water BMPs and VHP Conditions and AMMs vegetation maintenance would not result in substantial adverse effects on sedimentation, erosion, or channel shading. Therefore, there would be no substantial effects on special-status fish, designated critical habitat, or EFH, and this impact would be **less than significant**.

Impact BIO-5: Substantial Adverse Effect on California Red-Legged Frog and Northwestern Pond Turtle. (Less than significant)

Construction activities would include vegetation removal, grading, excavation, staging, ~~dewatering,~~ and construction of ~~temporary and~~ permanent structures that would affect northwestern pond turtle foraging, dispersal, refugia, and nesting habitat. There would be no ~~D~~direct impacts on aquatic habitat ~~would be limited to Reach 7 where the temporary creek crossing would be installed~~. If pond turtles are present in ~~these~~ work areas when construction occurs, they would likely move upstream or downstream in the creek, away from the areas of disturbance, as work commences~~, but there is a small potential for individuals to become stranded if present in the crossing area during dewatering. Stranded pond turtles would be susceptible to increased risk of predation, heat stress, and mortality~~. Pond turtles in areas where ~~in-channel~~ work occurs would also be susceptible to disturbance (from noise, vibration, and visual impacts of equipment and personnel), injury, and mortality from equipment operation, if the turtles are not able to move out of harm's way. In the unlikely event California red-legged frog is present in these construction areas, individuals could be affected in ways similar to those discussed for northwestern pond turtle. The potential for these impacts on California red-legged frog and northwestern pond turtle to occur would be minimized by the BMPs and VHP Conditions and AMMs discussed below.

Impacts on potentially suitable nesting habitat for northwestern pond turtle would be temporary and primarily limited to staging areas in Reaches 5, 6, and 7. However, equipment use, vehicular traffic, vegetation removal, and earth moving activities in these areas could result in injury or mortality of individuals, if present when work occurs. Individuals could also become trapped in pits, trenches, or other depressions excavated during project construction or could be impacted if they take refuge in construction materials that are subsequently moved. In addition, aquatic habitat in the creek could be degraded where construction activities would occur adjacent to the creek and could result in erosion and accidental spill of hazardous materials. The potential for these impacts to occur would be minimized by the BMPs and VHP Conditions and AMMs discussed below.

The project would not result in long-term loss of a substantial amount of northwestern pond turtle habitat, as most impact areas would continue to provide habitat similar to, or of higher quality than, current conditions after project construction is complete and throughout the maintenance period. No permanent loss of aquatic habitat would occur and maintenance activities, such as vegetation management, would have minor impacts, if any, on northwestern pond turtles. Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change aquatic habitat conditions during extreme events, these changes would occur very infrequently and only under conditions when habitat would already be subjected to changed circumstances resulting from flood conditions. As discussed above in relation to impacts on special-status fish, these project-related changes would be relatively small compared to operational baseline conditions and would result in a minor risk of increased erosion and scour and associated habitat degradation. Therefore, project-related changes in flow conditions during project operations would not have a substantial adverse effect on aquatic or upland habitat or California red-legged frog or northwestern pond turtle.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ would reduce impacts on northwestern pond turtle during project construction and operation. BMPs AQ-1 and GEN-29 would reduce potential for project activities to mobilize dust into aquatic habitat.~~ BMPs BI-3 and BI-9 require removing the temporary creek crossing and associated coffer dam and restoring the channel to pre-project habitat conditions.~~ BMPs GEN-2, GEN-24, GEN-25, GEN-26, GEN-30, GEN-31, GEN-32, HM-5, HM-6, HM-7, HM-8, HM-9, HM-10, REVEG-1, REVEG-2, WQ-3, and WQ-6 would restrict herbicide use in aquatic and upland habitats, minimize the potential for hazardous materials and other pollutants to impact Coyote Creek, and minimize effects of vegetation removal. BMPs GEN-4, GEN-21, WQ-1, ~~WQ-2,~~ WQ-4, and WQ-11 would minimize the area of disturbance and use and impacts of vehicles and equipment below the top of bank~~in Coyote Creek~~, require establishing appropriate staging and stockpiling areas and construction access areas, and require keeping the work site clean, thus minimizing impacts on the creek channel. BMPs GEN-20, WQ-15 and WQ-16 would reduce erosion potential, prevent water and stormwater pollution, and monitor turbidity levels and ensure project activities minimize turbidity increase, and BMPs GEN-28 and HM-12 would reduce the potential for fire to affect this species and its habitats.

Implementing VHP Condition 3 would protect water quality by reducing project-related runoff. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through numerous AMMs 1, 2, 6-8, 11~~-15, 17, 20-25~~, 12, 14, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities (including ground disturbance and vegetation removal), minimize impacts of in-channel activities~~ including diversions~~, ~~require implementation of a native fish and aquatic vertebrate capture and relocation plan during coffer dam installation, require maintenance of fish passage when the temporary crossing and diversion are in place (which would also benefit pond turtle),~~ reduce the potential for pollutants to impact pond turtle and its habitats, require planting of native and/or sterile species to promote native land cover, and avoid erosion and sediment impacts on pond turtle habitat. Although California red-legged frog is unlikely to occur in the BSA, implementing these measures would also reduce impacts on this species in the unlikely event it is present.

California red-legged frog and northwestern pond turtle are covered by the VHP, and the project activities that could impact these species are VHP covered activities. The VHP's conservation program includes the acquisition, enhancement, and management of lands to benefit these species. Therefore, Valley Water's payment of VHP impact fees for the project would contribute to a conservation program that would compensate for impacts the project may have on California red-legged frog and northwestern pond turtle and their habitats. With implementation of Valley Water BMPs, VHP Conditions and AMMs, and payment of VHP impact fees, the project would not result in a substantial adverse impact on California red-legged frog or northwestern pond turtle. Therefore, this impact would be **less than significant**.

Impact BIO-6: Substantial Adverse Effect on Western Burrowing Owl. (Less than significant)

Urban park habitats in the BSA provide low-quality habitat for western burrowing owl and individuals are unlikely to breed in the BSA. Possible burrowing owl use of the BSA is likely limited to itinerant individuals moving through or briefly stopping. Construction and operations and maintenance activities in urban parks, including use of staging areas, could disturb foraging activities, destroy occupied burrowing owl burrows, and injure or kill associated individuals, if present during project activities. In addition, if occupied burrows are present in or near the BSA, project-related disturbance (i.e., noise, vibration, and visual disturbance) could result in disturbance of foraging activities, burrow abandonment, and reduced care of eggs or young or premature fledging in the unlikely event nesting occurs. No permanent loss of burrowing owl habitat is anticipated to occur because suitable habitat is likely limited to construction staging areas that would be temporarily affected.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions would reduce impacts on western burrowing owl. Implementing BMP BI-5 would require conducting pre-activity surveys and avoiding disturbance of active nests, and BMPs BI-4, HM-1, and HM-2 would minimize potential impacts of pesticide use. BMP BI-11 would minimize the attraction of predators that may prey on burrowing owls, and ANI-1 would minimize potential for rodenticide and fumigant impacts on burrowing owl.

Implementing VHP Condition 1 would avoid killing birds protected under the MBTA (including burrowing owl), and VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on burrowing owl habitat through AMMs 58, 61, 62, 69, 70, 80, 85, and 103. These AMMs would require worker training, minimize the footprint of project activities, and require planting of native and/or sterile species to promote native land cover. VHP Condition 15, which is specifically designed to avoid and minimize impacts of covered activities on burrowing owls, is not required to be implemented because the project is not within the VHP burrowing owl survey zone. However, if an occupied burrowing owl burrow if discovered in the BSA, Condition 15 would be implemented to ensure that burrowing owls and active nests and burrows occupied during the non-breeding season (September 1 through January 31) are not disturbed by construction activities. This VHP condition requires monitoring during construction to confirm relevant buffers are enforced and burrowing owls are not disturbed by construction activities. The condition also allows for potential approval of passive relocation of owls if a covered activity otherwise cannot proceed because owls continually persist on a site where avoidance is not feasible.

Western burrowing owl is covered by the VHP, and the project activities that could impact this species are VHP covered activities. The VHP's conservation program includes a condition specifically designed to avoid and minimize impacts on this species; requirements of this condition would be implemented if an occupied burrowing owl burrow if discovered in the BSA. Valley Water's payment of VHP impact fees for the project would contribute to a conservation program that would compensate for impacts the project may have on western burrowing owl and its habitat. With implementation of Valley Water BMPs, VHP Conditions and AMMs, and payment of VHP impact fees, the project would not result in a substantial adverse impact on western burrowing owl. Therefore, this impact would be **less than significant**.

Impact BIO-7: Substantial Adverse Effect on Other Protected Birds. (Less than significant)

Golden eagle, bald eagle, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, tricolored blackbird (marginal foraging habitat only), purple martin, bank swallow, yellow-breasted chat, and yellow warbler could forage~~ and/or nest~~ in the BSA. ~~However, n~~Nesting potential is limited to white-tailed kite and yellow warbler. If active nests of these species are present in the BSA when construction or operations and maintenance activities occur, vegetation removal and maintenance, grading, and activity of equipment, vehicles, and personnel could result in disturbance (e.g., noise, vibration, visual) or destruction of active nests (including eggs and young) or disturb adults to the point of nest abandonment or reduced care of eggs or young. In addition, nearly all bird species that occur in the BSA are protected by the MBTA and/or CFGC, which prohibit take of birds and their nests and eggs. Project construction and operations and maintenance activities could result in destruction or indirect failure of active bird nests or take of individuals. However, as described below, Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would avoid loss of protected bird nests and individuals and reduce impacts on nesting and foraging habitat.

The project would disturb potential special-status bird nesting and/or foraging habitat during construction and operations and maintenance activities, but habitat in temporarily disturbed areas would regenerate and not result in a long-term loss. Permanent vegetation removal and maintenance would result in a long-term loss of nesting and foraging habitat, but this loss would be small relative to the total amount of nesting and foraging habitat in the BSA. A total of approximately 3.6 acres of land cover would be permanently occupied by the flood risk reduction improvements~~ and an additional approximately 8 acres are within the maintenance access areas~~; approximately 22~~8~~ acres would be temporarily affected during construction. These permanent and temporary impact areas are dominated by urban-suburban and park land covers. In comparison, the BSA is approximately~~more than~~ 400 acres, in which more than 40 acres are woodland and forest habitats and more than 75 acres is golf course/urban park. This relatively limited extent of construction-related habitat disturbance and permanent habitat loss related to habitat available in the BSA would not adversely affect nesting or foraging activities of a substantial number of individuals.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would avoid loss of protected bird nests and individuals and reduce impacts on nesting and foraging habitat. Implementing BMP BI-5 (Avoid Impacts to Nesting Migratory Birds) would require conducting pre-activity surveys and avoiding disturbance of active nests. BMP BI-6 (Avoid Impacts to Nesting Migratory Birds from Pending Construction), which involves installing nest exclusion materials to prevent birds from nesting in areas where they may be impacted, may also be implemented in appropriate situations, such as the Charcot Avenue Bridge. Implementing BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas), WQ-1 (Conduct Work from Top of Bank), and WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and SMP BMPs REVEG-1 (Seeding), and REVEG-2 (Planting Material), would minimize the potential impacts of pesticide and herbicide use and vegetation removal. BMP BI-11 (Minimize Predator-Attraction) would minimize the attraction of predators that may prey on birds, and SMP BMP GEN-28 (Fire Prevention) and BMP HM-12 (Incorporate Fire Prevention Measures) would reduce potential for fire to affect nesting and foraging habitats. Implementing VHP Condition 1 would avoid killing birds protected by the MBTA, including common and special-status species. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through AMMs 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs minimize the footprint of project activities and associated vegetation removal, require worker training, and require planting of native and/or sterile species to promote native land cover.

With implementation of Valley Water BMPs and compliance with VHP Conditions, impacts on nesting special-status species and other birds protected by the MBTA and CFGC would not reach a level that results in a decline in the regional (e.g., South Bay) population of any one species. Permanent impacts on nesting and foraging habitats would not substantially reduce the habitat of a bird species. Furthermore, the VHP's vast conservation program would conserve numerous habitats throughout much of the County that support populations of virtually all bird species, including those protected by the MBTA and CFGC that may be affected by the project, and Valley Water's payment of VHP impact fees for the project would contribute to a conservation program that would help to offset impacts on habitat for protected birds. With implementation of Valley Water BMPs, VHP Conditions and AMMs, and payment of VHP impact fees, the project would not result in a substantial adverse impact on nesting special-status species and other protected birds. Therefore, this impact would be **less than significant**.

Impact BIO-8: ***Substantial Adverse Effect on Special-Status Bats.***
(Less than significant with Mitigation)

~~Western red bat has been documented in the BSA, and p~~Pallid bat and Townsend's big-eared bat occur in the project region;~~.~~ ~~H~~however, few confirmed or potential occurrences of these species are known from the surrounding urban area in recent decades, and these species~~.~~ ~~Pallid bat and Townsend's big-eared bat~~ have not been documented in the BSA.~~;~~ ~~b~~Both species are highly sensitive to disturbance, ~~and~~ have low potential to occur, and are very unlikely to roost in the BSA. Additionally, roost features suitable for large bat colonies are limited in BSA. Western red bat has been documented in the BSA and could occur in low numbers ~~in the BSA,~~ migrating over Coyote Creek at night. Individuals could also occur in the BSA~~or~~ as a ~~short-term~~ daytime rooster in trees with suitable structure; however, the species has low roost site fidelity, meaning any occurrences would likely occur on a short-term, transient basis. Project construction would not result in loss of foraging habitat and potential disruption of foraging patterns of special-status bats, if present, would be limited because most construction and all operations and maintenance activities would occur during daylight hours and in a highly disturbed urban environment. Nighttime construction would be limited to Reach 4 and one floodwall in Reach 6; these reaches are highly urbanized and developed, with the exceptions of Watson and Roosevelt parks in Reach 6. This work and associated nighttime lighting could disturb bat foraging and movement in the affected portions of the BSA. However, this impact would be temporary, affect a small proportion of the BSA, and would not substantially disrupt bat foraging or movement. ~~In addition, a~~As stated in Section 2.4, "Project Construction," impacts would be minimized by directing and/or shielding lighting to limit illumination of adjacent habitat.

Removal of trees containing large cavities and crevices and modification of structures, such as the Charcot Avenue bridge in Reach 4, if they provide suitable roosting habitat, would reduce availability of roosting sites. If trees or structures containing roosting colonies or individual bats are removed or modified, individual bats could be physically injured, killed, or subjected to physiological stress resulting from being disturbed during torpor. Roosting bats may flush from these sites before they are injured or killed, but if flushed during the daytime bats could suffer increased predation, resulting in the loss of individuals.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions would reduce impacts on special-status bats. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas), WQ-1 (Conduct Work from Top of Bank), and WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and SMP BMPs REVEG-1 (Seeding) and REVEG-2 (Planting Material) would minimize the potential impacts of pesticide and herbicide use and vegetation removal on bats and their habitat, and SMP BMP GEN-28 (Fire Prevention) and BMP HM-12 (Incorporate Fire Prevention Measures) would reduce potential for fire to affect bats and their habitats. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on special-status bats and their habitat through AMMs 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs require worker training, minimize the footprint of project activities and associated vegetation removal, and require planting of native and/or sterile species to promote land cover.

Pallid bat, Townsend's big-eared bat, and western red bat are not VHP-covered species, but they are likely to benefit from the VHP's conservation program and therefore Valley Water's contribution to that program through payment of impact fees for the project. However, Valley Water BMPs and VHP Conditions~~conditions~~ and AMMs do not include measures to minimize direct impacts on roosting bats. If ~~a substantial roost~~ roosting bats occur~~s~~ in the BSA and would be impacted by project construction or operations and maintenance, individuals could be injured or killed. Western red bat are solitary roosters and not known to breed in Santa Clara County; thus, would not be expected to occur in the BSA in large numbers. However, while unlikely, if a roost(s) supporting a colony of pallid or Townsend's big-eared bats were removed, this could have a substantial adverse effect on local populations and would result in a **significant impact**.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure BIO 8.1: Minimize Impacts on Special-Status Bats

Valley Water and/or its construction contractor(s) shall implement the following measures to reduce potential effects on special-status bats associated with project construction:

- **Habitat Assessment.** Prior to initiation of project activities, a qualified biologist shall conduct a daytime survey to assess all trees and structures in the construction area to determine if they contain suitable bat roosting habitat (e.g., cavities, crevices, deep bark fissures), noting features with high potential for use by roosting bats. The survey shall identify locations of potential roost habitat features and potential direct and indirect project-related disturbing activities to those features. The daytime survey shall include visual inspection of potential roost features to determine whether there is evidence of use by bats (e.g., urine staining, guano, etc.). If bats are observed, attempts shall be made to identify individuals to species and estimate number of individuals. If special-status bats are identified, CDFW shall be notified.

- **Bat Survey.** Based on the results of the habitat assessment, the qualified biologist shall determine whether a nighttime emergence survey shall be conducted at each potential roost feature. This survey(s) shall require coordination with local law enforcement for safety reasons in the area. Nighttime emergence surveys shall document the number of bats exiting each feature and identification to species, if possible. If special-status bats are identified, CDFW shall be notified.

  In addition, occupancy surveys shall be conducted immediately prior to disturbance of roost features determined by the qualified biologist to have high potential for bat use. If potential roost features are unoccupied, work activities may proceed. The qualified biologist will have the authority to determine if it is necessary to direct and monitor activities relating to disturbance or removal of roost features. Biologist direction may include tiered removal of trees or modification of structures, as described in the following section.

- **Tiered Tree Removal and Structure Modification.** To minimize the likelihood of impacting roosting bats, tiered removal of trees or modification of structures with roost features known or suspected to support bats, based on the results of the habitat and bat surveys described above, shall be conducted at the direction of the qualified biologist. Tiered tree removal or structure modification shall occur over 2 or more days to make these trees/structures less desirable for roosting, and to encourage any bats that could be in residence to relocate to alternate roosts prior to tree felling, or to move to other areas of structures before exiting structures of their own volition at night. Removal or modification of these roost features shall occur under the supervision of a qualified biologist during periods when bats are active and capable of flight, approximately between March 1 to April 1~~5~~ and September 1~~August 15~~ to October 15; outside of bat maternity roosting season (approximately April 1~~5~~ – August 31), and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible.

- If removal of trees or disturbance to other roost features during the periods when bats are active and capable of flight is not feasible, and active bat roosts being used for maternity or winter torpor purposes are found within or in the immediate vicinity of planned tree removal or other disturbance, an appropriate no-disturbance buffer shall be established around the roost sites until they are determined by a qualified biologist to be no longer active. Recommended buffers shall follow guidelines from the Caltrans Bat Mitigation Report (H. T. Harvey & Associates 2021, Table 7-1). The qualified biologist shall have the authority to order the cessation of all nearby project activities until an appropriate buffer can be established. If appropriate buffers cannot be maintained, CDFW shall be contacted to determine a site-specific approach for minimizing impacts to roosting bats.

- Trees/structures with roost features known or suspected to support roosting bats shall only be disturbed/removed when no rain is occurring or projected to occur for 3 days, when nighttime winds are projected to be below 11 miles per hour, and when daytime temperatures are at least 50 degrees Fahrenheit.

- For each tree removed that is known or suspected to support roosting bats, tiered tree removal may include some or all the following approaches, as determined by the qualified biologist.
  - Remove all unaffected limbs (those without potential roosting habitat) from the tree and leave the remaining trunk and limbs overnight. Fell the remaining trunk and affected limbs the following day.
  - Remove 30 to 50 percent of palm skirts (dried palm fronds), as appropriate, in a scattered pattern while carefully inspecting for indications of roosting bats. Leave the remaining skirts and trunk overnight. Repeat for 2 or 3 days, as appropriate, until all palm skirts are carefully removed. Fell the remaining trunk on the last day of skirt removal.
  - If logistically feasible, fell affected trees or limbs gently to minimize the likelihood of crushing bats that may be roosting inside. The qualified bat biologist shall inspect all potential roost habitat for bats once the trees are felled.
  - Leave all fallen material on the ground at least 1 night prior to removal from the project area.
  - If bats are detected at any point, work in that area shall cease and the qualified biologist shall be notified. Work shall resume as directed by the qualified biologist.
  - If any compromised bats are found, the qualified bat biologist may collect and deliver the bat(s) to a permitted bat rehabilitator (e.g., Wildlife Center of Silicon Valley, Lindsay Wildlife Museum), as needed.

Significance after Mitigation: Implementing Mitigation Measure BIO 8.1 would reduce the significant impact associated with disturbance of special-status roosting bats by conducting a roosting habitat assessment, confirming absence through occupancy surveys, or implementing tiered removal of trees or modification of structures known or suspected to support roosting bats. Therefore, this impact would be **less than significant with mitigation**.

Impact BIO-9: Substantial Adverse Effect on San Francisco Dusky-Footed Woodrat. (Less than significant)

Habitat suitability and numbers of San Francisco dusky-footed woodrat potentially present in the BSA may be limited by high levels of disturbance from unhoused encampments and limited areas of adequate understory cover. If the species is present in the BSA, project construction in suitable forest and woodland areas could result in destruction of nests and injury or mortality of individual woodrats. In addition, project disturbance (e.g., noise and vibration) could flush woodrats from nests in adjacent areas and result in increased predation risk. Based on the limited amount of potentially suitable coast live oak and mixed riparian forest/woodland land cover that would be removed by project implementation (less than 0.2 ~~1~~ acre), few individuals and nests would be directly affected. In addition, project-related disturbance in portions of the BSA adjacent to construction activities would only be intense enough to potentially cause woodrats to leave their nests in a small portion of the ~~additional~~ remaining approximately 40 acres of coast live oak and mixed riparian forest/woodland in the BSA. Operations and maintenance activities would not impact this species.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions and AMMs would reduce impacts on San Francisco dusky footed woodrat and its habitat. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas), WQ-1 (Conduct Work from Top of Bank), and WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and SMP BMPs REVEG-1 (Seeding) and REVEG-2 (Planting Material), would minimize the potential impacts of pesticide and herbicide use and vegetation removal on woodrats and their food sources. BMPs HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance), HM-9 (Ensure Proper Hazardous Materials Management), HM-10 (Utilize Spill Prevention Measures), and WQ-11 (Maintain Clean Conditions at Work Sites) would minimize the potential for hazardous materials and other pollutants to impact woodrats and their food sources. BMP BI-11 (Minimize Predator-Attraction) would minimize the attraction of predators that may prey on woodrats, and SMP BMP GEN-28 (Fire Prevention) and BMP HM-12 (Incorporate Fire Prevention Measure) would reduce the potential for fire to impact woodrats and their habitat. BMP BI-10 (Avoid Animal Entry and Entrapment) would avoid entrapment in pipes, hoses, pits, or trenches during construction. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through AMMs 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would minimize the footprint of project activities, including ground disturbance and vegetation removal, require worker training, and require planting of native and/or sterile species to promote native land cover beneficial to San Francisco dusky-footed woodrat.

Based on habitat conditions in the BSA and the distribution of known occurrences of San Francisco dusky footed woodrats in Santa Clara County (CDFW 2024a,), the BSA is likely to support a low number of individuals and nests of this species, if any. San Francisco dusky footed woodrat appears to be much more common in rural portions of the County, particularly southern Santa Clara Valley. Therefore, the number of individuals that could be affected by the project likely represents a very small proportion of the regional population. As a result, the project would not have a substantial adverse effect on the San Francisco dusky footed woodrat, and this impact would be **less than significant**.

Impact BIO-10: Substantial Adverse Effects on Riparian Habitat or Other Sensitive Natural Community. (Less than significant)

For this analysis, mixed riparian woodland is the only sensitive natural community assessed. Potential impacts on riverine waters and forested~~seasonal~~ wetlands are discussed in Impact BIO-11 below. Approximately 37~~38~~ acres of mixed riparian woodland and forest occurs in the BSA, and of this, the project would result in permanent impacts on up to approximately 0.73~~1.50~~ acre~~s~~ of mixed riparian woodland and forest, including riparian directly overlapping with ~~permanent~~ flood risk reduction improvements and temporary work areas (see Table 3.4.1). For the purposes of this analysis, it is assumed that riparian woodland overlapping permanent or temporary project components could be permanently impacted. For example, trees overlapping temporary work areas surrounding project improvements ~~access routes~~ may be permanently removed to allow for adequate equipment clearance or because a substantial portion of their root system would be damaged.

The project has been designed to avoid impacts on the riparian habitat of Coyote Creek by focusing flood protection elements outside of the channel and upslope of streambanks, using existing roads and access routes, and siting ground-disturbing activities in developed and less-vegetated areas where possible. As a result, the project would impact a very small proportion of the overall extent of riparian habitat in the BSA, including adverse effects on its composition, functions, and values. However, given the narrow creek corridor constrained by urban development, options for placement of improvements and access routes are limited. Construction activities such as grading, excavation, and placement of new structures including floodwalls, passive barriers, and berms in riparian habitat would be considered a permanent impact. In addition, ~~removal of trees and other woody vegetation in mixed riparian woodland and forest for temporary construction access would be considered a permanent impact. This may include impacts on~~ riparian trees ~~that are~~ outside the project footprint ~~but that~~ may have considerable portions of their root zone damaged or removed by ground disturbance – enough so that root damage caused by construction activities would significantly affect the health or structural integrity of these riparian trees. These impacts would be reduced by Valley Water BMPs and compliance with applicable VHP Conditions and AMMs and offset through payment of land cover fees through participation in the VHP.

Project activities would affect mixed riparian woodland through direct disturbance and removal of vegetation and through damage to underground root structures, such as from sheet pile floodwall installation and excavations. Sheet piles have the potential to sever or damage roots. Should a large enough portion of the root mass be damaged, this could result in a decline in tree heath and eventually death. BMPs to minimize root damage will be implemented during construction; however, in instances where ~~over 25 percent of~~ a tree’s root system could be damaged to the extent that tree health may decline substantially, as determined by a certified arborist, the tree would ~~may~~ be considered for removal to reduce the potential for post-construction decline and increase in wildfire fuel load. In addition, equipment use, vehicular traffic, and worker foot traffic may result in the injury, mortality, altered growth, or reduced seed set of individual plants within riparian communities. Vegetation maintenance to facilitate access to the improvements during operations and maintenance activities would occur in areas already impacted by project construction and would not require removal of ~~impact~~ additional trees.

A detailed analysis has been conducted to quantify trees that would be removed from mixed riparian woodland and forest land cover (as determined by a certified arborist). **Table 3.4.4** summarizes information on the 69 riparian trees, including six snags ~~(dead trees)~~ that are expected to be removed during project construction. Of these 69 trees, 47 are native species and the remaining 22 are considered nonnative invasive species (Cal-IPC 2024) and/or included in Valley Water’s SMP agency-approved list of invasive species.

Table 3.4.4. Trees to be Removed[1] from Mixed Riparian Woodland and Forest Land Cover

Species	Number of Trees	Average Diameter at Breast Height (inches)	Canopy Acreage Impacted
Native Trees	**47**	**22.9**	**0.417**
black elderberry *Sambucus nigra*	2	22.5	0.03
box elder *Acer negundo*	5	10.6	0.016
buckeye *Aesculus californica*	1	17.0	0.021
California sycamore *Platanus racemosa*	1	88.0	0.052
coast live oak *Quercus agrifolia*	16	11.7	0.128
coast redwood *Sequoia sempervirens*	1	11.0	0.008
Fremont cottonwood *Populus fremontii*	2	5.0	0.026
Northern California black walnut *Juglans hindsii*	3	25.0	0.039
Oregon ash *Fraxinus latifolia*	1	12.0	0.007
red willow *Salix laevigata*	8	18.0	0.068
toyon *Heteromeles arbutifolia*	1	33.0	0.022
snag (dead tree)	6	21.3	NA
Nonnative (Invasive) Trees	**22**	**19.2**	**0.256**
invasive non-native ash *Fraxinus* sp.	2	14.0	0.013
blackwood acacia *Robinia pseudoacacia*	1	26	0.04
elm *Ulmus* sp.	13	10.4	0.109
glossy privet *Ligustrum lucidum*	1	31.0	0.026
olive *Olea europaea*	3	17.0	0.042
tree of heaven *Ailanthus altissima*	2	16.5	0.026
Total Trees	**69**	**21.1**	**0.673**

[1] Trees to be removed include those with trunks within the flood risk reduction improvements footprint and those adjacent to the footprint whose root system could be damaged to the extent that tree health may decline substantially.

Source: AECOM 2024, Data compiled by GEI Consultants in 2024

Temporary impacts include vegetation trimming to allow for temporary staging and access. However, staging areas have been sighted in annual grassland or disturbed areas that would minimize the need for vegetation removal. Creation of access routes and staging areas may result in the mechanical or physical removal of vegetation and modification of the seed bank due to grading. Dust that could be generated by construction activities may coat vegetative and floral surfaces, interfering with normal gas exchange, photosynthesis, or pollination. All temporarily impacted areas would be revegetated with native seed mix post-construction.

Earth moving, vegetation removal, construction-related erosion and runoff, as well as movement of equipment, vehicles, and personnel could introduce or spread invasive plants and pathogens. Project clearing and grading could create conditions suitable for the establishment and spread of invasive plant species and mulching or erosion control mixes could include and thus introduce invasive, nonnative plant species. Phytophthora could be spread or introduced to new areas by equipment, materials, and personnel, and weaken the health of riparian plants, resulting in the loss of individuals post-construction, eventually degrading riparian habitat quality. Thus, both invasive plants and Phytophthora could impact riparian communities in the BSA.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions and AMMs would reduce and avoid impacts on mixed riparian woodland and forest. BMP AQ-1 (Use Dust Control Measures) would reduce potential for construction activities to mobilize dust, thus reducing the effects of dust and the potential for Phytophthora to be mobilized on sensitive communities within that dust. SMP BMPs REVEG-1 (Seeding) and REVEG-2 (Planting Material), and BMPs BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement) would avoid the potential deleterious effects of invasive plants by requiring seeding and revegetation with local plant species. 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 Management), HM-10 (Utilize Spill Prevention Measures), WQ-3 (Limit Impact of Pump and Generator Operation and Maintenance), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), WQ-6 (Limit Impact of Concrete Near Waterways), WQ-15 (Prevent Water Pollution), and WQ-16 (Prevent Stormwater Pollution) would minimize the potential for hazardous materials and other pollutants to impact sensitive communities, and BMP HM-12 (Incorporate Fire Prevention Measures) and SMP BMP GEN-28 (Fire Prevention) would reduce the potential for fire to affect such communities. BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-9 (Restore Riffle/Pool Configuration of Channel Bottom), 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 from Staging and Stockpiling Materials), and WQ-11 (Maintain Clean Conditions at Work Sites) would require ~~removing temporary fill, restoring the channel bottom,~~ minimizing in-channel disturbance, establishing appropriate staging and stockpiling areas and construction access areas, and keeping the work site clean, thus minimizing impacts on sensitive communities, and avoiding the spread of invasive species and pathogens such as Phytophthora. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), and HM-5 (Comply with Restrictions on Herbicide Use in Upland Areas) would minimize impacts of herbicides and pesticides on nontarget species such as native plants in the riparian corridor. Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on sensitive communities through AMMs 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would minimize the footprint of project activities, including ground disturbance and vegetation removal, reduce potential for pollutants to impact plants and habitats, avoid encouragement of invasive plants, and require planting of native and/or sterile species to promote native land cover.

VHP fees to be paid by Valley Water for the project would include specialty fees for mixed riparian woodland and forest, in addition to general land cover fees for other communities that occur along Coyote Creek. The project's impact fees would contribute directly to the conservation of sensitive natural communities, including mixed riparian woodland that would be impacted by the project, and would adequately offset any permanent loss. Because riparian habitat associated with creeks is regulated by CDFW under Section 1602 of the CFGC and the SFBRWQCB considers riparian vegetation along waterways to be waters of the State, Valley Water would also obtain all necessary permits from these agencies related to impacts on riparian habitat along Coyote Creek and would comply with all permit conditions.

The project would result in an overall small relative permanent impact on riparian habitat in the BSA, including the functions and values of that habitat for wildlife, streambank stability, and riverine ecology. With implementation of Valley Water BMPs, payment of VHP permanent impact specialty habitat fees, and implementation of applicable VHP Conditions and AMMs, impacts on riparian communities would be further reduced and indirect impacts avoided. As a result, impacts on riparian habitat would be **less than significant**.

Impact BIO-11: Substantial Adverse Effect on State or Federally Protected Aquatic Resources (Waters or Wetlands). (Less than significant)

Approximately 28~~29~~ acres of riverine land cover in the BSA aligns with the ordinary high-water mark of Coyote Creek and Lower Silver Creek.~~ Of this area, impacts resulting from project implementation would be limited to approximately 0.32 acre of temporary impact resulting from interim construction access.~~

~~Impacts on protected aquatic resources would result primarily from the installation of the temporary creek crossing in Reach 7 to provide access during construction, totaling approximately 0.17 acre. Direct and temporary impacts from this would include the placement of fill for access. Temporary impacts would include placement of fill and materials for cofferdam installation and related hydrological interruption, temporary alteration of the streambanks, and temporary increases in sedimentation and turbidity in downstream portions of Coyote Creek from fill placement and cofferdam installation. The temporary crossing would be in place for less than one season between June 15 and October 15. Following construction, temporary fill for the cofferdam would be removed, impacted areas would be restored to pre-project grade, and the creek banks would be revegetated. O~~ No project work would occur below the ordinary high-water mark in either creek or within the forested wetlands. Therefore, construction, operations, and maintenance activities would not have permanent impact on protected waters or wetlands. Information on riparian tree removal, which could indirectly impact waters and adjacent forested wetlands, is provided under Impact BIO-10, which addresses riparian habitat.

The seasonal wetland (0.12 acre) in Reach 4 is beyond the top of bank and outside the flood risk reduction improvements and temporary construction areas ~~located in an upland staging area~~. This wetland is highly disturbed, providing little to no habitat value, and is hydrologically isolated from other aquatic resources. As a result, it likely does not meet the definition of Waters of the U.S. but would likely be considered Waters of the State. This feature is approximately 100 feet from the nearest flood risk reduction improvement and associated construction area and would not be impacted by the project. ~~Temporary fencing would be placed around the feature to avoid disturbance to the seasonal wetland during construction.~~

Implementing Valley Water BMPs and compliance with applicable VHP Conditions would reduce indirect impacts on aquatic resources. Implementing BMP AQ-1 (Use Dust Control Measure) would reduce potential for construction activities to mobilize dust into aquatic habitats, and BMP WQ-1 (Conduct Work from Top of Bank) would minimize use of vehicles and equipment below the top of bank~~in streams~~. 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 Management), HM-10 (Utilize Spill Prevention Measures), WQ-3 (Limit Impact of Pump and Generator Operation and Maintenance), WQ-6 (Limit Impact of Concrete Near Waterways), WQ-15 (Prevent Water Pollution), and WQ-16 (Prevent Stormwater Pollution) would minimize the potential for hazardous materials and other pollutants to impact waters and wetlands. BMPs ~~BI-3 (Remove Temporary Fill), BI-9 (Restore Riffle/Pool Configuration of Channel Bottom), WQ-2 (Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms),~~ WQ-4 (Limit Impacts from Staging and Stockpiling Materials)~~,~~ and WQ-11 (Maintain Clean Conditions at Work Sites) would require ~~minimizing equipment disturbance in the stream bottom, removing temporary fill, restoring the channel bottom,~~ establishing appropriate staging and stockpiling areas and construction access areas~~,~~ and keeping the work site clean, thus minimizing impacts on aquatic habitats and spread of Phytophthora and invasive species. Implementing VHP Condition 3 would protect water quality by reducing project-related runoff. VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through AMMs 1, 2, 6-8, 11~~-14, 17, 20-25~~, 12, 14, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities, minimize impacts of in-channel activities, reduce the potential for pollutants to impact aquatic habitat, and require planting of native and/or sterile species to promote native land cover.

Because impacts on state and federally protected waters in Coyote Creek would be limited to potential indirect, temporary impacts~~,~~ from erosion, runoff, and sedimentation associated with nearby construction activities, and implementation of Valley Water BMPs and VHP Conditions and AMMs would ensure water quality is preserved during construction~~ and the channel bottom is restored to pre-project conditions~~, these impacts would be minor. In addition, Valley Water will pay VHP impact specialty fees for aquatic resources, which include specialty fees for aquatic and riparian land cover types. Valley Water would also obtain necessary permits from USACE and the SFBRWQCB~~San Francisco Bay Regional Water Quality Control Board~~ and would comply with all permit conditions.

Aquatic resource impacts would be indirect, temporary, and small-scale. With implementation of Valley Water BMPs, payment of VHP permanent impact specialty fees for aquatic resources, and implementation of applicable VHP Conditions and AMMs impacts would be further reduced. Based on the analysis above, adverse effects on protected aquatic resources would not be substantial and impacts on state and federally protected waters and wetlands would be **less than significant**.

Impact BIO-12: Substantial Interference with Fish or Wildlife Movement or Native Nursery Sites. ***(Less than significant)***

The BSA is outside the California Essential Habitat Connectivity and Bay Area Critical Linkages and is mapped as Limited Connectivity Opportunity; it is also not in any other formally identified wildlife corridor and is not known or likely to support a native wildlife nursery site. However, Coyote Creek provides an important migration corridor for anadromous fish. The creek is also used by resident wildlife for foraging, breeding, and dispersal, but not as an important regional migration corridor. Construction activities, including vegetation removal, structure installation, staging, and general equipment and personnel movement could temporarily disturb movement of some wildlife individuals along the creek. In most of the project reaches, impacts would be relatively minor because work would occur on only one side of the creek and/or would occur in adjacent parks, with work areas set back from the creek corridor.

The greatest potential for construction-related disruption of terrestrial wildlife movement would occur along the less than half-mile extent of Reach 4 adjacent to Charcot Avenue. In this area, work would occur on both sides of the creek, urban development directly abuts the work areas, and work could occur at night due to lack of residences within 500 feet. However, even in Reach 4, wildlife movement within the creek channel and associated vegetation cover would not be substantially hindered because the project features would be installed along the existing access roads at the top of the creek bank/levee crest. Construction-related impacts would be less in reaches where work would only occur on one side of Coyote Creek and adjacent to parks providing vegetation cover that would not be disturbed by project activities because individuals would have alternative movement routes on the opposite side of the creek. In addition, except for Reach 4 and one floodwall in Reach 6, construction activities would not occur during nighttime hours, when many species are most active, and would not occur on weekends. This nighttime work and associated lighting may have minor impacts on local wildlife movement in these very limited areas. However, as stated in Section 2.4, “Project Construction,” impacts would be minimized by directing and/or shielding lighting to limit illumination of adjacent habitat. Therefore, nighttime lighting would not result in a substantial adverse effect.

~~Impacts on fish migration/movement would also be temporary and limited to Reach 7 where the temporary creek crossing is required to provide access to the east side of the creek. Impacts would be minimized by limiting the period during which the crossing would be in place to between June 15 through October 15, when potential for special-status fish presence in the affected portion of Coyote Creek and migratory movements are at their lowest. For example, during this period, fall-run Chinook salmon are unlikely to be present in this portion of Coyote Creek and potential steelhead presence would be limited to rearing juveniles~~.

Operations and maintenance activities would have minor impacts on wildlife movement because they would focus on project features outside the creek channel and would be conducted during daytime hours. When construction activities are complete, conditions for fish and wildlife movement/migration through the BSA would be very similar to existing conditions and ~~no~~ long-term impacts would <u>be minor</u>~~occur~~. ~~Although permanent vegetation removal would occur, these long-term habitat effects would occur at the outer edge of the riparian corridor and are unlikely to adversely affect wildlife movement. Conditions at the temporary creek crossing would be restored to pre-project contours, and therefore would not affect post-project fish passage.~~ Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change aquatic habitat conditions, these changes would occur very infrequently and only under conditions when habitat would already be subjected to changed circumstances resulting from flood conditions. In addition, confining most flood flows to the creek channel and reducing the extent of flooding outside the creek channel could reduce potential for fish stranding and impacts on movement of terrestrial species. Although permanent vegetation removal would occur, these long-term habitat effects would occur at the outer edge of the riparian corridor and are unlikely to adversely affect wildlife movement. Therefore, project-related changes in flow conditions during project operations would not have a substantial adverse effect on fish or wildlife movement.

Floodwalls would not substantially restrict movement through the Coyote Creek channel because they are primarily located at the top of the creek banks and typically oriented parallel to the creek channel. Floodwalls would extend only slightly below the top of bank in three locations. In cases where floodwalls are not parallel to the channel, they extend away from the channel and along the edge of adjacent development. Floodwalls would pose a minor permanent obstacle for some wildlife moving between the creek corridor and adjacent areas~~development~~. Because the walls would not be continuous, they would not completely block movement of animals unable to jump over the wall, but these animals would need to travel along the wall until they reach either end. Where parks and other open space areas are present adjacent to the creek, impacts on wildlife movement between the creek and adjacent open space would be minimized by locating the walls along the edge of development. In Reach 8, where high ground is required between the creek and a small area of open space on the west side of the creek, a berm would be constructed instead of a floodwall, which would facilitate continued wildlife passage to and from the creek. Therefore, movement of wildlife between the creek and adjacent open space would not be substantially affected by project implementation.

Implementing Valley Water BMPs and compliance with applicable VHP Conditions would reduce impacts on fish and wildlife movement/migration by minimizing habitat-related impacts. Implementing BMP~~s BI-2 (Minimize Impacts to Steelhead),~~ WQ-1 (Conduct Work from Top of Bank)~~, and WQ-2 (Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms)~~ would minimize use of and disturbance from vehicles and equipment below top of bank~~in streams, and BMPs BI-3 (Remove Temporary Fill), BI-9 (Restore Riffle/Pool Configuration of Channel Bottom),~~ and WQ-4 (Limit Impacts from Staging and Stockpiling Materials) would require ~~removing temporary fill, restoring the channel bottom, and~~ minimizing disturbance associated with staging and stockpiling areas and construction access.

Implementing VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts through AMMs 1, 2, 6-8, 11~~-14, 17~~, 12, 14, 20-25, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107. These AMMs would require worker training, minimize the footprint of project activities, ~~require fish passage to be maintained at the temporary creek crossing,~~ minimize impacts of in-channel activities, reduce the potential for pollutants to impact aquatic habitat, and require planting of native and/or sterile species to promote native land cover.

Although project activities may temporarily affect fish and wildlife movement during construction, animals would be able to continue to move through the BSA during construction, and no long-term impacts on fish or wildlife movement would result. Post-construction operations and maintenance also would not substantially affect fish or wildlife movement. Based on the above analysis, the project would not interfere substantially with fish or wildlife movement or migration, and this impact would be **less than significant**.

Impact BIO-13: Conflict with Local Policies and Ordinances Protecting Biological Resources. (Less than significant)

As noted in Section 3.4.2, “Regulatory Setting,” the City of San José has tree removal regulations (San José Municipal Code Chapter 13.32) that require a permit before trees over 38 inches in circumference, measured at 54 inches above natural grade slope, are removed from private property. The number of trees that would be removed during project construction was estimated based on the number of trees that overlap the footprint of the flood risk reduction improvements or are within 10 feet of the footprint, to account for instances where a tree’s root system could be damaged to the extent that tree health may decline, as determined by a certified arborist. Seventy-eight~~Approximately60~~ trees are estimated to require removal from private property during project construction, ~~approximately 50~~ 40 of which meet the size threshold for protection under this code. This code also prohibits removal of trees identified by the City as heritage trees; based on the City’s online map, no heritage trees would be removed during project construction. It is standard Valley Water practice, when feasible, to comply with City of San José tree ordinance regulations.[9] Therefore, before removal of any trees that are subject to protection under Chapter 13.32 of the Municipal Code, Valley Water would first obtain a permit or otherwise obtain approval from the City, and Valley Water would comply with tree replacement requirements, pay in-lieu fees, or implement alternative mutually acceptable compensatory measures. Replacement tree planting may occur in City parks and/or along City streets from which trees would be removed. Valley Water would also submit a Certified Arborist’s Report, if required.

Valley Water would also comply with any other applicable provisions of the City’s Tree Removal on Private Property Guide, which states that a Permit Adjustment Application is required for removal of non-ordinance-size trees on multifamily, commercial, or industrial properties. Some of the 78~~approximately 60~~ trees anticipated to be removed from private property may be on these types of properties. Operations and maintenance activities would not require additional tree removal. Therefore, the project would not conflict with the City’s regulations for tree removal on private property. In addition, San José Municipal Code Chapter 13.28 prohibits pruning or removal any street tree and any construction work or activity that may affect the critical root zone of a street tree “without a permit issued by the director” and Section 13.44.220 prohibits removing trees from City parks “unless authorized in writing by the director of the department of recreation, parks and community services.” ~~Only approximately five~~Fourteen trees are estimated to require removal from City streets or Caltrans rights-of-way. However, many of the trees to be removed on public property are in City parks. The project would remove 70~~approximately 75~~ trees from City Parks. Valley Water would seek City approval for removing trees from City streets and City Parks and develop mutually acceptable compensatory

[9] Valley Water may be exempt from compliance with the City tree ordinance and other City tree regulations under Hall v. Taft (1956) 47 Cal. 2d 177,189 (which holds that water districts are exempt from municipal police power regulation). Therefore, although the City tree ordinance by its terms would ordinarily apply to the Project, Valley Water’s removal of ordinance-sized trees may not conflict with the City tree ordinance, and there would be no impact. Nevertheless, recognizing the importance of protected trees to the City and the terms of the City tree ordinance, Valley Water has voluntarily proposed planting of replacement trees removed on private land consistent with the City tree ordinance.

measures if required. Therefore, the project would not conflict with Municipal Code Chapter 13.28 or Section 13.44.220.

The City of San José General Plan includes goals and policies designed to preserve, protect, and restore habitats that occur in the BSA, including oak woodland and riparian. In addition, portions of the BSA mapped in Figures 3.4-1 through 3.4-10 as golf courses/urban parks include habitat that may be considered grassland under the General Plan. The project would not conflict with these General Plan policies when taken as a whole, as demonstrated by the below analysis.

General Plan Policies ER-1.4 and 1.5 require that removal of ecologically valuable vegetation be minimized and loss of oak woodland and/or individual native oak trees be mitigated. Policies ER-1.7 and 4.3 prohibit planting of invasive nonnative plant species in natural habitats and Policy ER-2.5 encourages restoration of riparian habitat through native plant restoration and removal of nonnative/invasive plants along riparian corridors and adjacent areas. Policy ER-2.1 requires new public and private development adjacent to riparian corridors be consistent with provisions of the City's Riparian Corridor Policy Study (1999) and the VHP. Policy ER-2.2 sets a standard of a 100-foot setback from riparian habitat and Policy ER-2.4 requires when disturbance to riparian corridors cannot be avoided, measures to restore and/or mitigate damage and allow for fish passage during construction be implemented. Policies ER-4.1 and 5.1 also call for preservation and restoration of habitat areas that support special-status species and avoidance of activities that result in direct or indirect loss of active nests of native birds. Project implementation, including operations and maintenance activities, would affect habitats and species designed to be protected by these General Plan policies. However, the project has been designed to minimize impacts on riparian and oak woodland vegetation and place project components away from the creek where possible. In addition, implementing Valley Water BMPs and compliance with applicable VHP Conditions~~conditions~~ and AMMs would avoid and minimize impacts on aquatic and terrestrial habitat, special-status species, and nesting birds, thereby ensuring consistency with the relevant General Plan measures.

Valley Water BMP WQ-4 (Limit Impacts from Staging and Stockpiling Materials) would minimize riparian and oak woodland vegetation removal by establishing appropriate staging and stockpiling areas and construction access areas, and SMP BMP GEN-28 (Fire Prevention) and BMP HM-12 (Incorporate Fire Prevention Measures) would reduce the potential for fire to affect natural habitats. BMPs BI-4 (Minimize Adverse Effects of Pesticides on Non-target Species), BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes), HM-1 (Comply with All Pesticide Application Restrictions), HM-2 (Minimize Use of Pesticides), HM-5 (Comply with Restrictions on Herbicide Use in Upland 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-3 (Limit Impact of Pump and Generator Operation and Maintenance), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), WQ-6 (Limit Impact of Concrete Near Waterways), WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement), WQ-15 (Prevent Water Pollution), and WQ-16 (Prevent Stormwater Pollution) would minimize the potential for herbicides, pesticides, hazardous materials, and other pollutants to impact natural vegetation and the species they support and require local plant species in revegetation. ~~BMP BI-2 (Minimize Impacts to Steelhead) requires minimizing impacts on steelhead, and BMPs BI-3 (Remove Temporary Fill) and BI-9 (Restore~~

~~Riffle/Pool Configuration of Channel Bottom) require removing the temporary creek crossing and associated coffer dam and restoring the channel to pre-project habitat conditions.~~ BMP~~s~~ WQ-1 (Conduct Work from Top of Bank)~~ and WQ-2 (Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms)~~ would minimize use and impacts of vehicles and equipment in Coyote Creek. Implementing BMP BI-5 (Avoid Impacts to Nesting Migratory Bird) would require conducting pre-activity surveys and avoiding disturbance of active nests, and BMP BI-6 (Avoid Impacts to Nesting Migratory Birds from Pending Construction), which involves installing nest exclusion materials to prevent birds from nesting in areas where they may be impacted, may also be implemented in appropriate situations, such as the Charcot Avenue Bridge.

Implementing VHP Condition 1 would avoid killing birds protected by the MBTA, including common and special-status species. Implementing of VHP Conditions 4 and 5 would reduce the potential for and magnitude of impacts on aquatic and terrestrial habitats and the species they support, including special-status species, through AMMs 1, 2, 6-8, 11~~-15, 17, 20-25~~, 12, 14, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103. These AMMs would require worker training, minimize impacts of in-channel activities~~ including diversions, require implementation of a native fish and aquatic vertebrate capture and relocation plan during coffer dam installation, require maintenance of fish passage when the temporary crossing and diversion are in place~~, minimize the footprint of project activities and vegetation removal, reduce potential for pollutants to impact plants and habitats, avoid encouragement of invasive plants, and require planting of native and/or sterile species to promote native land cover.

VHP fees to be paid by Valley Water for the project include specialty fees for mixed riparian woodland and forest, in addition to general land cover fees for oak woodland and other types. The project's VHP impact fees would contribute directly to the conservation of ecologically valuable vegetation in the County.

Based on the above analysis, with compliance with City of San José tree regulations, implementation of Valley Water BMPs, and implementation of VHP Conditions~~conditions~~ and AMMs and payment of VHP fees, the project would not conflict with local policies and ordinances protecting biological resources. Therefore, this impact would be **less than significant**.

Impact BIO-14: Conflict with an Adopted Habitat Conservation Plan.
(Less than significant)

The proposed project is a covered activity under the VHP and Valley Water is a permittee legally obligated to implement all applicable VHP requirements for the project. Therefore, the project would not conflict with the VHP. No other adopted NCCP, HCP, or other approved local, regional, or state habitat conservation plan applies to the project or BSA. Therefore, this impact would be **less than significant**.

3.5 Cultural Resources and Tribal Cultural Resources

This section discusses cultural resources and Tribal Cultural Resources (TCRs). Cultural resources are buildings, sites, structures, or objects that may have historic, architectural, archaeological, cultural, or scientific importance. This section includes the environmental and regulatory setting for cultural resources and TCRs and describes potential impacts on cultural resources and TCRs that could result from implementing the project.

The study area includes all areas of project construction and staging that have the potential to impact known and undiscovered cultural resources and TCRs, which is defined as the Area of Potential Effects (APE) under Section 106 of the National Historic Preservation Act (NHPA). The APE, horizontally, encompasses a total of approximately ~~55~~ 82 acres~~, including 49.63 acres of construction footprint and 5.37 acres of staging areas~~.[1] The APE is defined by the vertical and horizontal extent that project components might impact any known or undiscovered cultural resources, therefore all project impacts would occur within the APE. The APE extends across 9 miles of Coyote Creek in reaches 4, 6, 7, and 8 between Montague Expressway and Tully Road in San José, California. Vertically, the APE includes the depths of cutoff walls (associated with I-walls) that would extend up to 30 feet below the ground surface, T-walls that would extend between 4 and 8 feet below the surface, L-walls with foundations and footings that would extend 4 feet below the surface, and buried passive barriers that would extend approximately 5 feet below the ground surface. The APE is depicted in **Figure 3.5.1** by project components; open spaces and parks are also depicted but are not part of the APE.

Database searches conducted at the Northwest Information Center for the project included the APE and a buffer. Information was collected for the buffer area to provide a regional context regarding the overall sensitivity of the area. Two database searches were conducted for the project. The first database search was conducted by Pacific Legacy, Inc., and included the APE and a 500-foot buffer. In 2021, GEI conducted a database search of the APE and a 200-foot buffer to account for changes to the project. The third database search, conducted by GEI in 2023, included the APE and a 50-foot buffer to fill small gaps in coverage due to minor project changes and because the previous database searches were more than two years old and considered outdated for review purposes. Because the previous database searches covered a 500-foot and 200-foot buffer; it was decided that a 50-foot buffer would be sufficient to provide an update to the previous database searches.

3.5.1 Environmental Setting

This section focuses on the Native American archaeological setting (also known as the pre-contact setting), the ethnohistoric setting, and the historic era setting of the project area. This section also includes a geologically based analysis of the potential archaeological sensitivity for surface and buried sites, and a discussion of natural environmental factors relevant to the cultural and historical patterns, both of which rely on the information presented the sections for other resource topics discussed in Chapter 3, "Environmental Setting, Impact Analysis, and Mitigation Measures."

[1] Minor modifications to the project description included in this Attachment 1 of the Final EIR would not meaningfully change the impact analyses and significance conclusions.

The information in this environmental setting section is presented to contextualize the inventory of cultural and tribal resources discussed in the impact analysis that follows, and as a basis for evaluating the significance of resources in the APE and degree of potential impacts to these resources.

Pre-Contact Setting

Native American Archaeological Setting

Three different taxonomic systems are used to describe the cultural chronology of the San Francisco Bay Area (Bay Area). The first employs broad temporal sequences; the second generally focuses on cultural sequences; and the third is a hybrid of these two. The third system can be refined further when applied to restricted areas that have more clearly distinctive cultural aspects or more finely resolved chronologies than the region. The following is the most recent, general cultural sequence for the Bay Area adapted from Milliken et al. (2007) and Lindley et al. (2021), which follows the hybrid system. Information from additional sources is included as appropriate. Date ranges are given in years before the current era (BCE) or current era (CE).

Terminal Pleistocene to Early Holocene: 13,000-8,000 BCE

No evidence for occupation during this period has yet been discovered, presumably because it has been washed away through stream action, buried under more recent alluvium, or submerged on the continental shelf (Rosenthal and Meyer 2004) or within the San Francisco Bay as it formed approximately 10,000 years ago.

Middle Holocene (Lower Archaic): 8,000-3,500 BCE

Ancestral Native American groups during this period employed a generalized mobile forager pattern. Characteristic artifacts include well-made milling slabs and handstones as well as wide-stemmed and leaf-shaped projectile points (Jones et al. 2007). The earliest date for a milling slab component in the Bay Area, 7,920 BCE, was obtained from a charcoal concentration found underneath a milling slab at Los Vaqueros Reservoir (CA-CCO-696[2]) in the hills east of Mount Diablo. Archaeobotanical remains recovered from the same site suggested an economy focused on acorns and wild cucumbers. Burials during this period tend to be flexed, sometimes found underneath cairns of milling slabs. Populations are thought to be sparse and highly mobile (Moratto 2004).

Early Middle Period (Middle Archaic): 3,500-500 BCE

Ancestral Native American groups changed during the Early Middle Period from being highly mobile to sedentary or semi-sedentary. Indicative of this is the appearance of substantial shell mounds in West Berkeley (CA-ALA-307), Ellis Landing (CA-CCO-295), and Pacheco (CA-MRN-152), as well as large house floors with postholes found at the Rossmoor site (CA-CCO-309). Mortars and pestles, some made of wood, greatly increase in number during this period, and burials contain greater amounts of ornamental goods. Changes in interment practices, such as

[2] This nomenclature is referred to as a trinomial which is used to identify specific cultural resources recorded by the California Historical Resources Information System maintained by the Office of Historic Preservation. The first part refers to the state (California), the second is a three-letter identifier for the county the site is located in, and the third part is a unique number that corresponds to the order in which it was recorded (e.g., smaller numbers correspond to an earlier recording date).

occasional burning before burial as identified at Los Vaqueros Reservoir (CA-CCO-637), also occurred during the Early Middle Period.

The presence of milling slabs and handstones beginning during the Early Holocene evidenced the use of small, hard seeds. During the Early Middle Period however, the relative number of these artifact classes decreased while mortars and pestles increased greatly, indicating that acorn use became much more important. Great Basin beads made of shell from the central and southern California coasts indicate long distance trade (Bennyhoff and Hughes 1987; Jackson and Ericson 1994).


Flood Risk Reduction Improvements
(includes 50-ft buffer)
New Flap Gate
New Manhole and Flap Gate
Bridge Headwall
Bridge Wingwall
Floodwall
Passive Barrier
Berm
Temporary Sandbag Berm
Construction Areas and Access
Staging/Laydown Area
Temporary Cofferdam
Temporary Creek Crossing
Park/Open Space
MONTAGUE EXPRESSWAY
Reach 4
Reach 5
Reach 7
Coyote Creek
Lower Silver Creek
Guadalupe River
0 0.25 0.5 1
Miles
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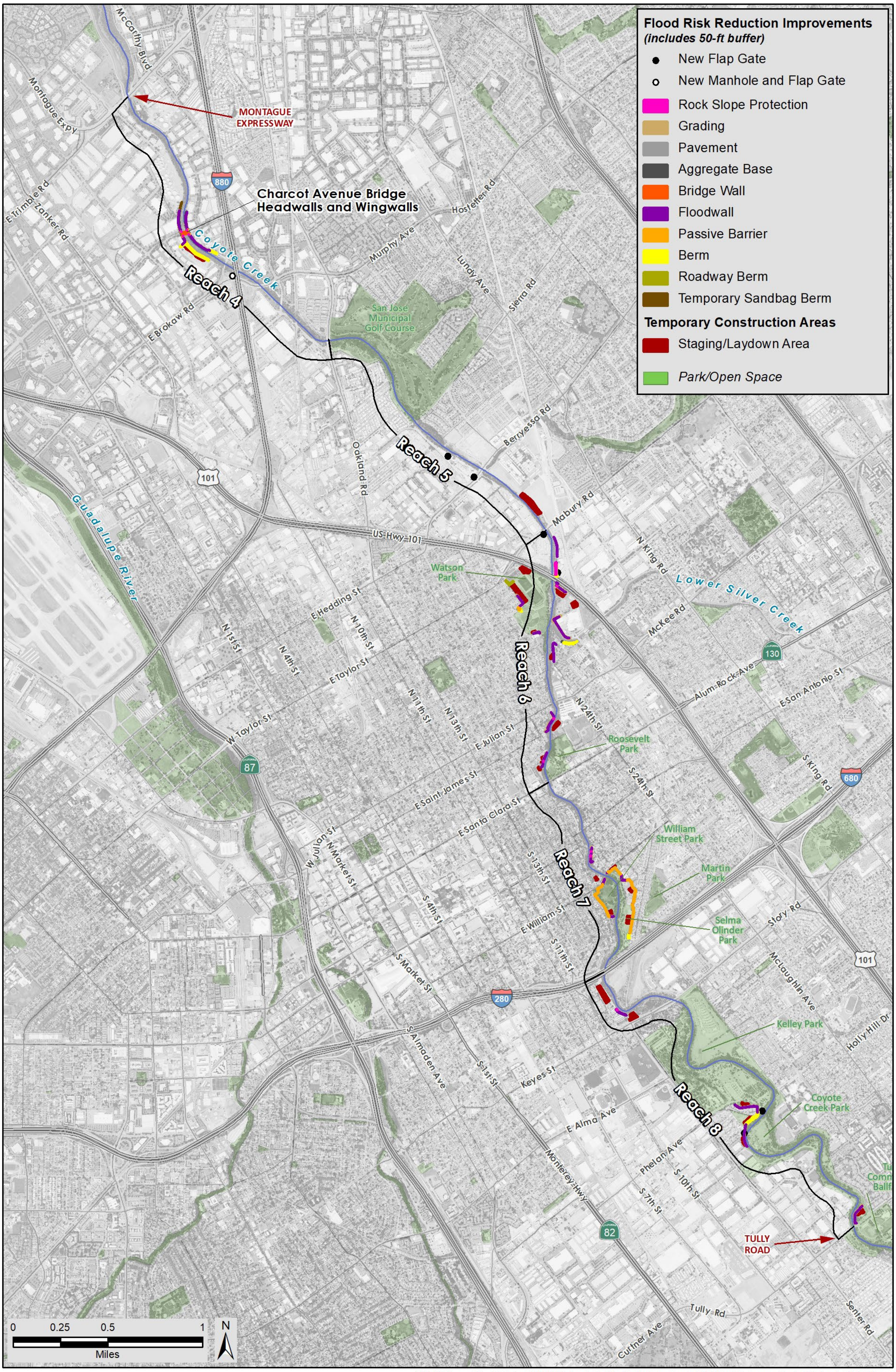

Figure 3.5.1. Area of Potential Effects

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Lower Middle Period (Initial Upper Archaic): 500 BCE-430 CE

Changes in ornamental items mark the beginning of this period. Rectangular shell beads, which had been used for 3,000 years, disappear from the archaeological record of the Bay Area, Central Valley, and Southern California. Split-beveled and small saucer beads made from *Olivella* shell enter the record, as do circular *Haliotis* shell beads. Spire-lopped *Olivella* beads, however, are more commonly found in burial contexts. Bead types such as *Olivella* saucer beads that previously had low representation become more prevalent. Other artifact types that date to this period include barbless fish spears, elk femur spatulae, and bone-tube whistles. In some parts of the Bay Area, basketry awls with shouldered tips appear in the record, indicating the manufacture of coiled basketry. Mortars and pestles were the sole grinding tools for most of the region, although milling slabs were still used around the periphery. Net sinkers, once prevalent, are now found only in very limited areas. Some areas that had not been heavily used in the past, such as the Napa Valley, now see more intensive use, with large accumulations of dark midden found at sites.

Upper Middle Period (Late Upper Archaic): 430-1050 CE

The Upper Middle Period is characterized by dramatic changes in mortuary practices and ornaments. Previously, individuals were buried in flexed positions, but this changed to an extended position during the Upper Middle Period. The beginning of this period also saw the abandonment of more than half the sites that had been occupied previously, a large increase in the amount of sea otter bone in the still-occupied sites, and a general collapse of the *Olivella* trade network. Artifacts that appear during this period are well-fashioned “show blades,” fishtail charmstones, single-barbed bone fish spears, ear spools, and large mortars. Seed recovery from midden also increases on at least some sites. In the Santa Clara Valley, from roughly 1000 to 1400 CE, the period is known as the Meganos Complex, named after the mortuary practice.

Initial Late Period (Lower Emergent): 1050-1550 CE

Artifacts associated with this period include fully shaped show mortars, new types of *Olivella* beads, as well as new types of multi-perforated and bar scored *Haliotis* ornaments. Other artifacts that appear are the flanged pipe, banjo shaped effigy ornaments, and bow-and-arrow technology. The banjo effigy ornaments may be the precursor to the ethnographically documented Kuksu cult, a widespread ceremonial system practiced by various language groups around the Bay Area. The first arrow-sized projectile points in the region were the Stockton serrated series, which were unique to central California.

The adoption of bow-and-arrow technology seems to have affected how lithic raw material was acquired in the region. Biface production and total amounts of debitage produced at Napa Glass Mountain obsidian quarries dropped significantly, while amounts of debris from that same source increased dramatically in the interior East Bay. Researchers have interpreted this as a rearranging of technology, in which large flakes from the Napa Glass Mountain sources were transported to more distant locales where small projectile points, preforms, and various simple flake tools were produced. This would in contrast with earlier periods when more time would have been spent at the quarries to fashion tools that required more work and larger amounts of material to produce.

Terminal Late Period: 1550 CE-Contact

Beads are once again a marker for change during this period. The *Olivella* sequin and cup beads that distinguished the previous period disappear and are replaced by greater numbers of clamshell disk beads, while *Olivella* lipped and spire-lopped beads are found in some parts of the Bay Area. Site distribution does not change, however, although midden accumulations for this period are generally thinner. Interestingly, evidence of the manufacture of clam disk beads is found not along the coasts, but farther inland in the Santa Rosa Plain and the Berryessa Valley (30 kilometers and 80 kilometers inland, respectively).

Another changing characteristic of this period is projectile point types. The Stockton serrated point series is replaced by simpler corner-notched arrow points in some areas, while Desert Side-Notched points appear in others. Other artifacts appearing during this period are the toggle harpoon, hopper mortar, and magnesite tube beads.

Ethnohistoric Setting

The project lies within the traditional territory of the Ohlone (previously known as Costanoan) speaking peoples. Ohlone is a langue family that consists of eight distinct but related languages (Levy 1978), although Kroeber (1925) recognized only seven. Ohlone language family speakers were and are organized into multiple ethnic groups, which are generally based on a common language or dialect and territory. At the time of European contact, the Ohlone lived in approximately 50 separate, politically autonomous nations or "tribelets," four of which were in Santa Clara County, where the Tamien language was spoken (Levy 1978). Overall, the Bay Area was the densest populated area in California, north of Mexico (Margolin 1978:1). Coyote Creek, and thus the project area, appears to have been the boundary between the Tamien speaking Tamien tribelet and the lesser-known Santa Ysabel tribelet, who had at least one village located along Coyote Creek (Milliken et al. 2009).

The Ohlone carefully managed the land, helping to ensure good animal and plant yields through controlled burning of extensive areas (Paddison 1999:11). This reduced risk of large, uncontrolled fires, minimized the presence of chaparral species, promoted the growth of seed-bearing annual plants, and provided extensive grazing areas for game animals. Acorns were likely the most important food for the Ohlone and were used to make mush or acorn bread (Levy 1978; Margolin 1978:41). Acorn was harvested during the fall (Margolin 1978:42). Poles were used to dislodge acorns from trees; the acorns were then ground and leached to remove tannin. Leaching was a complicated and involved process, with the time necessary to complete dependent on the species of acorn (Margolin 1978:43–44). Buckeye nuts were similarly used but secondary in importance. Some of the other plant foods used included tarweed, chia, digger pine, blackberries, elderberries, wild onion, thistle, and several other greens and roots (Levy 1978; Margolin 1978:46–51).

A variety of mammals were hunted, often taken by a single hunter. These species included black-tailed deer, grizzly bear, elk, antelope, sea lion, and whale. Hunting techniques included disguise, driving prey off cliffs, or ambushes; hunting was strictly a male activity (Margolin 1978:25–26, 84). Smaller mammals that were used for food included dog, wildcat, skunk, raccoon, cottontail, jackrabbit, and many rodent and reptile species (Levy 1978; Margolin 1978:25). Rabbits were communally hunted with nets. Waterfowl, including Canada goose, snow goose, white-fronted goose, mallard, teal, and American coot, were the most important birds eaten. Fish species that were important to the Ohlone included steelhead, salmon, sturgeon, and lamprey. Sturgeon and salmon were caught in seine nets. Other fish-catching techniques included the use of baskets, dip nets, and spearing. Honey was also gathered. Mussels were a very important food source along the coast (Levy 1978). Some animals, such as frogs, eagles, buzzards, ravens, and owls, were taboo for religious reasons (Margolin 1978:24).

Dwellings consisted of domed structures thatched with tule, grass, wild alfalfa, ferns, or carrizo. These plants were tied onto a framework of poles using willow withes. Some groups used a more conical structure made of split redwood or redwood bark. These homes tended to be small (Margolin 1978:15). Sweathouses generally held only six to eight individuals. Sweathouses were constructed by excavating a pit near a creek or stream bank. The remainder of the structure was built against the bank. Dance areas were circular or oval and enclosed by fences made of brush or laurel branches. Some assembly structures were large enough to hold an entire community of 200 individuals; they were usually located in the center of the village, with dwellings around the periphery (Levy 1978).

The Ohlone employed an extensive technological array of items. Tule balsas were used for watercraft and propelled with a double-bladed paddle. There are some reports that stone anchors were used (Levy 1978). The Ohlone made both sinew-backed and self-bows for hunting and warfare; the wood for the bows was often acquired through trade (Margolin 1978:30). Arrows were made with three-feather radial fletching attached with asphaltum, a cane shaft, and a hardwood foreshaft. Arrowheads were made of stone, bone, or were created out of the foreshaft. Nets were used to capture a variety of animals. Rocks and minerals were used for tools including manos, metates, net sinkers, anchors, pipes, arrowheads, and a variety of flaked stone tools. Stuffed ducks were used as hunting decoys (Margolin 1978:15). Minerals also were used to make pigments. Cordage was made from milkweed, Indian hemp, or nettle. Blankets were made from strips of sea otter while bedding was manufactured from tule mats or animal skins (Levy 1978).

Basket making was a highly developed art and craft among the Ohlone (Margolin 1978:117–122). Baskets were twined rather than coiled and made of willow, rush, tule, and various cut grasses. Often, baskets were ornamented with abalone shell, quail plumes, and woodpecker scalps. Baskets were used for the collection, preparation, storage, and serving of food, and for water containers and a variety of other tasks and gifts (Levy 1978; Margolin 1978:117–122).

Historic Setting

Settlement

The Spanish explored and settled the Santa Clara Valley as early as 1769 with the goal of establishing missions in the area to strengthen their claim and power in the region. (Archives and Architecture 1992:2). The population of Santa Clara County remained stagnant until the Mexican government assumed control of the region in 1822. After the U.S. government acquired the California territory in 1848 with the Treaty of Guadalupe Hidalgo, the population grew. Settlers arrived, established farms, and raised livestock. In 1850, California gained statehood and people flooded into the state, transforming the region (Archives and Architecture 1992:3). The construction of rail lines in the Santa Clara Valley starting in the late 19th century (including the Western Pacific Railroad [WPRR]), allowed for the shipment of goods to East Coast markets and easier transportation to the area, which significantly bolstered economic development, agricultural production, and population growth in the area (Archives and Architecture 1992:3). The economy remained largely agriculturally based until the post-World War II period, when it gradually shifted to technology.

Santa Clara County and San José

In 1777, Spanish explorer José Joaquin Moraga established a pueblo in San José (Archives and Architecture 1992:2). The community of San José continued to grow after the U.S. assumed control in 1849, and the economy focused on livestock and cattle raising. (Archives and Architecture 1992:4, 6). San José incorporated as a city in 1850. The rail line made the City of San José (City) more accessible for travelers and easier for local farmers to export their crops to market (Archives and Architecture 1992:6, 7). At the turn of the 20th century, the City became a flagship for many industries in the west such as the automobile and fruit industries (Archives and Architecture 1992:8, 9). As the population increased, the City annexed nearby districts and neighborhoods such as the Gardiner District and East San José which were annexed in 1911 (Archives and Architecture 1992:9).

Development beyond the City continued in the post-World War II years. The war transformed California into a technology manufacturing machine, which forever changed the City and Santa Clara County. Suburban neighborhoods became the norm and continued to develop into the 21st century. Several manufacturing and technology-related companies such as General Electric and International Business Machines also made the City their home during the postwar decades. The region's economy shifted from agriculture to defense and technology (Archives and Architecture 1992:10). The advent of technology and "Silicon Valley" in the late 20th century further contributed to a booming economy the region continues to enjoy. Presently, there are 1.928 million people living in Santa Clara County (USCB 2022).

Resources in the Area of Potential Effects

Records searches identified four previously recorded cultural resources in the APE, shown in **Table 3.5.1**. In addition, portions of the Naglee Park Conservation Area, a historic area designated by the City under San José Municipal Code Section 13.48, are in or in close vicinity to the APE. The Conservation Area borders Coyote Creek to the east between East Santa Clara Street and East William Street.

Four previously recorded cultural resources are in the APE; one contains a multiple-period site with a distinct Native American archaeological component (P-43-000087); a second contains archaeological and historic-era artifacts (427D-006) consisting of a loosely associated scatter of artifacts that are not definitely in association. The remaining two previously recorded cultural resources are historic era built environment resources. These include the Charcot Avenue Bridge (P-43-000927), and a portion of a maintenance yard (P-43-003902).

Native American Communication and Consultation

Initial Outreach

As part of the initial cultural resource assessment conducted by Pacific Legacy for the project, the Native American Heritage Commission (NAHC) was contacted on January 17, 2020, to request a search of the Sacred Lands Files (SLF) for Native American cultural resources in or near the project area, and to request a contact list of Tribes and Native American representatives with potential interest in or knowledge of the project area or vicinity. On January 24, 2020, the NAHC responded that the SLF search results were positive, and that Native American traditional cultural resources listed in the SLF are in or near the APE. The NAHC also provided a contact list of Native Americans and Tribal representatives with potential interest in, or knowledge of, the project and vicinity who should be contacted for further information. The contact list from the NAHC included the following Tribes:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- North Valley Yokuts Tribe
- Rumsen Am:a Tur:ataj Ohlone
- Tamien Nation
- The Confederated Villages of Lisjan
- Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

GEI contacted the NAHC on November 17, 2021, to identify any updates to the SLF that may pertain to the current project, and to request an updated contact list of Native American Tribes and representatives affiliated with the region. On January 3, 2022, the NAHC responded that the results of the SLF search were the same and provided an updated contact list with an additional Tribe listed than in the previous years. The Tamien Nation is now listed by the NAHC as a Native American Tribal contact.

To date, no information on specific Native American cultural resources in or near the project area has been provided by the Native American Tribes or representatives contacted in 2020 or 2021. Four Tribes or Native American representatives indicated that the project is in a generally culturally sensitive area and requested some level of cultural sensitivity training for construction crews and/or Tribal and archaeological monitoring for the project when near known Native American archaeological sites. The following are the specific requests and suggestions made by Native American Tribes and individuals; this input was considered in developing mitigation measures for project impacts on archaeological resources and TCRs:

- Chairperson Perez of the North Valley Yokuts Tribe stated an interest in monitoring the ground-disturbing activities of the project. Chairperson Perez also requested that:
    - Northern Valley Yokuts Tribe and Nototomne Cultural Preservation Tribal representatives be allowed to observe and participate in cultural resources studies.
    - The Northern Valley Yokuts Tribe be consulted about any potential archaeological subsurface testing or data recovery beforehand.

  - Tribal cultural resources be preserved in place and avoided, when possible.
  - If Tribal cultural resources are identified that Northern Valley Yokuts Tribe monitors should be present for all ground-disturbing activities in the vicinity, per the Tribes policies.
- Chairperson Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista has previously requested that construction crews receive training on cultural resources and has recommended archaeological and Native American monitoring for new ground-disturbing activities for Valley Water projects.
- Chairperson Sayers of the Indian Canyon Mutsun Band of Costanoan Ohlone People has also previously recommended Native American and archaeological monitoring, specifically when work occurs within known archaeological and/or Tribal Cultural Resource sites.
  - Chairperson Sayers also requested that Valley Water develop a plan in case Native American human remains are encountered in a known or unknown site.
  - Kanyon "Coyote Woman" Sayers-Roods, also of the Indian Canyon Mutsun Band of Costanoan Ohlone People, emphasized that the Project is in a generally sensitive area and recommended cultural competency training by Tribal representatives.

AB 52 Consultation

Valley Water, as the CEQA lead agency, must consider impacts to Tribal Cultural Resources by initiating consultation with Native American Tribes who request government to government consultation under AB 52 (Chapter 532, Statutes 2014). Valley Water sent AB 52 consultation letters via certified mail, and also via e-mail to the Muwekma Ohlone Indian Tribe of the Bay Area and the Tamien Nation on November 6, 2023. These tribes had previously requested to be notified of Valley Water projects under AB 52 and are traditionally and culturally affiliated with the project area. Neither Tribe communicated their intent to initiate formal AB 52 consultation within the 30-day AB 52 response deadline.

3.5.2 Regulatory Setting

Federal Laws, Regulations, and Policies

National Historic Preservation Act Section 106

The studies described in this report were conducted in compliance with the NHPA (54 U.S.C. Section 300101), Section 106 and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, as amended. Section 106 requires that federal agencies and entities that these agencies fund or permit consider the effects of their actions on properties that are listed in the National Register of Historic Places (NRHP) or that may be eligible for such listing.

National Register of Historic Places

The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The NRHP criteria and associated definitions are outlined in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (NPS 1997). The following is a summary of that bulletin.

Properties (structures, sites, buildings, districts, and objects) more than 50 years of age can be listed in the NRHP provided they meet one of the evaluation criteria described below; however, properties less than 50 years of age that are of exceptional significance or are contributors to a district, that also meet the evaluation criteria, can be included in the NRHP.

The NRHP uses four criteria under which a property can be considered significant for listing.

A. Properties associated with events that have made a significant contribution to the broad patterns of history.

B. Properties associated with the lives of persons significant in our past.

C. Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

D. Properties that have yielded or may likely yield information important in prehistory or history.

Properties can be listed individually or as contributors to a historic district. In addition to meeting one of the evaluation criteria, a property must also retain integrity to convey that significance. The NRHP recognizes seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association.

State Laws, Regulations, and Policies

California Register of Historic Resources

A historical resource may be eligible for inclusion in the California Register of Historic Resources (CRHR), as determined by the State Historical Resources Commission or the lead agency, if the resource:

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

In addition, a resource is presumed to constitute a “historical resource” if it is included in a “local register of historical resources” unless “the preponderance of evidence demonstrates that it is not historically or culturally significant.” (CEQA Guidelines Section 15064.5[a][2]). In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (OHP 2020).

California Environmental Quality Act

CEQA (Public Resources Code [PRC] Section 21000 et seq.) offers directives regarding impacts on historical resources and unique archaeological resources. The CEQA Guidelines

Section 15000 et seq.) define a “historical resource” to include more than one category of resources. The first category is “resource(s) listed or eligible for listing in the CRHR.” (CEQA Guidelines Section 15064.5[a][1]; *see also* PRC Sections 5024.1 and 21084.1).

In addition to the obligation to consider impacts on “historical resources,” CEQA and the CEQA Guidelines require consideration of unique archaeological sites (PRC Section 21083.2, Section 15064.5). A “unique archaeological resource” is defined in CEQA (PRC Section 21083.2[g]) as:

> …an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The CEQA Guidelines (Section 15064.5[e]) require that excavation activities be stopped whenever human remains are uncovered, and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the CEQA Guidelines (Section 15064.5[d]) direct the lead agency to consult with any appropriate Native Americans as identified by the NAHC in a timely manner, and direct the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Tribal Cultural Resources

Consistent with AB 52 (see below), the CEQA Guidelines require consideration of TCRs, which are either: (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that is either on or eligible for inclusion in the CRHR or a local historic register; or, (2) resources the lead agency (in this case, Valley Water), at its discretion and supported by substantial evidence, chooses to treat as a TCR.

Assembly Bill 52

Assembly Bill (AB) 52, effective July 1, 2015, amended CEQA and added sections relating to Native American consultation and TCRs. PRC Section 21084.2 provides that a project with an effect that may cause a substantial adverse change in the significance of a TCR may have a significant effect on the environment. PRC Section 21080.3.1(b) requires the lead agency to begin consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project if the Tribe requests the lead agency, in writing, to be informed by the lead agency through formal notification of projects that are proposed in that geographic area and the tribe subsequently requests consultation. PRC Section 21084.3 states that “public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.

To comply with AB 52, Valley Water sent AB 52 consultation letters to the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area and the Tamien Nation. Neither Tribe requested formal AB 52 consultation.

California Public Resources Code Section 5097

PRC Section 5097.5

PRC Section 5097.5 states that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archeological or vertebrate paleontological site, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

PRC Section 5097.9

PRC Section 5097.9 states that no public agency or private party using public property or operating on public property, under a public license, grant, lease, or contract shall in any manner interfere with the free expression or exercise of Native American religion as provided in the United States or California constitutions. It further states that no such agency or party shall cause irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property.

PRC Section 5097.99

PRC Section 5097.99 states that no person shall obtain or possess any Native American artifacts or human remains which are taken from a Native American grave or cairn except as otherwise provided by law; doing so constitutes a felony punishable by imprisonment as is removal of Native American artifacts or human remains with an intent to sell or dissect or with malice or wantonness.

PRC Section 5097.993 (Native American Historic Resource Protection Act)

PRC Section 5097.993, the Native American Historic Resource Protection Act, states that a person who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the CRHR is guilty of a misdemeanor if the act was committed with specific intent to vandalize, efface, destroy, steal, convert, possess, collect, or sell. The act must have been committed on public land or by a non-landowner on private land.

California Health and Safety Code Section 7050.5

14 Section 7050.5 of the California Health and Safety Code prohibits the disinterment, disturbance, or removal of human remains from any location other than a dedicated cemetery. PRC Section 5097.98 (also referenced in State CEQA Guidelines Section 15064.59[e]) identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicate cemetery. These steps include but are not limited to requiring that if human remains are discovered in any place other than a dedicated cemetery no further disturbance or excavation of the site or nearby area reasonably suspected to contain remains shall occur until the county coroner has examined the remains.

Regional/Local Laws, Regulations, and Policies

Envision San José 2040 General Plan

The following goals and policies from the Envision San José 2040 General Plan, related to cultural resources and conservation areas, may be relevant to the project (City of San José 2024).

Goal ER-10.1: Preserve and conserve archaeologically significant structures, sites, districts, and artifacts in order to promote a greater sense of historic awareness and community identity.

- **Policy ER-10.1:** For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
- **Policy ER-10.3:** Ensure that City, state, and federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

Goal LU-13: Preserve and enhance historic landmarks and districts in order to promote a greater sense of historic awareness and community identity and contribute toward a sense of place.

- **Policy LU-13.1:** Preserve the integrity and fabric of candidate or designated Historic Districts.
- **Policy LU-13.2:** Preserve candidate or designated landmark buildings, structures, and historic objects, with first priority given to preserving and rehabilitating them for their historic use, second to preserving and rehabilitating them for a new use, or third to rehabilitation and relocation on-site. If the City concurs that no other option is feasible, candidate or designated landmark structures should be rehabilitated and relocated to a new site in an appropriate setting.
- **Policy LU-13.4**: Require public and private development projects to conform to the adopted City Council Policy on the Preservation of Historic Landmarks.
- **Policy LU-13.5:** Evaluate areas with a concentration of historically and/or architecturally significant buildings, structures, or sites and, if qualified, preserve them through the creation of Historic Districts.
- **Policy LU-13.6:** Ensure modifications to candidate or designated landmark buildings or structures conform to the Secretary of the Interior’s Standards for Treatment of Historic Properties and/or appropriate State of California requirements regarding historic buildings and/or structures, including the California Historical Building Code.
- **Policy LU-13.9:** Promote the preservation, conservation, rehabilitation, restoration, reuse, and/ or reconstruction, as appropriate, of contextual elements (e.g., structures, landscapes, streetlamps, street trees, sidewalk design, signs) related to candidate and/or landmark buildings, structures, districts, or areas.

- **Policy LU-13.12**: Develop and encourage public/public and public/private partnerships as a means to support, expand, and promote historic preservation.
- **Policy LU-13.15:** Implement City, state, and federal historic preservation laws, regulations, and codes to ensure the adequate protection of historic resources.
- **Policy LU-13.19:** Continue to identify landmarks, landmark districts and Conservation Areas on the Land Use/Transportation Diagram as Ares of Historic Sensitivity.

Goal LU-14-Historic Structures of Lesser Significance: Preserve and enhance historic structures of less significance (i.e., Structures of Merit, identified Structures, and particularly Historic Conservation Areas) as appropriate, so that they remain as a representation of San José's past and contribute to a positive identify for the City's future.

- Policy LU-14.3: Design new development, alterations, and rehabilitation/remodels in Conservation Ares to be compatible with the character of the Conservation Area. In particular should respect character defining elements of the area that give the area its identity.
- Policy LU-14.6: Consider preservation of Structures of Merit and Contributing Structures in Conservation Areas as a key consideration in the development review process. As development of proposal are submitted, evaluate the significance of structures, complete non-Historic American Building Survey level of documentation, list qualifying structures on the Historic Resources Inventory, and consider the feasibility of incorporating structures in the development proposal, particularly those structures that contribute to the fabric of Conservation Areas.

City of San José Municipal Code 13.48

The City's Historic Preservation Ordinance (San José Municipal Code [SJMC] 13.48) contains work and design guidelines that are relevant to the project. SJMC 13.48.600 states that the purpose of the section "is to establish procedures for the designation of conservations areas in order to recognize, preserve and enhance the character of qualifying neighborhoods." SJMC 13.348.650 contains work and design guidelines for structures within conservations areas:

(A): Changes to the exterior for any structure located on property within a conservation area shall be performed in a manner consistent with any and all design guidelines approved or accepted by the city council for the preservation of historic structures and for the particular type of structure proposed for change.

(B): Changes to the exterior of any structure located on a property within a conservation area may trigger the requirement for a single-family house permit pursuant to the provisions of Part 9 of Chapter 20.100 of Title 20 of this Code.

3.5.3 Applicable BMPs and VHP Conditions/AMMs

Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that may result from the project. AMMs are project specific measures that have been identified to supplement the standard Valley Water BMPs to minimize impacts from project construction and implementation. All relevant Valley Water BMPs, VHP Conditions, and AMMs for the project are included in Appendix B and incorporated in the project, as described in Chapter 2, "Project Description." No VHP Conditions or AMMS are applicable to cultural or tribal cultural resources. Valley Water BMPs relevant to cultural and tribal cultural resources include the following:

- **CU-1: Accidental Discovery of Archaeological Artifacts or Burial Finds** – Specifies the process of addressing discovery of archaeological artifacts or burial remains during construction to meet PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines, County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs. If archaeological remains are inadvertently discovered all excavation within 100 feet of the find will immediately cease, and a consulting archaeologist will visit the site as soon as practicable. The archaeologist will determine if the find is significant or not. If found significant then 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. If human remains are inadvertently discovered then all work within 100 feet of the discovery or any nearby area reasonably suspected to overlie adjacent remains will cease except as authorized by the County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs.

3.5.4 Methods

This section is informed by cultural resources investigations conducted by GEI for the project which are fully documented in the report: *Cultural Resources Inventory and Evaluation Report for the Coyote Creek Flood Protection Project – Project B* (GEI 2024) (confidential Appendix E).

Records Search and Archival Research

GEI conducted archival and records research for the APE. As part of this task, GEI visited the Santa Clara County Office of the Assessor; the City Planning Department; the Joyce Ellington Branch Library, San José; and the California Room of the California State Library, Sacramento. Online research included accessing David Rumsey's online map collection, Nationwide Environmental Title Research, LLC's online historic aerials, the U.S. Geological Survey quadrangle map collection, and the City of San José website for information on its historic properties, including the Naglee Park Conservation Area. GEI also conducted an in-person records search of the APE where there is the potential for the project to impact cultural resources and a 200-foot buffer (the records search in the 200 foot buffer were examined only for contextual reasons and any resources found in the buffer are not discussed or given consideration) on November 13, 2023, at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) [NWIC File No.: 23-0670] to update previous record searches. Previous searches included one on December 2, 2021, by GEI [NWIC File No.: 21-853] and two by Pacific Legacy on February 7, 2020, and May 5, 2020, which included the entire APE, the Coyote Creek Flood Management Measures Project (CCFMMP) project area, and a 200-foot buffer [NWIC File Nos.: 19-1183 and 19-1888].

Field Surveys

Archaeological Field Survey

GEI conducted intensive pedestrian surveys on December 2, 3, 6, and 7, 2021, and October 17-19, 2023. The archaeological surveys covered approximately 39 acres of the project area with 15-meter spacing between transects, which were modified by project boundaries, terrain, and the degree of access provided to specific areas. No new cultural or historic era resources were observed during the supplemental survey.

Built Environment Field Survey

GEI conducted intensive pedestrian surveys of the APE on February 9, 2022, and October 19, 2023. As part of this survey, a GEI architectural historian recorded historic era (more than 45 years old) built environment resources in the APE. Results of the findings of field surveys are including in the "Findings" section below.

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Table 3.5.1. Cultural Resources Previously Identified In and Adjacent to the Project Area

Resource No. (P-43-)	Trinomial (CA-)	Type	Age	Description	Recorded NRHP Eligibility	Proximity to Project area Reach
000087	SCL-70/H	Site	Multi-component	Native American site with burials and a scatter of lithic debitage and fire affected rock. Also, a built historic-era farming site with associated features.	Considering eligible for purposes of this project	Within and adjacent to Reach 8
000927	None	Structure	Historic	The Charcot Avenue Bridge is a concrete bridge with a planter box spanning Coyote Creek. Bridge ID: 37C-0727	Not Eligible by consensus (6Y1)	Within Reach 4
002654 (also 01-002190)		Structure/ Site	Historic	A common metal warehouse at the City of San José DOT Mabury Service Yard, and the yard itself. Warehouse dates to 1966, while the yard dates to roughly the same period	Not Eligible by consensus (6Z)[3]	Within and adjacent to Reach 6 Improvements
427D-006	None	Site	Historic	An extensive but sparse scatter of mixed and modern historic-era refuse. No specific site identified in previous records or through survey	Not evaluated	Within and adjacent to Reach 6 Improvements

[3] California Historical Resource Status Code 6Z: Found ineligible for NRHP, CRHR or Local designation through survey evaluation.

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Assessment of Sensitivity for Buried Archaeological Resources

An analysis of the sensitivity for buried archaeological resources was conducted by Pacific Legacy within the entire APE and areas within the CCFMMP in 2020 (Holm 2021). A second sensitivity analysis was conducted by Far Western Anthropological Research Group (FWARG) in 2021 for the CCFMMP (Lindley et al. 2021). The analysis presented in this section relies on these two previous analyses.

Surface geologic and soil mapping were examined by Pacific Legacy and FWARG for the APE to assess the sensitivity for buried and intact cultural resources. Historical topographic maps were also examined to understand changes to Coyote Creek and the adjacent floodplain, particularly in the project vicinity. Both studies are based on the archaeological sensitivity models for the Santa Clara Valley and vicinity that were first developed by Rosenthal and Meyer (2004) and refined by Meyer and Rosenthal (2007). The archaeological sensitivity model was built by correlating the publicly available National Cooperative Soil Survey (NCSS) geographic database with field observations, vertical soil profiles, and radiocarbon dates from existing studies and original fieldwork. Initial age estimates were based on the degree of soil profile development provided in soil series descriptions, and then these estimated ages were refined with radiocarbon dates, correlation to other dated deposits, the geomorphic position of associated landforms, and the degree and extent of erosional dissection (Meyer and Rosenthal 2007:15-16).

Based on this model, NCSS soil map units can be consistently associated with landforms that occupy similar geomorphic positions on the landscape, and these units can then be grouped by major temporal periods and depositional processes and assigned to a scale of relative sensitivity for buried cultural resources classifications (Meyer and Rosenthal 2007:25). Based on the preceding discussion and this model the relative sensitivity for buried cultural resources within the APE can be categorized as having a low, moderate, or high potential for containing buried and intact archaeological sites, as follows:

- **Low potential:** soils and/or sediments associated with landforms that predate human occupation of the area (i.e., Late Pleistocene and older); bedrock surfaces; steep and heavily eroded hillslopes; and alluvium in active stream channels.
- **Moderate potential:** soils and/or sediments not falling into the Low or High potential categories.
- **High potential:** soils and/or sediments described as being relatively deep (more than 1-meter) deposits of sand textures and finer with weak surface soil development. Areas of High potential at the APE are likely limited to alluvial landforms interpreted to be Late Holocene in age.

Natural and anthropogenic alterations to the landscape of the APE were also considered, such as changes in the path of Coyote Creek and related erosion, and the impacts of urban development. Natural and anthropogenic landscape changes both impact the likelihood of finding intact archaeological sites, even if the soils and geology are otherwise conducive to the preservation of buried archaeological sites.

Soils within the Santa Clara Valley generally comprise very deep, poorly drained clay to silty clay formed in alluvium from mixed rock sources. Most of the valley is composed of alluvial fan deposits of gravel, sand, silt, and clay brought by streams originating from upland drainages or mountain canyons. Modern alluvial deposits are sometimes present along major drainages, such as Coyote Creek, but most of these date to the last 2000 years or so (Late Holocene), with some fans dating to the Late Pleistocene and Early Holocene. In these cases, only thin layers of Holocene sediment overlie Late Pleistocene deposits. In general, the depositional environment of most of the Santa Clara Valley has a moderate to high potential for containing buried archaeological sites. There are exceptions to this general sensitivity assessment, particularly in areas altered by historic-era anthropogenic landscape modifications, and where active channel cutting has occurred during the historic era, or earlier.

Prior to modern channelization, the middle reaches of Coyote Creek, where most of the project is located, was an intermittent creek that was dry at the surface most of the year and had no connecting tributaries (Grossinger et al. 2006: II-4, IV-38). The morphology of this section of the creek consisted of a deep and broad system that ranged between 500 and 1,500 feet wide in some locations, but with some interspersed short, narrow reaches. However, the widest portions of Coyote Creek have wide inset benches and terraces (Grossinger et al. 2006: II-4, II-34). In such braided channel settings, water flow and discharge are variable over time, with periodic high discharge events that sometimes rework the entire streambed, shift channel positions, and create and/or destroy sand bars (Waters 1992:124–125). In general, the dynamic and often high-energy processes that occur in braided channels is likely to impact surface or buried archaeological sites, if any exist, either within the channel or within the immediate vicinity of the channel (Waters 1992:126). This is particularly the case for project improvements along Reaches 4 and 6. These reaches have a low to moderate potential for buried archaeological sites due to the ecological history of the creek, as discussed above, and are not considered particularly sensitive for buried Native American archaeological resources. However, the more southern portions of the APE along Reach 7, and particularly Reach 8 (which contains a known, multi-component site; see discussion in the next section), which are on the creek floodplain, have a moderate to high potential for buried archaeological sites.

In addition to the potential for buried archaeological (pre-contact) sites in the APE, which mainly relies on geomorphic and environmental factors (Lindley et al. 2021:23), FWARG assessed the potential for buried historic-era sites/resources, which depend on historic period developments and disturbances. According to their review, which covered Reaches 5 to 7 of the current CCFPP, FWARG determined that Reaches 5 and 6 have low potential, while Reach 7 has high potential. Based on GEI's assessment of the project reaches, and recent field surveys, Reaches 4 and 5 have low potential and Reaches 6 to 8 have moderate to high potential for buried historic-era resources.

Findings

This section summarizes the findings of the activities described above that were conducted to identify cultural resources.

Archaeology

One multi-component, pre-contact Native American and historic-era archaeological site (P-43-000087/CA-SCL-70/H) extends into APE in Reach 8. P-43-000087 is potentially intact and contains one or more burials. As currently plotted it is not in an area where excavation is planned on being conducted, but it is immediately adjacent to a project improvement that requires excavation during construction. P-43-000087 has not been formally evaluated;

however, the precontact component of the resource was previously recommended as eligible and is listed in the CRHR. For purposes of the project all components of the resource are being considered eligible for listing in the CRHR and NRHP.

Informal resource 427D-006, which was not assigned a “P-“ number by the information center, extends into a project improvement within Reach 6 that requires excavation during construction; however, none of the previously recorded information on this possible cultural resource, nor any of the data collected during the 2021 archaeological pedestrian survey, indicate that this informal resource is intact or significant or meets the definition of a unique archaeological resource (i.e., contains information needed to answer important scientific research, has a special and particular quality such as being the oldest of its type or the best available example of its type). Given its sparse nature, lack of a subsurface deposit, and paucity of diagnostic artifacts, this resource is not eligible for listing in the CRHR.

Tribal Cultural Resources

At Valley Water’s discretion, P-43-000087 is being considered a Tribal Cultural Resource. This resource contains a component that may have cultural significance to Native American Tribes.

Built Environment

As a result of the two surveys, GEI identified and recorded 32 historic-era (more than 45 years old) resources and a conservation area within the APE or 500 feet of the APE. The resources include 3 previously recorded historic properties (Charcot Avenue Bridge, the WPRR trestle, and the Mabury Maintenance Yard) as well as 29 single-family and multi-family residences dating from the early 1900s to the late 1960s. In addition, some portions of the APE are within or in close vicinity to the Naglee Park Conservation Area which is listed in the City’s Historic Resources Inventory and is also designated as a conservation area per local ordinance (City of San José 2024). Below is a more detailed discussion of the three previously identified resources in the APE.

Charcot Avenue Bridge

Caltrans evaluated the Charcot Avenue Bridge and determined it to be ineligible for the NRHP because of a lack of historical significance (Archives & Architecture 1992). In 1994, the bridge was recommended as ineligible for the San José Historic Resources Inventory (Archives & Architecture 1994). The bridge was evaluated for the CRHR for the purposes of this project. The bridge is a standardized bridge that is not directly associated with significance events or individuals in the San José region and does not appear to meet CRHR Criterion 1 or 2. For Criterion 3, the bridge is a ubiquitous type and does not exhibit any unique construction methods or design. Lastly, under Criterion 4, the bridge is not the sole source of important information as required by a built environment resource and does not meet CRHR Criterion 4.

WPRR

The WPRR trestle is part of the former WPRR alignment that extended through San José. An evaluation of the entire WPRR alignment is beyond the scope of this project; therefore, the WPRR alignment is assumed eligible for the NRHP/CRHR for the purposes of this project for its association with rail transportation and development. The trestle was previously recommended as ineligible for the NRHP because of a lack of integrity (JRP Historical Consulting 2002). The trestle is recommended as not meeting NRHP/CRHR eligibility because of a lack of integrity.

Mabury Maintenance Yard

The Mabury Maintenance Yard was recorded and evaluated in 2006 and recommended as not meeting eligibility requirements for the NRHP and the CRHR because of a lack of historical significance (JRP Historical Consulting 2006). The previous evaluation stated the property did not appear to meet CRHR Criterion 1 because of a lack of historical significance association with city development at local or state levels. The property is not associated with any historically significant people (Criterion 2) and does not embody distinctive architectural characteristics of a period, type, or method of construction (Criterion 3). Under Criterion 4, the property does not appear to be a principal source of important information. GEI revisited the property as part of this project to assess its current condition and agrees with the previous recommendation of ineligibility.

The remaining 29 resources in the APE were newly recorded and evaluated by GEI for the NRHP/CRHR. None of the historic-era built environment resources within the APE meets the eligibility requirements for the NRHP/CRHR. In general, the 29 resources are examples of 20th century residential development in the San José area. There is no evidence that the properties are directly associated with significant events or individuals important to the region, thus they do not appear to meet Criteria 1 or 2. The properties also do not exhibit unique design or construction methods and therefore do not appear to meet Criterion 3. Under Criterion 4, they do not appear to be the sole source for information important to history.

The 32 properties lack historical significance at the local, state, and national level. They are also not listed on a local register, nor have they been determined historical by an agency. Therefore, these resources are not considered historical resources for the purposes of CEQA. Additional information on these resources can be found in confidential Appendix E. (GEI 2024).

The Naglee Park Conservation Area is a former estate property associated with General Henry M. Naglee. It is bounded by E. Santa Clara Street to the north, Coyote Creek to the east, E. William Street on the south, and S. 11th Street to the west. The property is listed in the City's Historic Resources Inventory and is also eligible for the NRHP for its distinctive architecture (City of San José 2024). As the conservation area is a locally listed property and also eligible for the NRHP, it is considered a historical resource for the purposes of CEQA.

3.5.5 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the CEQA Guidelines. The project would have a significant impact on cultural resources if the project would:

- Cause a substantial adverse change in the significance of a built environment historical resource pursuant to CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in California PRC Section 21074 as either a site, feature, place, or 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;

- Disturb any human remains, including those interred outside of dedicated cemeteries;
- Make any exterior changes to a structure located within a Conservation Area per SJMC 1348.

Impact Analysis

Impact CUL-1: ***Cause a Substantial Adverse Change in the Significance of a Built Environment Historical Resource listed or eligible for listing in the NRHP, CRHR or a local register. (Less than significant)***

As discussed above, 32 built environment resources and a conservation area were identified within the APE or 500 feet of the APE.

Further, the 32 identified resources in the APE lack historical significance and, therefore, are not considered historical resources for the purposes of CEQA., Project activities would also occur along and near the boundary of the Naglee Park Conservation Area. The project construction and operational and maintenance activities would not result in any changes to the exterior of buildings within the conservation area and the buildings and the conservation area, overall would retain their historical significance and integrity.

Therefore, impacts to build environment historical resources from construction and operation of the project would be **less than significant**.

Impact CUL-2: ***Cause a Substantial Adverse Change in the Significance of an Archaeological Resource. (Less than significant with Mitigation)***

The likelihood of encountering previously unknown site materials or human remains is moderate to high probability in the more southern portions of the APE along Coyote Creek Reach 7, and particularly Reach 8, as previously described in the "Findings" section. Undiscovered archaeological resources could be inadvertently discovered during project-related, ground disturbing activities (i.e., excavation). Once the construction of the project is completed, continuing operational activities associated with the project would not impact P-43-000087 because operation and maintenance activities would not result in excavation. P-43-000087 is considered an archaeological resource as well as a TCR (see Impact CUL-4); the precontact component of P-4000087 is listed on the CRHR and the entire resource is being considered as eligible for the CRHR. Any damage to P-43-000087 or any previously undiscovered archaeological resources would constitute a significant impact to archaeological resources. Valley Water BMP CU-1 (Accidental Discovery of Archaeological Artifacts or Burial Remains) would reduce this impact, but the inadvertent discovery of such resources could result in a substantial adverse change in the significance of archaeological resources that could meet the criteria for NRHP/CRHR-eligibility or qualify as unique archeological resources. Therefore, impacts to archaeological resources from construction of the project are considered **significant**.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training

Valley Water and its construction contractor(s) shall provide a cultural resources awareness training program to all construction personnel within the various construction areas prior to earth moving activities throughout the duration of project construction in areas not previously disturbed by construction. The training shall be conducted in person, or via a video or PowerPoint presentation to be viewed by all construction personnel involved in ground-disturbing activities prior to work on the project. The training shall be developed and conducted in coordination with a qualified archaeologist who meets the U.S. Secretary of the Interior's Professional Qualifications Standards for Archaeology, as well as representatives of culturally affiliated California Native American Tribe(s) who have participated in consultation with Valley Water. The program shall include relevant information regarding sensitive cultural resources (including human remains and burials), applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations. The worker cultural resources awareness program shall also describe appropriate avoidance and minimization measures for resources that have the potential to be located within the project construction area and shall outline what to do and whom to contact if any potential archeological resources, human remains and burials, or artifacts are encountered. The program shall emphasize the requirement of confidentiality and culturally appropriate treatment of any finds of significance to Native Americans, and behaviors consistent with Native American Tribal values. The contractor shall keep a list of all trained workers on site and shall provide training to all new workers who join work after the initial training.

Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan

Valley Water shall prepare a Monitoring and Unanticipated Discoveries Plan in consultation with Native American Tribes that have requested monitoring prior to the initiation of project construction. The Monitoring and Unanticipated Discoveries Plan shall provide that a qualified archaeologist shall monitor ground disturbance (e.g., grading, trenching, vegetation clearing and grubbing with a backhoe or other mechanical methods, etc.) in areas not previously disturbed by construction. Valley Water and the construction contractor(s) shall coordinate with Native American Tribes that have requested monitoring to retain a Tribal monitor to work in tandem with the archeological monitor. Monitoring shall take place at locations within 50 feet of known sites and at locations identified as sensitive for cultural resources where excavation below the ground surface would occur. Monitoring shall also occur in areas identified by the archaeological principal investigator that meet high sensitivity potential for buried archaeological deposits in Reaches 7 and 8 only. Protocols for monitoring, such as scheduling, personnel responsibilities, chain of command, and reporting, shall be detailed in the Monitoring and Unanticipated Discoveries Plan.

The Monitoring and Unanticipated Discoveries Plan shall also address the accidental discovery of archaeological resources and incorporate the guidelines of Valley Water BMP CU-1 (Accidental Discovery of Archaeological Artifacts or Burial Remains), including issuance of a stop work order and establishment of a no work zone in the immediate vicinity of the find. The area of the discovery shall be flagged to delineate the boundary of the sensitive zone. If either an archaeological or Tribal monitor are not present at the time of the discovery, a qualified archaeologist, who meets the U.S. Secretary of the Interior's Professional Qualifications Standards for Archaeology, shall visit the discovery site as soon as practicable for identification and evaluation pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15064.5. If the archaeologist determines that the archaeological find is not a "historical" or "unique archaeological" resource, and thus not significant, construction may resume. If the archaeologist determines that the archaeological find is significant, the archaeologist shall determine if the find can be avoided and, if so, shall detail avoidance procedures. If the archaeological find cannot be avoided, the archaeologist shall develop an Action Plan within 48 hours which shall include provisions to minimize impacts and, if required, a Data Recovery and Treatment Plan that shall follow the protocols outlined in the Data Recovery and Treatment Plan described in Mitigation Measure CUL 2.3. The Plan shall specify that if human remains are discovered, procedures for notification of the County Coroner and for the disposition of Native American human remains under Health and Safety Code Section 7050.5 and PRC 5097.5 shall be followed.

Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided

The preferred treatment for impacts to archaeological sites, including those identified as Tribal Cultural Resources, is avoidance, as directed under CEQA Guidelines 15126.4(b)93)(b)(1) and PRC 21084.3. Not all archaeological sites that may be encountered may be able to be avoided. Therefore, Valley Water shall require a Data Recovery and Treatment Plan to be prepared by a qualified archaeologist who meets the U.S. Secretary of the Interior Professional Qualifications Standards for archeology, to address impacts to those archaeological historical resources that cannot be avoided by the project. The Data Recovery and Treatment Plan will be developed consistent with requirements in PRC Section 21083.2 and CEQA Guidelines Section 15126.4(b) . The Data Recovery and Treatment Plan shall include a research design to identify research questions as the focus of data recovery efforts and detail the field and laboratory methods to address the questions. The Data Recovery and Treatment Plan shall also include a specific discussion of the methods and level of effort at each site for data recovery excavation, which are an acceptable form of mitigation under Section 15126.4(b)(3)(c) of the CEQA Guidelines. Specific plans for Native American sites shall be prepared in consultation with Native American Tribes who participated in CEQA Tribal consultation. Valley Water shall require that data recovery and treatment be scheduled such that the actions shall be completed in advance of construction involving impacted sites. The Data Recovery and Treatment Plan protocols shall also be used for addressing accidental discoveries as discussed in Mitigation Measure CUL 2.2.

The Data Recovery and Treatment Plan shall specify that if human remains are discovered, procedures for notification of the County Coroner and for the disposition of Native American human remains under Health and Safety Code Section 7050.5 and PRC Section 5097.5 shall be followed.

Significance After Mitigation*:* Implementing Mitigation Measures CUL 2.1 - 2.3 would reduce construction-related impacts on archaeological resources by requiring preparation and implementation of a cultural resources' awareness training program for all construction personnel, a Monitoring and Unanticipated Discoveries Plan, and a Data Recovery and Treatment Plan. Therefore, impacts from the project on archeological resources would be **less than significant with mitigation.**

Impact CUL-3: ***Cause a Disturbance of Human Remains, including Remains Interred Outside of Dedicated Cemeteries.***
(Less than significant with Mitigation)

Recorded resource site P-43-000087 (CA-SCL-70/H) within the APE in Reach 8 contains Native American human remains and is adjacent to project construction activities that require excavation. It is possible that project construction activities would disturb any remains that might be within the resource due to the close proximity of the recorded site. Operation and maintenance activities would not impact P-43-000087 or any other locations that may have undiscovered human remains because those activities do not include excavation. Further, while there is no indication that any other portions of the APE contain any human remains, encountering previously unidentified human remains is possible during ground-disturbing construction activities. This would be a **significant impact**. Therefore, the following mitigation measures have been identified to address this impact.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure CUL 3.1: Avoid Disturbances of Human Remains, including Remains interred Outside of Dedicated Cemeteries

In the event possible human remains are identified during project-related, ground-disturbing activities, Valley Water will require the construction contractor(s) to halt all excavation within 100 feet of the find and to notify the County Coroner to determine the nature of the remains. The Coroner is required to examine all the discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands. If the Coroner determines that the remains are those of a Native American, he or she must contact the NAHC by telephone within 24 hours of making that determination.

Once notified by the Coroner, the NAHC will identify the person it believes is the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This visit should be conducted within 24 hours of the MLD's notification by the NAHC if feasible. If a satisfactory agreement for treatment of the remains cannot be reach, any of the parties may request mediation by the NAHC. Should mediation fail, Valley Water would work with the landowner to reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance.

Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Significance After Mitigation*:* Implementing Mitigation Measures CUL 3.1 in combination with Mitigation Measures 2.1, 2.2, and 2.3, would reduce construction-related impacts on human remains by requiring preparation and implementation of a cultural resources' awareness training, an inadvertent monitoring and discovery plan, a treatment plan if necessary, and requiring compliance with state law if human remains are encountered during construction. Therefore, impacts from the project on human remains would be **less than significant with mitigation.**

Impact CUL-4: ***Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, as Defined in PRC Section 21074.***
(Less than significant with Mitigation)

At the discretion of Valley Water, P-43-000087 is considered a TCR. In addition, the number of Native American archaeological sites in, and near, the APE and the general moderate to high archaeological sensitivity in Reaches 7 and 8, means it is possible that more TCRs could be identified within the APE. If P-43-000087 extends into portions of the APE that will undergo excavation, the project would cause a substantial adverse change in the significance of P-43-000087 or some other unidentified TCR. Because P-43-000087, is a buried resource, operation and maintenance activities associated with the project would not impact the resource because they do not involve excavation activities. Construction-related project impacts on TCRs would be **significant**. Therefore, the following mitigation measures have been identified to address this impact.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources That Cannot Be Avoided

Please refer to Impact CUL-2 above for full text of this mitigation measure.

Mitigation Measure Cul 3.1: Avoid Disturbances of Human Remains, including Remains interred Outside of Dedicated Cemeteries

Please refer to Impact CUL-3 for full text of this mitigation measure.

Significance After Mitigation*:* Implementing Mitigation Measures CUL 2.1 - 2.3 would reduce significant construction-related impacts on Tribal Cultural Resources to **less than significant with mitigation** by requiring preparation and implementation of a cultural resources awareness training program, a Monitoring and Unanticipated Discoveries Plan, and a Data Recovery and Treatment Plan, all with tribal participation.

3.6 Geology, Soils, and Seismicity

This section discusses the existing geological setting of the project area and vicinity; applicable regulations; and potential impacts related to geology, soils, and seismicity.

3.6.1 Environmental Setting

The project area is in the Santa Clara Valley of the Coast Ranges, which are northwest-trending mountain ranges that typically extend approximately 2,000 to 4,000 feet above sea level and occasionally 6,000 feet above sea level (California Geologic Survey [CGS] 2002a). The active San Andreas fault line follows subparallel to the ranges and valleys from Point Arena to the Gulf of California. Mesozoic and Cenozoic sedimentary rock compose the Coast Ranges and, in several areas, volcanic flows of Quien Sabe, Sonoma, and Clear Lake volcanic field overlay Franciscan rock (CGS 2002a). The Santa Clara Valley is part of a long, northwest-southeast-trending structural depression within the central Coast Ranges at the south end of the San Francisco Bay. The topography of the Santa Clara Valley rises from sea level at the south end of the San Francisco Bay to elevations of more than 2,000 feet to the east. The geology, seismicity and other geological hazards, soils, and paleontological resources in the vicinity of the project area are discussed below.

Geology

The project area is within the San José East and San José West 7.5-minute U.S. Geologic Survey Quadrangles in the Santa Clara Valley near the south end of the San Francisco Bay. The most extensive geologic map units in the project area are the Coyote Creek channel, overbank deposits, alluvial terrace deposits, and natural levee deposits from the Holocene era (Dibblee and Minch 2005; Helley et al. 1994; Helley and Wesling 1989, 1990; Wentworth et al. 1999). Coyote Creek channel deposits (Qhsc) consist of poorly to well-sorted sandy silt, silty sand, sand, or sandy gravel with minor cobbles. Alluvial terrace deposits ($Qhfp_1$ and $Qhfp_2$) are generally less than 1-meter thick and consist of rounded gravel and historic artifacts in the clayey silt matrix. Natural levee deposits (Qhl) are nearly symmetrical on either side of Coyote Creek and consist of loose, moderate to well-sorted sandy or clayey silt grading to sandy or silty clay (Helley and Wesling 1989, 1990). Levees grade laterally into fine-grained basin deposits away from the channel.

Seismicity

The San Francisco Bay region is one of the most seismically active regions in the U.S. (Santa Clara County 1995). In many cases, seismic activity, which itself is insufficient to directly cause damage, may trigger the occurrence of other geologic hazards, especially landslides.

Ground Shaking

Areas most susceptible to intense ground shaking are those located closest to an earthquake-generating fault, and areas underlain by thick, loosely unconsolidated, and saturated sediments. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. Structures and utilities located in areas of saturated or unconsolidated soils are also far more susceptible to damage from earthquakes. Severe earthquakes have the potential to damage or destroy even the most well-designed and constructed buildings, but the existence of many homes and buildings made of unreinforced masonry, structures not anchored to foundations, and structures which do not conform to current codes present the possibility of major damage even in the case of a moderately strong earthquake such as the 1989 Loma Prieta earthquake.

Surface Fault Rupture

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. Ground rupture is considered more likely along active faults. The Quaternary-aged Silver Creek Fault is near Coyote Creek Reach 6 – the buried fault trace crosses Coyote Creek at approximately East Santa Clara and 17^{th} Streets, about a block south of Reach 6. Additionally, the Quaternary-aged San José, Stanford, and Coyote Creek Faults are located within 3 miles to the west of the project area. The nearest known active fault designated by the CGS is the Hayward Fault Zone, located approximately 5 miles east of the project area, as shown in **Figure 3.6.1**. The San Andreas Fault Zone is approximately 16-miles west of the project area (CGS 2015). The San Andreas and Hayward Fault Zones are two of the most active in the world and act as structural controls on the Santa Clara Valley fault activity. Both major fault zones are considered active according to the definition used by the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (and amendments). Active faults, by this definition, are those that are known to have ruptured in the last 11,000 years (i.e., approximately since the Pleistocene/Holocene boundary). The Silver Creek, San José, Stanford, and Coyote Creek faults, though not considered "active" by this definition, are worth noting, because faulting is generally expected to recur within pre-existing traces (Bonilla 1991; CGS 2002b).

According to CGS, the entire project area is mapped in state-designated areas (Alquist-Priolo Fault Zone). Specifically, the San José West and San José East 7.5-minute Quadrangle are both categorized as Earthquake Zones of Required Investigation (CGS 2022a).

Liquefaction

Liquefaction is a phenomenon where unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil cohesion during strong earthquake shaking results in the temporary fluid-like behavior of the soil. During the 1989 Loma Prieta earthquake, two areas near the southeast corner of the San José Municipal Airport experienced liquefaction. The CGS Seismic Hazards Program identifies liquefaction zones throughout the entire project area and surrounding area (CGS 2022b). Further, geotechnical data collected for the CCFPP indicates that liquefaction zones are present within the project area (AECOM 2023). The CGS defines liquefaction zones as areas where the stability of foundation soils must be investigated, and countermeasures undertaken in the design and construction of buildings for human occupancy. Cities and counties are required by statute to use these zones as part of their construction permitting process.


Quaternary Faults
Based on time of most recent surface deformation
latest Quaternary (<15,000 years), well constrained location
latest Quaternary (<15,000 years), moderately constrained location
latest Quaternary (<15,000 years), inferred location
late Quaternary (<130,000 years), moderately constrained location
late Quaternary (<130,000 years), inferred location
undifferentiated Quaternary(<1.6 million years), well constrained location
undifferentiated Quaternary (<1.6 million years), moderately constrained location
undifferentiated Quaternary (<1.6 million years), inferred location
Flood Risk Reduction Improvements
New Flap Gate
New Manhole and Fla
Bridge Headwall
Bridge Wingwal
Floodwall
Passive B
Berm
Tem
erm
Const
d Access
Staging/Laydown Area
Temporary Cofferdam
Temporary Creek Crossing
Park/Open Space
0
0.5
1
2
Miles
N
Silver Creek fault zone
Arroyo Aguague fault
Hayward fau
San Jose fault
Coyote Creek fault zone
MONTAGUE EXPRESSWAY
Reach 5
Coyote Creek
Guadalupe River
Upper Penitencia Creek
Lower Silver Creek
San Jose Municipal Golf Course
Roosevelt Park
William Street Park
Martin Park
Selma Olinder Park
Kelley Park
Coyote Creek Park
Tully Community Ballfields
Milpitas-Alviso Rd
Jacklin Rd
Evans Rd
E Calaveras Blvd
Calaveras Rd
Piedmont Rd
Landess Ave
Great Mall Pkwy
Tasman Dr
W Tasman Dr
McCarthy Blvd
Oakland Rd
Lundy Ave
Sierra Rd
Berryessa Rd
McKee Rd
E San Antonio St
Story Rd
US Hwy 101
S King Rd
Monterey Hwy
Tully
E Alma
Pine Ave
Lincoln Ave
Curtner Ave
Cherry Ave
Meridian Ave
Hillsdale Ave
W Capitol Expy
Snell Ave
Branham Ln
Chynoweth Ave
Blossom Hill Rd
State Hwy 85
W Valley Fwy
Almaden Expy
Guadalupe Fwy
Vistapark Dr
Pearl Ave
McLaughlin Ave
Silver Creek Rd
Yerba Buena Rd
Hellyer Ave
880
680
237
280
87
82
85
101
130
19Jun2024 RS Z:\Projects\2004818_CoyoteCr_FloodCntrl_Protection_Prj\CoyoteCreek_CCFPP_Faults_20240619.mxd

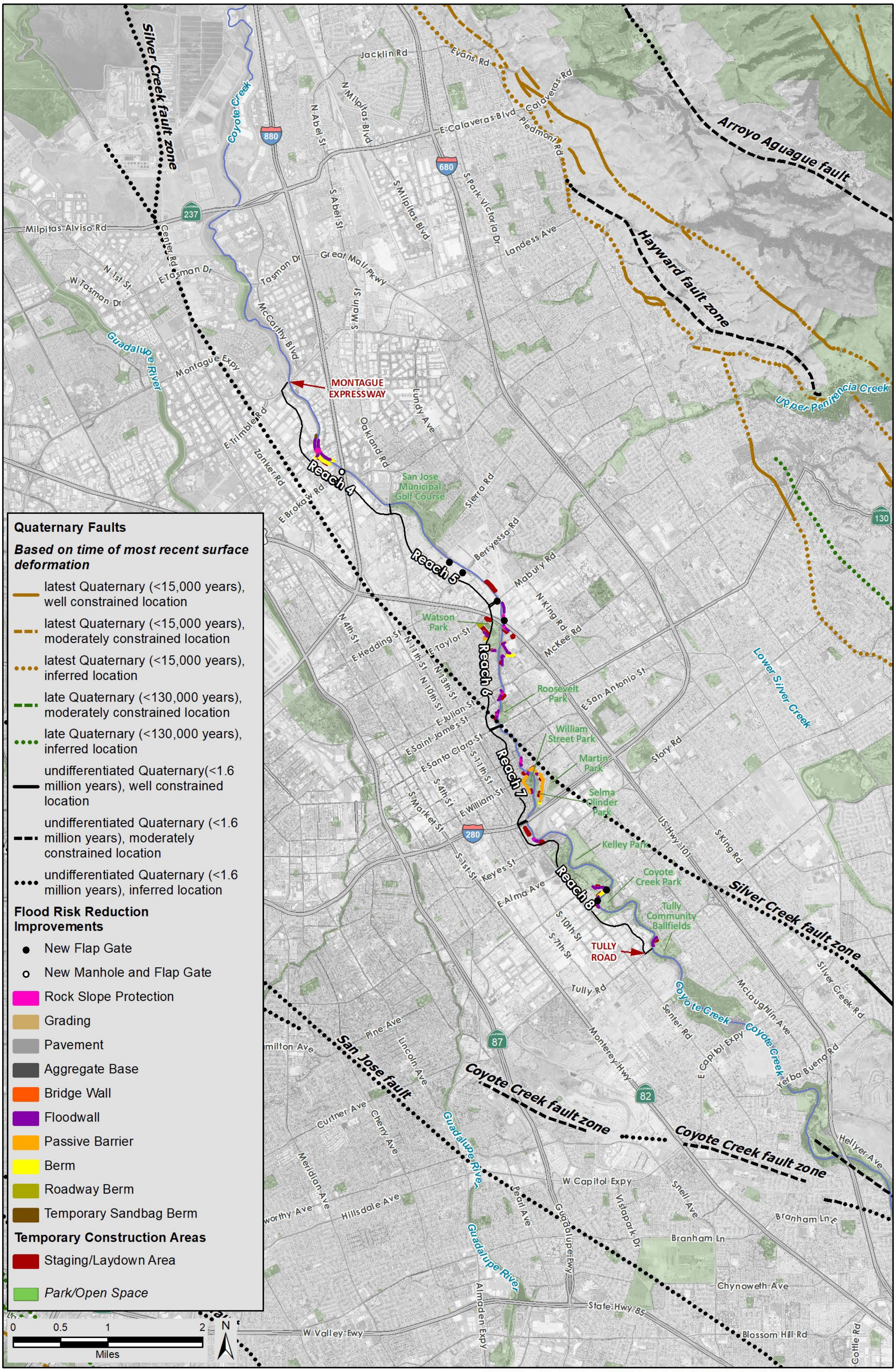

Figure 3.6.1. Fault Map of the Project Area and Vicinity (mapping by GEI)

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Subsidence

Subsidence is the gradual settling or sudden sinking of the ground surface resulting from subsurface movement of earth materials. There are multiple causes and types of subsidence including decomposition of peat, pumping of groundwater, tectonic activity, and possibly gas or oil extraction. Subsidence of soils has occurred on the Santa Clara Valley floor resulting from the withdrawal of groundwater for agricultural, domestic, and industrial use at a faster rate than natural or artificial replenishment. Additionally, development over large portions of the valley floor has reduced the percolation capacity of the land, thereby reducing natural replenishment and perpetuating the subsidence.

Other Geologic Hazards

Saturated, loosely consolidated soils and precipitation events increase the likelihood that an earthquake will trigger landslides, slope failure, or lateral spreading. Landslides are deep-seated ground failures (several tens to hundreds of feet deep) in which a large section of a slope detaches and slides downhill. Landslides can occur in steeply sloped areas during seismic events. Numerous massive, deep-seated bedrock landslide complexes are present in the sedimentary rocks beneath the Diablo Range, approximately 3 miles northeast of the project area (Weiger 2011). However, the topography of the project area is relatively flat and low-lying, and therefore, not susceptible to landslides.

On a smaller scale, horizontal displacement of gently sloping ground (5 percent or less slope) can occur along riverbanks or exposed embankments, a phenomenon known as “lateral spreading.” Following the 1906 San Francisco earthquake, water and mud spurted from artesian wells in the Willow Park area of San José, east of the Guadalupe River, and numerous cracks indicated lateral spread developed along the banks of Coyote Creek (CGS 2000, 2002b).

Soil creep, a less familiar form of land instability, describes the tendency of expansive soils to move slowly down hillsides at unequal rates depending on moisture content, depth to bedrock, and other factors. Expansive soils comprise predominantly clays, which expand in volume when water is absorbed and shrink when the soil dries. Expansion is measured by shrink-swell potential, which is the volume change in soil with a gain in moisture. The Natural Resource Conservation Service (NRCS) uses linear extensibility to determine the shrink-swell potential of soils. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. A majority of the soil types (75 percent) within the project area have low shrink-swell potential and the remainder (25 percent) have moderate shrink-swell potential (NRCS 2023).

Soils

The NRCS Web Soil Survey documents 10 soil map units that are generally present within the project vicinity, as shown in **Table 3.6.1**. The project area is characterized by fine sandy loam, sandy loam, sandy clay loam, and silty clay loam. These soil types have a low runoff capacity, are well drained, and have a moderate susceptibility to wind or water driven erosion (Cornell 2007). The Santa Clara Valley is underlain by Quaternary and Holocene-aged alluvium deposits, which accumulate surface soils of the type just described (Santa Clara County 1995).

Table 3.6.1. Soils Present in the Project Area

Map Unit Symbol	Map Unit Name	Project Area Acreage	Project Area Coverage (Percentage)
102	Urban land, 0 to 2 percent slopes, alluvial fans	32.3	7.5
123	Urban Land-Xerorthents, anthropogenic fill complex, 0 to 2 percent slopes	2.1	0.5
130	Urban Land-Still complex, 0 to 2 percent slopes	55.5	12.9
131	Urban Land-Elpaloalto complex, 0 to 2 percent slopes	18.4	4.3
168	Elder fine sandy loam, protected, 0 to 2 percent slopes	13.3	3.1
169	Urban Land-Elder complex, 0 to 2 percent slopes, protected	15.4	3.6
171	Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded	53.4	12.5
173	Canine creek-Elder complex, 0 to 2 percent slopes, rarely flooded	195.6	45.6
174	Urban Land-Canine creek-Elder complex, 0 to 2 percent slopes	37.9	8.8
178	Canine creek-Elder complex, 1 to 5 percent slopes, protected	5.0	1.2

Source: NRCS 2023

Paleontological Resources and Unique Geologic Features

Paleontological resources are the fossilized remains or impressions of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils). They are valuable, nonrenewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived (Society of Vertebrate Paleontology [SVP] 2010).

Unique geologic features are generally defined as those that are unique (i.e., rare and/or singular) in the broad field of geology. These may include certain minerals, type locations (i.e., locations where a geologic unit was first described/named), a representative of an important geologic principle, something notable/unique to the history of geology, a distinctive section that is used repeatedly for teaching or instruction, or units/outcrops that contribute to important natural habitats and/or ecology (see e.g., Santa Clara County General Plan 1994:Book B, 0-22). There are no unique geologic features within the project area or vicinity.

Rock units within the project area are from the recent Holocene era and comprise stream channel, levee, and alluvial deposits. The major topographical features of Santa Clara County include the Santa Clara Valley, the Diablo Range to the east, and the Santa Cruz Mountains to the west, which are fault-bounded by major strike-slip fault zones – the Hayward and San Andreas, respectively. The topography of the project area is relatively flat and is incised by meandering waterways (e.g., Coyote Creek).

The Santa Clara Valley is well-known for yielding Pleistocene-aged vertebrate and plant fossils, some of which have been found within and along waterway banks and channels near the project area (see, e.g., Maguire and Holroyd 2016). The University of California Museum of

Paleontology (UCMP) at UC-Berkeley was contacted on March 7, 2024 to request a paleontological records search of the project and surrounding area (i.e., four contiguous USGS 7.5-minute topographic quadrangles within Santa Clara and Alameda counties that encompass the project). Patricia Holroyd, Senior Museum Scientist at the UCMP, returned results on April 8, 2024.

Though the UCMP does not have records of localities specifically from the Coyote Creek drainage, there are three fossil localities within approximately 1.5 miles of the project, to the west, along the Guadalupe River (UCMP locality numbers: V99597, V99891, and V99893). Locality V99597, also called SCVWD Mammoth or Lupe the Mammoth, yielded a partial skull, femur, and parts of the pelvis of a juvenile mammoth from hard pan sediment about 3.5 meters below the modern floodplain. Additional mammoth material, at V99893, a partial juvenile humerus, was found approximately 60 meters upstream of Lupe and is potentially associated (Maguire and Holroyd 2016). Locality V99891, called Babcock's Bones, was found about 6 to 12 meters downstream from V99597 in a mud layer, not the hard pan, and so is stratigraphically distinct. V99597 yielded numerous dentognathic, vertebral, and limb elements from a variety of taxa including horse, camel, pronghorn antelope, bison, and ground sloth. In addition, various fossils collected were not identifiable to genus and species and so are referred generally to bovid, artiodactyl, elephant, and mammal (Maguire and Holroyd 2016).

Another Pleistocene locality, approximately 0.2-miles (>320 meters) west of the Coyote Creek channel, in Milpitas, is about 3 miles north of the project (locality number V4916). This locality yielded a single bison tooth from soil or subsoil in a sandy layer at about 2-feet (0.6 meters) below the surface (Maguire and Holroyd 2016). The association of this bison fossilized tooth with recent agricultural soils suggests it has either been displaced vertically from its original burial context (i.e., Pleistocene sediments) via erosion or *in situ* taphonomic processes, or that Pleistocene deposits are very close to the surface in this location.

Together, these four localities preserve a diverse assemblage of probable Late Pleistocene (between circa (c.) 129,000 and c. 11,700 years ago) medium- and large-bodied mammals, including bison, horse, camel, pronghorn antelope, ground sloth, and mammoth (Maguire and Holroyd 2016). These shallow-buried discoveries (e.g., between 2 and 10 feet) in sediments mapped as Holocene, suggest that Pleistocene deposits are much nearer to the surface in the Santa Clara Valley than is commonly believed. The presence of Holocene and Pleistocene sedimentary units within the project area suggests a high potential for significant paleontological resources to exist in the project area, and thus a high likelihood for such resources to be discovered during ground-disturbing construction activities (Envision San José General Plan 2009: Appendix J; SVP 2010).

3.6.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Clean Water Act

Activities discharging pollutants from a point source to a water of the United States are subject to the National Pollutant Discharge Elimination System (NPDES) permitting program, as authorized by the 1972 Clean Water Act (33 U.S.C. Section 1251 et seq.).

The NPDES permitting program has been delegated to the State of California for implementation through the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). Under the NPDES program, construction projects that result in the disturbance of 1 or more acres require compliance with the SWRCB's Construction General Permit for stormwater discharges associated with the construction activity, which is discussed in detail below in this section.

Earthquake Hazards Reduction Act of 1977

The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. Section 7701 et seq.) established the National Earthquake Hazards Reduction Program "to reduce the risks of life and property from future earthquakes in the U.S. through the establishment and maintenance of an effective earthquake hazards reduction program." The four principal goals of this program are:

- develop effective practices and policies for earthquake loss reduction and accelerate their implementation;
- improve techniques for reducing earthquake vulnerabilities of facilities and systems;
- improve earthquake hazards identification and risk assessment methods, and their use; and
- improve the understanding of earthquakes and their effects.

Many of the tools used to assess, as well as mitigate, earthquake hazards and impacts were developed under this program.

State Laws, Regulations, and Policies

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Fault Zoning Act (Public Resources Code Section [PRC] 2621 et seq.), administered by the CGS, provides a mechanism for reducing losses from surface fault ruptures on a statewide basis. This act requires the mapping of zones around active faults in California to prohibit the construction of structures for human occupancy on active faults and minimize damage due to rupture of a fault. Active faults are those that have ruptured within the past 11,000 years. Where an Earthquake Fault Zone is identified, a geologic investigation and report is necessary to prevent siting of buildings on active fault traces.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. This act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. This act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites, and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

Title 24 of the California Code of Regulations, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. The most current and updated version of the CBC (the 2022 version at the time of preparation of this Draft EIR is generally adopted by local jurisdictions to guide building construction. The CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California. The City of San José has adopted the 2022 CBC on January 1, 2023.

Construction General Permit

The State of California adopted the Construction General Permit, Order No. 2022-0057-DWQ, effective September 1, 2023. The Construction General Permit regulates construction site stormwater management. Projects that will disturb 1 or more acres of soil, or disturb less than 1 acre, but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit for discharges of stormwater associated with construction activities. The Construction General Permit requires the preparation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) to minimize potential stormwater impacts to surface waters. The Construction General Permit SWPPP requirements are further discussed in Section 3.7, “Hydrology and Water Quality.” Construction activities that are subject to this permit include clearing, grading, and ground disturbance (e.g., stockpiling, excavation).

Permit applicants are required to submit a Notice of Intent (NOI) to the SWRCB and to prepare a SWPPP. The SWPPP identifies Best Management Practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on pollutants. BMPs are directed at implementing sediment and erosion control measures, and other measures to control chemical contaminants. The SWPPP must also include descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (i.e., post-construction BMPs). The SWPPP must contain a visual monitoring program, a chemical monitoring program for “nonvisible” pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the CWA section 303(d) list of waterbodies impaired for sediment.

Public Resources Code Section 5097.5

PRC Section 5097.5 defines a misdemeanor as any unauthorized disturbance or removal of a historic or prehistoric ruin, burial ground, or archaeological or vertebrate paleontological site on public lands, without the express permission of the public agency having jurisdiction over the lands. This protection includes fossilized footprints, inscriptions, or other archaeological, paleontological, or historical features on public land.

Regional/Local Laws, Regulations, and Policies

Envision San José 2040 General Plan

The Envision San José 2040 General Plan provides a road map for the City’s growth from 2020 to 2040 (City of San José 2024). Goals, policies, and actions related to seismic hazards, geological and soil resources, and paleontological resources that may be relevant to the project are listed below.

Goal EC-3: Minimize the risk of injury, loss of life, property damage, and community disruption from seismic shaking, fault rupture, ground failure (liquefaction and lateral spreading), earthquake-induced landslides, and other earthquake-induced ground deformation.

- **Policy EC-3.2** Within seismic hazard zones identified under the Alquist-Priolo Fault Zoning Act, California Seismic Hazards Mapping Act and/or by the City of San José, complete geotechnical and geological investigations and approve development proposals only when the severity of seismic hazards have been evaluated and appropriate mitigation measures are provided as reviewed and approved by the City of San José Geologist. State guidelines for evaluating and mitigating seismic hazards and the City-adopted California Building Code will be followed.
- **Policy EC-3.5** Locate, design, and construct vital public utilities, communication infrastructure, and transportation facilities in a manner that maximizes risk reduction and functionality during and after an earthquake.

Goal EC-4 Minimize the risk of injury, loss of life, and property damage from soil and slope instability including landslides, differential settlement, and accelerated erosion.

- **Policy EC-4.3** Locate new public improvements and utilities outside of areas with identified soils and/or geologic hazards (e.g., deep seated landslides in the Special Geologic Hazard Study Area and former landfills) to avoid extraordinary maintenance and operating expenses. Where the location of public improvements and utilities in such areas cannot be avoided, effective mitigation measures will be implemented.

Goal ER-10 Preserve and conserve archaeologically significant structures, sites, districts, and artifacts to promote a greater sense of historic awareness and community identity.

- **Policy ER-10.1** For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
- **Policy ER-10.3** Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

3.6.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, “Project Description,” Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that could result from the project. All relevant BMPs for the project are included in Appendix B. In reference to geological and soils resources, applicable Handbook BMPs focus on dust control and soil erosion mitigation. Valley Water Handbook BMPs relevant to geological and soil resources include the following:

- **AQ-1: Use Dust Control Measures** – Would ensure dust and air quality management measures, including implementation of BAAQMD’s (Bay Area Air Quality Management District’s) BMPs for dust suppression. Removal of ground cover, including both vegetation and structures, would expose soil to erosive forces. Dust control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.

- ~~**BI-3: Remove Temporary Fill** – Would reduce the potential for erosion. Temporary fill materials, because they consist of exposed soil, are vulnerable to erosion. Removing this temporary fill after it has served its purpose would remove the source of erosion.~~
- **BI-8: Plant Local Ecotypes of Native Plants and Choose Appropriate Erosion – Control Seed Mixes** – Would reduce the potential for erosion. Planting and seeding reduce the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place during erosive conditions.
- **WQ-4: Limit Impacts from Staging and Stockpiling Materials** – Would reduce the potential for erosion. Staging can increase the risk of erosion by removing ground cover and disturbing soil, making it more vulnerable to erosive forces. Stockpiling of materials can increase erosion if the stockpiled materials consist of soil. This BMP would limit staging to areas that are already disturbed and where possible compacted or paved and would ensure that stockpiled soils would either be covered or surrounded by properly installed silt fencing or other means of erosion control.
- **WQ-5: Stabilize Construction Entrances and Exits** – Would reduce the potential for erosion. This BMP minimizes the risk of erosion in areas where construction equipment enters and exits the work area by minimizing the distance between the entrance or exit and the work area and by planning work site access to minimize disturbance of water bodies and stream banks.
- **WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement** – Would reduce the potential for erosion. Similar to Valley Water BMP BI-8 discussed above, seeding reduces the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place in the face of erosive forces.

The following Valley Water SMP BMPs are applicable to geology and soils during operation and maintenance of the project:

- **GEN-20: Erosion and Sediment Control Measures** – Would reduce the potential for erosion and sedimentation. This BMP describes measures to recover disturbed and exposed soils with seeding or erosion control materials. These measures would capture soil affected by erosion and keep it on the site and out of downslope waterways, where it could affect water quality as well as sedimentation.
- **GEN-21: Staging and Stockpiling of Materials** – Would reduce the potential for erosion. This BMP specifies that staging must occur on surfaces that are either paved or already compacted, stockpiled materials must be hydrologically disconnected from waterways, and stockpiled soils will remain covered during the wet season. These measures would ensure that any sediments remain onsite and do not migrate to downslope waterways.
- **REVEG-1: Seeding** – Would reduce the potential for erosion. Similar to Valley Water BMP BI-8 discussed above, seeding reduces the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place in the face of erosive forces.

VHP conditions were developed to help covered activities meet regional avoidance and minimization goals. VHP conditions that apply to geology and soils relate to erosion control, slope stability, and paleontological resources (that could be unearthed through erosion or landslide). VHP conditions that would minimize impacts are the following:

- Condition 3, Maintain Hydrologic Conditions and Protect Water Quality
- Condition 4, Avoidance and Minimization for In-Stream Projects
- Condition 5, Avoidance and Minimization for In-Stream Operations and Maintenance
- Condition 11, Stream and Riparian Setbacks

In addition, the following VHP AMMs apply to geology and soils specifically for erosion control, slope stability, and paleontological resources (that could be unearthed through erosion or landslide).

- **VHP Construction AMMs**
  - 61: Minimize ground disturbance to the smallest area feasible.
  - 62: Use existing roads for access and disturbed area for staging as site constraints allow.
  - 63: Prepare and implement sediment erosion control plans.
  - 64: No winter grading unless approved by City Engineer and specific erosion control measures are incorporated.
  - 65: Control exposed soil by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles).
  - 66: Control sediment runoff using sandbag barriers or straw wattles.
  - 67: No stockpiling or placement of erodible materials in waterways or along areas of natural stormwater flow where materials could be washed into waterways.
  - 68: Stabilize stockpiled soil with geotextile or plastic covers.
  - 69: Maintain construction activities within a defined project area to reduce the amount of disturbed area.
  - 70: Only clear/prepare land which will be actively under construction in the near term.
  - 71: Preserve existing vegetation to the extent possible.
  - 72: Equipment storage, fueling and staging areas will be sited on disturbed areas or non-sensitive habitat outside of a stream channel.
  - 73: Avoid wet season construction.
  - 74: Stabilize site ingress/egress locations.
  - 83: Sediments will be stored and transported in a manner that minimizes water quality impacts. If soil is stockpiled, no runoff will be allowed to flow back to the channel.
  - 84: Appropriate erosion control measures will be used on site to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian vegetation. Fiber rolls

used for erosion control will be certified as free of noxious weed seed. Filter fences and mesh will be of material that will not entrap reptiles and amphibians.

  - 88: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas.
  - 96: Isolate the construction area from flowing water until project materials are installed and erosion protection is in place.
  - 97: Erosion control measures shall be in place at all times during construction.

- **VHP Post-Construction AMMs**
  - 102: Immediately after project completion and before close of seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets.
  - 103: All disturbed soils will be revegetated with native plants and/or grasses or sterile nonnative species suitable for the altered soil conditions upon completion of construction. All disturbed areas that have been compacted shall be de-compacted prior to planting or seeding.
  - 104: Measures will be utilized on site to prevent erosion along streams (e.g., from road cuts or other grading), including in streams that cross or are adjacent to the project proponent's property.
  - 114: Erosion control methods shall be used as appropriate during all phases of routine maintenance projects to control sediment and minimize water quality impacts.

3.6.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the CEQA Guidelines, as amended (2023). The proposed project would have a significant impact on geology, soils, and seismicity if implementing the project would:

directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), or landslides;

- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Be located on expansive soil, creating substantial direct or indirect risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or, ~~the~~
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Analysis Methodology

The assessment of potential impacts relied on a review of published geological and paleontological literature and maps, soil survey data published by the NRCS for the project area and vicinity, and a request to the UCMP to review their records database.

Paleontological Resources

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the SVP (SVP 1995) initially established three categories of potential for rock units to contain paleontological resources: high, low, and undetermined. This scheme was revised in 2010 to include a “no potential” category (SVP 2010). The probability of the presence of paleontological resources is directly associated with the rock units (e.g., geologic formations) themselves, which may occur over geographic areas larger than those of the proposed project. As discussed in SVP (2010), it is the mapped “limits of the entire rock unit, both areal and stratigraphic” that “define the extent of paleontological resources.”

Rock units in which vertebrate or significant invertebrate, plant, or trace fossils have been previously found are considered to have a high potential for producing additional fossils. Rock units for which sparse information is available concerning fossil content, geologic age, and depositional setting are considered to have undetermined potential. Rock units from which few or poorly preserved fossils have been recovered, or only in rare circumstances, are considered to have low potential. Finally, some rock units will have no potential to yield fossils, for example high-grade metamorphic rocks or plutonic igneous rocks. All vertebrate fossils are typically considered to have potential scientific value and so any rock units that contain them are considered to have high potential.

Impacts Not Discussed Further in the EIR

Soil Suitability for Septic Systems or Alternative Wastewater Disposal Systems

The project provides flood risk reduction along Coyote Creek and would not require use of, or increase the demand for use of, septic tanks or alternative wastewater systems. The project would not require the use of wastewater disposal systems. Therefore, issues related to septic tanks, alternative wastewater systems, or disposal systems for wastewater are not discussed further in this EIR.

Unique Geologic Features

The project area does not contain unique geologic features, as defined above. Therefore, impacts to unique geologic features are not discussed further in this EIR.

Destruction of Unique Paleontological Resources During Operation and Maintenance

Operational and maintenance activities would not require excavation or work that would exceed 3-feet below ground surface directly adjacent to constructed improvements. Therefore, because the ground in these areas would be disturbed during construction, the impacts of which are analyzed separately below, there would be no impacts on paleontological resources during these activities, and this issue is not discussed further in this EIR.

Impact Analysis

Impact GEO-1: Adverse Effects from Rupture of a Known Earthquake Fault, Seismic Ground Shaking, Liquefaction, Subsidence, Soil, Instability, Landslides, or Expansive Soils. (Less than significant)

Construction and Operational Impacts

Ground rupture refers to the displacement of the earth's surface along a fault during an earthquake and can cause severe damage to floodwalls and conveyance structures, as well as injuries to workers during construction activities. As described in Section 3.6.1, "Environmental Setting", the project area is within an Alquist-Priolo Fault Zone, is adjacent to the Silver Creek Fault, and is approximately 3-miles from the San José, Stanford, and Coyote Creek faults. In addition, the Santa Clara Valley is bounded to the east by the Hayward Fault Zone and to the west by the San Andreas Fault Zone. The Silver Creek Fault and both major fault zones (Hayward and San Andreas) are identified as active or potentially active. Therefore, a high potential exists for a seismic event to occur that could cause ground shaking throughout the project area. Additionally, the entire length of the project area is mapped as a liquefaction zone by CGS, indicating that there is potential for ground failure, such as liquefaction, occurring during a seismic event. Landslides are unlikely to occur at the project area due to the relatively flat topography.

Construction and operational activities from the project would not cause conditions that would lead to risks associated with the rupture of an earthquake fault, directly or indirectly, because the project area is not located on a known fault; the Silver Creek fault is adjacent, but not within the project area. Further, seismic ground shaking is an existing hazard for existing structures, roads, and other facilities as currently constructed and the project would not exacerbate existing seismic ground shaking hazards. The project improvements (i.e., headwalls, floodwalls, passive barriers, and berms) would be constructed to engineering criteria to withstand expected ground shaking or ground failure, including liquefaction, during a major seismic event. These criteria include the dimensions and type of concrete foundations, and depth of floodwalls relative to underlying soil types and seismic-related conditions (AECOM 2023).

Subsidence is present within the project area and vicinity due to decades of groundwater pumping. Although the project is located on soil units that may become unstable during a seismic event, construction and operational activities related to the project would not result or potentially result in the soil becoming unstable because the subsurface design includes engineering criteria to maintain stability of project improvements and maintain the existing soil conditions. Further, operations would not require below ground activities that could destabilize underlying or adjacent soil. Additionally, most of the project area is situated on soils with a low shrink-swell potential indicating there is minimal risk to life or property from expansive soil. Therefore, impacts related to the project causing, directly or indirectly, potentially substantial adverse effects, including the risk of loss, injury, or death, involving rupture of a known earthquake fault, strong seismic ground shaking, seismic ground failure, landslides, subsidence, or expansive soils would be **less than significant**.

Impact GEO-2: ***Result in Substantial Soil Erosion or Loss of Topsoil. (Less than significant)***

Construction Impacts

Excavation and ground disturbing activities associated with construction of the project could result in soil erosion or the loss of topsoil. Erosion increases when vegetation and other ground covers are removed, exposing underlying soil to erosive forces such as wind and water. Construction activities for the proposed improvements that would expose soil to erosive forces include clearing and grubbing of construction areas, excavation and grading activities, and installation of false work areas for the improvements at Charcot Avenue. ~~and construction of the temporary creek crossing and coffer dam.~~ Rain and wind events in areas where these activities would occur could result in erosion or sedimentation.

Implementation of relevant BMPs and VHP conditions identified in Section 3.6.3, “Applicable BMPs and VHP Conditions/AMMs” would reduce erosion during construction. Adherence to requirements of Valley Water BMPs AQ-1 (Use Dust Control Measures), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and WQ-5 (Stabilize Construction Entrances and Exits), would reduce erosion by implementing erosion control measures around stockpiled soils and staging areas and stabilizing construction entrances and exits. Upon completion of construction, ~~any temporary fill would be removed, and~~ site restoration measures would be implemented to return individual sites to pre-construction conditions, as specified in Valley Water BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement. In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous AMMs, including 61 to 74, 83, 84, 96, 97, 102-104, and 114. These AMMs would require measures to reduce the extent of exposed soil and erosion during and after construction activities.

In addition, project compliance with the Construction General Permit would require development and implementation of a SWPPP, as described in greater detail in Chapter 3.9, “Hydrology and Water Quality.” The SWPPP would incorporate erosion control measures which would include scheduling or limiting activities to certain times of the year to avoid the wet season, installing silt fences or other sediment barriers along the perimeter of the construction areas, and implementing sediment tracking controls such as stabilizing entrances to the construction site.

With adherence to the requirements of the SWPPP erosion control measures, Valley Water BMPs, and VHP conditions, construction of the project would therefore not result in substantial soil erosion or loss of topsoil and impacts would be **less than significant**.

Operational Impacts

Similar to current practice and consistent with Valley Water’s Stream Maintenance Program (SCVWD 2014), following construction of the project, maintenance activities would be conducted in Coyote Creek Reaches 4 through 8. These activities may include vegetation management within maintenance access areas which could potentially cause erosion or loss of topsoil. Vegetation would be preserved if the improvement can be accessed for maintenance. Inspections and maintenance would occur on a limited basis, only one to two times annually and immediately following a natural hazard. Additionally, maintenance activities for the project would be minimal compared to the current level of maintenance activities conducted by Valley Water within all tributaries of the SMP and it is unlikely all flood risk reduction improvements would require repairs or maintenance at the same time after each inspection. Furthermore, Valley Water SMP BMPs would be implemented during maintenance activities, including GEN-20, GEN-21, and REVEG-1, as described previously. Due to the limited frequency and area of maintenance activities, and removal of vegetation only when access is hindered, impacts on soil erosion and loss of topsoil would be **less than significant**.

Impact GEO-3: Destruction of Unique Paleontological Resources during Construction. (Less than significant with Mitigation)

The project area is within the Coyote Creek channel, which includes Holocene-age overbank, alluvial terrace, and natural levee deposits. Colloquially referred to as "recent," Holocene-age sedimentary deposits are subject to past and present erosion and periodic shifts during high-water events. As has been shown by numerous vertebrate fossil finds within sediments identical to those mapped in and near the project area, these Holocene sediments may be shallow in depth, and only thinly cover Late Pleistocene alluvium and mud that has high potential to yield significant paleontological resources (Maguire and Holroyd 2016; UCMP 2024). Project-related construction excavation activities, particularly those below 3 feet, could impact paleontological resources wherever Holocene-aged deposits are present. Excavation of paleontological resources could result in adverse effects to these resources. Therefore, impacts from construction on paleontological resources would be **significant**.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure GEO 3.1: Prepare and Implement a Paleontological Mitigation and Monitoring Plan

Valley Water shall retain a Qualified Professional Paleontologist (QPP) as defined by the SVP Impact Mitigation Guidelines Revision Committee (SVP 2010:10) to update the EIR's formal paleontological records search at the UCMP at UC Berkeley. The UCMP records search will be able to determine whether additional fossil material, beyond that available in the published literature, is near or within the project area and inform preparation of a Paleontological Mitigation and Monitoring Plan (PMMP).

Prior to the start of any construction-related excavation activities, defined as construction work conducted more than 3 feet below the ground surface, Valley Water shall retain a qualified paleontologist as defined by the SVP Impact Mitigation Guidelines Revision Committee (SVP 2010:10) to prepare a PMMP to be implemented during ground disturbance for the project. This plan shall identify and map areas of high paleontological sensitivity, outline the procedures for construction staff Worker Environmental Awareness Program (WEAP) training, paleontological monitoring extent and duration, salvage and preparation of fossils, curation, monitoring and salvage report, and paleontological staff qualifications. The requirements of the plan are discussed further below.

Worker Environmental Awareness Program

Valley Water and the construction contractor(s) shall require paleontological resources awareness training, as part of an overall WEAP, for all construction personnel, conducted by a QPP who meets the SVP Professional Qualifications Standards (SVP 2010:10). The training shall be conducted before personnel begin any stages of project construction requiring ground disturbing activities in areas not previously disturbed by construction. The WEAP training shall include information on the physical appearance of fossils that may be encountered and the procedures for notifying paleontological staff should fossils be discovered by construction personnel.

Paleontological Monitoring

The construction contractor(s) shall require excavations or other ground disturbing activity in previously undisturbed areas defined in the PMMP as having high paleontological sensitivity (e.g., soils and/or sediments mapped as Holocene or older) to be monitored on a full-time basis by a Qualified Paleontological Resource Monitor (SVP 2010). If no fossils are observed during the first 50 percent of excavations, which would indicate that the likelihood of uncovering significant paleontological resources from a particular excavation site is lower, paleontological monitoring may be reduced to weekly spot-checking, or eliminated entirely, based on the expert opinion of (i.e., at the discretion of) the QPP (SVP 2010:6).

Salvage of Fossils

If fossils are discovered, the construction contractor(s) shall require the Qualified Paleontological Resource Monitor to recover, or salvage, them. Typically, fossils can be safely salvaged by a single paleontologist so as not to disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammals) require more extensive excavation and longer salvage periods. In the latter case, the Qualified Paleontological Resource Monitor shall have the authority to temporarily re-direct, divert, or halt construction activity in the immediate area to ensure that fossils can be removed in a safe and timely manner.

Preparation and Curation of Recovered Fossils

Once salvaged, the construction contractor(s) shall require the QPP to identify fossils to the lowest possible taxonomic level (e.g., genus and/or species) and to skeletal element, prepare fossils to a curation-ready condition, and curate fossils in a scientific institution with a permanent paleontological collection. All curated fossils shall be accompanied by field notes, photographs, maps, and other relevant data.

Final Monitoring and Salvage Report

Once ground-disturbing activities are complete and fossils have been curated (if applicable), Valley Water and the construction contractors(s) shall require the QPP to prepare a final monitoring and salvage report describing the results of the monitoring program. The report shall include discussion of the locations, durations, and methods of the monitoring, stratigraphic sections, any recovered fossils, the scientific significance of those fossils, and where the fossils were curated.

Significance After Mitigation: Implementation of Mitigation Measure GEO 3.1 would reduce impacts on paleontological resources to **less than significant with mitigation** because it would require the preparation and implementation of a PMMP that would include identification and mapping of areas of high paleontological sensitivity, preparation and implementation of WEAP training, monitoring of excavation during construction, and recovery and curation protocols should any paleontological resources be discovered during construction. These measures would minimize destruction of unique paleontological resources, and for unique paleontological resources that cannot be preserved, allow for their recovery and curation.

3.7 Greenhouse Gas Emissions and Energy Use

This section evaluates impacts from greenhouse gas (GHG) emissions that would be generated by the project and impacts that are related to project energy use. GHG emissions have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. This section discusses climate change, existing sources of GHG emissions, energy, and fuel, and applicable regulations that pertain to GHGs and energy use. The analysis also identifies potential impacts of the project related to GHG emissions and energy consumption.

3.7.1 Environmental Setting

Greenhouse Gas Emissions and Climate Change

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters the earth's atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This infrared radiation (i.e., thermal heat) is absorbed by GHGs within the earth's atmosphere. As a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on earth.

GHGs are naturally present in the atmosphere are released by natural and anthropogenic (human-caused) sources and are formed from secondary reactions in the atmosphere. Natural sources of GHGs include human, animal, and plant respiration; organic matter decomposition; and ocean evaporation. Anthropogenic sources include the combustion of fossil fuels, waste treatment, and agricultural processes. The following GHGs are widely accepted as the principal contributors to human-induced global climate change: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

CO_2 is a colorless and odorless GHG that results from burning coal, oil, natural gas, and wood. Methane is the main component of natural gas and is associated with agricultural practices and landfills. N_2O is a colorless GHG that results from industrial processes, vehicle emissions, and agricultural practices. HFCs are synthetic chemicals used as a substitute for chlorofluorocarbons in automobile air conditioners and refrigerants. PFCs are produced as a byproduct of various industrial processes associated with aluminum production and the manufacturing of semiconductors. SF_6 is an inorganic, odorless, colorless, nontoxic, and nonflammable GHG used for insulation in electric power transmission and distribution equipment, and in semiconductor manufacturing.

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to CO_2. The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main GHGs that have been attributed to human activity include methane, which has a 100-year GWP of 25, and N_2O, which has a GWP of 298 (Intergovernmental Panel on Climate Change [IPCC 2007). The concept of CO_2-equivalents (CO_2e) is used to account for the different GWPs of GHGs to absorb infrared radiation. These GWP values are derived from the Intergovernmental Panel on Climate Change's (IPCC's)

Fourth Assessment Report which are also used by the California Air Resources Board's (CARB's) methodology for developing its statewide inventory.

Impacts of GHGs are borne globally, as opposed to the more localized air quality effects of criteria air pollutants and toxic air contaminants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to a global climate, local climate, or microclimate (IPCC 2013). Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis.

GHG emissions related to human activities are unequivocally responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's atmosphere and oceans (IPCC 2023). As a result, global surface temperature between 2011 and 2020 was 1.1 degrees Celsius (°C) higher than temperature levels between 1850 and 1900. As global warming has progressed, many other changes have occurred or are predicted to occur in other natural systems. Sea levels have risen; precipitation patterns throughout the world have shifted, with some areas becoming wetter and others drier; a decrease in snowpack leading to an increase in runoff and water storage; and numerous other conditions have been observed. There is a high level of confidence within the scientific community that these changes are a direct result of increased global temperatures caused by the increased presence of GHGs in the atmosphere.

Greenhouse Gas Emission Sources

GHG emissions contributing to global climate change are attributable in large part to human activities. For purposes of accounting for and regulating GHG emissions, sources of GHG emissions are grouped into emission categories. CARB identifies the following categories, which account for most anthropogenic GHG emissions generated within California:

- **Transportation:** On-road motor vehicles, recreational vehicles, aviation, ships, and rail.
- **Electric Power:** Use and production of electrical energy.
- **Industrial:** Mainly stationary sources (e.g., boilers and engines) associated with process emissions.
- **Commercial and Residential:** Area sources, such as landscape maintenance equipment, fireplaces, and consumption of natural gas for space and water heating.
- **Agriculture:** Agricultural sources that include off-road farm equipment; irrigation pumps; crop residue burning (CO_2); and emissions from flooded soils, livestock waste, crop residue decomposition, and fertilizer volatilization (methane and N_2O).
- **High GWP Gases:** Refrigerants for stationary and mobile source air conditioning and refrigeration, electrical insulation (e.g., SF_6), and various consumer products that use pressurized containers.
- **Recycling and Waste:** Waste management facilities and landfills; primary emissions are CO_2 from combustion and CH_4 from landfills and wastewater treatment.

Statewide Inventory

The total GHG inventory for California in 2021 was 381 million metric tons (MMT) CO_2e (CARB 2023). **Table 3.7.1** summarizes the statewide GHG inventory for California by percentage. As shown in Table 3.7.1, transportation, industry, and in-state electricity generation are the largest GHG emission sectors.

Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water) and are two of the most common processes for removing CO_2 from the atmosphere.

Table 3.7.1. Statewide GHG Emissions by Economic Sector

Emissions Sector	MMTCO2e
Transportation	149
Industrial	84
Electricity (In-State)	42
Residential Energy	30
Agriculture and Forestry	30
Commercial Energy	23
Electricity (Imported)	19
Total	**381**

Notes: $MMTCO_2e$ = million metric tons are carbon dioxide equivalent
Source: CARB 2023.

Local Inventory

The City of San José (City) prepared a GHG inventory for 2017 in its *2030 Greenhouse Gas Reduction Strategy* (GHGRS), adopted in 2020. **Table 3.7.2** summarizes the City's total GHG emissions in 2017 (City of San José 2020).

Table 3.7.2. Citywide Greenhouse Gas Emissions for San José in 2017

Emissions Sector	MTCO2e
Transportation and Mobile Sources	3,589,158
Building Energy	1,791,147
Solid Waste	271,862
Water and Wastewater	29,235
Process and Fugitive Emissions	30,262
Total	**5,711,664**

Notes: $MTCO_2e$ = metric tons carbon dioxide equivalent
Source: City of San José 2020.

As shown in Table 3.7.1, the transportation and building energy sectors generated the most emissions in the City in 2017.

Energy

Valley Water participates in the Power and Water Resources Pooling Authority (PWRPA), which consists of publicly owned electric utilities that coordinate pooling of energy resources and supplement wholesale power purchasing. PWRPA coordinates construction and maintenance of intervening facilities (e.g., transmission and distribution systems, substations, and other infrastructure) and negotiates agreements. Ninety-five percent of Valley Water's purchased electricity is sourced from PWRPA, which enables Valley Water to source carbon-free electricity from utility-scale solar and hydroelectric projects (Valley Water 2021). Since some of the sources of this carbon-free electricity are based on hydroelectric projects, it is subject to variability, especially during drought conditions.

Energy needs in Santa Clara County are served primarily by Pacific Gas and Electric Company (PG&E). California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California are natural gas. In 2022, natural gas accounted for approximately 36 percent of California's power mix. Large hydroelectric powered approximately 9 percent of electricity, and renewable energy from solar, wind, small hydroelectric, geothermal, and biomass combustion totaled 54 percent (CEC 2024).

In 2021, PG&E provided its customers with 48 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind), 39 percent from nuclear, 9 percent natural gas, and 4 percent from large scale hydroelectric (PG&E 2022). The proportion of PG&E-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the Senate Bill (SB) 100 goals, as described in the section below.

3.7.2 Regulatory Setting

Since GHG emissions and energy use would primarily occur from construction activities, only relevant regulations, policies, and plans that apply to construction emissions have been included in this setting. Additionally, because the project would not require the construction of any new buildings, building-related regulations have been omitted.

Federal Laws, Regulations, and Policies

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the Federal Clean Air Act (CAA). On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the Federal CAA and that EPA has the authority to regulate GHGs.

Greenhouse Gas Findings under the Clean Air Act

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment finding: The EPA Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or contribute finding: The EPA Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to reduce energy consumption by increasing the fuel economy of cars and light trucks. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance.

In March 2022, CAFE standards were finalized for model years 2024 through 2026. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. Current rulemaking is working on establishing (NHTSA 2022):

- standards for model years 2027 and beyond for passenger cars and light trucks,
- fuel efficiency standards for model years 2029 and beyond for heavy-duty pickup trucks and vans, and
- fuel efficiency standards for model years 2030 and beyond for medium and heavy-duty on-highway vehicles and work trucks.

State Laws, Regulations, and Policies

With the passage of legislation, including SB, Assembly Bills (AB), and executive orders, California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level.

State Greenhouse Gas Reduction Targets and California Climate Change Scoping Plan

Executive Order S-3-05, signed in 2005 by Governor Arnold Schwarzenegger, sets state goals to reduce California's GHG emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of AB 32.

AB 32, the California Global Warming Solutions Act of 2006, was signed in September 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. It required that statewide GHG emissions be reduced to 1990 levels by 2020.

On April 29, 2015, EO B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030. SB 32 (, described below, mandates the 2030 GHG reduction goals of EO B-30-15.

SB 32 of 2016 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030. Approved by Governor Newsom on September 16, 2022, AB 1279, The California Climate Crisis Act, declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 also requires CARB to ensure that the Scoping Plan identifies and recommends measures to achieve carbon neutrality, and to identify and implement policies and strategies for CO2 removal solutions and carbon capture, utilization, and storage technologies.

CARB is required to prepare a Climate Change Scoping Plan showing how state GHG reduction targets can be met. CARB is required to update the Scoping Plan at least once every 5 years to evaluate progress and develop future inventories that may guide this process. CARB has updated the Scoping Plan three times since it was first adopted in December 2008. CARB updated the Scoping Plan in 2014 and i2017. In response to AB 1279, in 2022 CARB adopted the *2022 Scoping Plan to Achieve Carbon Neutrality* (2022 Scoping Plan), and it is the most current version of the Scoping Plan (CARB 2022a). It outlines a strategy to achieve AB 1279's GHG reduction targets. The 2022 Scoping Plan outlines the strategies that the state will implement to achieve carbon neutrality by reducing GHG emissions to meet the anthropogenic target, and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches. The major element of the 2022 Scoping Plan is the decarbonization of every sector of the economy, including rapidly moving to zero-emissions transportation for cars, buses, trains, and trucks.

Renewables Portfolio Standard

Earlier legislation established California's Renewables Portfolio Standard (RPS), The program sets continuously escalating renewable electricity procurement requirements for the state's load-serving entities. Generation must be procured from RPS-certified facilities SB 2 (1X) of 2011 obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. The CPUC and CEC are jointly responsible for implementing the program. The program was accelerated by:

- SB 350 (Chapter 547, Statutes of 2015). This bill's key provisions are to require the following by 2030: (1) an RPS of 50 percent and (2) a doubling of efficiency for existing buildings.
- SB 100 (Chapter 312, Statutes of 2018)). This bill establishes a new RPS target of 50 percent by 2026, increases the RPS target in 2030 from 50 to 60 percent, and establishes a goal of 100 percent zero-carbon energy sources by 2045.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles than EPA. The program's initial goal requiring zero-emission vehicle (ZEV) regulation (i.e., battery, fuel cell, and plug-in hybrid electric vehicles [EVs]) to account for up to 15 percent of California's new vehicle sales by 2025 was supersede by Executive Order N-79-20, which directed the state to scale out the sales of internal combustion engines to 100 percent ZEV sales by 2035. The Advanced Clean Cars II Program was adopted by CARB in August 2022 and provides the regulatory framework for ensuring the sales requirement goal of Executive Order N-79-20 to ultimately reach 100 percent ZEV sales in the state by 2035. See Section 3.3, "Air Quality," for additional information about these regulations.

Executive Order B-48-18, signed into law in January 2018, requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen-fueling stations and 250,000 EV-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less CO_2 than other fossil fuel–based fuels such as gasoline and fossil diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

Regional/Local Laws, Regulations, and Policies

CARB's 2022 Scoping Plan states that local governments are "essential partners" in the effort to reduce GHG emissions (CARB 2022a). It also acknowledges that local governments have broad influence and, in some cases, exclusive jurisdiction over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to reduce GHG emissions rely on local government actions.

Metropolitan Transportation Association/Association of Bay Area Governments

In addition to regulations that address tailpipe emissions and transportation fuels, the state legislature has passed regulations to address the amount of driving by on-road vehicles. Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to develop and adopt sustainable communities' strategies (SCSs) as a component of the federally-prepared regional transportation plans (RTPs) to show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035 (CARB 2018). These plans link land use and housing allocation to transportation planning and related mobile-source emissions.

The Metropolitan Transportation Association/Association of Bay Area Governments (MTC/ABAG) serves as a combined entity fulfilling the MPO requirements for the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. The project site is in Santa Clara County. Under the most recent targets of SB 375 (i.e., achieve a 10-percent and 19-percent below 2005 per capita reduction in automobile emissions by 2020 and 2035, respectively), MTC/ABAG completed and adopted its most recent RTP/SCS, Plan Bay Area 2050, in 2021 (MTC/ABAG 2021). CARB's technical evaluation of

Plan Bay Area 2050 confirmed that the plan was sufficient to meet the reduction targets of SB 375 (CARB 2022b).

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) 2017 Clean Air Plan includes a wide range of proposed control measures to reduce combustion-related activities, decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs. The Clean Air Plan contains 85 measures to address reduction of GHG emissions and several criteria air pollutants and air toxics. The control measures are categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures (BAAQMD 2017).

In 2023, BAAQMD adopted its 2022 CEQA Guidelines (2022 BAAQMD CEQA Guidelines), which updated and superseded prior BAAQMD 2017 CEQA Guidelines. (BAAQMD 2023). The 2022 BAAQMD CEQA Guidelines provide BAAQMD-recommended procedures for evaluating air quality and climate impacts in CEQA documents. The 2022 BAAQMD CEQA Guidelines recommend GHG thresholds of significance for land use plans and projects, but do not recommend GHG thresholds of significance directly relevant to the Project (i.e., for large construction).

Because construction emissions are temporary and variable, BAAQMD has not developed a quantitative threshold of significance for construction related GHG emissions. However, BAAQMD does recommend that the lead agency quantify and disclose GHG emissions that would occur during construction. Even though the significance of construction related GHG emissions is not determined, to minimize GHG emissions and emissions of other air quality pollutants, BAAQMD recommends that projects should incorporate the following best management practices for reducing GHG emissions (Table 6-1 in the 2022 BAAQMD CEQA Guidelines) (BAAQMD 2022):

- Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation (CARE) area or AB 617 community.
- Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
- Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year 2024 to 2026, as a condition of contract.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (a 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
- Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
- Use CARB–approved renewable diesel fuel in off-road construction equipment and on road trucks.

- Use EPA SmartWay certified trucks for deliveries and equipment transport.
- Require all construction equipment is maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills, and compressors, and use electric tools whenever feasible.
- Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
- Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
- Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
- Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
- Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more by weight than the diversion requirement in Title 24.
- Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk, and curb materials). Wood products used should be certified through a sustainable forestry program.
- Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
- Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.

Santa Clara Valley Water District Climate Change Action Plan

Valley Water's Climate Change Action Plan (CCAP) is a comprehensive guide to Valley Water's current and future climate change mitigation and adaptation efforts. The CCAP includes seven goals: three mitigation goals, three adaptation goals, and one emergency preparedness goal. The mitigation goals correspond to Scope 1 (direct emissions from sources controlled by Valley Water), 2 (indirect emissions), and 3 (upstream and downstream indirect emission) GHG emissions. The adaptation goals correspond to Valley Water's three mission areas: water supply, flood protection, and ecosystem stewardship. The CCAP also identifies strategies and potential actions that have been identified to help achieve these goals.

This project helps Valley Water towards achieving Goal 5 "Flood Protection Adaptation in Santa Clara County," as outlined in the CCAP to ensure that residents, infrastructure, and waterways are protected from the risks associated with increased flooding. The purpose of this goal is to minimize flooding risks in riverine and coastal areas; improve flood preparedness of people, property, and habitat; implement projects and plans to increase the flexibility and resilience of flood protection operations and assets; and expand the use of flood forecasting and modeling tools in the planning and design of agency projects to maximize protection from flood risks.

The Valley Water CCAP was adopted in July 2021 (Valley Water 2021). The CCAP contains the following goals and strategies relevant to GHG emissions:

Goal 1: Reduce Direct GHG Emissions (Scope 1).

- Strategy: Reduce GHG emissions associated with Valley Water fleet.
- Strategy: Reduce GHG emissions from trips between Valley Water offices and work sites.
- Strategy: Reduce GHG emissions associated with Valley Water-owned equipment.
- Strategy: Minimize GHG emissions associated with planning, design, construction, operation, and maintenance of capital projects.
- Strategy: Increase GHG sequestration in Valley Water properties and other areas.
- Strategy: Continue to update Valley Water's GHG accounting practices.

Goal 2: Expand Renewable Energy Portfolio and Improve Energy Efficiency (Scope 2).

- Strategy: Continue to support increased renewable energy in the agency's energy portfolio.
- Strategy: Continue to improve energy efficiency at agency facilities.

Goal 3: Reduce Indirect GHG Emissions (Scope 3).

- Strategy: Reduce emissions from Valley Water employee commutes.
- Strategy: Reduce waste produced at facilities.
- Strategy: Continue to create and expand other efforts to minimize indirect emissions.

Valley Water Greenhouse Gas Reduction Plan

Valley Water is preparing a Greenhouse Gas Reduction Plan (GHGRP) that is consistent with the framework outlined under the CEQA Guidelines §15183.5 and is anticipated to be adopted in 2025. The GHGRP will provide an inventory of Valley Water's GHG emissions through 2021, a forecast of future GHG emissions, and a list of measures to achieve a goal of net zero emissions by 2045. It will provide specific measures to reduce GHG emissions and metrics to measure progress and will be considered for adoption in a public process following preparation of a CEQA document analyzing potential environmental impacts of the GHGRP.

Envision San José 2040 General Plan

The following goals and policies from the San José 2040 General Plan are relevant to the proposed project, GHG emissions, and energy usage (San José 2011).

GOAL MS-2: **Energy Conservation and Renewable Energy Use.** Maximize the use of green building practices in new and existing development to maximize energy efficiency and conservation and to maximize the use of renewable energy sources.

- **Policy MS 2.4.** Promote energy efficient construction industry practices.

City of San José 2030 Greenhouse Gas Reduction Strategy

The City adopted its 2030 GHGRS in 2020. The GHGRP identifies emissions targets for the City for 2030 expressed as an efficiency metric of 2.94 metric tons are carbon dioxide equivalent ($MTCO_2e$) per service population ($MTCO_2e$/SP) and 5.3 million $MTCO_2e$/year. To meet these targets, the GHGRS emissions reduction measures focus on building electrification, renewable energy, water conservation, transit opportunities, and solid waste diversion. The GHGRS's measures target operational sources of GHG emissions, and therefore, are not applicable to the project, which primarily generates construction-generated emissions (City of San José 2020).

3.7.3 Applicable BMPs and VHP Conditions/AMMS

Valley Water would incorporate BMPs, VHP Conditions, and AMMs, to avoid and minimize adverse effects on the environment that may result from the project. All relevant BMPs, VHP Conditions, and AMMs for the project are included in Appendix B and incorporated in the project, as described in Chapter 2, "Project Description." There are no relevant BMPs or VHP conditions that would apply to GHG emissions and energy use.

3.7.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines.

Greenhouse Gas Emissions

The proposed project would have a significant impact on GHG emissions if implementing the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment; or
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.

BAAQMD has developed qualitative thresholds to assess a land use development project's cumulative contribution to climate change. BAAQMD's thresholds are structured to provide projects with two options to demonstrate consistency with the goal of carbon neutrality by 2045: (a) incorporation of certain project design elements and (b) incorporation of relevant GHG reduction measures from a qualified climate action plan (CAP). The project design features recommended for land use development projects in option (a) include the elimination of on-site natural gas, a reduction in VMT aligning with OPR's SB 743 VMT targets, and compliance with off-street electric vehicle charging requirements in the most recently adopted CalGreen code. Notably, these project design features are intended to reduce operational emissions from land use development projects. The project evaluated in this analysis is not categorized as a land use development project and would have negligible operational emissions. Operational activity would be limited to periodic maintenance activity including minimal annual trips and vegetation management. Therefore, BAAQMD's option (a) to incorporate certain project design elements is not appropriate for this project. Moreover, as noted in Section 3.7.2, "Regulatory Setting," the City's GHGRS includes GHG reduction measures that are intended to reduce operational sources of emissions; and therefore, BAAQMD's option (b) of demonstrating CAP consistency is not appropriate for the project. Therefore, BAAQMD's operational thresholds are not applied in this analysis.

While BAAQMD does not have a recommended numerical threshold for evaluating construction generated GHG emissions, a nearby air district, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has developed a quantitative screening level for assessing construction emissions. SMAQMD supports the use of a 1,100 $MTCO_2e$/year screening level for all construction projects, based on substantial evidence (SMAQMD 2021). Therefore, this EIR uses 1,100 $MTCO_2e$/year as a threshold to determine whether the project's GHG emissions would cause a significant environmental impact.

Regarding potential conflicts with plans or policies for GHG reduction, the City's GHGRS cannot be applied in this analysis as the measures included focus on operational sources of GHG emissions. Therefore, the basis of the GHG reduction strategy in the 2022 Scoping Plan is the baseline GHG inventory conducted for statewide emissions for years 2000–2021 (CARB 2023), applicable to this analysis. The GHG inventory quantified statewide emissions from all relevant GHG emissions sectors including off-road equipment and found that this source represents less than 1 percent of statewide emissions (CARB 2023). Likewise, the 2022 Scoping Plan does not identify GHG reduction targets or strategies to address GHG reductions from the off-road sector of emissions.

Therefore, the most relevant plans in place for the purpose of reducing GHG emissions from project implementation are the 2022 Scoping Plan and Valley Water's current CCAP and are used primarily in this analysis. Thus, the project would have a significant GHG impact if GHG emissions would directly or indirectly have a significant impact or conflict with any applicable plan, policy, or regulation of an agency adopted for the purposes of reducing GHG emissions. In this instance, the plans that the project would need to demonstrate no conflict are the 2022 Scoping Plan and Valley Water's CCAP.

Energy Use

- Appendix F of the State CEQA Guidelines directs lead agencies to consider if a project would result in decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy. In 2018, these queries were revised and added to the Appendix G checklist of the CEQA Guidelines. Based on the factual inquiries of Appendix F and Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the project would:
- result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Analysis Methodology[1]

As discussed in more detail below, operational GHG emissions were not evaluated. Construction GHG emissions were quantified using a combination of methods, including the use

[1] Modeling of air quality emissions was based on the original project description in the Draft EIR. Minor modifications to the project description included in this Attachment 1 of the Final EIR would not meaningfully change the modeling results, and would not change significance conclusions.

of published emissions factors from EPA's AP-42 for various sources of construction activities (e.g., material handling, dust on paved/unpaved roads), emissions factors for off-road construction equipment available from Appendix G of the California Emissions Estimator Model (CalEEMod) Version 2022.1, emissions factors for off-road equipment contained within Sacramento Metropolitan Air Quality Management District's (SMAQMD) Roadway Construction Model, and emissions factors for on-road vehicles (e.g., worker commute, haul and delivery trucks) were obtained from CARB's Emissions Estimator Model (EMFAC 2021) (CAPCOA 2022, EPA 2024).

Overall, modeling parameters were based on available project-specific information, including equipment lists and hours of use for each feature type (e.g., berm/demolition, passive barriers, floodwalls), number of workers per day, quantities of concrete, soil export/import, vendor deliveries (e.g., sheet piles, construction material, vegetation planting), and duration of overall construction activities. Where certain project-specific details were not available, default assumptions from CalEEMod were used. A detailed description of model inputs by project activity are provided in greater detail below and in Appendix C.

Offroad Heavy-Duty Equipment

Activity use data were available for the entire project, based on the equipment type that would be required for construction of the various project feature types. Equipment horsepower and load factors were obtained from Appendix G of CalEEMod. Based on the construction hours per day, total equipment hours were estimated for the project. Emissions factors for criteria air pollutants and ozone precursors were obtained from Appendix G of CalEEMod. Total mass emissions associated with heavy-duty equipment use were calculated for each year of construction to derive annual GHG emissions. Table 3.3.3 in "Section 3.3 Air Quality," and Appendix C include a detailed summary of mobile source input parameters for offroad heavy-duty equipment.

On-Road Truck Travel

Delivery and haul trucks would be required to deliver construction materials, soil import, vegetation for replanting, and off-haul of waste, tree/vegetation material, and excavated soil. Emissions from worker commutes were also calculated. Quantity estimates were available for all import and export deliveries and emissions were estimated based on the total quantity of material, haul truck capacity, and distance to supply/haul sites to obtain total VMT of each truck trip type. Using the estimated VMT, exhaust emissions factors for haul trucks within Santa Clara County were obtained from EMFAC. Based on an average daily work crew of 30 workers/day, worker commute VMT was also estimated.

On-road emissions were summed based on the total VMT calculated for the project for each trip type and summed by year of construction to obtain annual GHG emissions. Table 3.3.4 in Section 3.3, "Air Quality," and Appendix C include a detailed summary of mobile source input parameters for on-road truck travel.

Impacts Not Discussed Further in the EIR

Operational GHG Emissions and Energy

As noted previously, energy consumption and GHG emissions generated by the project would occur primarily from construction activities over a 2-year construction period, currently planned between 2025 and 2026. Once constructed, project improvements would be inspected one to two times per year, and hand-held equipment would be used to manage vegetation throughout the project area. Therefore, operation and maintenance of the project would only result in a small increase in annual vehicle trips and would generate a negligible amount of GHG emissions or energy demand. Therefore, operational GHG emissions are not discussed further in this EIR. Also, operational energy use is not discussed further in this EIR for the same reasons.

Impact Analysis

Impact GHG/EN-1: Direct or Indirect Construction-Generated GHG Emissions that may have a Significant Effect on the Environment. (Less than significant)

Construction of the project would generate GHG emissions over a 2-year period from the combustion of fossil fuel used to power heavy-duty equipment and by vehicles used to transport materials, equipment, and workers to and from the project area. **Table 3.7.3** provides an estimate of annual GHG emissions generated from construction activities over the project's two-year construction period (i.e., 2025–2026). Refer to Appendix C for detailed modeling assumptions and information.

Table 3.7.3. Construction GHG Emissions from Project Implementation (2025–2026)

Construction Year	MTCO2e/year
2025	421
2026	421
Total	**842**

Notes: $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year
Source: Modeling conducted by Ascent Environmental in 2024.

As discussed under the heading, "Thresholds of Significance," SMAQMD's quantitative 1,100 $MTCO_2e$ screening level for assessing construction emissions has been applied as a significance threshold in this analysis. As shown in Table 3.7.3, the project's emissions would be 421 $MTCO_2e$/year for each year of construction, which would not exceed the 1,100 $MTCO_2e$/year screening level.

Moreover, consistent with BAAQMD guidance, Valley Water has incorporated the following best management practices to reduce construction related GHG emissions as components of the project:

- Use zero-emission and hybrid-powered equipment to the greatest extent possible, provided that said equipment is available to replace a traditional diesel-powered piece of equipment and can accomplish the required construction task in a comparable manner (e.g., meets construction and engineering requirements) to its traditional counterpart. This measure shall be prioritized in locations where construction activities would be located in close proximity (i.e., within 500 feet) of residential receptors.
- Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract. Where specific equipment is required and an EPA-rated Tier 4 version is not available, other lower tiered equipment may be used, so long as it can be demonstrated that acquiring the Tier 4 equipment would not be feasible (defined as not being available in the market or resulting in schedule delays that could be

detrimental to completion of the project). Alternatively, use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on road trucks.

- Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (a 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
- Prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Require all construction equipment to be maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills, and compressors, and use electric tools whenever available, so long as they can accomplish the required task in comparable manner to their traditional non-electric counterpart.
- Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
- Provide carpools, shuttle vans, transit passes, and/or secure bicycle parking for construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.
- Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.

These measures would reduce construction GHG emissions through improved energy and water efficiency, use of renewable fuels, fewer single-occupancy vehicle trips, and electrification of equipment.

Because emissions would be below SMAQMD's 1,100 $MTCO_2e$/year screening threshold and would incorporate the aforementioned BAAQMD-recommended measures, construction of the project would not generate emissions either directly or indirectly that would have a significant effect on the environment. This impact would be **less than significant.**

Impact GHG/EN-2: Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing GHG emissions. (Less than significant)

Senate Bill 32, Assembly Bill 1279, and 2022 Scoping Plan

The 2022 Scoping Plan outlines the main strategies California is implementing to achieve the 2045 statewide carbon neutrality goal and GHG target of 85 percent below 1990 levels by 2045. Appendix D of the 2022 Scoping Plan includes detailed GHG reduction measures and local actions that development projects and municipalities can implement to support the statewide targets. However, these measures pertain primarily to land use development projects and emissions sources typically associated with these (e.g., passenger vehicle exhaust emissions, building-related natural gas use, areawide emissions from landscape equipment and consumer products, waste, and water treatment emissions, etc.). As described in the 2022 Scoping Plan, the combination of statewide GHG reduction strategies (e.g., Cap-and-Trade, Low Carbon Fuel Standard, Renewable Portfolio Standard, carbon capture/sequestration) and GHG reductions from local actions pertaining to land use development would achieve the state's GHG reduction targets. In other words, the 2022 Scoping Plan does not identify necessary GHG reductions associated with construction activities and off-road equipment as a means to achieving overall state GHG reduction targets.

Moreover, as described under Impact GHG/EN-1, project construction activities related to construction of Reaches 4 through 8 would incorporate best management practices that would reduce GHG emissions and improve fuel efficiency (e.g., use of engine electrification [including hybrid equipment] and renewable fuels where possible, limit idle time and daily equipment use time). As such, project construction activities would not conflict with achievement of 2022 Scoping Plan goals. For these reasons, one-time emissions associated with construction activities would not conflict with the 2022 Scoping Plan.

Valley Water CCAP Consistency

The Valley Water CCAP provides goals, strategies, and possible actions to reduce its GHG emissions and address the ways that Valley Water is vulnerable to climate change impacts in each of Valley Water's mission areas, including water supply, flood protection, and ecosystem stewardship (Valley Water 2021). The CCAP sets seven goals to guide Valley Water's response to climate change. Project construction consistency with the CCAP is demonstrated in **Table 3.7.4**. As shown therein, project construction would be consistent with and not conflict with the Valley Water CCAP, and there would be a less-than-significant impact related to GHG emissions generation conflicting with the Valley Water CCAP.

Table 3.7.4. Valley Water CCAP Strategies Consistency Analysis

Goals	Strategy	Description	Project Consistency
Reduce Direct GHG Emissions	1.1	Reduce GHG emissions Associated with the Valley Water fleet.	Consistent. Construction equipment and fleets would reduce emissions through the use of engine electrification (including hybrid equipment), the use of renewable fuels where possible, and reduced idling time/equipment operation time. These actions would reduce GHG emissions from project construction equipment fleet.
	1.2	Reduce GHG emissions from trips between Valley Water offices and work sites.	Consistent. Project construction would utilize maintenance routes that are optimized to minimize GHG emissions.

Goals	Strategy	Description	Project Consistency
	1.4	Minimize GHG emissions associated with planning, design, construction, operation, and maintenance of capital projects.	Consistent. Construction equipment and fleets would reduce emissions through the use of engine electrification (including hybrid equipment), the use of renewable fuels where possible, and reduced idling time/equipment operation time. These actions would reduce GHG emissions from project construction equipment fleet.
	3.3	Create and expand other efforts to minimize indirect GHG emissions.	Consistent. Construction equipment and fleets would reduce emissions through the use of engine electrification (including hybrid equipment), the use of renewable fuels where possible, and reduced idling time/equipment operation time. These actions would reduce GHG emissions from project construction equipment fleet.

Notes: GHG = greenhouse gas emissions, CCAP = climate change action plan
Source: Valley Water 2021.

Significance Conclusion Summary

Project construction would be consistent with SB 32, AB 1279, the 2022 Scoping Plan, and the Valley Water CCAP with implementation of construction best management practices and because estimated construction GHG emissions would not be considered substantial. Therefore, the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions, and this impact would be **less than significant.**

Impact GHG/EN-3: Unnecessary, Wasteful, or Inefficient Consumption of Energy. (Less than significant)

Appendix F and Appendix G of the CEQA Guidelines require consideration of the energy implications of a project. CEQA requires the implementation of mitigation measures to prevent or reduce the wasteful, inefficient, and unnecessary use of energy. Neither the law nor the State CEQA Guidelines establish thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary.

The project would not introduce energy consumption from increased electricity or natural gas, nor would it introduce notable new long-term vehicle trips during operations and maintenance after construction is complete that would result in the combustion of gasoline or diesel fuel. For these reasons, construction-related energy consumption is the focus of this analysis.

Most of the construction-related energy consumption would be associated with off-road equipment and the transport of equipment and materials using on-road haul trucks.[2] An estimated 20,525 gallons of gasoline and 388,173 gallons of diesel fuel would be used during the construction of the project (see Appendix C for a summary of construction calculations).

[2] Energy consumption estimates were based on the original project description in the Draft EIR. Minor modifications to the project description included in this made in Attachment 1 of the Final EIR would not meaningfully change the modeling result, and would not change significance conclusions.

Consumption of diesel fuel would occur primarily from the haul truck trips to and from the project area, as well as the operation of heavy-duty equipment, such as dozers and cranes.

The energy needs for project construction would be temporary and would not require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Gasoline and diesel would be consumed during worker commute trips. As stated previously, diesel would also be consumed during haul truck trips and operation of heavy-duty equipment. Energy would be required to transport excavated materials. The one-time energy expenditure required to construct the project would be nonrecoverable.

Nonrenewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction activity in the region. Moreover, this one-time energy expenditure would facilitate the project's objectives to provide flood protection to the City. Further, implementation of construction best management practices would increase fuel efficiency and result in an increase of renewable energy use (e.g., high-performance renewable diesel), which is consistent with the intent of CEQA Guidelines Appendix F. Therefore, construction energy consumption would not be wasteful, inefficient, or unnecessary.

For the reasons described above, the project would not result in the unnecessary, wasteful, or inefficient use of energy. This impact would be **less than significant**.

Impact GHG/EN-4: Conflict with an Applicable Plan to Improve Energy Efficiency or Promote Renewable Energy. (Less than significant)

Energy would be consumed during project construction (approximately 20,525 gallons of gasoline and 388,173 gallons of diesel fuel) (see Appendix C); however, this one-time energy expenditure would not impede or conflict with an applicable renewable energy or energy efficiency plan. Applicable plans, such as the 2022 Scoping Plan and Valley Water's CCAP, address renewable energy and energy efficiency from an operational perspective with the understanding that construction-related energy consumption is inherently short term. As discussed above under Impact GHG/EN-2, construction of the project would not conflict with energy-related strategies in Valley Water's CCAP or the 2022 Scoping Plan. Because the use of gasoline and diesel fuel during project implementation would be short-term and because the project incorporates BAAQMD-recommended construction BMPs that improve energy efficiency and promote renewable energy, implementing the project would not conflict with a renewable energy or energy efficiency plan. This impact would therefore be **less than significant.**

3.8 Hazards and Hazardous Materials

This section provides an overview of the existing hazards and hazardous materials conditions within the project area and vicinity, identifies the regulatory framework, and analyzes potential impacts to hazards and hazardous materials from the project. The study area for hazards and hazardous materials consists of the area located within 0.25 mile of the project elements depicted in **Figure 3.8.1**.

3.8.1 Environmental Setting

Regional Setting and Existing Land Uses

The project area is located along Reaches 4 through 8 of Coyote Creek within the City of San José (City) in Santa Clara County, California, on land at various locations that is owned either by Valley Water, the City, or private landowners. The area surrounding Coyote Creek consists largely of urban development and includes industrial, commercial, recreational, and residential land uses, including facilities that use hazardous materials or generate hazardous wastes such as dry cleaners, gas stations, automotive repair/service facilities, machine shops, and industrial/construction supply businesses. Historic land uses include agriculture and industrial uses that may have used or stored legacy chemicals within the project area and vicinity, including in underground storage tanks.

Existing Hazardous Material Sites

A database search was conducted of all data sources in the “Cortese List” (enumerated in Government Code Section 65962.5). These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Resources Control Board (SWRCB); the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the California Department of Toxic Substances Control (DTSC); and the Environmental Protection Agency (EPA) Superfund Site database (DTSC 2023a,b; DTSC 2024; SWRCB 2023a,b; California Environmental Protection Agency [CalEPA] 2016). The Watson Park hazardous material site is located within the project site. The following open case hazardous material sites, with unique identification numbers from the Cortese List, are located within the study area (Figure 3.8.1).

- Watson Park (70000112) – Voluntary Cleanup (DTSC 2005 and DTSC 2024)
- Las Plumas Warehouse (SL0608593920) – Verification Monitoring as of 3/28/2022 (SWRCB 2022b)
- Cortec Precision Warehouse (T10000016973) – Open, Assessment and Interim Remedial Action (SWRCB 2021)
- Empire Gardens Elementary School (43820009) – Needs Evaluation (SWRCB 2003)
- Senter Road Residential Property (T10000020035) – Open, Site Assessment as of 8/29/2022 (SWRCB 2022b)
- The Charles (T10000020881) – Open, Remediation as of 6/12/2023 (SWRCB 2023c)

Watson Park

This park is a City park with a community center, dog park, children's playground, soccer fields and community garden, and is located within the project area containing all or part of improvements sites R6-B7, ~~R6-B7 FW1,~~ R6-B8, and R6-FW9~~, and R6-FW16~~ and is adjacent to improvement sites R6-PB7 and R6-FW7. This park was a former burn dump and City incinerator in the 1920's, and was abandoned in the 1930's. The site was developed into a park and an elementary school in the 1960's. This park is bordered by residential housing, Empire Gardens Elementary School, Coyote Creek, an orchard, and Highway 101. In early 2006, the City conducted a Preliminary Waste Characterization Study on the site, and in July 2006, the City prepared a Removal Action Workplan (RAW) documenting soil removal conducted in certain areas of the site. The RAW set a cleanup level for lead in soil of 255 milligrams per kilogram (mg/kg). The City implemented the approved RAW in August 2006 and documented its actions in a Soil Removal Action Completion Report. Part of the remedy to contain remaining soil contamination included the installation of a 3-foot-thick soil cap on the site and a hardscape layer thicker than 3 feet in areas where lead is in concentrations that exceed 255 mg/kg. Because of the remaining underground lead and residual levels of other contaminants of concern, land use restrictions have been placed on Accessor Parcel Numbers (APNs) 249-63-003, 249-63-006, 249-63-007, 249-63-008, 249-64-011, 249-63-005, 249-63-009, 249-63-004, 249-63-010, and 249-63-009 south of Watson Park on Terrace Drive, and institutional controls have been placed on all areas within the park in and adjacent to the cap (DTSC 2024).

Las Plumas Warehouse

This site is located along Las Plumas Avenue and is approximately 0.24 miles from improvement site R6-FW6. This site is owned by the City; however, prior to the City's ownership, the site had been a plastic bag manufacturing facility. In 1999, the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) responded to a No Further Action Request Report prepared by the City and concluded that an adequate investigation was performed for four 2,000-gallon underground storage tanks that were removed. However, an additional investigation showed elevated levels of petroleum hydrocarbons and dichloroethane in the soil and groundwater in the location of a former 10,000-gallon underground storage tank located on the east side of the warehouse that required additional investigation (SFBRWQCB 2010).

In June 2014, the site was redeveloped by the City into the Environmental Innovation Center that includes a Habitat for Humanity ReStore and a household hazardous waste drop-off facility, office spaces, laboratories, and conference space for companies to demonstrate and develop clean technologies. In 2021, the City prepared a second No Further Action Request Report and submitted it to the SFBRWQCB (San José 2021). In March of 2022, the site cleanup status was changed to "Open – Verification Monitoring as of 3/28/2022" (SWRCB 2022a).


Hazardous Materials Site
Flood Risk Reduction Improvements
New Flap Gate
New Manhole and Flap Gate
Bridge Headwall
Bridge Wingwall
Floodwall
Passive Barrier
Berm
Temporary Sandbag Berm
Construction Areas and Access
MONTAGUE EXPRESSWAY
Coyote Creek
Reach 5
Guadalupe River
Las Plumas Warehouse
Lower Silver Creek
Empire Gardens Elementary School
The Charles
Senter Road Residential Property
Precision Warehouse
TULLY ROAD
0
0.25
0.5
1
Miles
N

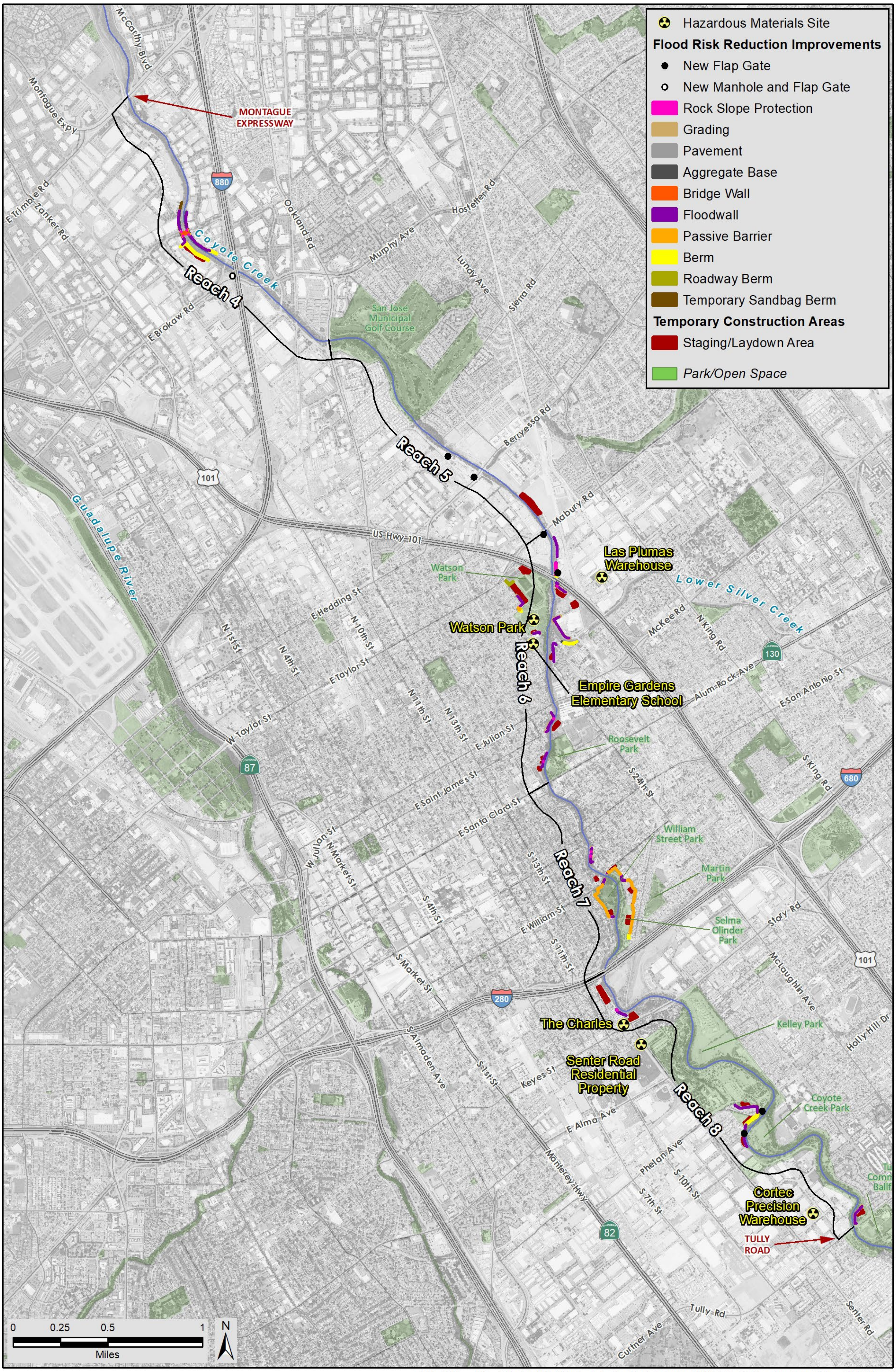

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Figure 3.8.1. Hazardous Materials Sites

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Cortec Precision Warehouse

This site is located along Wool Creek Drive and is approximately 0.17 miles from improvement site R8-FW14. This site is owned by Cortec Precision Realties and oversight is provided by the County of Santa Clara Department of Environmental Health (DEH) as part of the County's Site Cleanup Program. In 2021, during planning for redevelopment of the site, it was determined that a focused soil survey was needed. In October 2021, a Site Assessment Workplan was prepared to further characterize potential environmental impacts to the site by collecting four discrete shallow soil samples and drilling four soil borings (AEI Consultants 2021). The DEH approved the Work Plan in January 2022, and soil investigations were conducted in early 2022, which found an elevated level of lead in the soil at one sampling location. The DEH is requiring Cortec Precision Realties to prepare a Site Management Plan to address removal of the lead contaminated soils in the site (Santa Clara County 2022a).

Empire Gardens Elementary School

This site is located along Empire Street and adjacent to improvement site R6-FW9. Portions of the site are owned by the City and private landowners. The site is currently occupied by an elementary school and residential homes, surrounded by residential development and a city park. Prior to the current development, the site was occupied by residential structures and a small equipment repair shop. Prior to 1900, the site was used as a dump for general refuse. Additionally, an underground storage tank was removed from one of the parcels (DTSC 2003). In 2003, the DTSC entered into an Environmental Oversight Agreement with the San José Unified School District to perform a Preliminary Endangerment Assessment (PEA) for the site. The PEA was prepared to determine if current or past hazardous materials management practices or waste management practices resulted in a release or threatened release of hazardous materials (DTSC 2003). The PEA is not available online; therefore, the results of this study are unknown. A Phase I Environmental Site Assessment[1] (ESA; San José Unified School District 2003) was prepared in January 2003 and identified three Recognized Environmental Conditions (RECs[2]) including:

- Hydrocarbon product resembling motor oil detected in a soil sample taken from below an out of service underground storage tank that was removed from the subject property at 1042 East Empire Street.
- Presence of "construction debris" in exploratory borings at the property boundaries indicated the potential for generation of methane and other landfill gases and a soil gas survey was conducted. Laboratory testing results found trace levels of volatile organic chemicals (VOCs) and methane. It was determined that the levels of VOCs and methane are not at levels of concern, and no further action was recommended relative to this finding.
- Buildings on the property were constructed prior to 1978 and a sampling program for lead was incorporated into the Phase I investigation following DTSC guidelines. The investigation found two limited areas of soil that contained lead concentrations between 255 mg/kg and

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[1] A Phase I Environmental Site Assessment (ESA) is conducted to identify and evaluate the presence of Recognized Environmental Concerns (REC).

[2] An REC is the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

1,000 mg/kg. Following excavation of these areas, soil levels of lead were below levels of concern for young children.

The Phase I ESA did not recommend any further actions for any of the three RECs.

Senter Road Residential Property

This site is located along Senter Road and is approximately 0.17 miles from improvement site R8-FW13. In August 2022, the DEH and the owner of this property, Affordable Housing Land Consultants, LLC., entered into a Remedial Action Agreement and a Phase I ESA was completed in May 2022, which identified the following REC (AMG & Associates, LLC 2022):

- The former railroad presents the potential for Polynuclear Aromatic Hydrocarbons (PAHs), arsenic, and VOCs in the soil at the site. However, based on a previous subsurface assessment conducted in 2021, PAHs and VOC's were not found at the site.

The Phase I ESA recommended preparation of a Soil Management Plan for implementation of remedial action at the site. A Subsurface Environmental Site Assessment Work Plan was prepared in March 2023 and includes subsequent drilling and sampling of 12 exploratory borings on the site. A Subsurface Environmental Site Assessment Report was prepared in June 2023 and concluded that no further subsurface assessment or remedial actions related to PAHs, VOCs, or the Title 22 Metals (except for arsenic) are needed. The Subsurface Environmental Site Assessment Report recommended implementation of a Soil Management Plan for shallow subsurface soils where arsenic was detected.

The Charles

This site is located near the intersection of Story Road and Senter Road and is approximately 106 feet from improvement site R8-FW13. In March 2023, the DEH and the owner of this property, Keyes, L.P., entered into a Remedial Action Agreement. A Phase I ESA was completed in 2018 and a Phase II ESA[3] was completed in 2019 (Charities Housing Development Corporation 2018, 2019). The Phase I ESA identified the following RECs:

- The former agricultural use presents the potential for chemical pesticides and insecticides in the soil at the site.
- The former railroad presents the potential for arsenic in the soil at the site.
- The presence of an old building adjacent to the site, and likelihood of lead-based paints used in this building in the past, presents the potential for lead contamination in the soil at the site.
- The proximity of an active Superfund[4] site presents the potential for VOCs in the groundwater at the site.

The Phase I ESA recommended conducting additional soil testing to identify any potential contaminants at the site and groundwater sampling analyses to evaluate the potential residual

[3] A Phase II ESA evaluates the presence or absence of petroleum products or hazardous substances in the sites subsurface.

[4] As established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), a Federal "Superfund" was created to clean up uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants. Sites identified for clean up under CERCLA are commonly referred to as "Superfund sites." See Section 3.8.2 "Regulatory Setting" for a further discussion regarding CERCLA.

VOC concentration and develop risk management options as necessary. The Phase II ESA included soil and groundwater sampling at various locations throughout the site to address these recommendations. Laboratory testing results indicate that approximately half of the surface soil across the site contains lead with some locations that also contain pesticides. Groundwater laboratory results found no contaminants. The Phase II ESA recommended excavating all areas of soil contamination. In September 2023, a Final Soil Management Plan was prepared to provide management and contingency procedures to be implemented during the soil remediation of the site.

Previous Hazardous Assessments in the Project Area

Phase I Hazardous Substance Liability Assessments

Phase I Hazardous Substance Liability Assessments (HSLAs) were prepared in preparation for the easement acquisition process by Valley Water for 44 properties located within the project area and vicinity. Of the 44 properties, one includes a previously discussed existing hazardous materials site; Watson Park. The HSLAs were reviewed and used in this section to summarize information on 21 sites that pose risks due to the potential presence of hazardous materials (see Appendix F for all HSLAs). See **Figure 3.8.2** for the location of the APNs of these sites relative to the project area.

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Parcel Boundary
Flood Risk Reduction Improvements
Floodwall
Passive Barrier
Berm
Temporary Sandbag Berm
Construction Areas and Access
Staging/Laydown Area
Temporary Cofferdam
Temporary Creek Crossing
Park/Open Space
MONTAGUE EXPRESSWAY
23718042
23718081
23718082
23702066
23702067
23702064
Coyote Creek
San Jose Municipal Golf Course
Reach 5
24921005
Watson Park
24964028
24964025
24964001
Lower Silver Creek
Roosevelt Park
46751069-072
William Street Park
47233007
Martin Park
47233010
Selma Olinder Park
47211009
47212005
47212041
47212076
47212044
47212001
Kelley Park
47212024
Coyote Creek Park
TULLY ROAD
47720033
Guadalupe River
0
0.25
0.5
1
Miles
N

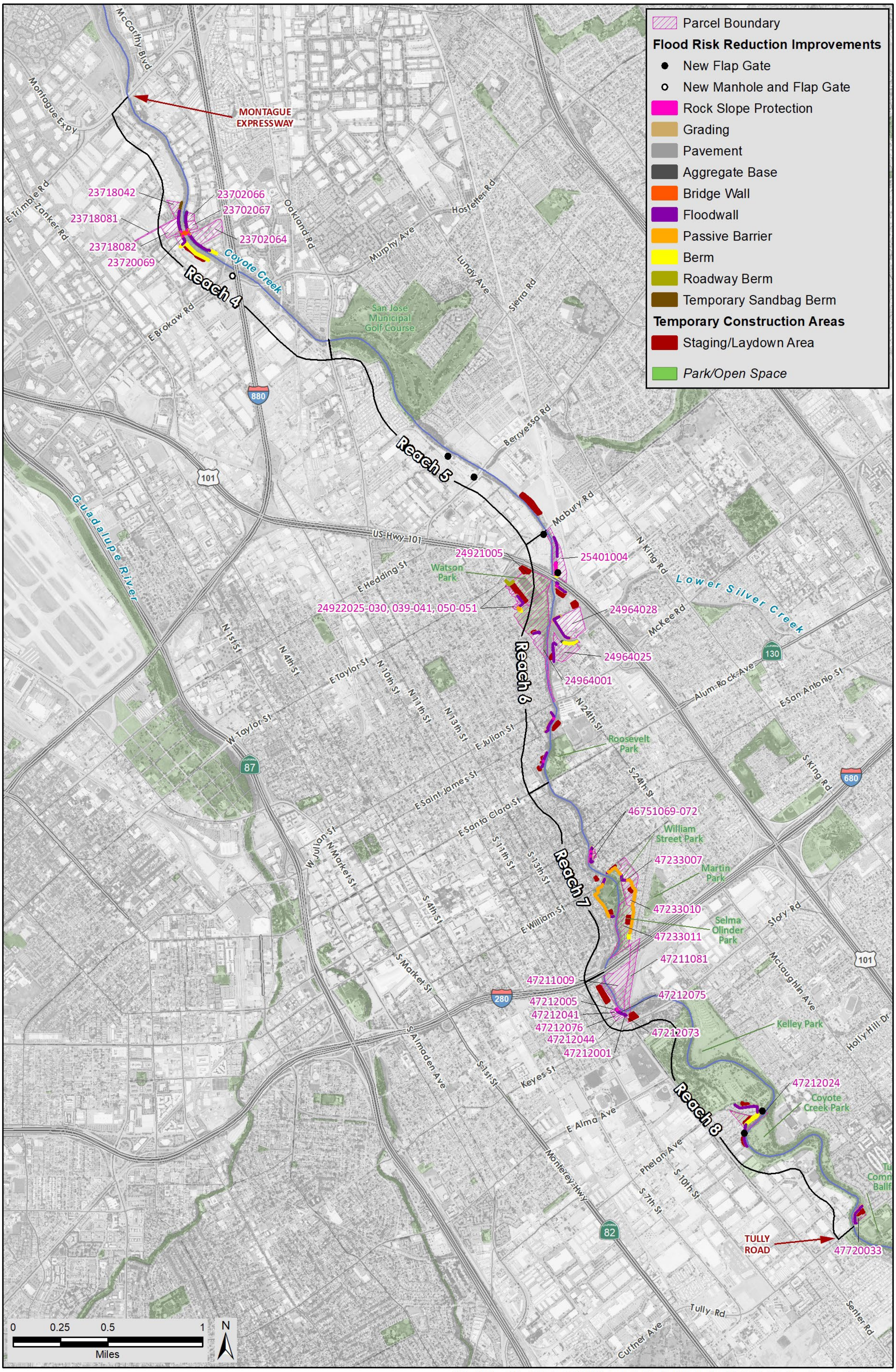

Figure 3.8.2. Phase I HSLA APNs

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As stated in the HSLAs, most of the 44 sites in the project area and vicinity have been historically inundated by flooding, and therefore also have the potential to contain contaminants typical of urban stormwater runoff, including metals, oils, polychlorinated biphenyls (PCBs), and other constituents. Historic agricultural land use was common at the majority of the 44 sites adjacent to Coyote Creek, and therefore pesticides and other agricultural chemicals may be present in soils at these sites. The majority of the 44 sites adjacent to Coyote Creek have old structures and residences, which due to their age, have the potential to contain asbestos and lead-containing materials. Additionally, lead and organochlorine pesticides (OCPs) can sometimes be present in soils along the base of older residential structures. Imported soils and debris from historic filling and grading operations, which were undertaken when less stringent screening of imported fill was common, have the potential to contain hazardous materials. Lastly, historic railroad maintenance practices are associated with two parcels in the project area (APNs 273-18-042 and 237-18-081), which indicates the potential for elevated levels of metals, primarily arsenic and lead, pesticides, and other chemicals in shallow soils at these sites.

In addition to the historical uses described above, 35 HSLAs identified the following site-specific business environmental risks[5] and recommendations to avoid impacts from the identified risks:

- APNs 472-33-007, 472-33-010, and 472-33-011 (Reach 7, within and adjacent to improvement site R7-FW12): Two adjacent contaminated sites (Former Union Pacific William Street Railroad Yard and Former Martin Park Landfill) indicate the presence of historic documented releases impacting soil and groundwater from total petroleum hydrocarbons (TPH) at both sites and evidence of the intention to install a passive vapor barrier at one of the sites. Installing a passive barrier is typically done if there is residual contamination, however, no further information was found regarding the purpose of the passive barrier. One of the sites is under the oversight of the SFBRWQCB for the monitoring of contamination in groundwater. The HSLA recommended air quality monitoring for soil and groundwater vapor (VOC) should be conducted in any excavated trenches three feet or more in depth planned for entry by construction workers.
- APN 249-64-028 (Reach 6, within improvement site R6-FW8): The Kellogg's food processing operations at 475 Eggo Way store and use acutely hazardous materials (anhydrous ammonia). If a chemical accident were to occur during construction, a potential worker safety hazard could be posed. The HSLA recommended coordination with environmental health and safety staff at the facility to become familiar with their Risk Management Plan requirements, particularly as they relate to the facility's emergency evacuation alarms, procedures, communications, and evacuation routes.
- APN 237-20-069 (Reach 4, adjacent to improvement sites R4-FW2, R4-FW1): Two release incidents have been documented to have occurred on this parcel.is However, there is a lack of information regarding these incidents, the location of the impacts, and what was done in response. The HSLA recommended conducting shallow soil sampling to analyze for potential hazardous materials.

[5] A business environmental risk is a risk that can have material environmental or environmentally driven impact on the business associated with the current or planned use of the parcel of commercial real estate.

- APN 472-12-005 (Reach 8; adjacent to improvement site R8-FW13): Approximately 11 vehicles are being stored onsite without visible evidence of a release of hazardous materials from leaks. However, the ground surfaces below the vehicles could not be inspected for potential petroleum product staining.
- APN 249-22-030 (Reach 6, adjacent to improvement site R6-FW7): Two old vehicles are stored onsite without visible evidence of a release of hazardous materials. However, the ground surfaces below the vehicles could not be inspected for potential petroleum product staining. The HSLA recommended coordination with the property owner to relocate the old vehicles and inspect and sample the soil beneath for evidence of any hazardous substances.
- APN 249-21-005, 249-64-001 (Reach 6, within and adjacent to improvement sites R6-FW7, ~~R6-FW16,~~ R6-PB7, ~~R6-B7 FW1,~~ R6-B7, R6-B8, and R6-FW9): An engineered soil cap is present on a portion of Watson Park. Agency enforced institutional controls are required to be followed for any construction work conducted in Watson Park. The HSLA recommended notifying DTSC and the City of project construction activities on property immediately adjacent to the cap and that the work be performed in accordance with the requirements of the Watson Park institutional controls[6] (AECOM 2018).
- APN 254-01-004 (Reach 6 adjacent to improvement site R6-FW5): A vehicle maintenance, repair, and fueling facility located on this parcel indicates potential for soil or groundwater contamination from leaks or spills of fuel, oil, grease, and other hazardous materials used onsite. Location of the site directly adjacent to US 101 also indicates potential for soil to be impacted from aerial deposition of lead from automobile exhaust. The HSLA recommended performing a baseline soil and groundwater quality investigation.
- APN 477-20-033: Due to the presence of PFAS groundwater contamination on the property, should the planned floodwall excavation be constructed to a depth that encounters groundwater and/or requires de-watering, the HSLA recommends performing a groundwater quality investigation.
- APN 249-22-025, 467-51-071, 467-51-072, 467-51-069, 467-51-070, 249-64-025, 237-18-082, 237-02-067, 237-02-064, 249-22-026, 249-22-027, 249-22-028, 249-22-050, 249-22-029, 249-22-030, 249-22-039, 249-22-041, 249-22-051, 249-22-040, 237-02-066, 472-12-001: Due to the presence of old structures, the HSLAs recommended evaluating these sites for asbestos-containing materials and lead containing paint for any structures they plan to remove or modify prior to performing any construction, remodeling, or demolition of structures. Additionally, the HSLAs recommended that performing soil quality investigations of the exterior perimeter soils around the structures to evaluate potential impacts related to the presence of lead from historical lead-based paint and pesticides from historical use.
- APN 254-01-004, 472-33-007, 472-33-010, 472-12-04, 477-20-033, 472-11-009, 472-11-081, 472-12-073, 472-12-005, 472-12-076, 472-12-044, 472-12-075, 472-12-001, 472-33-011, 477-12-024: Due to the potential for excavation to the depth that encounters groundwater and/or requires dewatering, the HSLAs recommended performing a groundwater quality investigation to evaluate potential health risk impacts to Valley Water

[6] Institutional controls are land use restrictions required as part of the corrective action remedies.

workers and the public, and off-site disposal options for de-watering fluids prior to performing excavation activities.

- For all areas within the improvement sites, the HSLAs recommended soil quality investigations to evaluate potential health-risk impacts and to evaluate off-site disposal options for excess soil prior to performing any future construction at the site related to flood control improvements.

The following RECs were identified at APNs within or adjacent to the improvement site for R8-FW13 due to the presence of the Lorentz Barrel and Drum Company (LBD) Superfund cleanup site, the former Story Road Landfill, and the former Union Pacific Railroad tracks and trestle. Recommendations proposed to avoid an impact due to the RECs are provided below.

The LBD Superfund cleanup site is located at the intersection of South 10th Street and East Alma Avenue in the City, approximately 0.29-mile from the project site. The LBD Superfund cleanup site accepted 55-gallon drums containing chemical residues, including solvents, acids, and oils, for more than 40 years. When the drums were cleaned and repainted for subsequent resale, chemical residues were improperly disposed of at the site, resulting in significant soil and groundwater contamination. A groundwater contamination plume of VOCs and Semi-volatile Organic Compounds (SVOCs) has migrated northward in the downgradient direction for a distance of over 4,000 feet. The LBD Superfund site is listed as closed with monitoring.

The former Story Road Landfill is located near the intersection of Coyote Creek and I-280 in San José. The City of San José operated the Story Road Landfill from 1961 to 1969, with approximately 500,000 cubic yards of refuse discharged to the site. The Story Road Landfill is currently listed as closed with monitoring.

The former Union Pacific Railroad tracks and trestle-bridge are located immediately east of the project site near R8-FW13. Based on an interview questionnaire conducted for APN 472-11-081, the property consists of a railroad easement purchased by the City from Union Pacific Railroad. Additionally, environmental sampling conducted by the City indicated the presence of elevated concentrations of arsenic and other contaminants in shallow soil due to operations associated with the former Union Pacific Railroad

- APNs 472-12-044, 472-12-005, 472-12-041, 472-11-009, 472-11-081, 472-12-073, 472--12-005, 472-12-075, and 472-12-001: Presence of groundwater contamination originating from the Lorentz Barrel and Drum Company (LBD) Superfund cleanup site. Due to the likely presence of groundwater contamination beneath the above listed APNs from the LBD Superfund cleanup site and the proximity of Story Road Landfill, the HSLAs recommended that if construction will intersect groundwater or require construction dewatering, to notify EPA Region 9 of the intent to excavate within the LBD groundwater plume area. Additionally, the reports recommended that any construction work at this site should be subject to a Health and Safety Plan (HASP) that specifically addresses the potential for encountering TPH and VOC vapors in soil, and groundwater during excavation and dewatering operations.
- APNs 472-12-005, 472-11-009, 472-11-081, 472-12-073, 472-33-011, and 472-12-041: Presence of groundwater contamination originating from the Story Road Landfill cleanup site located within Reach 8 adjacent to improvement R8-FW13. Additionally, APN 472-11-009 is part of the former Story Road Landfill. Should excavation be to the depth that encounters

groundwater and/or requires dewatering, the HLSAs recommended performing a groundwater quality investigation to evaluate potential health risk impacts to Valley Water workers and the public and off-site disposal options for de-watering fluids prior to performing excavation activities. Due to APN 472-11-009 being part of the Story Road Landfill, the HLSAs recommended notifying the City and the SFBRWQCB before performing construction activities at the site and coordinating with these agencies as appropriate.

- APNs 472-11-009, 472-11-081, and 472-12-073: Presence of elevated concentrations of arsenic and other contaminants in shallow soil due to operations associated with the former Union Pacific Railroad. The tracks and trestle-bridge are located within Reach 8 immediately adjacent to the improvement site for R8-FW13. The HSLA recommended performing soil quality investigations.

Limited Phase II Soil Investigation Work Report

The Limited Phase II Soil Investigation Work Report documents field activities and findings from the Limited Phase II Soil Investigation that was conducted for a portion of the project area within Reaches5 (the CCFPP does not propose improvements along Reach 5, only a staging/laydown area), 6 and 7 to investigate the RECs identified during the Phase I HSLAs, described above (AECOM 2023). On November 21 and 28, 2022, AECOM performed 29 soil borings to a depth of 2 feet below ground surface and collected 31 soil samples to evaluate health-risk impacts and inform safety requirements to protect the public and Valley Water workers during construction activities. No groundwater was encountered during sampling; thus, no grab groundwater samples were collected. All samples were compared to SFBRWQCB Tier 1 Environmental Screening Levels (ESLs); SFBRWQCB 2019) and Human Health Risk Assessment (HHRA) DTSC Note 3 Industrial ESLs, EPA Regional Screening Levels (RSLs) for Residential Soil, and Construction Worker ESLs for Cancer and Non-cancer risk (if available). The soil samples were tested for Title 22 Metals[7], TPH, VOCs, OCPs, SVOCs, and PCBs. The TPH and SVOCs results were either not detected or were below laboratory reporting limits and/or applicable regulatory screening levels.

Title 22 Metals

During the Limited Phase II Soil Investigation that was conducted within Reaches 6 and 7, the following metals were detected above laboratory reporting limits and/or applicable regulatory screening levels.

- Arsenic was detected at concentrations ranging from 1.3 to 24 mg/kg. Arsenic is a naturally occurring metal in California soil at background concentrations up to 11 mg/kg, and detections equal to and below this value can be considered typical of the regional geology. Four arsenic concentrations exceeded the background concentration and applicable regulatory screening level.
- Chromium was detected at concentrations ranging from 19 to 190 mg/kg. One chromium detection exceeded the Tier 1 ESL, but not the Construction Worker ESLs for cancer or non-cancer risks.
- Cobalt was detected at concentrations ranging from 7 to 28 mg/kg. One cobalt detection exceeded the Tier 1 ESL and the Construction Worker ESL for non-cancer risk.

[7] Heavy metals identified in the California Code of Regulations Title 22, Section 66261.24.

- Lead was detected at concentrations ranging from 5.6 to 170 mg/kg. Sixteen lead detections exceeded the Tier 1 ESL, and one lead detection exceeded the Construction Worker ESL for non-cancer risk.
- Nickel was detected at concentrations ranging from 28 to 300 mg/kg. Eight nickel detections exceeded the Tier 1 ESL and the Construction Worker ESL for non-cancer risk.
- Thallium was detected in two samples at concentrations ranging from 0.96 to 0.99 mg/kg. Both samples exceeded the Tier 1 ESL but not the Construction Worker ESL for non-cancer risk.
- Vanadium was detected in two samples at concentrations ranging from 21 to 120 mg/kg. Vanadium is a naturally occurring metal in California soil at background concentrations up to 90 mg/kg, and detections equal to and below this value can be considered typical of the regional geology. The vanadium detections exceeded the background concentrations and the Tier 1 ESL but not the Construction Worker ESLs for cancer or non-cancer risks.
- Ten soil samples were also analyzed for chromium and lead by Soluble Threshold Limit Concentration to determine if the soil met requirements for Resource Conservation and Recovery Act (RCRA) non-hazardous or hazardous waste criteria. None of these samples exceeded the concentration for hazardous waste of 5 milligram per liter.

Organochlorine Pesticides

Dieldrin was detected at concentrations ranging from 0.00021 to 0.4 mg/kg. Two detections exceeded the EPA RSL for Residential Soil and one detection exceeded the HHRA Note 3 Industrial Soil ESL but no other applicable regulatory screening levels. All other OCPs detections were below the laboratory reporting limits and/or applicable regulatory screening levels.

Polychlorinated Biphenyls

PCB 1260 was detected at concentrations ranging from 0.0033 to 3.7 mg/kg. One detection exceeded the EPA RSL for Residential Soil, and the HHRA Note 3 Industrial Soil ESL for cancer risks. All other PCBs detections were below laboratory reporting limits and/or applicable regulatory screening levels.

Recommendations

The Limited Phase II Soil Investigation Work Report recommended development of a Soil and Groundwater Management Plan (SGMP) and exposure hazard mitigation plan before implementing construction activities in the project areas sampled. SGMPs provide guidance on best management practices for segregated stockpiling, transport, and disposal of non-hazardous and of hazardous waste soil, and management of groundwater. The report also recommends submitting information to SFBRWQCB for review. SFBRWQCB may forward this information to CalEPA), which regulates PCBs under the Toxic Substances Control Act. The general rule for a PCB concentration over 1.0 ppm or mg/kg is regulated by EPA under Title 40 of the Code of Federal Regulations (CFR) Part 761. A concentration exceeding 50 ppm or mg/kg is considered hazardous waste under 40 CFR Part 761.

Naturally Occurring Asbestos

Asbestos is a naturally occurring fibrous mineral found in many parts of California, including in Santa Clara County. When rocks containing these fibrous minerals are broken apart, asbestos fibers can become airborne and present a potential human health risk. Natural occurrences of asbestos are more likely to be encountered in, and immediately adjacent to, areas of ultramafic rocks. Based on information developed by the SWRCB to map natural occurring asbestos in Santa Clara County, there is no evidence of naturally occurring asbestos present within the project site and vicinity (San José 2021).

Valley Fever

Valley Fever, sometimes called “San Joaquin Valley fever” or “desert rheumatism”, is an infection caused by a soil dwelling fungus (Coccidioides) that, when inhaled, can affect the lungs, causing respiratory symptoms including cough, fever, chest pain, and tiredness. Valley Fever can be contracted as a result of ground disturbing activities and may be common in soil types throughout the Project study area. There are no commercially available tests to detect this fungus in soil. In 2021, Santa Clara County reported 65 cases indicating the fungus that causes Valley Fever was present in Santa Clara County (CDPH 2021).

School Facilities

The following schools are within 0.25-miles of the project area: Empire Gardens Elementary School, San José High School Auxiliary Gym, Yerba Buena High School, and Luiz Valdez Leadership Academy.

Airports and Airstrips

The San José Mineta International Airport is located approximately 1.5 miles north of the project area in Reach 4. The project area is not within safety zones defined in the Airport Comprehensive Land Use Plan (Santa Clara County Airport Land Use Commission 2011).

Fire Hazard

The project is not located within a very high fire severity zone as designated by California Department of Forestry and Fire Protection (CALFIRE 2023).

3.8.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also called the Superfund Act (42 USC section 9601 et seq.), is intended to protect the public and the environment from the effects of prior hazardous waste disposal and new hazardous material spills. Under CERCLA, the EPA has the authority to seek out the parties responsible for hazardous materials releases, and to assure their cooperation in site remediation (EPA 2023). CERCLA also provides federal funding (the “Superfund”) for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (PL 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program. One Superfund site, the LBD Superfund site, is located approximately 0.29 mile distance from the project area.

When potentially responsible parties cannot be identified or located, or when responsible parties fail to act, the EPA has the authority to remediate abandoned and/or historical sites where hazardous materials contamination is known to exist and to pose a human health hazard.

Pursuant to CERCLA, the EPA maintains the National Priorities List of uncontrolled or abandoned hazardous waste sites identified for priority remediation under the Superfund program. Sites are identified for listing on the basis of the EPA's hazard ranking system, or if they meet certain other requirements, such as a designation of one site by a state or territory or if the Agency for Toxic Substances and Disease Registry issues a public health advisory.

Emergency Planning and Community Right-to-Know Act of 1986

The Emergency Planning and Community Right-to-Know Act (also known as Title III of the Superfund Amendments and Reauthorization Act) was enacted by Congress in 1986 to help local communities protect public health, safety, and the environment from chemical hazards. To implement the Emergency Planning and Community Right-to-Know Act, Congress requires each state to appoint a State Emergency Response Commission (SERC). The SERCs are required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district.

Broad representation on the SERC by fire fighters, health officials, government and media representatives, community groups, industrial facilities, and emergency managers ensures that all necessary elements of the planning process are represented.

Resource Conservation and Recovery Act

The RCRA (42 USC section 6901 et seq.) set up the federal regulatory program for hazardous substances and gives the EPA the authority to regulate the generation, transport, treatment, and disposal of hazardous substances in a "cradle to grave" system. RCRA also establishes a framework for the management of non-hazardous solid wastes (EPA 2020b). RCRA addresses only active and future facilities; it does not address abandoned or historical sites, which are covered by CERCLA (see preceding section).

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). These standards, codified in 29 CFR Part 1910, address issues that range in scope from walking and working surfaces, to exit routes and emergency planning, to hazardous materials and personal protective equipment (PPE). They include exposure limits for a wide range of specific hazardous materials, as well as requirements that employers provide PPE to their employees wherever it is necessary (29 CFR section 1910.132).

U.S. Department of Transportation Regulations on Hazardous Materials

The United States Department of Transportation governs the transport of chemicals and hazardous materials under CFRCFR Title 49, which stipulates the types of containers, labeling, and other restrictions that must be used to move such material on interstate highways.

State Laws, Regulations, and Policies

Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is primarily responsible for developing and enforcing workplace safety regulations in the state. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (California Code of Regulations (CCR) Title 8 require employers to provide safety training and safety equipment, conduct accident and illness prevention programs, warn against hazardous-substance exposure, and prepare emergency action and fire prevention plans.

Cal/OSHA also enforces hazard-communication program regulations that contain training and information requirements. Companies must establish procedures to identify and label hazardous substances, communicate information about hazardous substances and their handling, and prepare health and safety plans to protect workers and employees at hazardous waste sites. Employers must make material safety data sheets available to employees and document employee information and training programs.

California Environmental Protection Agency

CalEPA is responsible for creating and enforcing environmental regulations within California. Within CALEPA is housed the DTSC, which was formed under the Hazardous Waste Control Act. DTSC is responsible for regulating hazardous waste, remediating existing contamination, and identifying ways to reduce production of hazardous wastes. DTSC can delegate enforcement responsibilities to local jurisdictions.

California Environmental Protection Agency Unified Program

CalEPA oversees California's Unified Program which protects Californians from hazardous waste and hazardous materials by ensuring that local regulatory agencies apply statewide standards when permits are issued and conduct inspections and enforcement activities. Specifically, the Unified Program consolidates the administration, permit, inspection, and enforcement activities of the following environmental and emergency management programs: Aboveground Petroleum Storage Act Program, Area Plans for Hazardous Materials Emergencies, California Accidental Release Prevention Program, Hazardous Materials Business Plan Program, Hazardous Material Management Plan and Hazardous Material Inventory Statements (California Fire Code), Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and Underground Storage Tank (UST) Program.

Hazardous Waste Control Act of 1972

The Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.) creates the framework for managing hazardous wastes in California. It requires that a statewide hazardous waste program be developed to administer and implement the provisions of the federal RCRA. The Hazardous Waste Control Act also designates California-only hazardous wastes and includes standards (regulations) that are equal to or, in some cases, more stringent than, federal requirements. The act lists allowable exemptions and requirements for recycled materials and for other materials, such as launderable rags.

DTSC administers and implements the provisions of the Hazardous Waste Control Act at the state level, pursuant to EPA's authorization. Certified unified program agencies, which are typically local agencies, implement some provisions of the act locally.

DTSC requires preparation of written programs and response plans, such as hazardous materials business plans. DTSC's programs also include aftermath cleanup caused by improper management of hazardous waste; evaluation of samples taken from sites; enforcement of regulations regarding use, storage, and disposal of hazardous materials; and encouragement of pollution prevention.

Hazardous Waste Operations and Emergency Response

CCR, Title 8, Industrial Relations – Section 5192 Hazardous Waste Operations and Emergency requires employers to develop and implement a written safety and health program for their employees involved in hazardous waste operations to identify, evaluate, and control safety and health hazards, and provide for emergency response for hazardous waste operations.

Motor Vehicle Code

In addition to the RCRA hazardous waste transportation standards, California regulates the transportation of hazardous waste originating or passing through the state. State regulations are contained in the CCR, Title 13, Vehicle Code. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests. The California Highway Patrol (CHP) and Caltrans are responsible for enforcing federal and state regulations pertaining to the transport of hazardous materials through California. The CHP enforces materials and hazardous waste labeling and packaging regulations that prevent leakage and spills of material in transit and provides information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance. The CHP and Caltrans also respond to hazardous materials transportation emergencies. Caltrans has emergency chemical spill identification teams at locations throughout the state.

Cortese List Government Code Section 65962.5

Government Code Section 65962.5 was enacted in 1985 and amended in 1992.Itrequires that through the combined efforts of the DTSC, the Department of Health Services, SWRCB, and local enforcement agencies a list of potentially hazardous areas and sites be compiled and maintained (at a minimum annually updated), commonly referred to as the "Cortese List." The list is consolidated by the Secretary for Environmental Protection and is distributed to each city and county where sites on the list are located. DTSC's portion of the list can be found on its data management system known as EnviroStor. Additional Cortese List data resources include SWRCB's GeoTracker database, EPA Superfund sites, and Water Board solid waste disposal sites and active Cease and Desist Orders and Cleanup and Abatement Orders. The Environmental Setting section describes the six Cortese list sites located in the project area.

California Emergency Services Act

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

The California Emergency Management Agency (Cal EMA) is the state agency responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. CAL EMA regulates businesses by requiring specific businesses to prepare an inventory of hazardous materials (CCR Title 19). CAL EMA is also the lead state agency for emergency management and is responsible for coordinating the state-level response to emergencies and disasters.

California Valley Fever Regulations

Regulations covering Valley Fever are promulgated in CCR, Title 8, Industrial Relations, in the sections summarized below.

- Section 3203, Injury and Illness Prevention: This section requires employers to establish and implement a written Injury and Illness Prevention Program (IIPP) that shall identify the person or persons with authority and responsibility for implementing the IIPP, establish a system for ensuring that employees are trained to recognize and comply with safe and healthy work practices, and establish a system for communicating with employees in a form readily understandable by all affected employees on matters relating to occupational safety and health.
- Section 5141, Control of Harmful Exposures: This section requires that harmful exposures shall be prevented by engineering controls whenever feasible. Whenever engineering controls are not feasible or do not achieve full compliance, administrative controls shall be implemented if practicable. Control by respiratory protective equipment shall be used to prevent harmful exposures (1) during the time period necessary to install or implement feasible engineering controls, and (2) where feasible engineering controls and administrative controls fail to achieve full compliance; and (3) in emergencies.
- Section 5144, Respiratory Protection: This section establishes the permissible practice for the use of respiratory protection: "((1) In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures. When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section. (2) Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee.".

California Department of Forestry and Fire Protection

Public Resources Code 4201-4204 directs CALFIRE to map fire hazard within State Responsibility Areas (SRA) based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread. These zones, referred to as Fire Hazard Severity Zones (FHSZ), classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone.

Regional/Local Laws, Regulations, and Policies

San Francisco Bay Regional Water Quality Control Board

In 2000, the SFBRWQCB first published human health risk-based screening levels (RSL) for over 100 commonly detected contaminants at sites with impacted soil and groundwater. The RSLs were revised in 2003 to become ESLs, and their scope broadened to include direct exposure screening levels for construction and trench workers, and ecological risks and nuisance/gross contamination concerns (SFBSWRCB 2020). The ESLs are conservative risk-based screening levels initially informed by USEPA Region 9 Preliminary Remediation Goals and CalEPA California Human Health Screening Levels. Although initially developed to regulate water quality for the San Francisco Bay Basin Water Quality Control Plan, the conservative, risk-based ESLs have been adopted by many California regulatory agencies as default screening levels to evaluate risk to human health and the environment.

Envision San José 2040 General Plan

The following goals and policies from the Envision San José 2040 General Plan are relevant to the proposed project (City of San José 2011).

GOAL EC-6: **Hazardous Materials.** Protect the community from risks inherent in the transport, distribution, use, storage, and disposal of hazardous materials.

- **Policy EC 6.1.** Require all users and producers of hazardous materials and wastes to clearly identify and inventory the hazardous materials that they store, use or transport in conformance with local, state and federal laws, regulations and guidelines.
- **Policy EC 6.2.** Require proper storage and use of hazardous materials and wastes to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal by businesses and residences. Require proper disposal of hazardous materials and wastes at licensed facilities.

City of San José Emergency Operations Plan

The purpose of the City of San José Emergency Operations Plan (EOP) is to establish the foundational policies and procedures that define how the City will effectively prepare for, respond to, recover from, and mitigate against natural or human-caused disasters (City of San José 2019). It identifies emergency response policies, describes the response and recovery organization, and assigns specific roles and responsibilities to City departments, agencies, and community partners.

Santa Clara County Emergency Operations Plan

The Santa Clara County EOP is a comprehensive all-hazards document that provides guidance and procedures for the County to prepare and respond to significant natural and human-caused threats (Santa Clara County 2022b). The EOP does not address specific emergency response scenarios, however, it outlines specific response activities for response organizations to conduct during emergencies.

3.8.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, “Project Description”, Valley Water would incorporate BMPs, VHP Conditions, and AMMs, to avoid and minimize adverse effects on the environment that may result from the project. All relevant Valley Water BMPs, VHP Conditions, and AMMs for the project are included in Appendix B. No VHP Conditions or AMMs are applicable to hazards and hazardous materials. BMPs relevant to hazards and hazardous materials include the following:

- **AQ-1: Use Dust Control Measures –** Would ensure dust and air quality management measures, including implementation of BAAQMD’s (Bay Area Air Quality Management District’s) BMPs for dust suppression are implemented. Removal of ground cover, including both vegetation and structures, would expose soil to erosion. Dust control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.
- **HM-7: Restrict Vehicle and Equipment Cleaning to Appropriate Locations –** Would ensure that vehicles and equipment would 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 –** Would ensure that fueling or servicing will be done in designated areas away from waterways or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators).
- **HM-9: Ensure Proper Hazardous Materials Management –** Would ensure that hazardous materials are properly handled, and the quality of water resources is protected by all reasonable means.
- **HM-10: Utilize Spill Prevention Measures –** Would implement spill prevention, hazardous materials control, and spill clean-up procedures to prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into the environment.

The following Valley Water SMP BMPs are applicable to hazards and hazardous materials during operation and maintenance of the project:

- **GEN-2: Instream Herbicide Application Work Window** – Would limit application of herbicides to the dry season only (between June 15 and October 15) or until the first occurrence of local rainfall greater than 0.5 inch is forecasted within a 24-hour period from planned application events or when steelhead begin migrating upstream and spawning, as determined by a qualified biologist (typically in November/December). In addition, no herbicides applications are allowed directly into water and when wind conditions may result in drift.
- **GEN-24: On-Site Hazardous Materials Management** – Would reduce the potential for release of hazardous materials. This BMP specifies handling, storing, and disposing of all hazardous materials used or expected to be used at maintenance work sites. This BMP also specifies that all portable toilets will be placed outside the creek channel and floodplain and regularly cleaned and/or replaced and inspected daily for leaks and spills.
- **GEN-25: Existing Hazardous Materials** – Would reduce hazardous materials from entering the creek. This BMP specifies that all hazardous materials found during maintenance (e.g.

batteries, oil, paint cans, etc.) will be removed from the maintenance work sites and disposed of according to applicable regulatory requirements.

- **GEN-26: Spill Prevention and Response** – Would reduce the release of chemicals, fuels, lubricants, and non-storm drainage water into channels, drains, or on the ground. This BMP specifies measures to prevent accidental release of hazardous materials and response measures in the event that spills occur to minimize the area affected by any release of hazardous materials. This BMP also includes measures to respond to spills that cannot be contained immediately with materials on the work site and for large spills, including contacting all responsible regulatory and emergency response agencies.
- **GEN-30: Vehicle and Equipment Maintenance** – Would reduce the release of fuel, oil, lubricants, and other hazardous materials. This BMP specifies measures to inspect vehicles for leaks and clean excessive build-up of grease and oil. This measure also specifies where vehicle maintenance will be done to prevent spills or leaks from leaking on the ground or entering surface or the storm drain system.
- **GEN-31: Vehicle Cleaning** – Would reduce the spread of soil and other contaminants from entering surface waters. This BMP prohibits vehicle wash-water from entering water bodies by requiring vehicles to be washed at designated and approved wash areas in Valley Water's corporation yard.
- **GEN-32: Vehicle and Equipment Fueling** – Would prevent the release of fuels onto the ground and from entering surface waters. This BMP prohibits fuels in the channel, unless equipment cannot be easily relocated (e.g., pumps and generators), and requires secondary containment for all in-field equipment fueling to prevent spills from reaching soil, surface water, or the storm drain system.
- **HM-4: Posting and Notification for Pesticide Use** – Would minimize exposure to pesticides by requiring the posting/notification of where pesticide use would be performed in compliance with Valley Water Policy Ad-8.2. This BMP includes notification requirements for both staff and the general public, along with contact information and other specifications.

3.8.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The proposed project would have a significant impact on hazards and hazardous materials if implementing the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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, including hazards associated with existing contaminated soils, asbestos, Valley fever, or existing contaminated groundwater during dewatering activities;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

- 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 create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would t result in a safety hazard or excessive noise for people residing or working in the project area;
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Analysis Methodology

Potential impacts on the environment related to hazards and hazardous materials were evaluated based on the type and location of project-related construction and operation and maintenance activities. The analysis is based on review of publicly available information and databases related to existing land uses, schools, and known soil and/or groundwater contamination sites within and near the project site, as well as the Phase I and II ESAs and HSLAs for sites within the project area and vicinity described previously in Section 3.8.1, "Environmental Setting." The analysis considers temporary and short-term impacts that would occur during the 2-year construction period and permanent impacts from ongoing operations and maintenance activities.

Impacts Not Discussed Further in the EIR

Accidental Release of Hazardous Materials Associated with Asbestos

No structures would be demolished as a part of the project, and the project is not located in an area with known naturally occurring asbestos (San José 2021). Therefore, there would be no potential for exposure to asbestos-containing materials because of project construction. No impact would occur from the project, and this issue is not discussed further in this EIR.

Conflict with An Airport Land Use Plan or be Located Within Two Miles of An Airport

Although the project is located within 2 miles of the San José Mineta International Airport, the project area is not located within the safety zones or noise contours as identified in the Comprehensive Land Use Plan (Santa Clara County Airport Land Use Commission 2011). Therefore, there would be no conflicts with an airport land use plan or exposure of workers to excessive noise. No impact would occur, and this issue is not discussed further in this EIR.

Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires

The project is not located within a very high fire severity zone as designated by CALFIRE (CALFIRE 2023). Additionally, the project would not increase the risk of wildland fires during project construction or operation and maintenance activities. Please also see Section 3.1.7, "Resources Eliminated from Further Analysis" for more information on eliminating analysis of wildfire. Therefore, no impact would occur, and this issue is not discussed further in this EIR.

Impact Analysis

Impact HAZ-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials. (Less than significant)

Project construction equipment, such as haul trucks, excavators, bulldozers, cranes, and pile drivers, would require the use of hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (which could include solvents and corrosives in addition to soaps and detergents) commonly used during construction. See Chapter 2, "Project Description," for a full list of construction equipment. Additionally, materials may be stored onsite at designated staging/laydown areas for re-fueling or maintaining construction equipment.

During construction and operation, Valley Water and construction contractors would be required to use, store, transport, and dispose of hazardous materials in compliance with federal, state, and local regulations during project construction. In accordance with OSHA and Cal/OSHA requirements, presented in Section 3.8.2 "Regulatory Setting," safety procedures for the handling of hazardous substances would be followed. The project would not result in the use or storage of large quantities of hazardous or flammable materials during construction or operations.

Operation and maintenance activities would result in a minor increase in activities along Coyote Creek requiring use of hazardous materials. These activities include trash removal, debris removal, vegetation management (e.g., removing vegetation along maintenance roads), maintenance road grading, management of wildlife conflicts, and graffiti removal. Visual inspection of the project improvements would be conducted on a periodic basis (one to two times per year).Valley Water SMP BMPs GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response) and BMP HM-4 (Posting and Notification for Pesticide Use) would reduce the potential for a significant hazard to the public or environment by implementing hazardous material management and response measures. Additionally, the public would be notified of pesticide use. Therefore, the project would not significantly increase the amount of hazardous materials currently used by Valley Water for operation and maintenance of flood risk reduction facilities.

As discussed above, implementation of Valley Water BMPs would reduce hazards to the public or environment through the routine transport, use, or disposal of hazardous materials by requiring vehicle and equipment cleaning away from sensitive habitats, ensuring proper maintenance of vehicles and equipment, handling and storing hazardous materials properly, requiring a spill prevention plan, and staging temporary sanitary facilities away from any waterbodies. Therefore, the project would not cause a significant hazard to the public or environment from the routine transport, use, or disposal of hazardous materials, and this impact would be **less than significant**.

Impact HAZ-2: 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. (Less than significant with Mitigation)

Construction activities would occur at intermittent locations over an approximately 9-mile-long stretch of Coyote Creek. Fuel leaks, or any other accidental hazardous materials spill during construction, could result in the release of hazardous material into the environment, including Coyote Creek and areas adjacent to the project area. Ground disturbing activities during construction could still expose previously recorded or unknown hazardous materials from historical agricultural and industrial land uses; imported fill; and buried debris and sediments from historic inundation events. This could expose construction workers, the public, and the environment to hazardous materials.

As discussed previously in Section 3.7.1 "Environmental Setting," Watson Park is within and adjacent to the project area and is reported to contain lead in concentrations that exceed 255 mg/kg and residual levels of contaminants of concern at depths greater than 3 feet below ground surface, under a soil and hardscape cap. Because of this, land use restrictions are imposed on this park and adjacent parcels and are enforced by DTSC and the City. In addition, 21 parcels with business environmental risks and/or RECs are identified within the project area and vicinity with recommendations for additional investigations and measures to reduce exposure of workers and public to hazardous materials. Finally, the Limited Phase II Soil Investigation Work Report conducted for parcels within Reaches 5, 6, and 7 found the following hazardous materials above applicable screening levels: Title 22 metals, Organochlorine Pesticides, and Polychlorinated Biphenyls. The Limited Phase II Soil Investigation Work Report recommended developing a SGMP and exposure hazard mitigation plan prior to any construction activities along these reaches.

During construction activities, construction workers that may directly or indirectly be exposed to onsite soil or groundwater would perform work in accordance with Cal/OSHA regulations. All site construction activities associated with exposure to onsite soil or groundwater would be required to be conducted in compliance with a site-specific HASP prepared by the contractors to protect workers and the environment from site contaminants. The site-specific HASP would be prepared according to Title 8, California Code of Regulations, Section 5192 and Title 29 CFR 1910.120 and would include provisions for personal protective equipment to be worn by workers during construction activities.

Implementation of Valley Water BMPs AQ-1 (Use Dust Control Measures), HM-7 (Restrict Vehicle and Equipment Cleaning to Appropriate Locations), and HM-10 (Utilize Spill Prevention Measures), and SMP BMPs GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), and HM-4 (Posting and Notification for Pesticide Use) would minimize the potential for accidental release of hazardous materials into the environment during both construction and operations and maintenance activities. Although compliance with existing regulations and implementation of BMPs would reduce the potential for accident or upset conditions to expose workers or the public to hazardous materials during construction activities, the risk of a significant hazard to the public or the environment from an accidental release of hazardous materials remains during construction and a **significant** impact.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measures: Mitigation Measure HAZ 2.1: Ensure Worker Safety in Areas with Elevated Concentrations of Lead

To ensure worker safety in areas with elevated lead concentrations in or adjacent to Watson Park where ground disturbance activities would occur, Valley Water and/or its contractor(s) shall require PPE that meets Cal/OSHA requirements for protection from lead exposure during project construction to maintain exposure levels below those established by the Cal/OSHA.

Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan

To minimize potential impacts to workers, the public or the environment from hazardous materials, Valley Water and/or its contractor(s) shall develop and implement a Hazardous Materials Management Plan (HMMP) for areas where project excavation activities would occur. The HMMP shall establish procedures to manage potentially contaminated soil and/or groundwater encountered as part of project construction. The HMMP shall identify proper protocols to implement upon uncovering suspected contamination, segregation and containment of contaminated materials, and testing and handling of potentially hazardous materials. The HMMP shall also identify potential licensed disposal facilities and their acceptance criteria.

Implement Recommendations of Phase I and II Environmental Site Assessments and Hazardous Substance Liability Assessments

The HMMP shall include the following recommendations from the Phase I and II Environmental Site Assessments (ESAs) and Hazardous Substance Liability Assessments (HSLAs) for the safety of workers, the public, and the environment as follows.

- Conduct air quality monitoring for soil and groundwater vapor (volatile organic compounds) at excavations that are 3 feet or more below ground surface depth at project improvement site R7-FW12 prior to workers entering excavated area(s).
- Coordinate with the Kellogg's facility prior to construction and obtain and implement their Risk Management Plan requirements for emergency evacuation alerts, procedures, communications, and evacuation routes in the event of an accident at the facility when workers are present at project improvement site R6-FW8.
- Conduct shallow soil sampling at project improvement sites R4-FW2 and R4-FW1 prior to ground disturbing activities to determine if hazardous materials are present.
- Contact DTSC and the City prior to conducting any ground disturbing activities within or adjacent to Watson Park.
- Comply with Watson Park institutional controls including the following (AECOM 2018):
    - Communication with City staff

    - Before initiating construction and or architectural/design work at the site, City's archived as-built construction specifications and drawings for the site shall be referenced.
- All engineering work performed at the Site shall be under the direction and supervision of a registered professional engineer licensed in California, with expertise in hazardous substance site cleanup,
- All geological work performed at the Site shall be under the direction and supervision of a registered professional geologist licensed in California, with expertise in hazardous substance site cleanup,
- After the City of San José Department of Public Works Environmental Services Project Manager has reviewed construction plans for the project and ensures that the necessary actions and or notifications indicated in the Site Management Plan have been completed, he/she will provide a work authorization form to the contractor and the City's or property owner's project manager. The form will identify City personnel to be contacted in the case that burn ash is encountered (at which time the excavation activities will cease).
- A Quality Control program will be implemented to ensure that staff working on a specific project is aware of the building restrictions and the procedures to ensuring that no one becomes exposed to burn ash present at the site.
    - DTSC will receive notification at least seven days in advance of proposed construction projects or field activities at the site. The DTSC shall be permitted to collect duplicate samples (or request split samples) for any soil sampling performed in the course of future field activities.

▪ If vehicles are located within project improvement site R6-FW7 and R8-FW13, coordinate with property owner prior to construction to remove them and examine soil underneath the vehicles for evidence of leaks. Test soil for presence of hazardous materials if evidence of leaks on ground surface are found.

▪ Conduct soil quality investigations at all 44 properties prior to ground disturbing activities.

Soil and/or Groundwater Testing and Proper Disposal of Potentially Contaminated Soils or Groundwater

The HMMP shall include procedures to be conducted if soil and/or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are exposed during site grading, excavation, or dewatering activities or identified in sampling of soil or groundwater, including those discussed below.

Valley Water and/or its contractor(s) shall stop work and test the excavated soil and/or groundwater prior to removal to determine whether hazardous levels of contaminants are present prior to continuing construction activities. The presence of known or suspected contaminated soil and/or groundwater shall require testing and investigation procedures to be conducted and supervised by a hazardous materials specialist who meets federal and state regulatory requirements related to the handling and disposal of hazardous materials. The test results shall be compared against SFBRWQCB Tier 1 ESLs; (SFBRWQCB 2019) and Human Health Risk Assessment (HHRA) DTSC Note 3 Industrial ESLs, EPA Regional Screening Levels (RSLs) for Residential Soil, and Construction Worker ESLs for Cancer and Non-cancer risk (if available) for the protection of human health, groundwater quality, and terrestrial receptors. If hazardous levels of contaminants (as defined by federal and state regulations) are present, Valley Water shall report findings to federal, state, and local agencies for further direction on clean up actions required. The materials shall be excavated and/or remediated as directed by federal, state, and local regulatory agencies and taken to a permitted hazardous waste facility for disposal. The required handling, storage, and disposal methods will depend on the types and concentrations of hazardous materials identified in the soil and/or groundwater. Any site investigations or remedial actions shall comply with applicable federal, state, and local hazardous materials and waste disposal regulations.

Significance After Mitigation: Implementation of Mitigation Measures HAZ 2.1 and HAZ 2.2 would reduce significant impacts from accidental release of hazardous materials by requiring the use of personal protective equipment during construction activities in areas which are known to have high lead concentrations, by halting construction activities and testing of soil and/or groundwater in areas suspected of contamination, by implementing proper disposal of contaminated soil and/or groundwater, and by implementing recommended measures to test air, soil, and groundwater in areas as documented in Phase I and II ESAs and HSLAs. Therefore, the project would not create a significant hazard to the public or the environment from an accidental release of hazardous materials, and this impact would be **less than significant with mitigation**.

Impact HAZ-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials within 0.25 mile of Existing or Proposed Schools. (Less than significant with Mitigation)

As discussed in Section 3.8.1 “Environmental Setting,” several schools are located within 0.25 mile of the project area. The project would use hazardous materials, such as fuels, oils, lubricants, and solvents, which are commonly used in construction projects, that could impact nearby schools during the construction of the proposed project. However, the hazardous materials used during construction would not result in emissions of levels considered hazardous and the project would comply with all federal, state, and local regulations designed to minimize the release of hazardous materials into the environment from use, storage, and transport of hazardous materials. Valley Water would implement BMPs AQ-1 (Use Dust Control Measures), 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), and HM-10 ((Utilize Spill Prevention Measures), as well as SMP BMPs GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), and HM-4 (Posting and Notification for Pesticide Use) which would minimize potential impacts from the accidental release of hazardous materials during construction and operations and maintenance activities. Although compliance with existing regulations and implementation of BMPs would reduce the potential for accident or upset conditions to schools to hazardous emissions or materials during construction activities, the risk for accidental release of hazardous emissions or materials remains during construction and is a **significant** impact.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan

Please refer to Impact HAZ-2 above for full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measures 2 would reduce significant impacts from accidental release of hazardous emissions or materials in the project area by requiring the use of personal protective equipment during construction activities in areas that are known to have high lead concentrations, by halting construction activities and testing of soil and/or groundwater in areas suspected of contamination, by implementing proper disposal of contaminated soil and/or groundwater, and by implementing recommended measures to test air, soil, and groundwater in areas as documented in Phase I and II ESAs and HSLAs. Therefore, the project would not create a significant hazard to schools from an accidental release of hazardous emissions or materials, and this impact would be **less than significant with mitigation**.

Impact HAZ-4: ***Be Located on a Site Which is included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5. (Less than significant with Mitigation)***

As discussed previously in Section 3.7.1 “Environmental Setting,” Watson Park is within and adjacent to the project area and is reported to contain lead in concentrations that exceed 255 mg/kg and residual levels of contaminants of concern at depths greater than 3 feet below ground surface under a soil and hardscape cap. Because of this, land use restrictions are imposed on the site and adjacent parcels and are enforced by DTSC and the City. Five additional hazardous material sites exist within 0.25 mile of the project area; however, remedial actions for those sites are currently in process or have been completed, and the project would be unlikely to cause new hazards related to hazardous materials at these sites. Implementation of BMPs AQ-1 and HM-7 to HM-10 would implement measures for proper handling, storage, and disposal of hazardous materials, including contaminated soil encountered during construction work at Watson Park. Nevertheless, due to the presence of a hazardous material site listed on the Cortese List within the project area, this impact is **significant**.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measures: Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan

Please refer to Impact HAZ-2 above for full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measures 2 applicable to Watson Park would reduce significant impacts from accidental release of hazardous materials by requiring the use of personal protective equipment during construction activities in areas which are known to have high lead concentrations, by halting construction activities and testing of soil and/or groundwater in areas suspected of contamination, by implementing proper disposal of contaminated soil and/or groundwater, by contacting DTSC and the City prior to conducting any ground disturbing activities, and by complying with all institutional controls. Therefore, the presence of a hazardous material site listed on the Cortese List within and directly adjacent to the project area would not create a significant hazard to the public or the environment, and this impact would be **less than significant with mitigation**.

Impact HAZ-5: ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*** ***(No Impact)***

Although the Santa Clara County EOP and City of San José EOP are applicable to the project, no specific emergency response or evacuation routes are identified within the project area. Therefore, this topic is not applicable to the project and there would be **no impact**. Please refer to Section 3.13, "Transportation and Traffic" for a discussion regarding emergency access.

Impact HAZ-6: ***Create a significant hazard to construction workers or the public through exposure to Valley Fever during Construction Activities.*** ***(Less than significant)***

As discussed in Section 3.8.1 "Environmental Setting," construction activities have the potential to release the soil-dwelling fungus Coccidioides that can cause Valley Fever. Such a release could pose a hazard to construction workers and/or the public, which would be a significant impact. In order to minimize these potential impacts, the project would comply with all relevant federal, state, and local laws, regulations, and policies related to hazardous materials, including the regulations in CCR Title 8, Industrial Relations, which minimize exposure to California Valley Fever.

Valley Water BMP AQ-1 (Use Dust Control Measures) would be implemented and would minimize potential impacts from Valley Fever. These requirements would include implementing fugitive dust control measures (e.g., watering disturbed surfaces, covering materials in haul trucks) and worker safety measures when working in areas that may have the fungus that causes Valley Fever. By complying with federal, state, and local laws, regulations, and policies, and implementing Valley Water BMP AQ-1, the project would not create a significant hazard to construction workers through exposure to Valley Fever during construction activities, and the impact would be **less than significant**.

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3.9 Hydrology and Water Quality

This section provides an overview of the existing hydrology and water quality conditions within the project area and vicinity, identifies the regulatory framework, and analyzes the impacts of the project on hydrology and water quality. The hydrology and water quality study area, for the purposes of the impact analysis in this section, includes the surface water and groundwater resources in the project area, including the Coyote Creek watershed, South San Francisco Bay, and the Santa Clara groundwater subbasin. The resources within the study area for analysis of impacts on hydrology and water quality are described in the next section.

3.9.1 Environmental Setting

Regional Setting

Coyote Creek Watershed

The project is in Reaches 4 through 8 of Coyote Creek within the Coyote Creek watershed, which is approximately 320 square miles extending from the Diablo Range east to the valley floor, as shown in **Figure 3.9.1** (Santa Clara Valley Urban Runoff Pollution Prevention Program [SCVURPPP] 2024).

Coyote Creek originates in the Diablo Mountains northeast of the City of Morgan Hill and flows northwest for approximately 42 miles and through the City of San José (City) before emptying into the South San Francisco Bay (Bay) (SCVURPPP 2024). The creek is impounded by two dams at the base of the Diablo Range, which form two reservoirs – Coyote (upstream) and Anderson (downstream) Reservoirs. Releases from Anderson Reservoir to Coyote Creek flow to the Coyote Percolation Pond, which is a Valley Water managed recharge facility. At least four major tributaries flow from the mountains across the Coyote Valley to the mainstem Coyote Creek, including Upper Penitencia Creek, Upper Silver Creek, Lower Silver Creek, and Fisher Creek. In lower elevations of the watershed, Lower Penitencia Creek extends as a tributary to the mainstem Coyote Creek near Dixon Landing Road at the southern end of San Francisco Bay. Downstream of the Coyote Percolation Pond, Coyote Creek flows through unincorporated, predominately agricultural land between Morgan Hill and San José and then flows through the urbanized areas of San José and Milpitas before emptying into the Bay (SCVURPPP 2024). As the creek approaches the Bay, it transitions from a freshwater creek to an estuarine environment (City of San José 2010).

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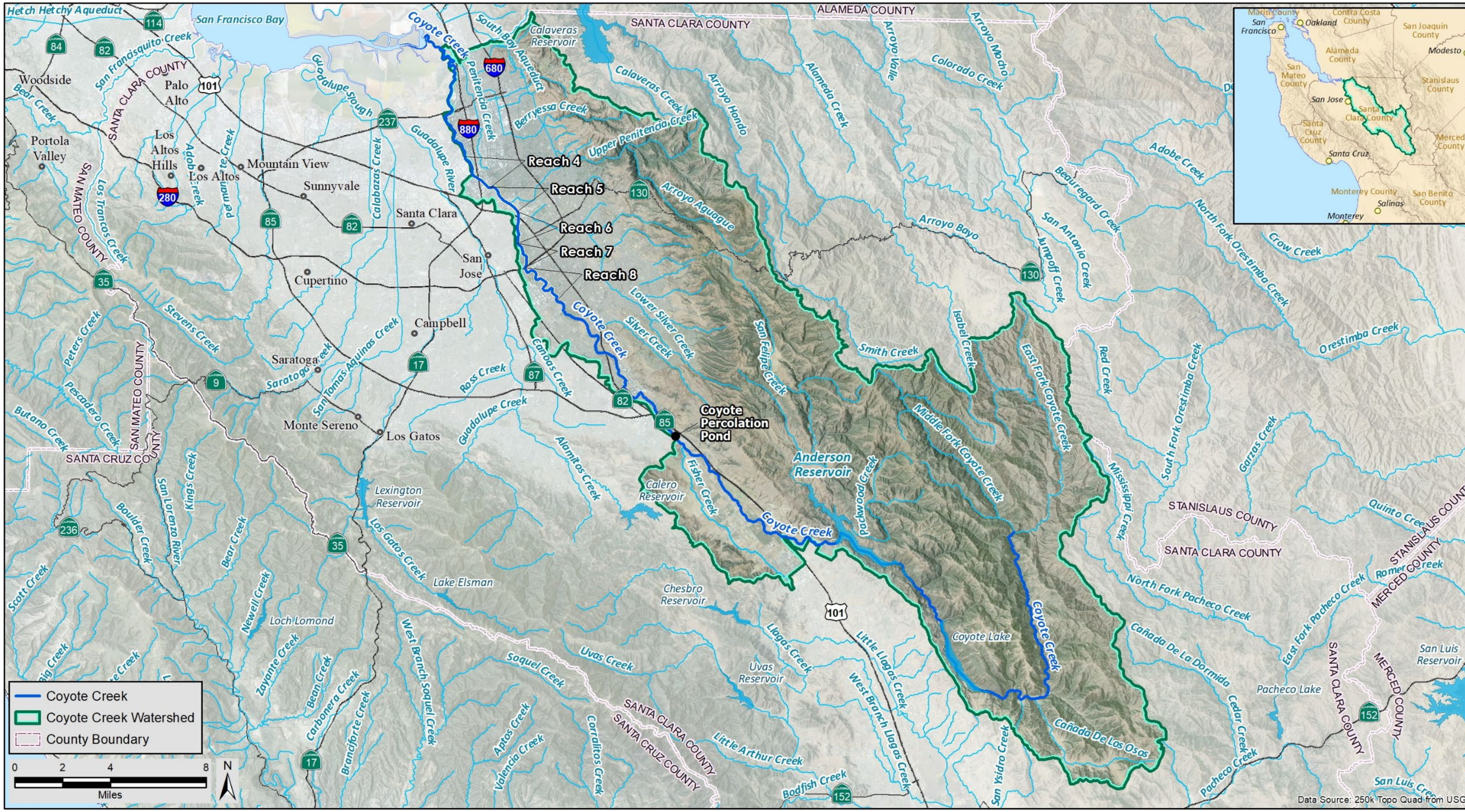

Source: GEI Consultants and Valley Water GIS: https://www.valleywater.org/accordion/coyote-watershed-complete

Figure 3.9.1. Coyote Creek Watershed

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Topography and Climate

The topography of the City varies with the lowest elevations near the Town of Alviso at approximately 20 feet above sea level, and elevations reaching greater than 300 feet in the foothills near the outer perimeter of the City (Miller and Null 2015; City of San José 2010). The Coyote Creek Watershed extends into the Diablo Range, reaching elevations over 4,000 feet above sea level. Similar to other areas of the Santa Clara Valley, the City experiences a Mediterranean climate, with warm, dry summers and cool, wet winters. Average temperatures range from highs between 80 to 85 degrees Fahrenheit (ºF) in the summer to lows near 40ºF during the winter months (Miller and Null 2015). Most precipitation generally occurs from October to April, with the driest months being May through September. Annual average rainfall amounts vary throughout the City and Coyote Creek watershed, with most rainfall falling at higher elevations. The mean annual precipitation in the watershed is approximately 15 inches near the Bay and increases to 25 inches in the Diablo Range (Lowe et al., 2021).

Surface Water Hydrology

Coyote Creek

The timing of high flows in Coyote Creek within the project area are primarily controlled by the Anderson Dam. Therefore, the hydrology of Coyote Creek is described in this section from below the dam.

Coyote Creek flows from the Anderson Dam for approximately 10 miles to the Coyote Percolation Pond, an in-stream recharge pond that is impounded by the Coyote Percolation Dam – a steel panel dam that is presently being replaced with an inflatable bladder dam (Valley Water 2023a). Downstream of the pond, the channel runs dry or has intermittent flow during most summers (City of San José 2010). Six miles downstream from the percolation pond, Upper Silver Creek connects with Coyote Creek upstream of the project reaches. Coyote Creek continues for another 1.9 miles to the upstream limits of the project in Reach 8. Approximately 5 miles further downstream, Lower Silver Creek flows into Coyote Creek (along Reach 6), and one mile further downstream from that, Upper Penitencia Creek flows into Coyote Creek from the east (along Reach 5). Coyote Creek then flows 3 miles to the downstream limits of the project in Reach 4 and continues downstream for approximately 4.6 miles, where it connects with Lower Penitencia Creek and then travels through an area characteristic of a marsh, near the salt ponds, before discharging to the Bay.

Within the highly urbanized City, the creek channel is incised with steep banks and characterized as having low channel complexity with several long and slow velocity pools (Lowe et.al 2021). Other sources of flow in the project area are derived from groundwater, tributary flow, and precipitation and stormwater runoff.

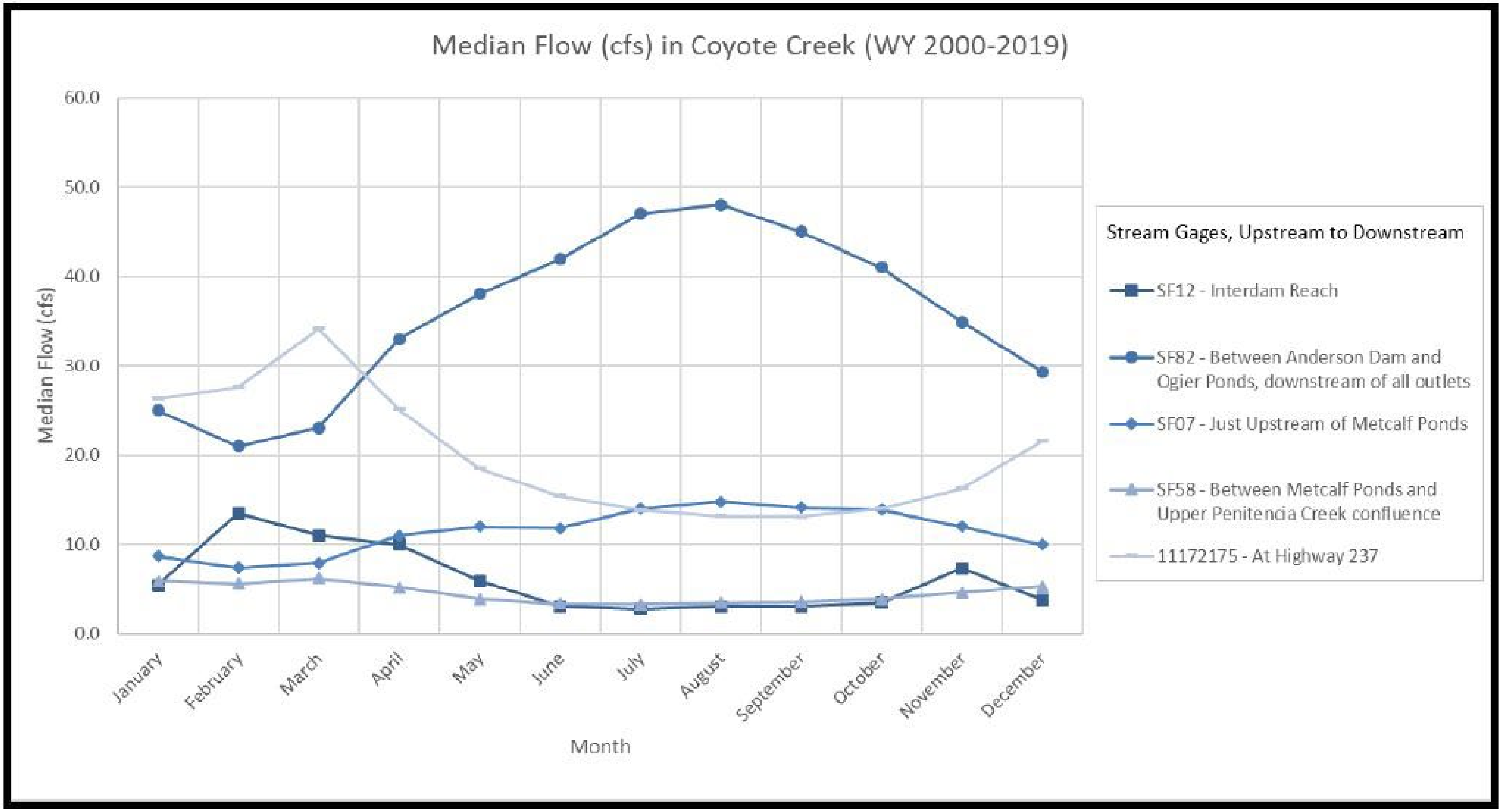
Anderson Reservoir and Flows Below Anderson Dam

Anderson Reservoir is Valley Water’s largest reservoir, with a storage capacity of over 89,000 acre-feet. Operations typically involve reservoir water releases for multiple purposes, including water supply, groundwater recharge, flood risk reduction, downstream aquatic habitat, maintenance, and emergency purposes.

Anderson Dam is classified under the Federal Energy Regulatory Commission (FERC) guidelines as a “High Hazard Potential” dam due to the potential incremental loss of life should failure occur. This classification is based on dam safety deficiencies associated with seismic shaking, fault offset, flood capacity, and emergency drawdown capabilities that were identified between 2008 and 2016. In February 2020, FERC determined additional measures were needed to reduce the risk of seismic failure until the Anderson Dam Seismic Retrofit Project (ADSRP) could be implemented. In response, Valley Water developed the FERC Order Compliance Project (FOCP), which is expected to be completed in 2025 (Valley Water 2023a; Valley Water 2020). Prior to the onset of FOCP, Valley Water was ordered by FERC to drawdown Anderson Dam to deadpool and to manage the reservoir at this level until the completion of ADSRP. The drawdown of Anderson Reservoir to deadpool was completed by the end of December 2020. The deadpool level within Anderson Reservoir was initially managed through maximal releases through the existing outlet structure; as part of the FOCP, the Anderson Dam Tunnel Project (ADTP) is being constructed that will allow for larger releases from the reservoir and further control of the release rates from the reservoir. The ADSRP will seismically retrofit the dam so that Valley Water may continue to operate it at capacity (Valley Water 2023a).

Prior to the drawdown to deadpool as part of the FOCP, flows in Coyote Creek below Anderson Dam were controlled by releases from Anderson Reservoir and the discharge of imported water via the Coyote Discharge Line (CDL). Coyote Creek is mostly perennial due to regulated flows from Anderson Dam with generally higher summer flows and lower winter flows than what would occur naturally (Valley Water 2020). The FOCP Final Reservoir Drawdown and Operations Plan reports the median of daily flows by month in cubic feet per second (cfs) for five Valley Water and USGS stream gages from the reach between Coyote Percolation Dam and Anderson Reservoir (Valley Water gage SF82) to Coyote Creek at Highway 237 (USGS gage # 11172175) from Water Years 2000 to 2019 (Valley Water 2020). The USGS streamflow station 11170000 (previously, Valley Water SF82), also identified by the station name “Coyote Creek near Madrone, California,” is the nearest location that measures Anderson Dam releases. **Figure 3.9.2** displays monthly median flow at Valley Water SF82 ranges between 40 to 50 cfs in the summer (June to September) and 20 to 25 cfs in the winter (January to March) (Valley Water 2020). Current, or baseline, average monthly flows, at the same station, “Coyote Creek near Madrone, California,” are reported by the USGS gage during 2022 through early 2024, as shown in **Table 3.9.1**. The mean of monthly discharge during this period ranges from approximately 18 to 142 cfs in the summer (June to September) and approximately 223 to 246 cfs in the winter (January to March) (USGS 2024).

Higher summer releases are expected in the future as Valley Water operates to replenish the groundwater subbasin after resuming normal Anderson Dam operations upon completion of the ADSRP. Large storm events have resulted in creek flows as high as 850 cfs (April 2006), 600 cfs (March 2011), and 7,400 cfs (February 2017) at the Madrone gage with high flows persisting in the channel for as long as 2 weeks (Valley Water 2023a; Valley Water 2017a).



Source: Valley Water 2020

Figure 3.9.2. Monthly Median of Daily Flow (cfs) Recorded in Coyote Creek at Five Stream Gages, Water Year 2000 through 2019

Table 3.9.1. Monthly Average Stream Discharge (cfs) at USGS Gage #11170000, Coyote Near Madrone, CA (Calculation Period: 02-02-2022 to 02-29-2024)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2022	NA	15.1	13.7	12.9	11.7	18.6	18.6	15.1	19.6	11.8	10.8	60.1
2023	386.2	409.3	432.7	447.5	408	264.5	17	29.7	21.5	23.3	21	35.5
2024	82.2	314.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mean of Monthly Discharge	234	246	223	230	210	142	18	22	21	18	16	48

Source: USGS 2024

Flooding

Flooding has occurred along Coyote Creek many times in the past, including in 1911, 1917, 1931, 1958, 1969, 1982, 1983, 1997, 1998, and 2017. The largest flow recorded on Coyote Creek was 25,000 cfs in 1911, before the construction of the Coyote and Anderson Reservoirs. The worst flooding in the project reach since Anderson Reservoir was constructed in 1950 occurred in February 2017. Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road. Businesses and hundreds of homes were inundated by creek waters for many hours. Highway 101 near Watson Park and various local streets were closed due to flooding, and thousands of residents had to be evacuated and sheltered (Valley Water 2023b).To reduce flood risk along Coyote Creek, Valley Water is also implementing the Coyote Creek Flood Management Measures Project (CCFMP), which includes floodwalls in reaches prone to flood flows within some of the same reaches as the project (Valley Water 2023b).

Localized flooding within the project area can occur during larger storm events in areas where the storm sewer system is under design standards. The City's design standard requires that storm sewer systems be designed to convey a 10-year storm event, or a storm large enough to have a 10 percent chance of occurring in any given year (San José 2012). However, most of the existing storm sewer system can only effectively convey the storm run-off from a 1- to 3-year storm event, the City's previous design standard (San José 2017). This may cause localized flooding from the storm sewer system during storm events of greater magnitude, such as 10- or 20-year storm events.

The City's Storm Sewer Master Plan is a comprehensive effort to identify and prioritize capacity related improvements to the storm sewer system by analyzing current conditions and the anticipated future land use developments in the General Plan. In December 2017, the City completed the first phase of the Storm Sewer Master Plan study using their pipelines and riverine network model. The study has identified a preliminary list of storm drain capacity deficiencies and improvement needs. Over 20 high priority projects, including the Charcot Area Storm Drain Improvements Project, were identified to address known flooding due to capacity constraints and predicted flooding at a 3-year storm event (San José 2022).

Groundwater

Groundwater in Santa Clara County is derived from the Santa Clara Valley Groundwater Basin, which is comprised of two subbasins, the Santa Clara subbasin and the Llagas subbasin (San José 2010). The Santa Clara subbasin is further divided into two subareas known as Santa Clara Plain and Coyote Valley, as shown in Figure 3.9.2. The Santa Clara Plain subarea is largely urban/suburban and primarily served by major water retailers using both groundwater and treated surface water (Valley Water 2014). Most of the inflow to the Santa Clara Plain comes from artificial recharge of local and imported supplies (Valley Water 2014). Water flowing in Coyote Creek recharges the Santa Clara Subbasin by in-stream percolation in Coyote Creek and at the Coyote Percolation Pond just north of Metcalf Road. Valley Water manages aquifer recharge using local water supply and imported water releases to Coyote Creek below Anderson Dam via the CDL and Cross Valley Pipeline (Valley Water 2023a).

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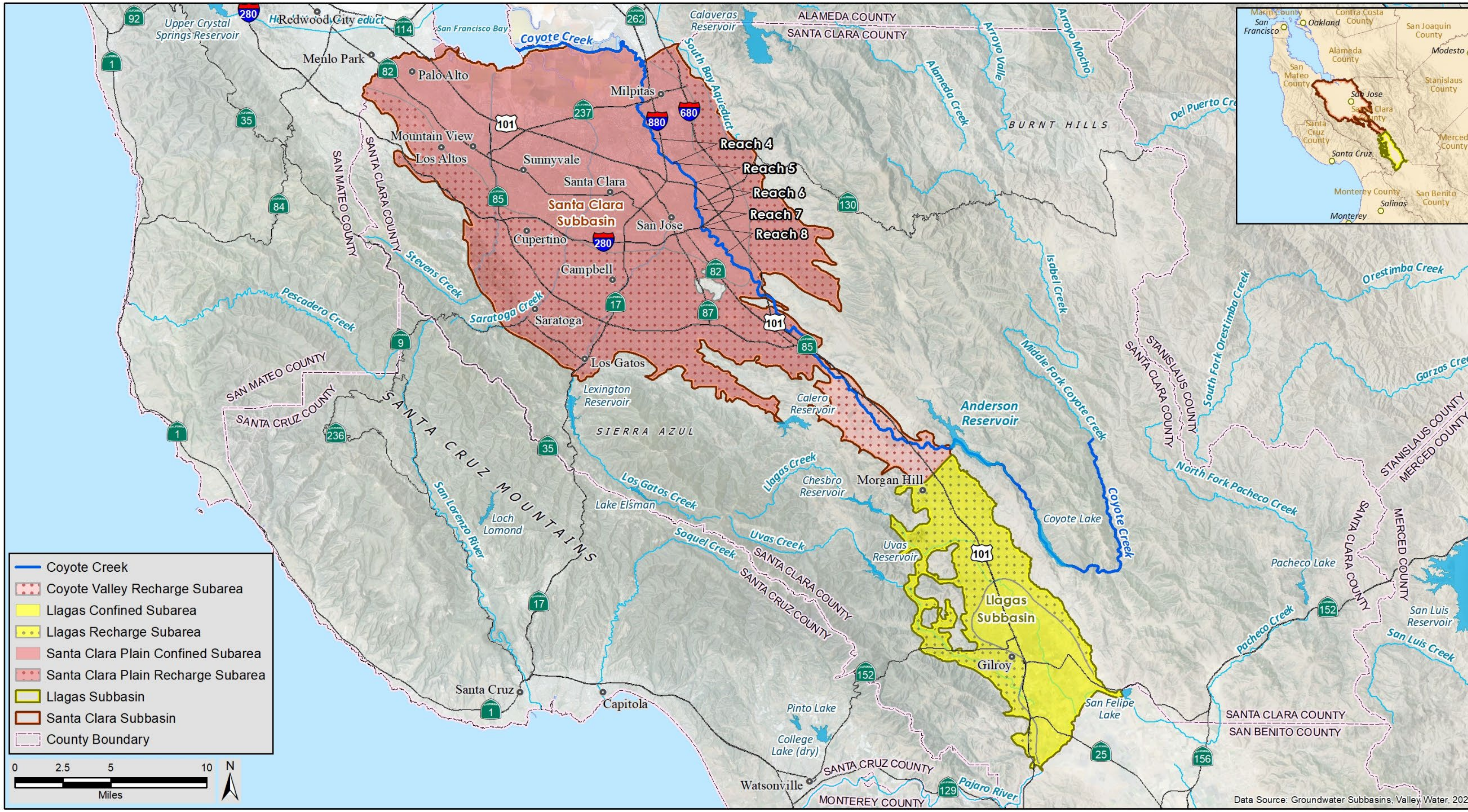

Figure 3.9.3. Locations of Santa Clara Plain and Coyote Valley Subareas

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The Santa Clara Plain is divided into confined and recharge (unconfined) areas. The recharge area includes the alluvial fan and deposits located along the edge of the groundwater subbasin where high lateral and vertical sediment allow surface water to infiltrate the aquifers. Surface water replenishes unconfined groundwater within the recharge area and contributes to the recharge of deep aquifers in the confined area through subsurface flow (Valley Water 2014).

The project area resides within the unconfined area of the Santa Clara Plain, located in the northern and central portion of the subbasin. It is characterized by upper and lower aquifers, divided by laterally extensive, low permeability clays and silts, which restrict the vertical flow of groundwater (Valley Water 2014). Valley Water refers to these aquifers as the shallow and principal aquifer zones. Shallow zones are those represented by wells pumping water from depths less than 150 feet, whereas principal zones are those represented by wells pumping at depths greater than 150 feet (Valley Water 2014). The principal zone is less vulnerable to contamination than shallow aquifers since the confining layers also restrict the movement of contaminants that may be present in the infiltrating water (Valley Water 2014). Shallow aquifer zones located adjacent to salt ponds and tidal creeks near San Francisco Bay have been affected by seawater intrusion, as indicated by higher chloride and other indicators in some shallow monitoring wells (Valley Water 2021). Groundwater levels within the project area range from 9 feet below ground surface (bgs) to 40.5 feet bgs (Kleinfelder 2022).

Santa Clara Plain groundwater has infrequent detections of water-quality parameters above health-based Maximum Contaminant Levels (MCLs), indicating overall very good quality (Valley Water 2021). Dominant dissolved parameters in the Santa Clara Plain include calcium, magnesium, and bicarbonate. Other parameters include sodium bicarbonate, sodium chloride, and mixed cation-mixed anion character (Valley Water 2021). Total Dissolved Solids (TDS) is a prime indicator of the general suitability of water, especially for domestic and municipal use. The 2019 median TDS concentration in the principal aquifer zone was 410 milligrams per liter (mg/L). Nitrate concentration in 2019 was below the MCL of 10 mg/L (Valley Water 2021). Primary sources of nitrate in the Santa Clara Plain are from irrigated groundwater, sewer system exfiltration, and recycled water (Valley Water 2014).

Water Quality

The Santa Clara Valley Urban Pollution Prevention Program (SCVURPPP) collects water quality data and sediment samples in Coyote Creek as part of their Watershed Monitoring and Assessment Program. The results of the data collection and monitoring are summarized in the annual Urban Creeks Monitoring Reports (UCMR) to fulfill requirements for the Municipal Regional Permit[1] (MRP). The MRP describes triggers or water quality exceedances, which are dependent on the waterbody's beneficial uses as determined by the State Water Board. Beneficial uses serve as a basis for establishing water quality objectives and discharge prohibitions to achieve water quality goals. Beneficial uses of Coyote Creek (the main stem) include groundwater recharge, commercial and sport fishing, cold freshwater habitat, and warm freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact recreation, and non-contact recreation (SCVURPPP 2019).

[1] Municipal Regional Permit is the combined National Pollution Discharge Elimination System Permit for the Bay Area municipalities.

During 2017 and 2018, general water quality parameters including pH, dissolved oxygen (DO), specific conductance, and temperature were measured at three water quality stations in lower Coyote Creek, within project Reaches 6 and 7. Measurements were taken over two-week periods in June and September of each year. In both years, the DO levels exceeded the trigger threshold of 7 mg/L for cold water habitat beneficial uses in over 20 percent of the measurements recorded at all three water quality stations in Coyote Creek (Valley Water 2023b; SCVURPPP 2019). In 2017, the general water quality parameters were similar among the stations with the exception of DO, which displayed different patterns at the sites (SCVURPPP 2018, 2019). Similarly, SCVURPPP's Coyote Creek Dissolved Oxygen Stressor Source Identification (SSID) Project found that low gradient channels and high amounts of accumulated organic material in the studied reach cause low DO concentrations (SCVURPPP 2012).

Measurements collected for pH and specific conductivity at all three water quality stations during water years 2017 and 2018 did not exceed their respective triggers (SCVURPPP 2018, 2019). Temperature measurements did not exceed the MRP maximum temperature SSID trigger threshold of 24 degrees Celsius but did exceed the Maximum Weekly Average Temperature SSID trigger threshold of 17 degrees Celsius for two consecutive weeks in WY's 2017 and 2018 during both sampling periods (Valley Water 2023a; SCVURPPP 2018, 2019).

Coyote Creek is listed on the Clean Water Act (CWA) 303(d) Impaired Waterbodies List for trash, toxicity, and Diazinon (a type of pesticide) (SWRCB 2024a).

Stormwater

Average rainfall and seasonality can vary depending on weather events, such as droughts or the El Niño climate pattern. An El Niño year can significantly increase precipitation above normal and extend the duration of the rainy season. In the other extreme, droughts lasting 5 to 7 years have been documented in the City over the last century. As previously mentioned, average rainfall in the City is 14.5 inches annually (San José 2010). Average annual evapotranspiration in the City is approximately 50 inches (San José 2010).

City runoff drains to two main watershed/drainage basin areas – Coyote Creek (which includes the project area) and Guadalupe River. The amount of rainfall that flows into Coyote Creek as stormwater runoff depends on topography, soil types, and the amount of impervious surfaces. Most of the City's storm sewer collection system benefits from the generally uniform topography of the Santa Clara Valley, allowing most of the water to be conveyed to waterways using gravity lines with minimal use of pump stations.

The City's storm sewer system consists of approximately 1,100 miles of sewer mains and 31 pump stations. Other components of the storm sewer system include 32,200 inlets, 27,530 manholes, and 1,712 outfalls (San José 2022). The City is responsible for planning, designing, constructing, and maintaining facilities for conveyance of stormwater runoff within the City's service area. Design, construction, and maintenance of flood control facilities and modification and maintenance of Coyote Creek for the purposes of flood risk reduction is the responsibility of Valley Water.

Roads, parking lots, and driveways are examples of impervious surfaces that prevent infiltration of stormwater into the ground and allow polluted stormwater runoff to flow into surface waters. Coyote Creek within the project area is mildly sloped and has a narrow riparian corridor which is buffered by neighborhood parks in some areas and predominately surrounded by dense urban development. Since Coyote Creek is within dense urban development, the probability of contaminated stormwater runoff is elevated. The upper reaches of lower Coyote Creek that are below Anderson Dam flow through agricultural lands in unincorporated areas of Santa Clara County. Proximity to agricultural fields can often yield higher amounts of pesticides in stormwater runoff.

3.9.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Clean Water Act

The CWA (33 United States Code [USC] Section 1251, et seq) is the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA Section 402 is discussed in this section, as it pertains to stormwater management and hydrology. CWA Section 404, which regulates the discharge of dredged and fill materials into waters of the U.S., is also discussed briefly below. Refer to Chapter 3.4, "Biological Resources", for more discussion of the CWA Section 404.

Section 402, Permits for Stormwater Discharge

CWA Section 402 regulates construction related stormwater discharges to surface waters through the NPDES program. The NPDES program is administered by the U.S. Environmental Protection Agency (EPA). However, in California, the EPA has delegated authority to the SWRCB; the SWRCB in turn delegates implementation responsibility to the nine RWQCBs. The project is located within the jurisdictional boundaries of the San Francisco Bay RWQCB (SFBRWQCB).

The NPDES program provides for both general permits (those that cover several similar or related activities) and individual (activity- or project-specific) permits. The General Permit for Construction Activities and Municipal Regional Stormwater Permit are discussed below.

Section 303, Impaired Water Bodies

Under CWA Section 303[d] (40 CFR. Section 130.7(b)), states are required to identify "impaired water bodies" (those that do not meet established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for preparing control plans to improve water quality. Following listing, EPA then approves the state's recommended list of impaired waters or adds to and/or removes water bodies from the list. Each RWQCB must update the Section 303[d] list of impaired waters every 2 years. Water bodies on the list cannot absorb additional quantities of the identified pollutant, and the Section 303[d] List identifies priorities to develop pollution control plans for each listed waterbody and pollutant. According to the most current list, Anderson Reservoir is listed as impaired for mercury and PCB, and Coyote Creek is listed as impaired for trash and diazinon. The Lower San Francisco Bay, to which Coyote Creek drains, is listed as impaired for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin compounds, furan compounds, invasive species, mercury, PCBs, and trash (SWRCB 2024b).

The pollution control plans triggered by the CWA Section 303[d] List are called Total Maximum Daily Loads (TMDL). The TMDL is a "pollution budget" designed to restore the health of a polluted body of water. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, thereby ensuring the protection of beneficial uses. A TMDL also contains the target reductions needed to meet water quality standards and allocates those reductions among the pollutant sources in the watershed (point sources, non-point sources, and natural sources). The TMDL process quantifies water quality problems, identifies pollutant sources, and recommends pollutant load reductions or control actions needed to restore and protect the beneficial uses of the impaired water body. The calculation of a TMDL includes a margin of safety and considers seasonal variations (40 CFR Section 130.2). TMDLs for the Lower San Francisco Bay that are relevant to Coyote Creek include the San Francisco Bay Mercury TMDL (approved by EPA in 2008), San Francisco Bay PCBs TMDL (approved by EPA in 2010), and Urban Creeks Dioxin Pesticide Toxicity TMDL (approved by EPA in 2007).

Section 401, Water Quality Certification

For an applicant of a federal permit or license to conduct any activity that may result in a point source discharge of a pollutant to a water of the U.S., CWA Section 401 (33 USC Section 1341) requires the state to issue a certification that the activity will comply with the state's water quality standards. The state may grant the Section 401 certification outright, grant it with technical conditions imposed on the project activity, or deny the certification.

The discharge of dredged or fill material into waters of the U.S., including wetlands, as determined by the U.S. Army Corps of Engineers (USACE), is subject to permitting specified under Section 404 of the CWA (Discharges of Dredge or Fill Material), discussed below. A Section 401 water quality certification is required for all Section 404 permitted activities. In California, the SWRCB or its nine RWQCBs issue water quality certifications. The SWRCB or RWQCB is responsible for implementing section 401 in compliance with the CWA and the applicable regional water quality control plan (also known as a basin plan).

Section 404, Permits for Fill Placement in Waters and Wetlands

CWA Section 404 regulates the discharge of dredged and fill materials into "waters of the U.S.," or jurisdictional waters, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. Before any actions that may discharge dredged or fill material into surface waters or wetlands are carried out, a delineation of jurisdictional waters of the U.S. must be completed, following USACE protocols (USACE 1987), in order to determine whether the project area encompasses wetlands or other waters of the U.S. that qualify for CWA protection.

For actions that will discharge dredged or fill material into waters of the U.S., a permit must be obtained from the USACE, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Under EPA guidelines, no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment, or (2) the nation's waters would be significantly degraded (EPA 2023a). In other words, applicants must first show that steps have been taken to avoid impacts to wetlands, streams, and other aquatic resources; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts (EPA 2023a). For most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or state basis for particular categories of activities (EPA 2023a). For proposed activities that have potentially significant impacts, an individual permit is required.

State Laws, Regulations, and Policies

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act of 1966 (Porter-Cologne Act) (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation governing water quality. The Porter-Cologne Act, together with the CWA, provides regulatory guidance to protect water quality and water resources in the state. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The Porter-Cologne Act established regulatory authority over “waters of the state,” which are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Division 7, Section 13050). More specifically, the SWRCB and its nine RWQCBs have jurisdiction over the beneficial uses and supporting Water Quality Objectives (WQOs) assigned by the RWQCB or SWRCB for various waters of the state. The Porter-Cologne Act also assigned responsibility for implementing CWA sections 303, 401, and 402 within California to the SWRCB and RWQCBs.

The Porter-Cologne Act authorizes the SWRCB to adopt statewide water quality control policies and requires each of the nine RWQCBs to develop and periodically review regional water quality control plans (basin plans) for the protection of water quality in each of California’s nine regions. Statewide water quality control policies are adopted and maintained by the SWRCB. Regional basin plans are unique to each region and must identify beneficial uses, establish WQOs for the reasonable protection of the beneficial uses, and establish a program of implementation for achieving the WQOs. Basin plans must also comply with CWA Section 303, which requires states to establish their own water quality standards. Basin plans provide the technical basis for the RWQCBs to determine waste discharge requirements, issue CWA Section 402 permits and Section 401 certifications, take enforcement actions, and evaluate grant proposals.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 created a legal and policy framework to manage groundwater sustainably at a local level. The SGMA allows local agencies to customize groundwater sustainability plans (GSP) to their regional economic and environmental conditions and needs and establish new governance structures, known as groundwater sustainability agencies (GSA). The SGMA requires that GSAs develop GSPs or prescribed alternatives for groundwater basins designated as high and medium priority by DWR. The GSPs are intended to facilitate the management of groundwater supply and use in a manner that avoids undesirable results defined as:

- Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed).
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.

- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

The GSPs are required to include measurable objectives and minimum thresholds, as well as interim milestones in 5-year increments, to achieve the sustainability goal for the designated basins for the long-term beneficial uses of groundwater. Additionally, GSPs are required to include components related to groundwater quality monitoring, the monitoring and management of groundwater levels within the basin, mitigation of overdraft, and a description of surface water supply used or available for use for groundwater recharge or for an alternative use.

San Francisco Bay Basin Plan

The SFBRWQCB developed, adopted, updated, and currently implements the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). The portions of the Santa Clara County that drain into the San Francisco Bay are governed by the San Francisco Bay Basin Plan (Basin Plan, SFBRWQCB 2023). The project area is located within the Santa Clara Basin.

Listed beneficial uses within Coyote Creek include groundwater recharge, commercial and sport fishing, cold freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, warm freshwater habitat, wildlife habitat, water contact recreation, and non-contact water recreation.

The Basin Plan establishes water quality objectives to protect beneficial uses (i.e., WQOs). Key WQOs established in the Basin Plan that apply to the project include:

- DO in non-tidal waters: Cold water habitat: 7.0 mg/L; Warm water habitat: 5.0 mg/L.
- Temperature: The temperature of any cold or warm freshwater habitat shall not be increased by more than 5°F (2.8°C) above natural receiving water temperature.
- Turbidity: Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 Nephelometric Turbidity Unit (NTU).
- pH: The pH shall not be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters within the basin. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels.
- Toxicity: All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate, and decreased reproductive success of resident or indicator species. There shall be no acute or chronic toxicity in ambient waters. Acute toxicity is defined as a median of less than 90 percent survival, or less than 70 percent survival, 10 percent of the time, of test organisms in a 96-hour static or continuous flow test.

In addition, designated beneficial uses of groundwater basins in the study area include agricultural supply, municipal and domestic supply, industrial service supply, and industrial process supply.

Because the project could affect Coyote Creek, Coyote Slough (tidally influenced), and South San Francisco Bay, the project would be subject to the Basin Plan for the following beneficial uses specific to each of these water bodies shown below in **Table 3.9.2**.

Table 3.9.2. Beneficial Uses[1] of Surface Water Bodies in the Project Area (Santa Clara Basin)

Water Body	AGR	MUN	FRSH	GWR	IND	PROC	COMM	SHELL	COLD	EST	MAR	MIGR	RARE	SPWN	WARM	WILD	REC-1	REC-2	NAV
San Francisco Bay South					E		E	E		E		E	E	E		E	E	E	E
Coyote Slough										E			E			E	E	E	
Coyote Creek (nontidal)				E			E		E			E	E	E	E	E	E	E	

Notes:

[1] Beneficial Uses are defined as: Agricultural Supply (AGR), Cold Freshwater Habitat (COLD), Ocean, Commercial, and Sport Fishing (COMM), Estuarine Habitat (EST), Freshwater Replenishment (FRSH), Groundwater Recharge (GWR), Industrial Service Supply (IND), Marine Habitat (MAR), Fish Migration (MIGR), Municipal and Domestic Supply (MUN), Navigation (NAV), Industrial Process Supply (PRO), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD).

E = existing beneficial use, E*: Water quality objectives apply; water contact recreation is prohibited or limited to protect public health

Source: San Francisco Bay RWQCB 2023.

NPDES General Permit for Construction Activities

Most construction projects that disturb one acre or more of land are required to obtain coverage under the SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2022-0057-DWQ; "Construction General Permit"; adopted on September 8, 2022, and effective September 1, 2023), which requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a SWPPP. The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations; present the BMPs that will be implemented to prevent soil erosion and discharge of sediment and other construction-related pollutants to surface waters; and discuss monitoring that will be conducted to assure ongoing compliance of storm water discharges from the construction site with the Construction General Permit.

The SWPPP must include BMPs to control erosion at the source, such as through minimizing soil disturbance, preserving existing vegetation where feasible, and stabilizing and revegetating disturbed areas as soon as possible after grading or construction activities. Temporary soil stabilization measures/practices that could be utilized include covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding (SWRCB 2022). Additionally, the SWPPP may include sediment control measures, which would be used to capture soil that becomes eroded. This may include perimeter control measures, such as installing silt fences or placing straw waddles below slopes, sediment basins and active treatment systems to remove sediment prior to storm water releases (SWRCB 2022). Wastewater washout and cleanout areas or structure, secondary containment facilities, hazardous materials spill plans and other hazardous materials control measures to preclude discharge of toxic construction related pollutants in storm water runoff are also typically included in the SWPPP (SWRCB 2022). Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and that they are effective in controlling the discharge of construction-related pollutants.

Municipal Regional Stormwater NPDES Permit

The Municipal Regional Stormwater NPDES permit (Order R2-2022-0018) (SFBRWQCB 2022) covers municipal stormwater discharges from most Bay Area counties and cities. The permit is applicable to Valley Water, Santa Clara County, the City, and other cities and storm water management agencies within the county, which have joined together to form the SCVURPP. The Municipal Regional Stormwater NPDES permit establishes discharge prohibitions, annual reporting requirements, construction site controls, water quality monitoring, pesticides toxicity control, trash load reductions, and provisions to address existing total maximum daily loads established for the Bay. The continuous monitoring requirements include triggers that indicate the need for further study.

When results at one sampling station (e.g., along Coyote Creek) exceed the applicable temperature or dissolved oxygen trigger or demonstrate a spike in temperature or drop in dissolved oxygen with no obvious natural explanation, the Permittees shall identify the sample site as a candidate SSID project. SSID projects are intended to be oriented toward taking action(s) to alleviate stressors and reduce sources of pollutants.

The purposes of these measures included in the Municipal Regional Stormwater NPDES Permit are to control and reduce the levels of pollution in both stormwater and non-stormwater runoff discharges from storm drains into watercourses or features that are waters of the state or waters of the U.S.; gather concentration and loading information for a number of pollutants of concern; and ensure the implementation of appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects discharge runoff into storm water management systems that concentrate and discharge runoff to jurisdictional waters. The permit was recently amended to refine development categories and low-impact development specifications.

Stormwater runoff that enters Coyote Creek through storm water management system outfall pipes and similar facilities is covered under the provisions of the Municipal Regional Stormwater NPDES permit, which include prohibiting certain discharges, such as solid wastes, and discharges that cause or contribute to a violation of any receiving water limitation or applicable water quality standard (SFBRWQCB 2022).

Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality

The SWRCB adopted the General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality Permit (Water Quality Order [WQO] NO. 2003 – 0003 – DWQ) that applies to various categories of dewatering activities. Permit conditions for discharge from construction activities require notification and application for a WDR with the RWQCB within which the project is located (in this case the SFBRWQCB). Permit conditions include testing of water and limits on the amount of water discharged on land.

Regional/Local Laws, Regulations, and Policies

Valley Water Groundwater Management Plan

Valley Water is the GSA for the Santa Clara Subbasin, which underlies the project area. Because DWR designated the Santa Clara Subbasin as a high priority basin (DWR 2021), Valley Water was required to develop a GSP for the subbasin or submit an alternative for consideration. Valley Water submitted the 2016 Groundwater Management Plan (GWMP) for the Santa Clara and Llagas Subbasins as an alternative to a GSP in December 2016. In July 2019, DWR approved the alternative for both the Santa Clara and Llagas Subbasins, determining that it satisfies the objectives of SGMA (Valley Water 2023c). As noted above, Valley Water's 2016 GWMP was approved by DWR as an Alternative to a GSP, and Valley Water subsequently submitted the GWMP in 2021 to DWR in accordance with the periodic evaluation for the approved alternative (Valley Water 2023c). The 2021 GWMP supersedes all previous GWMPs and is the current version in effect. The GWMP describes Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP includes the following sustainability goals related to groundwater supply reliability and protection (Valley Water 2021):

- Manage groundwater to ensure sustainable supplies and avoid land subsidence.
- Aggressively protect groundwater from the threat of contamination.

These goals describe the overall objectives of Valley Water's groundwater management programs. The GWMP then includes basin management strategies to meet the sustainability goals. Many of the strategies have overlapping benefits, acting to improve water supply reliability, minimize subsidence, and protect or improve groundwater quality. Basin management strategies are as follows (Valley Water 2021):

- manage groundwater in conjunction with surface water,
- implement programs to protect and promote groundwater quality,
- maintain and develop adequate groundwater models and monitoring networks, and
- work with regulatory and land use agencies to protect recharge areas, promote natural recharge, and prevent groundwater contamination.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan contains the following goals and policies related to hydrology and water quality that may be relevant to the project.

- **Goal MS 20.** Ensure that all water in San José is of the highest quality appropriate for its intended use.
    - **Policy MS 20.3.** Protect groundwater as a water supply through flood protection measures and the use of the stormwater infiltration practices that protect groundwater quality. In the event that percolation facilities are modified for infrastructure projects, replacement percolation capacity will be provided.
- **Goal ER 8.** Minimize the adverse effects on ground and surface water quality and protect property and natural resources from stormwater runoff generated in the City of San José.

- **Policy ER 8.1.** Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff [6-29] and Hydromodification Management [8-14] Policies.
- **Policy ER 8.10.** Participate in the SCVURPPP and take other necessary actions to formulate and meet regional water quality standards which are implemented through the NPDES permits and other measures.

- **Goal ER 9.** Protect water resources because they are vital to the ecological and economic health of the region and its residents.
  - **Policy ER 9.1.** In consultation with Valley Water, other public agencies and Valley Water's Water Resources Protection Guidelines and Standards (2006 or as amended), restrict or carefully regulate public and private development in streamside areas so as to protect and preserve the health, function, and stability of streams and stream corridors.
  - **Policy ER 9.5.** Protect groundwater recharge areas, particularly creeks and riparian corridors.
  - **Policy ER 9.6.** Require the proper construction and monitoring of facilities that store hazardous materials in order to prevent contamination of the surface water, groundwater, and underlying aquifers. In furtherance of this policy, design standards for such facilities should consider high groundwater tables and/or the potential for freshwater or tidal flooding.
- **Goal EC 5.** Protect the community from flooding and inundation and preserve the natural attributes of local floodplains and floodways.
  - **Policy EC 5.10.** Encourage the preservation and restoration of urban creeks and rivers to maintain existing floodplain storage. When in-channel work is proposed, engineering techniques which include the use of plant materials (bio-engineering) are encouraged.
  - **Policy EC 5.16.** Implement the Post-Construction Urban Runoff Management requirements of the City's Municipal NPDES Permit to reduce urban runoff project sites.
  - **Policy 5.17.** Implement the Hydromodification Management requirements of the City's Municipal NPDES Permit to manage runoff flow and volume from project sites.
  - **Policy 3.8.** In designing improvements to creeks and rivers, protect adjacent properties from flooding consistent with the best available information and standards from the Federal Emergency Management Agency and California Department of Water Resources. Incorporate restoration of natural habitat into improvement where feasible.

3.9.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, "Project Description," Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that could result from the project. All relevant BMPs for the project are included in Appendix B. Valley Water Handbook BMPs relevant to hydrology and water quality are:

- **AQ-1: Use Dust Control Measures** – Would ensure dust and air quality management measures, including implementation of BAAQMD's (Bay Area Air Quality Management District's) BMPs for dust suppression. Removal of ground cover, including both vegetation and structures, would expose soil to erosive forces. Dust control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.

- ~~**BI-3: Remove Temporary Fill** – Would reduce the potential for erosion. Temporary fill materials, because they consist of exposed soil, are vulnerable to erosion. Removing this temporary fill after it has served its purpose would remove the source of erosion.~~
- **BI-8: Plant Local Ecotypes of Native Plants and Choose Appropriate Erosion – Control Seed Mixes** – Would reduce the potential for erosion. Planting and seeding reduce the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place during erosive conditions.
- **HM-7: Restrict Vehicle and Equipment Cleaning to Appropriate Locations –** Would ensure that vehicles and equipment would 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 –** Would ensure that fueling or servicing will be done in designated areas away from waterways or immediate floodplain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators).
- **HM-9: Ensure Proper Hazardous Materials Management –** Would ensure that hazardous materials are properly handled, and the quality of water resources is protected by all reasonable means.
- **HM-10: Utilize Spill Prevention Measures –** Would implement spill prevention, hazardous materials control, and spill clean-up procedures to prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into the environment.
- **WQ-4: Limit Impacts from Staging and Stockpiling Materials** – Would reduce the potential for erosion. Staging can increase the risk of erosion by removing ground cover and disturbing soil, making it more vulnerable to erosive forces. Stockpiling of materials can increase erosion if the stockpiled materials consist of soil. This BMP would limit staging to areas that are already disturbed and where possible compacted or paved and would ensure that stockpiled soils would either be covered or surrounded by properly installed silt fencing or other means of erosion control.
- **WQ-5: Stabilize Construction Entrances and Exits** – Would reduce the potential for erosion. This BMP minimizes the risk of erosion in areas where construction equipment enters and exits the work area by minimizing the distance between the entrance or exit and the work area and by planning work site access to minimize disturbance of water bodies and stream banks.
- **WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement** – Would reduce the potential for erosion. Similar to Valley Water BMP BI-8 discussed above, seeding reduces the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place in the face of erosive forces.

The following Valley Water SMP BMPs are applicable to hydrology and water quality during operation and maintenance of the project:

- **ANI-5: Slurry Mixture Near Waterways –** Would prevent all slurry type mixes used to fill rodent burrows from entering any waterway by using appropriate erosion control methods and according to the manufacturer's specifications. If the creek bed is dry or has been dewatered, any material that has entered the channel will be removed.
- **GEN-2: Instream Herbicide Application Work Window** – Would limit application of herbicides to the dry season only (between June 15 and October 15) or until the first occurrence of local rainfall greater than 0.5 inch is forecasted within a 24-hour period from planned application events or when steelhead begin migrating upstream and spawning, as determined by a qualified biologist (typically in November/December). In addition, no herbicides applications are allowed directly into water and when wind conditions may result in drift.
- **GEN-4: Minimize the Area of Disturbance** – Would require soil disturbance to be kept to the minimum footprint necessary to complete the maintenance operation.
- **GEN-20: Erosion and Sediment Control Measures** – Would reduce the potential for erosion and sedimentation. This BMP describes measures to recover disturbed and exposed soils with seeding or erosion control materials. These measures would capture soil affected by erosion and keep it on the site and out of downslope waterways, where it could affect water quality as well as sedimentation.
- **GEN-21: Staging and Stockpiling of Materials** – Would reduce the potential for erosion and sedimentation. This BMP specifies that staging must occur on surfaces that are either paved or already compacted, stockpiled materials must be hydrologically disconnected from waterways, and stockpiled soils will remain covered during the wet season. These measures would ensure that any sediments remain onsite and do not migrate to downslope waterways.
- **GEN-24: On-Site Hazardous Materials Management** – Would reduce the potential for release of hazardous materials. This BMP specifies handling, storing, and disposing of all hazardous materials used or expected to be used at maintenance work sites. This BMP also specifies that all portable toilets will be placed outside the creek channel and floodplain and regularly cleaned and/or replaced and inspected daily for leaks and spills.
- **GEN-25: Existing Hazardous Materials** – Would reduce hazardous materials from entering the creek. This BMP specifies that all hazardous materials found during maintenance (e.g. batteries, oil, paint cans, etc.) will be removed from the maintenance work sites and dispose of according to applicable regulatory requirements.
- **GEN-26: Spill Prevention and Response** – Would reduce the release of chemicals, fuels, lubricants, and non-storm drainage water into channels, drains, or on the ground. This BMP specifies measures to prevent accidental release of hazardous materials and response measures in the event that spills occur to minimize the area affected by any release of hazardous materials. This BMP also includes measures to respond to spills that cannot be contained immediately with materials on the work site and for large spills, including contacting all responsible regulatory and emergency response agencies.
- **GEN-29: Dust Management** – Would ensure dust and air quality management measures, including implementation of BAAQMD's BMPs for dust suppression. Removal of ground cover, including both vegetation and structures, would expose soil to erosive forces. Dust

control measures would minimize erosion by requiring exposed surfaces to be watered, limiting vehicle speed and idling times, and planting or paving exposed surfaces as soon as possible, among other measures.

- **GEN-30: Vehicle and Equipment Maintenance** – Would reduce the release of fuel, oil, lubricants, and other hazardous materials. This BMP specifies measures to inspect vehicles for leaks and clean from excessive build-up of grease and oil. This measure also specifies where vehicle maintenance will be done to prevent spills or leaks from leaking on the ground or entering surface water or the storm drain system.
- **GEN-31: Vehicle Cleaning** – Would reduce the spread of soil and other contaminants from entering surface waters. This BMP prohibits vehicle wash-water from entering water bodies by requiring vehicles to be washed at designated and approved wash areas in Valley Water's corporation yard.
- **GEN-32: Vehicle and Equipment Fueling** – Would prevent the release of fuels onto the ground and from entering surface waters. This BMP prohibits fuels in the channel, unless equipment cannot be easily relocated (e.g., pumps and generators), and requires secondary containment for all in-field equipment fueling to prevent spills from reaching soil, surface water, or the storm drain system.
- **REVEG-1: Seeding** – Would reduce the potential for erosion. Similar to Valley Water BMP BI-8 discussed above, seeding reduces the risk of erosion by replacing ground cover that was removed during construction. Replanting with native plants or erosion control mixes would provide for a stable ground cover that will hold soil in place in the face of erosive forces.

VHP conditions were developed to help covered activities meet regional avoidance and minimization goals. VHP conditions that apply to hydrology and water quality relate to erosion control, slope stability, and control of onsite storage and use of materials that could degrade water quality. VHP conditions that would minimize impacts are the following:

- Condition 3, Maintain Hydrologic Conditions and Protect Water Quality
- Condition 4, Avoidance and Minimization for In-Stream Projects
- Condition 5, Avoidance and Minimization for In-Stream Operations and Maintenance
- Condition 11, Stream and Riparian Setbacks

In addition, the following VHP AMMs apply to hydrology and water quality:

- **VHP Construction AMMs**
    - 61: Minimize ground disturbance to the smallest area feasible.
    - 62: Use existing roads for access and disturbed area for staging as site constraints allow.
    - 63: Prepare and implement sediment erosion control plans.
    - 64: No winter grading unless approved by City Engineer and specific erosion control measures are incorporated.

- 65: Control exposed soil by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles).
- 66: Control sediment runoff using sandbag barriers or straw wattles.
- 67: No stockpiling or placement of erodible materials in waterways or along areas of natural stormwater flow where materials could be washed into waterways.
- 68: Stabilize stockpiled soil with geotextile or plastic covers.
- 69: Maintain construction activities within a defined project area to reduce the amount of disturbed area.
- 70: Only clear/prepare land which will be actively under construction in the near term.
- 71: Preserve existing vegetation to the extent possible.
- 72: Equipment storage, fueling and staging areas will be sited on disturbed areas or non-sensitive habitat outside of a stream channel.
- 73: Avoid wet season construction.
- 74: Stabilize site ingress/egress locations.
- 83: Sediments will be stored and transported in a manner that minimizes water quality impacts. If soil is stockpiled, no runoff will be allowed to flow back to the channel.
- 84: Appropriate erosion control measures will be used on site to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian vegetation. Fiber rolls used for erosion control will be certified as free of noxious weed seed. Filter fences and mesh will be of material that will not entrap reptiles and amphibians.
- 88: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas.
- 96: Isolate the construction area from flowing water until project materials are installed and erosion protection is in place.
- 97: Erosion control measures shall be in place at all times during construction.

- **VHP Post-Construction AMMs**
  - 102: Immediately after project completion and before close of seasonal work window, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets.
  - 103: All disturbed soils will be revegetated with native plants and/or grasses or sterile nonnative species suitable for the altered soil conditions upon completion of construction. All disturbed areas that have been compacted shall be de-compacted prior to planting or seeding.
  - 104 Measures will be utilized on site to prevent erosion along streams (e.g., from road cuts or other grading), including in streams that cross or are adjacent to the project proponent’s property.
  - 114: Erosion control methods shall be used as appropriate during all phases of routine maintenance projects to control sediment and minimize water quality impacts.

3.9.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The proposed project would have a significant impact on hydrology and water quality if implementing the project would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- 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;
  - Result in substantial erosion or siltation on- or offsite;
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - 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
  - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Analysis Methodology[2]

Construction and Operations and Maintenance Activities

The analysis of project construction and operations and maintenance impacts on hydrology and water quality, except for the evaluation of changes in flood flows and resulting effects to erosion and scour in Coyote Creek (discussed below), uses the NOP existing conditions baseline and is based on activities within the Coyote Creek corridor and urbanized areas of the City adjacent to the creek. In general, construction activities at improvement sites involve the use of construction equipment, the use of fuels, oils, and lubricants, and excavation and earth moving activities that expose soil. Operation and maintenance activities defined in Chapter 2, “Project Description” would be similar to existing Valley Water operation and maintenance activities among all other creeks and flood improvements in its jurisdiction, including trash and debris removal, vegetation management (e.g., removing vegetation along maintenance roads), minor maintenance road repairs, management of wildlife conflicts, and graffiti removal, among other activities. All

[2] Minor modifications to the project description included in this Attachment 1 of the Final EIR would not meaningfully change the modeling results and would not change the impact analyses and significance conclusions.

applicable Valley Water BMPs, SMP BMPs, and VHP Conditions and AMMs would be applied as part of the project and are used in the impact analyses to help reduce impacts.

Changes in Hydrology and Flood Flows

To the extent possible, quantitative methods are used to evaluate the potential for the project to change hydrology and flood flows. To analyze these changes, hydrologic and hydraulic (H&H) modeling was conducted. The methodology and results of the H&H modeling conducted for a 100-year storm event within the Coyote Creek watershed are included in **Appendices H1 – H3**. The H&H model was developed using the parameters and approaches described in the two technical memoranda prepared by Valley Water: one memorandum (Appendix H1) identifies inputs to construct and run the hydraulic model, and the other memorandum (Appendix H2) describes several modeling scenarios and associated flows for Coyote Creek including baseline conditions, consideration of the project, and cumulative scenarios. The results of the H&H modeling for the operational baseline condition are contained in the *Modeling Efforts in Support of Environmental Impact Report Technical Memorandum* prepared by AECOM (Appendix H3, AECOM, 2024). Cumulative impacts are analyzed in Chapter 4, "Other Statutory Requirements" of this Draft EIR. The contents of these appendices are described in more detail below in this section.

Operational Baseline Conditions in Coyote Creek

As described in Section 3.1, "Introduction to the Analysis" of this Draft EIR, the ADTP and CCFMMP will be completed before construction of the CCFPP begins. Therefore, the operational baseline condition (also called the 2023 ADTP scenario or Scenario 3) is used for the analysis of changes in flood flows; this baseline includes the CCFMMP, ADTP, and City Trails projects being constructed and operational. Under the operational baseline condition, flows in Coyote Creek are controlled by the ADTP.

Historically, the largest recorded flows on Coyote Creek were a result of spills from Coyote and Anderson Dams. However, because of changing conditions at Anderson Dam over the course of the FOCP, Anderson Dam is not anticipated to spill during the 100-year event under the operational baseline condition. In the H&H modeling of Coyote Creek, a 72-hour storm centered on Anderson and Coyote Reservoirs has been used to estimate the peak flows on Coyote Creek for a 100-year event to account for reservoir attenuation and travel time from the reservoirs to the lower part of Coyote Creek.

The local watershed (i.e., the watershed that is not influenced by Anderson Dam releases) response is modeled with a 24-hour storm due to the reduced travel time and the lack of reservoirs within the watershed downstream of Anderson Dam. However, the peak flows in Coyote Creek resulting from the local watershed response are sensitive to the location of the 24-hour storm in the local watershed.

As described in Appendix H2, the 24-hr event is considered the controlling event for the operational baseline condition flood flows (2023 ADTP) because it results in higher flows along Coyote Creek. The flow at the Anderson Dam spillway for the 24-hour 100-year event for the 2023 ADTP scenario is assumed to be 2,500 cfs. This is based on a coincident analysis, which evaluates the risk of a coincident peak flow in the local watershed and the controlled flows from Anderson Dam. The 24-hour 100-year flow distributions for the 2023 ADTP scenario are shown in **Table 3.9.3**.

Table 3.9.3. 2023 ADTP Scenario 24-Hour 100-Year Event Flows

Location	Post-ADTP 24-Hour 100-year Event Flows (cfs)
Coyote Creek d/s Dam Spillway	2,500
Coyote Creek d/s Upper Silver Creek	5,350
Coyote Creek at I-280	6,090
Coyote Creek at East William St	6,130
Coyote Creek u/s Lower Silver Creek	6,090
Coyote Creek d/s Lower Silver Creek @ 101	8,170
Coyote Creek u/s Upper Penitencia Creek	8,180
Coyote Creek d/s Upper Penitencia Creek @ Berryessa Rd	10,260
Coyote Creek at I-880	10,380

Notes: downstream = d/s; upstream = u/s
Source: Valley Water 2024a

Modeling Approach

To model changes in hydrology and flood flows for the operational baseline condition, AECOM used the 2023 ADTP 24-hr flows developed in Appendices H1 and H2 as provided by Valley Water. AECOM used these flows in a combined 1-Dimensional (1D)-2-Dimensional (2D) hydraulic model[3], specifically a USACE Hydrologic Engineering Center's River Analysis System (HEC-RAS) software model. The 1D-2D HEC-RAS hydraulic model was initially developed by Valley Water; AECOM updated the 1D-2D HEC-RAS hydraulic model to reflect the CCFMMP, CCFPP, and City Trails project elements. A detailed description of the model selection, development, and calibration is provided in *Draft Technical Memorandum: Hydrology Approach for Environmental Impact Report* (Valley Water 2024a [Appendix H2]) and *Draft Technical Memorandum: Recommended Hydraulic Modeling Approach for Environmental Import Report* (Valley Water 2024b [Appendix H1]). Revisions done to the 1D-2D HEC-RAS hydraulic model by AECOM are described in Appendix H3.

The model boundaries include areas upstream and downstream of the project reaches to ensure that the operational baseline (2023 ADTP scenario) and the post-project H&H modeling encompass areas that could be affected by the project. Of the scenarios described in Appendix H3, the following two scenarios were used to evaluate project impacts compared to the operational baseline conditions during a 100-year event:

1) the operational baseline scenario, including 2023 ADTP flows, and completed CCFMMP (but not the CCFPP) and City Trails projects, and
2) the post-project scenario which consists of the operational baseline scenario plus the CCFPP (also called Scenario 3A).

Results from the 1D-2D HEC-RAS hydraulic model were used to develop figures provided in the impact analysis to compare the operational baseline conditions with the post-project conditions to assess changes in extent of flooding, water depths, and velocities. A comparison of the

[3] A 1-Dimensional model models water flow in one direction along an alignment or path, like a channel (e.g., Coyote Creek), while a 2-Dimensional model models water flowing over an entire area or floodplain, incorporating flows in multiple directions. Combined, a 1D-2D model integrates both models to provide information on movement of flows in both a path and over an area.

modeling results of the operational baseline scenario to the post-project scenario is provided in the analysis of impacts on hydrology and erosion and sedimentation. All applicable Valley Water BMPs, SMP BMPs, and VHP Conditions and AMMs would be applied as part of the project and are used in the impact analyses to help reduce impacts.

Changes in Erosion and Scour in Coyote Creek

The evaluation of erosion and scour within Coyote Creek uses maximum velocities estimated by the H&H model for the 24-hour 100-year event. The maximum velocities from the operational baseline scenario are compared to those from the post-project scenario. Changes in post-project total maximum velocities were then used to assess whether shear stress[4] was increased to a level that could result in erosion and/or scour along the creek channel.

The relationship between flow velocity and shear stress, which causes erosion, is often nonlinear. A small increase (0 to 10 percent) in velocity results in a proportionally smaller increase in shear stress, especially at lower velocities in a creek system like Coyote Creek. A 10-percent increase in velocity translates to a slightly higher shear stress, but not necessarily a proportionally higher erosion rate. Natural waterways often experience brief periods where permissible velocities are exceeded. Short durations of slightly higher velocities may not have a significant effect on erosion. For this analysis, classifying a 0- to 10-percent increase above the permissible velocity as a minor risk of increased erosion is based on engineering design practices and the nonlinear response of erosion to velocity increases. The H&H modeling used a velocity of 7.5 feet-per-second (fps) as a threshold for velocities (i.e., permissible velocity), above which shear stress could result in erosion. This threshold was based on the National Resources Conservation Service Hydrologic Soil Group classification and drainage design criteria. Only those areas with increases in velocities above 7.5 fps were analyzed further to assess if there would be a significant increase in velocity (i.e., greater than 10 percent) that could result in bank erosion and sedimentation (See Appendix H3).

Impacts Not Discussed Further in the EIR

Risk Release of Pollutants Due to Project Inundation in Flood Hazard, Tsunami, or Seiche Zones

The project would construct flood risk reduction improvements to reduce flooding within urban areas of the City. The improvements would be composed of materials to retain flood flows and withstand inundation (e.g., metal and concrete) and are not composed of materials that would release pollutants during inundation related to flooding. Further, the project is not located in a tsunami or seiche zone. There would be no impact related to release of pollutants due to project inundation and this issue is not discussed further in this EIR.

[4] Shear stress is defined as physical forces resulting in frictional forces in opposite directions, and sometimes also in diagonal directions, along the bed and bank of the creek.

Impact Analysis

Impact HWQ-1: Violate any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality. (Less than significant)

Construction Impacts

Project construction activities adjacent to and within the Coyote Creek channel could affect water quality and thereby result in adverse effects on water quality in the creek. More specifically, construction activities for the proposed improvements that would expose soil to erosive forces include clearing and grubbing of construction areas, excavation and grading activities, and installation of false work areas (e.g., scaffolding) suspended under the Bridge for the improvements at Charcot Avenue~~, and construction of the temporary creek crossing and coffer dam.~~ (For Charcot Avenue bridge reinforcement, no bridge construction work would occur within the channel, and all would be suspended under the bridge.)

Rain and wind events in areas where these activities occur could result in erosion or sedimentation degrading water quality within the Coyote Creek. Construction activities and use of equipment adjacent to ~~and within~~ the channel could also result in the unintentional release of construction debris, fuels, lubricants, solvents, or other pollutants into the channel. Additionally, disturbance of deposited sediments or fill soils during excavation may release contaminants or hazardous materials that may affect water quality of Coyote Creek and San Francisco Bay.

The project would be required to comply with applicable water quality permits such as the NPDES Construction General Permit, described previously in Section 3.9.2, "Regulatory Setting." As part of compliance with the Construction General Permit, a SWPPP would be prepared prior to construction and reviewed for compliance by the SFBRWQCB prior to issuance of the Construction General Permit. The SWPPP would include appropriate erosion control measures, spill prevention measures, and other measures to minimize the release of construction debris, fuels, lubricants, solvents, or other pollutants, measures required to be implemented during all project construction activities.

In addition, implementation of relevant Valley Water BMPs and VHP conditions identified in Section 3.6.3, "Applicable BMPs and VHP Conditions/AMMs" would reduce erosion during construction. Adherence to requirements of Valley Water BMPs AQ-1 (Use Dust Control Measures), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and WQ-5 (Stabilize Construction Entrances and Exits) would reduce erosion by implementing erosion control measures around stockpiled soils and staging areas and stabilizing construction entrances and exits. Upon completion of construction~~, any temporary fill would be removed, and~~ site restoration measures would be implemented to return areas around project improvements to pre-construction conditions, as specified in Valley Water BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement). Further, adherence to Valley Water BMPs HM-10 (Assure Proper Vehicle and Equipment Fueling), HM-11 (Assure Proper Vehicle and Equipment Maintenance), HM-12 (Assure Proper Hazardous Materials Management), HM-13 (Prevent Spills), HM-14 (Know the Spill Kit Location), WQ-18 (Maintain Clean Conditions at Work Sites), WQ-26 (Evaluate Use of Silt Fence Culvert Entrance Protection), WQ-29 (Evaluate Use of Discharge Storm Drain Curb &

Drop Inlet Protection), WQ-40 (Prevent Water Pollution), WQ-41 (Prevent Stormwater Pollution) would require the project to implement plans and measures to minimize discharges of soil and hazardous materials in stormwater runoff. In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous AMMs, including 61-74, 83, 84, 96, 97, 102-104, and 114 and additional requirements of Section 404 Permit conditions for the project under authority of USACE to cover activities within waters of the U.S. These BMPs, VHP Conditions /AMMs and permit conditions would require measures to minimize the extent of exposed soil and erosion, and release of hazardous materials used during and after construction activities.

Therefore, due to compliance with the Construction General Permit, Section 404 Permit, and application of BMPs and VHP Conditions and AMMs, project construction would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality, and these impacts would be **less than significant**.

Operational Impacts

Similar to current practice and consistent with Valley Water's SMP (SCVWD 2014), following construction of the project, maintenance activities would be conducted in Coyote Creek Reaches 4 through 8. These activities would include vegetation management within maintenance access areas which could cause erosion or loss of topsoil. Vegetation would be preserved if the improvement can be accessed for maintenance. Inspections and maintenance would occur on a limited basis, only one to two times annually and immediately following a natural hazard. Additionally, it is unlikely all flood risk reduction improvements would require repairs or maintenance at the same time after each inspection. Maintenance activities would also involve the use of equipment that use lubricants, fuels, and other hazardous materials in small amounts. Additionally, although the project would result in a small increase in impervious surfaces from passive barriers (approximately 22,600 square feet), passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City stormwater system, except for the passive barriers located in Reach 4. The four passive barriers in Reach 4 would drain via small pipes to outfalls on the creek bank onto riprap slope protection. Because of the small gap around the passive barriers, there would only be a small amount of stormwater that would enter the foundations underneath the passive barriers and runoff ~~from the passive barriers~~ would contain minimal amounts of urban pollutants because of their location relative to existing land uses (e.g., in or adjacent to open spaces and parks). Valley Water would be required to maintain the surface drainage from the passive barriers under its SCVURPPP Municipal Regional Stormwater ~~p~~Permit requirements to minimize impacts on stormwater runoff and quality.

Valley Water Handbook BMPs, VHP conditions and AMMs, and Valley Water SMP BMPs would be implemented during maintenance activities to reduce water quality impacts from these operation and maintenance activities. Applicable SMP BMPs include GEN-2 (Instream Herbicide Application Work Window), GEN-4 (Minimize the Area of Disturbance), GEN-20 (Erosion and Sediment Control Measures), GEN-21 (Staging and Stockpiling of Materials), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), GEN-29 (Dust Management), GEN-30 (Vehicle and

Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), and REVEG-1 (Seeding) to reduce impacts on water quality.

Therefore, due to the limited frequency and area of maintenance activities, and application of Valley Water Handbook BMPs, Valley Water SMP BMPs and VHP Conditions and AMMs, and SCVURPPP permit requirements, project operations and maintenance would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality, and these impacts would be **less than significant**.

Impact HWQ-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such that the Project May Impede Sustainable Groundwater Management of the Basin. (Less than significant)

As discussed previously, groundwater in the project area ranges from shallow to deep, (i.e., between 9 feet to 40.5 feet bgs) (Kleinfelder 2022). Although the project would include excavation during construction, excavation would not be more than 3 feet bgs in areas where groundwater is shallow (i.e., at 9 feet bgs) and approximately 5 feet bgs in areas where groundwater is deeper (e.g., below 9 feet bgs). Dewatering would not be required due to the limits in excavation depths. Even under unlikely conditions where groundwater might be experienced during excavation, the amounts would be minor and would not interfere with the construction process. Therefore, no dewatering is anticipated to be required for project construction. However, should groundwater need to be eliminated from construction areas, Valley Water would discharge to nearby areas after notifying the SFBRWQCB first and after meeting all the requirements of the General WDRs for Discharges to Land with a Low Threat to Water Quality Permit (WQO NO. 2003–0003–DWQ).

The project improvements would result in a negligible amount of new impervious surfaces, mainly from the construction of passive barriers within the ground (approximately 22,600 square feet). However, as stated previously, most passive barriers would include internal drainage systems to collect stormwater within the base of the passive barrier structures and convey flows to new connections with the existing City stormwater system. The four passive barriers in Reach 4 would drain via small pipes to outfalls consisting of riprap slop protection at the top of the creek bank. This negligible increase in impervious surfaces would not significantly impede groundwater recharge compared to the existing areas of impervious surfaces throughout the urbanized areas of the groundwater basin. The project would not create impervious surfaces within the Coyote Creek channel which is the main source of groundwater recharge in the project vicinity. Floodwalls would be installed in areas adjacent to the creek channel at depths that would intersect with some areas of groundwater recharge from the creek. However, floodwalls would not result in a significant reduction of groundwater recharge from the creek from entering the basin underneath or around the limited linear boundaries of the floodwalls. Further, the project would not use groundwater during construction or operations and maintenance activities. Based on the above analysis, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management would be impeded, and this impact would be **less than significant**.

Impact HWQ-3: 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 Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Offsite. (Less than significant)

The project improvements include floodwalls, passive barriers, headwalls and wingwalls, <u>and</u> berms, <u>and roadway recontouring</u>. Floodwalls would not result in a significant increase in impervious surfaces as they would be vertically oriented in the ground and are not wide enough to increase surface runoff significantly. <u>Additionally, floodwalls R6-FW19, R6-FW-20, R7-FW11, R8-FW13 would include pipes equipped with flap gates to drain stormwater that collects on the land side of the floodwalls and discharge on riprap bank protection that would be installed at the top of the creek bank. Floodwall R8-FW13 includes a stormwater collection grate and stormwater discharge pipeline adjacent and along the landside of the floodwall that would connect to a stormwater pipe with flap gates and riprap bank protection.</u> Headwalls would be constructed on the existing Charcot Avenue Bridge. Berms would be composed of compacted soil and vegetated after construction and would provide infiltration of surface runoff. <u>Berms in Reach 4 (R4-B and -B) and Reach 6 (R6-B21) would be topped with aggregate base for maintenance access, and in the case of the latter trail access, along the top of the berms. The aggregate base would also be pervious to stormwater.</u> Passive barriers would be constructed in streets and within undeveloped areas along the borders of parks or open space (e.g., passive barriers within Selma Olinder Park [R7-PB5]). <u>Passive barriers along Reaches 6 and 7 would include internal drainage systems to collect and convey stormwater that enters through the small gaps between the passive barrier wall and the foundation to new connections with the existing City of San José stormwater system. Passive barriers within Reach 4 would collect stormwater that enters footings through the small gaps between the passive barrier wall and the foundation and drain out through a pipe to an outfall equipped with riprap slope protection at the top of the bank of the creek.</u> ~~However, the~~ <u>The</u> area of impervious surfaces that would be created by passive barriers are negligible (approximately 22,600 square feet) compared to the existing impervious surfaces in the surrounding urbanized areas of the City<u>.</u> ~~and surface runoff from passive barriers along open space or parks would flow onto both permeable areas within the parks/open space and within streets with City storm drainage systems~~. <u>Further, Valley Water would be required to maintain the surface drainage from the passive barriers under its SCVURPPP Municipal Regional Stormwater Permit requirements to minimize impacts on stormwater runoff and quality.</u> Maintenance of areas around floodwalls would include vegetation removal within areas on either side of floodwall. However, vegetation removal would not result in exposure of bare soil that could otherwise increase the rate or amount of surface runoff. Therefore, the project would not result in a substantial increase in the rate or amount of surface runoff that would result in flooding on- or off-site. This impact would be **less than significant**.

Impact HWQ-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Creates or Contributes Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage

Systems or Provide Substantial Additional Sources of Polluted Runoff. (Less than significant)

For reasons stated previously in Impact HWQ-3, project improvements would not introduce substantial new impervious surfaces that would result in or contribute to increased runoff such that the capacity of existing stormwater drainage systems in the City would be exceeded.

Because Valley Water is a permittee under the Municipal Regional Stormwater Permit (NPDES No. CAS612008), the project is subject to the source control, site design, and stormwater requirements pursuant to the Municipal Regional Stormwater Permit conditions, and would be consistent with the policies contained in the Municipal Regional Stormwater Permit by minimizing runoff generation, promoting infiltration of storm water, and using vegetated areas to filter pollutants from stormwater before it enters the City storm drainage system or creek. As described previously, the project would include drainage features within all passive barriers and select floodwalls to convey stormwater flows to the existing City stormwater system or to the creek. The vegetated areas receiving stormwater would filter sediment and other pollutants from stormwater runoff entering the City's stormwater system and reduce the amount of pollutants reaching the creek channel. Valley Water BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement). In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous AMMs, including 61-74, 83, 84, 96, 97, 102-104, and 114. These AMMs would require measures to reduce the extent of exposed soil and erosion during and after construction activities. Furthermore, Valley Water SMP BMPs would be implemented during maintenance activities, including GEN-2 (Instream Herbicide Application Work Window), GEN-4 (Minimize the Area of Disturbance), GEN-20 (Erosion and Sediment Control Measures), GEN-21 (Staging and Stockpiling of Materials), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), GEN-29 (Dust Management), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), and REVEG-1 (Seeding) to would ensure runoff from project improvements would not exceed the capacity of existing stormwater systems or create substantial additional sources of polluted runoff. Therefore, this impact would be **less than significant**.

Impact HWQ-5: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Impedes or Redirects Flood Flows. (Less than significant)

As described in Section 3.9.1, "Environmental Setting," flows in Coyote Creek are currently composed of runoff from within the natural portions of the watershed, releases from the outlet of Anderson Dam, and from the City's stormwater drainage system. As described previously in the "Analysis Methodology" section, since the 2017 flood event overtopping the creek banks into the urban areas of the City, the FOCP was initiated and will result in reduced flows from Anderson Dam compared to pre-FOCP historic levels. The H&H modeling analyzed effects of the project on flood flows based on the operational baseline conditions, which includes 2023 ADTP flows and completion of the CCFMMP and City Trails projects. Specifically, a comparison of results of the floodplain extents and water surface elevations between the operational baseline condition and the post-project conditions was conducted to determine if the project would redirect or impede flood flows and exacerbate existing flood conditions or introduce new areas of flooding. Redirecting and impeding flood flows compared to the operational baseline conditions would occur with the project improvements because the improvements are specifically located in areas where flood water would normally overtop the creek banks.

The H&H modeling results depicted in **Figures**[5] **3.9.4** through **3.9.7** show the estimated range in maximum water depths during the 100-year flood event for areas with 1 ft of depth or greater under the current operational baseline (2023 ADTP scenario) conditions including the releases from Anderson Dam and completed CCFMMP improvements. As shown in the figures, the model boundary in green encompasses a wide area on either bank of the creek and areas upstream and downstream of the project reaches to ensure identification of baseline conditions and any effects of the project on hydrology in the model boundary area. Figures 3.9.4 through 3.9.7 show maximum water depths under baseline conditions range from 1-foot to greater than 20 feet and encompass many areas beyond the creek channel in areas of the City.

Figures 3.9.8 through **3.9.11** show the change in maximum water depths after implementation of the project for areas with depths of 1-foot or greater. The modeling results show that after implementation of project improvements, estimated maximum depths in the modeled area increase in some areas and decrease in others. Maximum depth decreases by as much as approximately 6.1 feet and increases by as much as 1.3 feet. As shown in these figures, areas with increases in water depths ranging from approximately 0.1 to 1.3 feet occur within the Coyote Creek channel and adjacent land in reaches and areas downstream of the upstream end of Reach 4. Changes to water depths in Reaches 5, 6, and 7 range from approximately -0.1 to 1.3 feet. The difference in flood depths ranges between approximately -0.1 feet (decrease) to 0.1 feet (increase) in the upstream portion of Reach 8 and further upstream. In addition, some areas in Reaches 6, 7, and 8 would experience even larger reductions in water depths of up to approximately -6.3 feet.

Most of the depth changes occur within the creek channel along the modeled reaches. However, for the areas where flood depths change beyond the creek channel, an analysis of the areal extent of flooding shows that the project would substantially reduce the extent of flooding compared to the operational baseline conditions.

The H&H modeling results shown in **Figures 3.9.12** through **3.9.15** show the estimated areal extent of flooding under the operational baseline (2023 ADTP scenario) conditions for areas with a depth of 1-foot or greater, compared with the extent of flooding under post-project conditions for areas with a depth of 1-foot or greater. As shown on Figures 3.9.12 through 3.9.15, flood flows during the operational baseline condition would escape the creek channel and flood many areas of the City. However, as shown on the same figures, after implementation of the project improvements, the extent of flooding would be significantly reduced and restricted to within the Coyote Creek channel and surrounding open space areas. Further, the areal extent of flooding downstream of project improvements would also be reduced. There are no areas outside of the Coyote Creek channel where the areal extent of flooding would exceed that

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[5] As stated previously, minor modifications to the project description included in this Attachment 1 of the Final EIR would not meaningfully change the modeling results (including figures provided in impact analyses) and would not change the impact analyses and significance conclusions.

shown under the operational baseline condition after implementation of the project. Therefore, the project would reduce flood risk and would not result in flooding from the redirection or impeding flood flows from overtopping the creek banks into urbanized areas of the City. Therefore, the impact related to impeding or redirecting flood flows would be **less than significant**.

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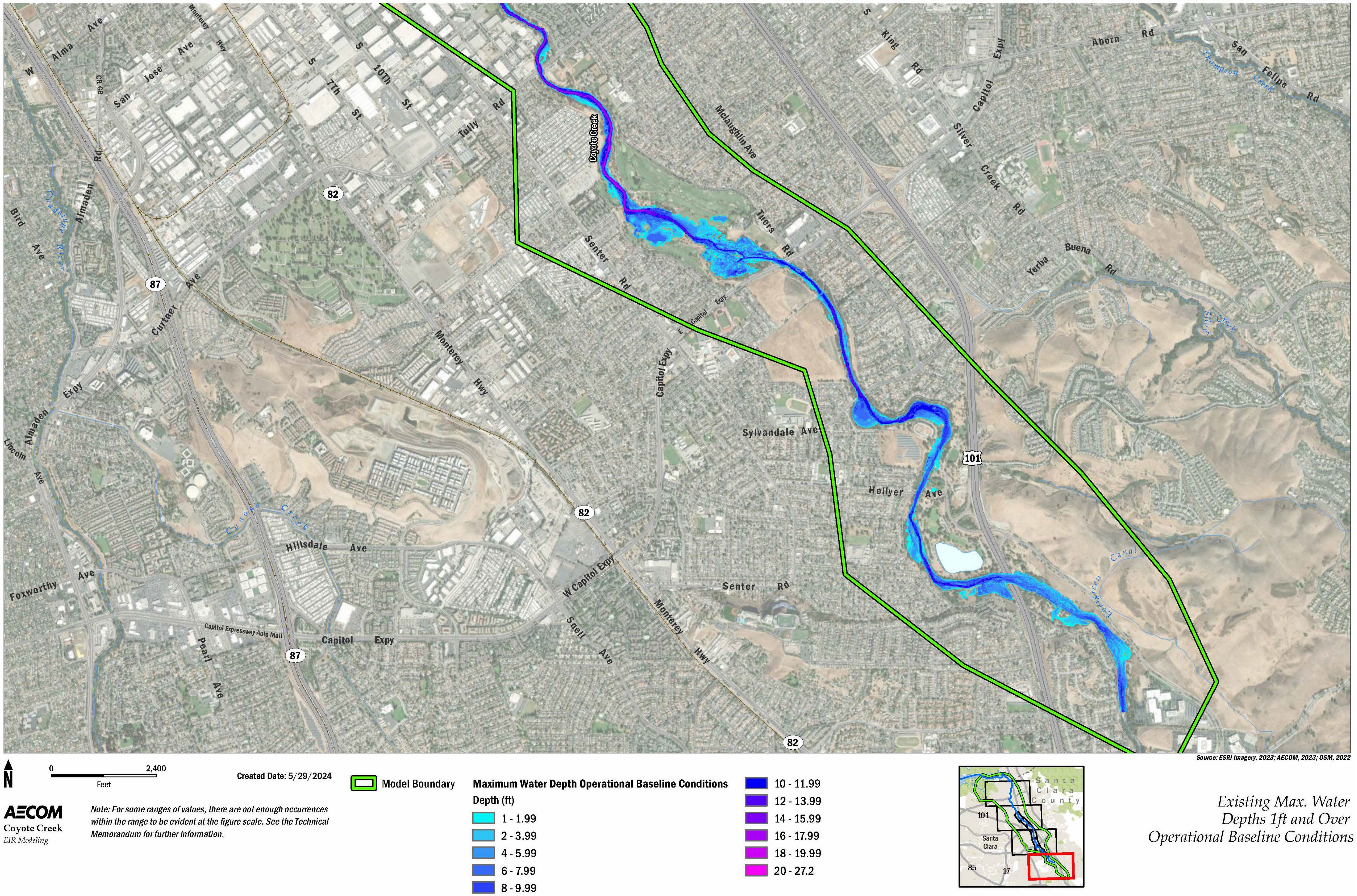
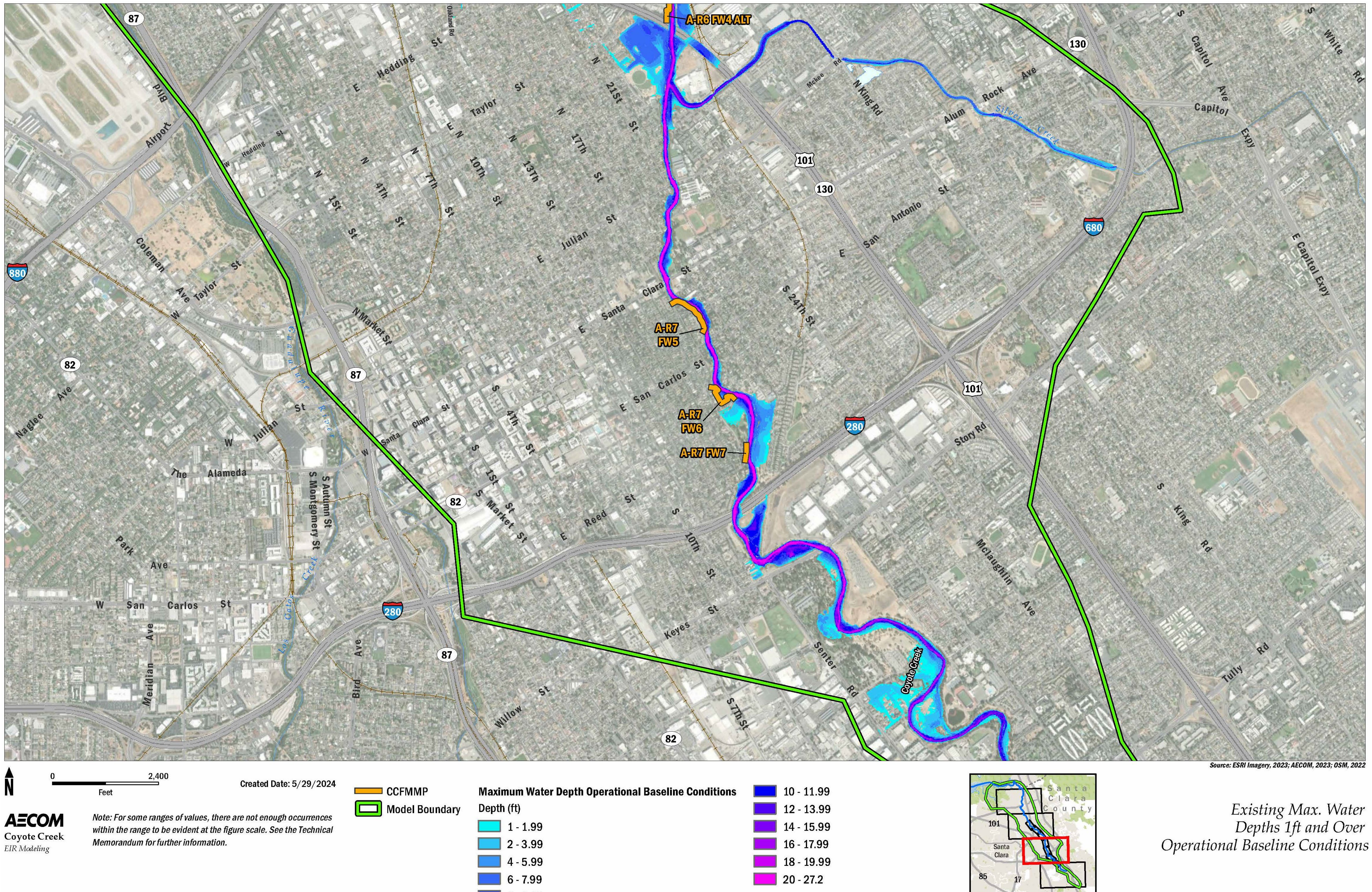


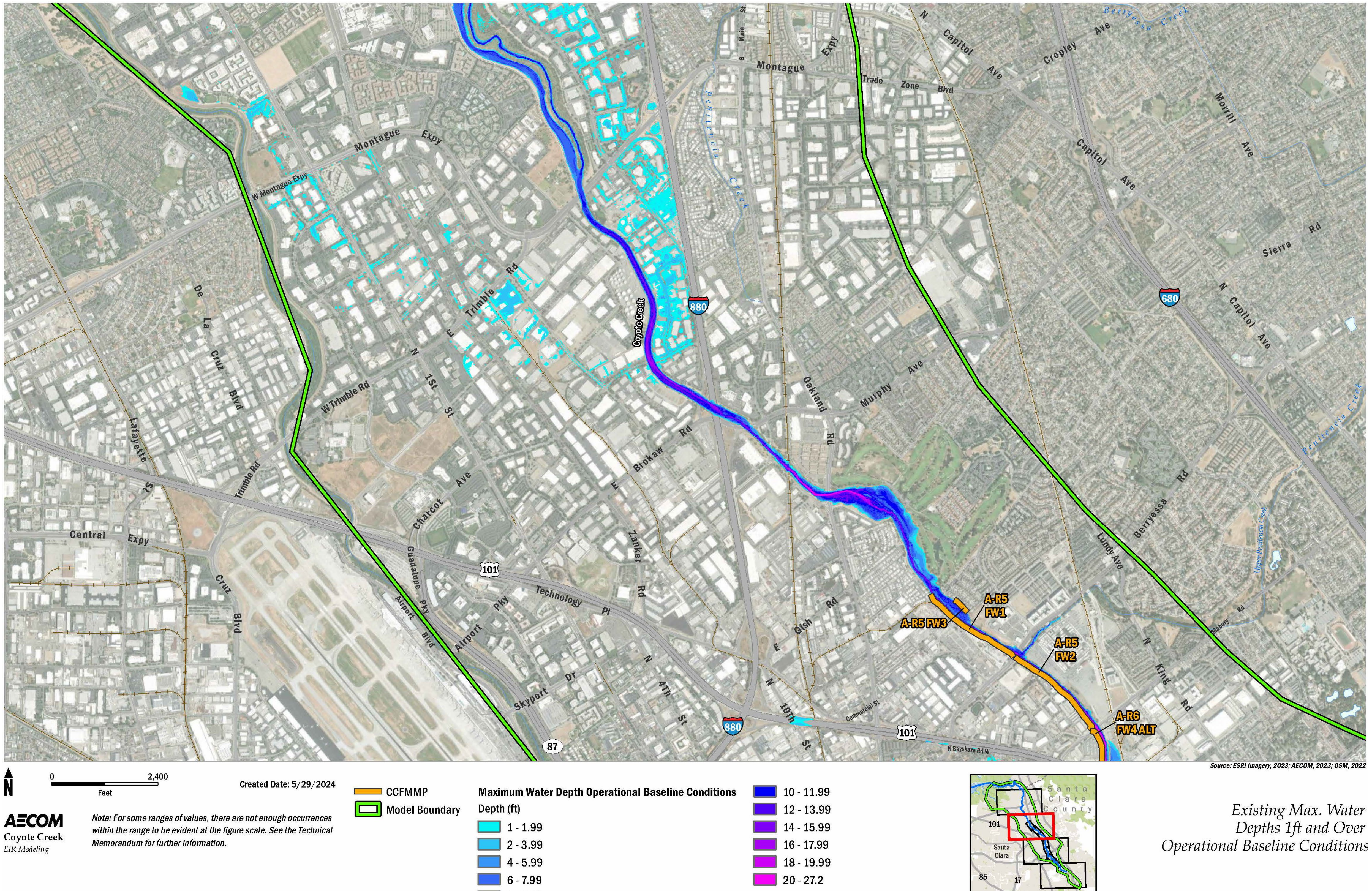
Source: Appendix H3

Figure 3.9.4. Existing Operational Baseline Water Depths 1 ft and Over in Reach 8 and Upstream



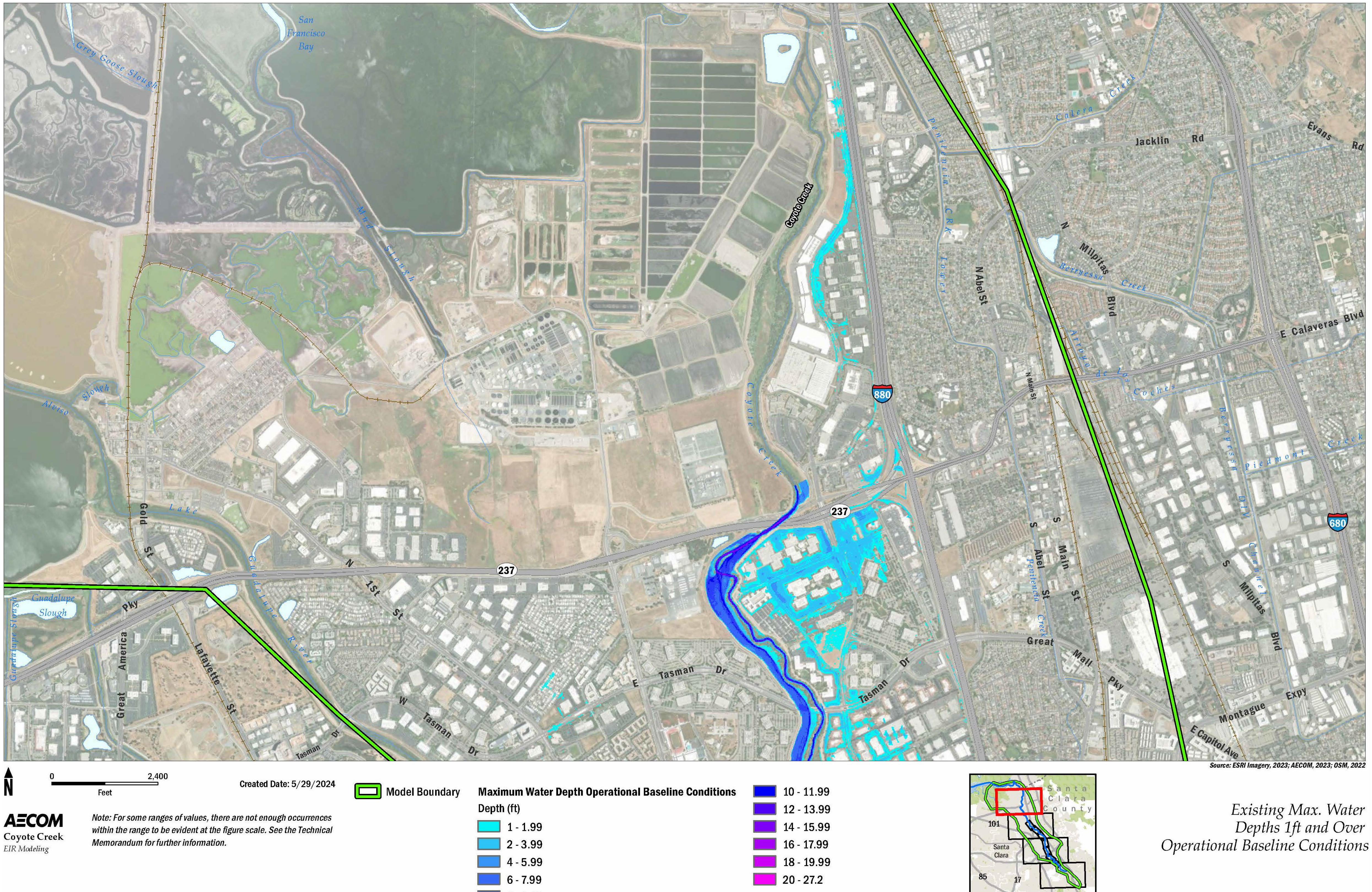
Source: Appendix H3

Figure 3.9.5. Existing Operational Baseline Water Depths 1 ft and Over in Reaches 6, 7 and 8



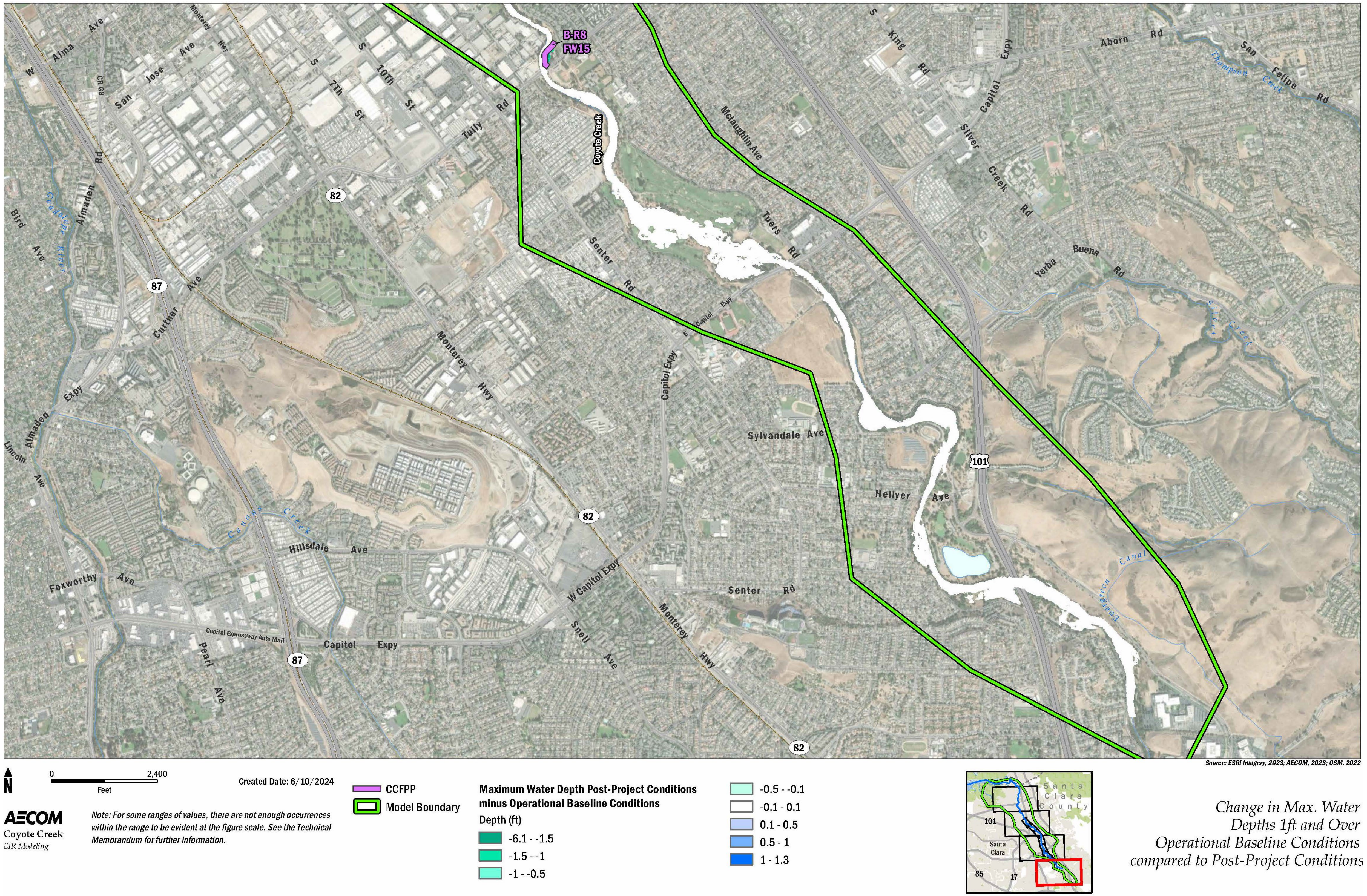
Source: Appendix H3

Figure 3.9.6. Existing Operational Baseline Water Depths 1 ft and Over in Reaches 4, 5, and 6 and Downstream of Reach 4



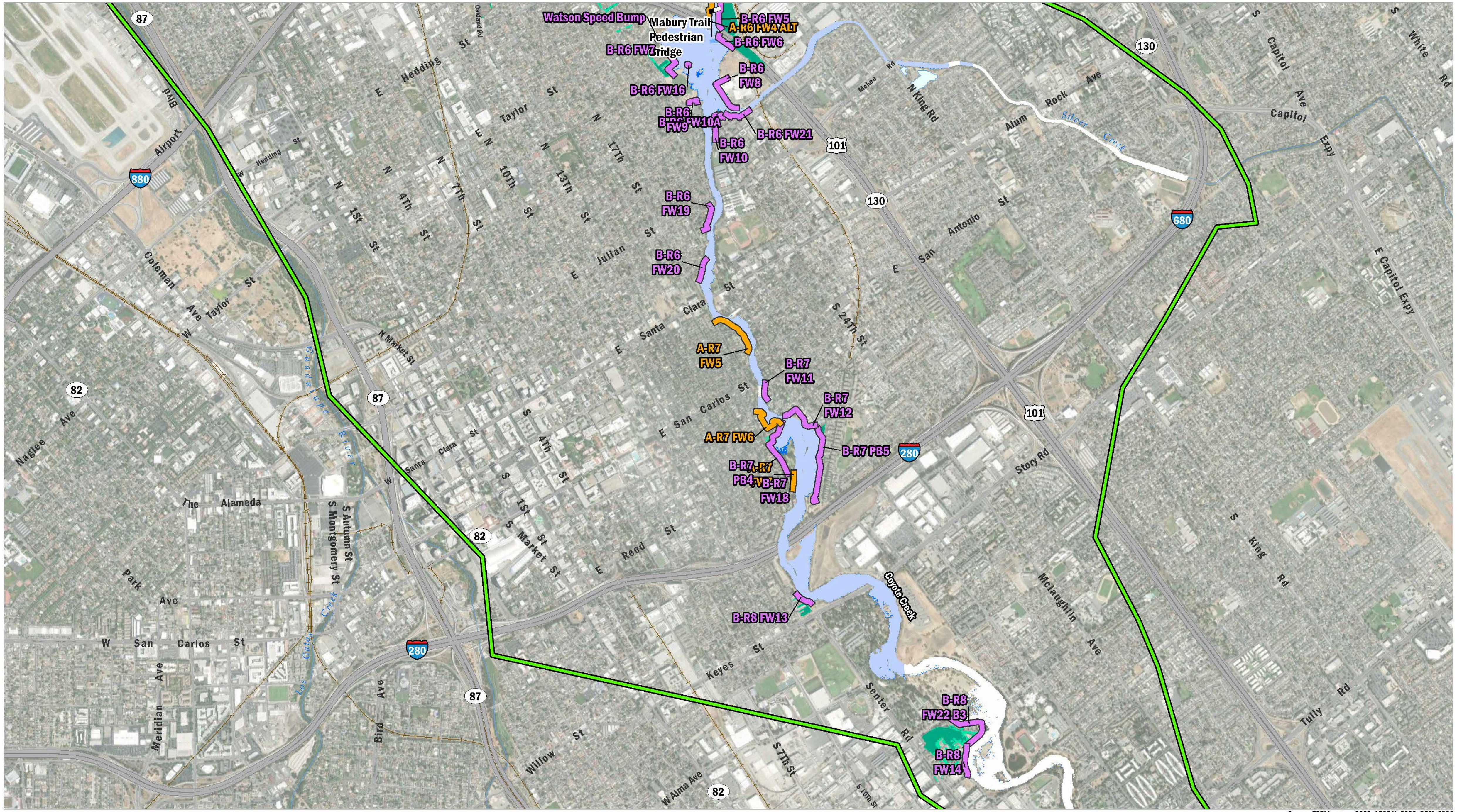
Source: Appendix H3

Figure 3.9.7. Existing Operational Baseline Water Depths 1 ft and Over Downstream of Reach 4



Source: Appendix H3

Figure 3.9.8. Post-Project Change in Water Depths 1 ft and Over in Reach 8 and Upstream



N

0 2,400 Feet

Created Date: 6/10/2024

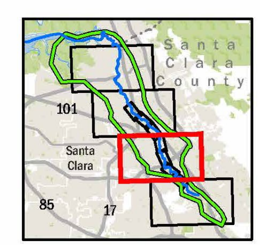
AECOM
Coyote Creek
EIR Modeling

Note: For some ranges of values, there are not enough occurrences within the range to be evident at the figure scale. See the Technical Memorandum for further information.

Mabury Trail Pedestrian Bridge
CCFMMP
CCFPP
Model Boundary

Maximum Water Depth Post-Project Conditions minus Operational Baseline Conditions
Depth (ft)

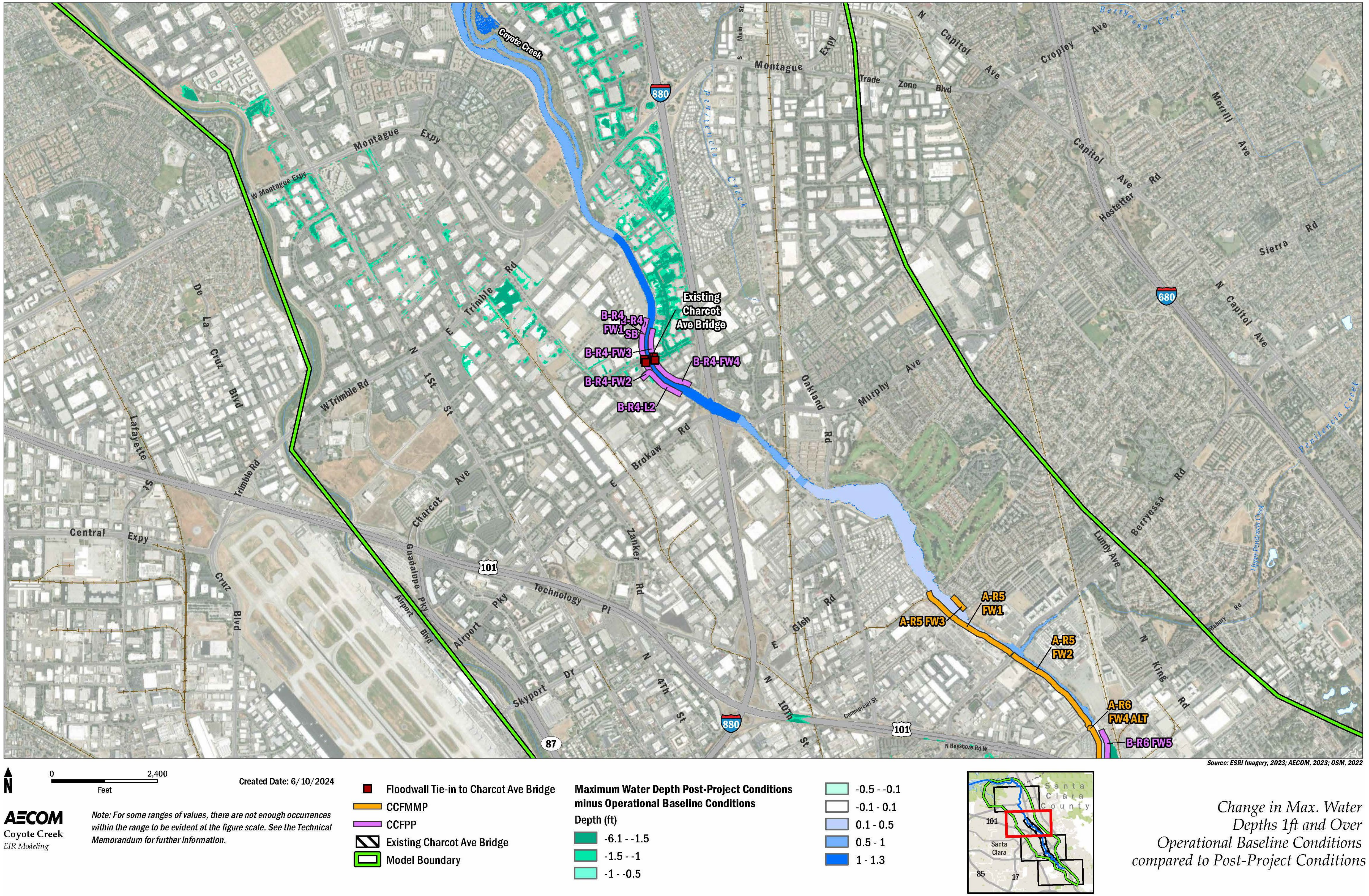
- -6.1 - -1.5
- -1.5 - -1
- -1 - -0.5
- -0.5 - -0.1
- -0.1 - 0.1
- 0.1 - 0.5
- 0.5 - 1
- 1 - 1.3



Change in Max. Water Depths 1ft and Over Operational Baseline Conditions compared to Post-Project Conditions

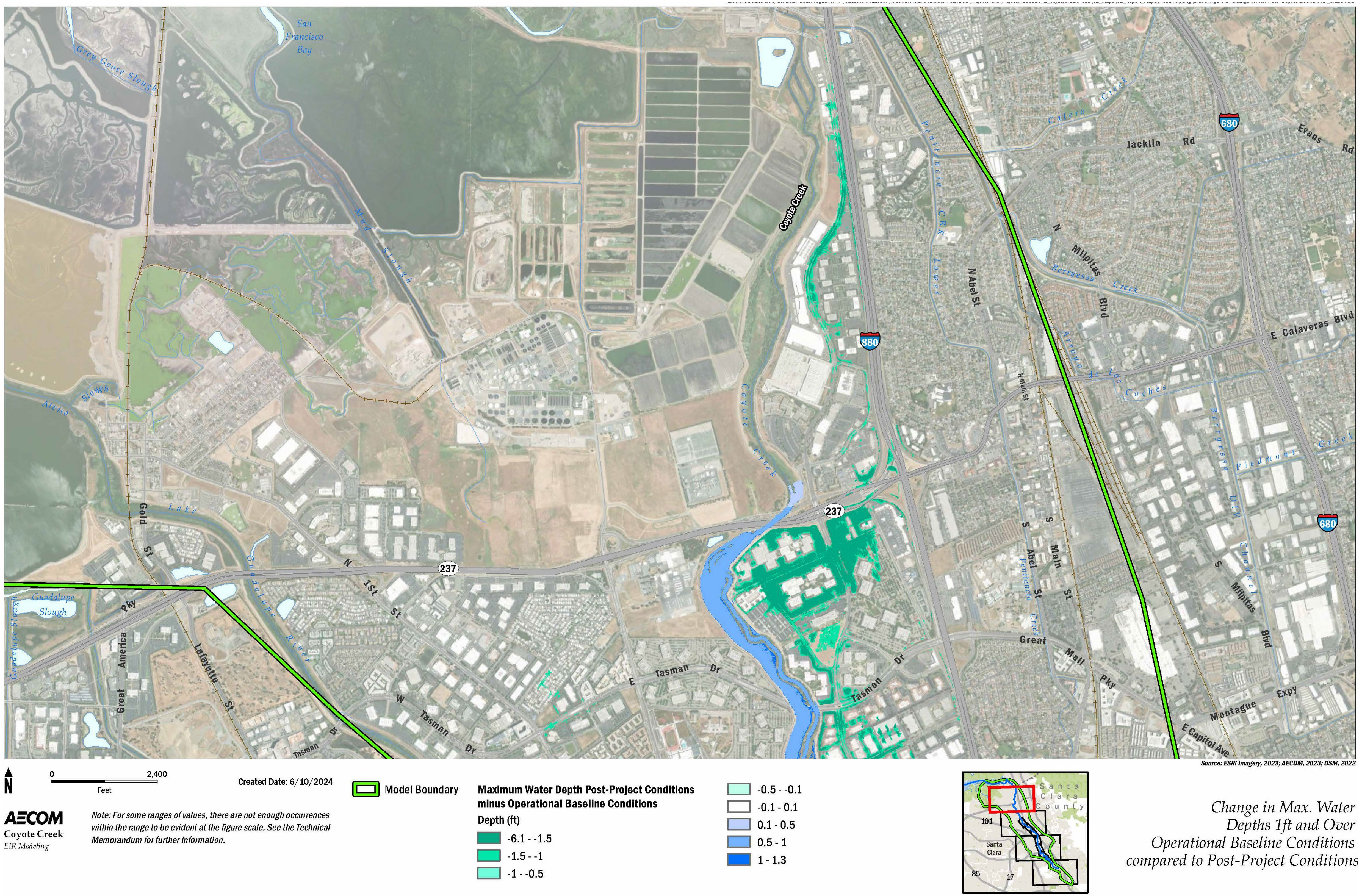
Source: Appendix H3

Figure 3.9.9. Post-Project Change in Water Depths 1 ft and Over in Reaches 6, 7 and 8



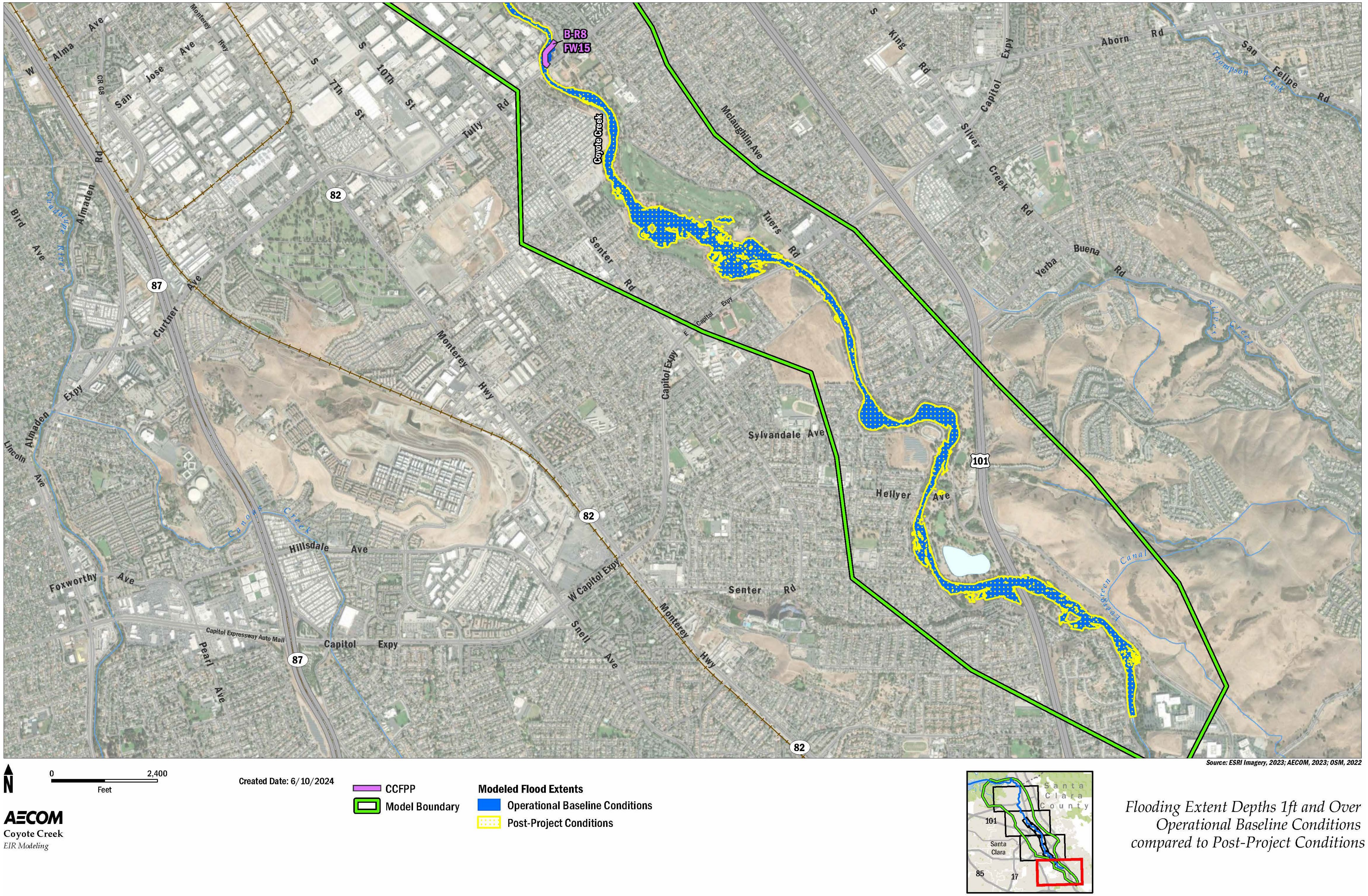
Source: Appendix H3

Figure 3.9.10. Post-Project Change in Water Depths 1 ft and Over in Reaches 4, 5, and 6 and Downstream of Reach 4



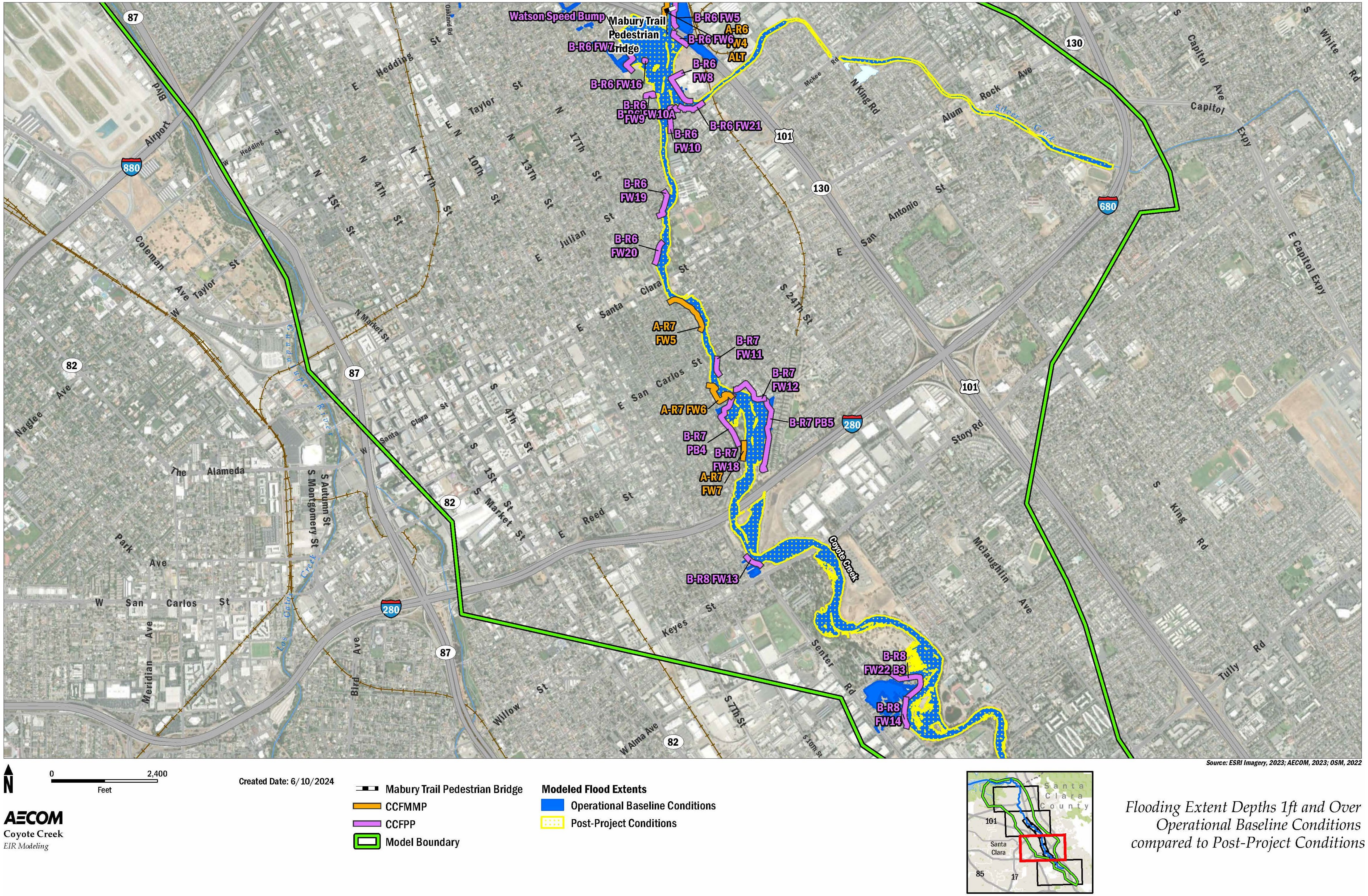
Source: Appendix H3

Figure 3.9.11. Post-Project Change in Water Depths 1 ft and Over Downstream of Reach 4



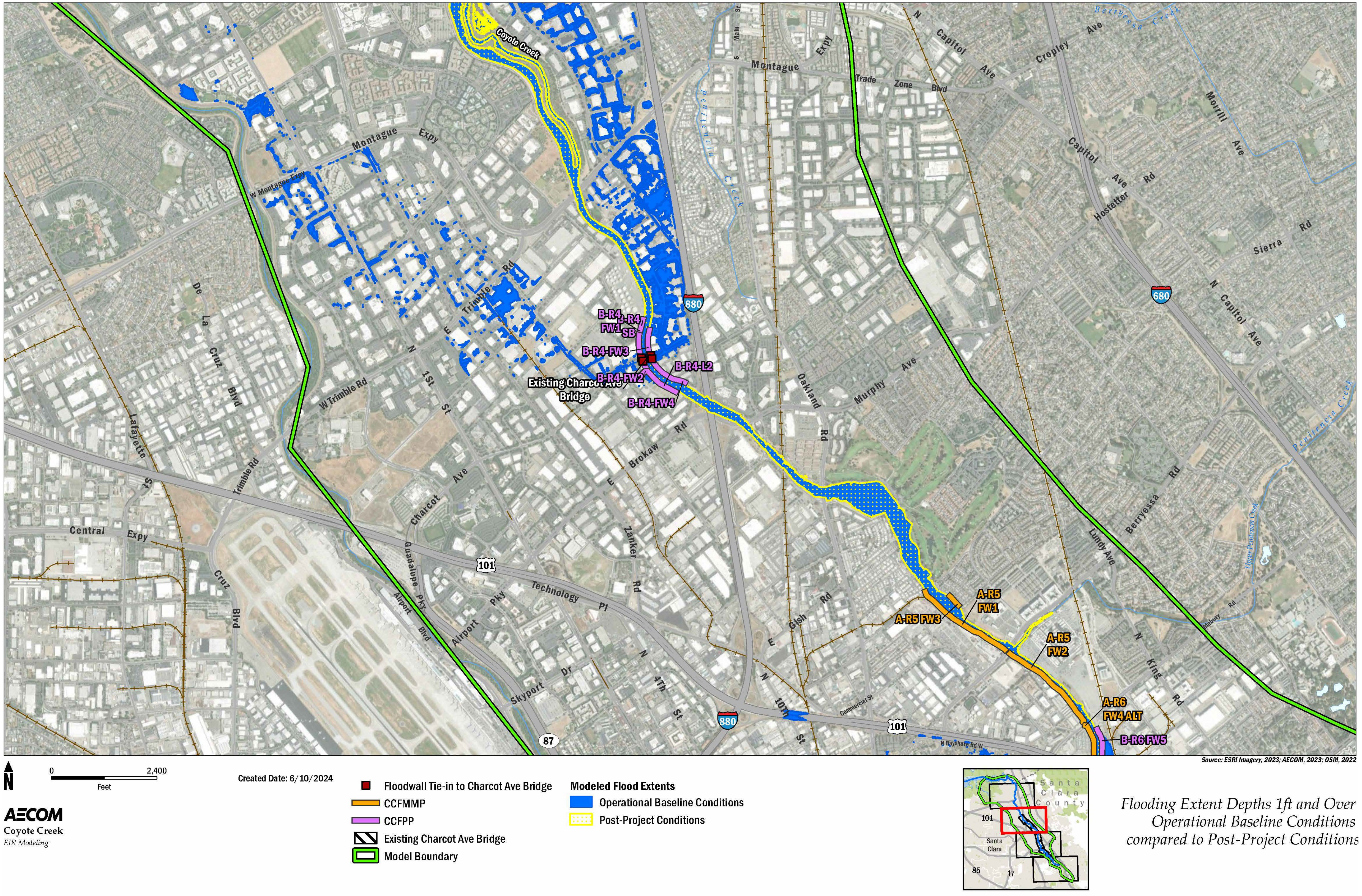
Source: Appendix H3

Figure 3.9.12. Post-Project Change in Flood Extents with Water Depths 1 ft and Over in Reach 8 and Upstream



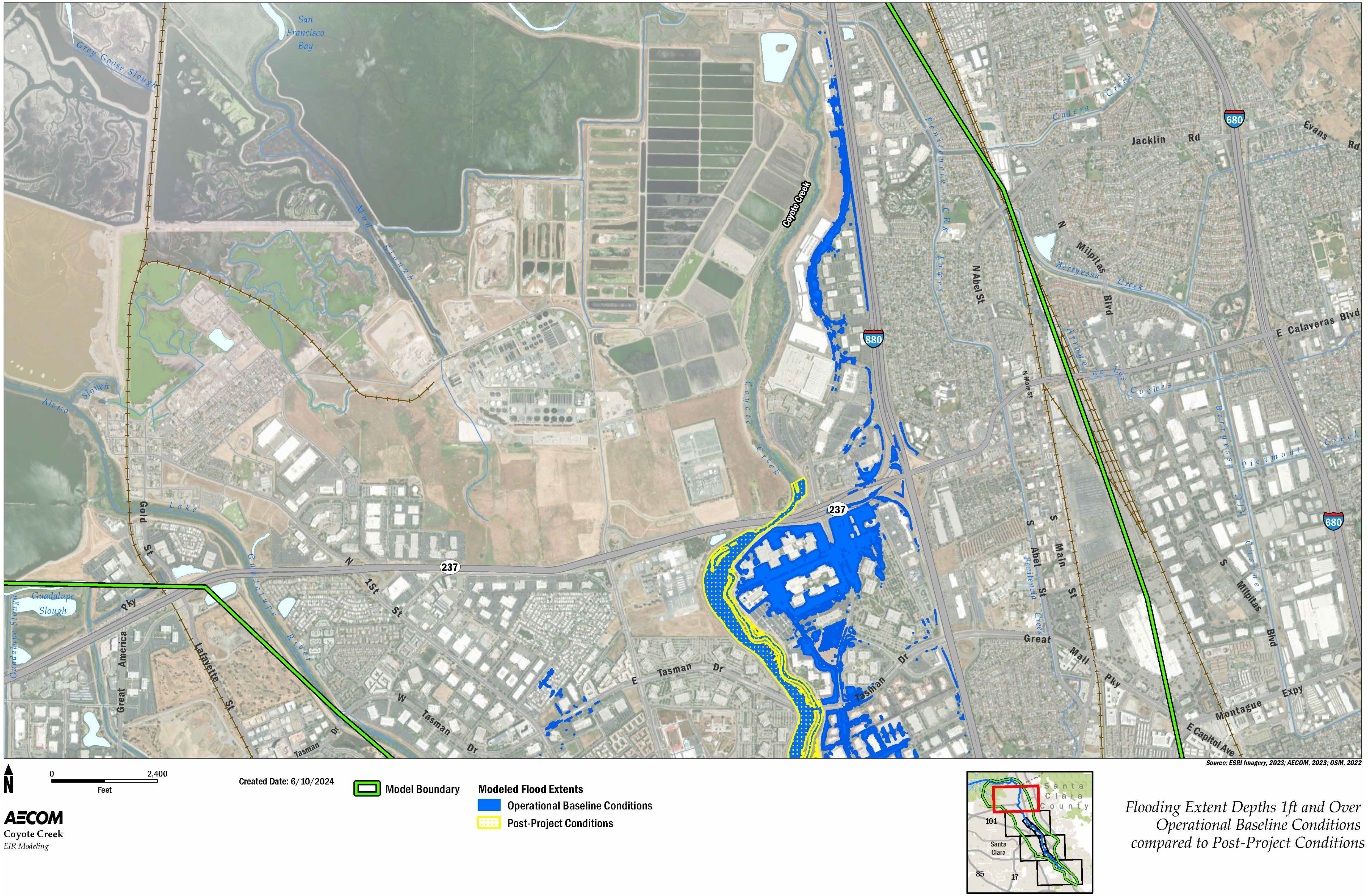
Source: Appendix H3

Figure 3.9.13. Post-Project Change in Flood Extents with Water Depths 1 ft and Over in Reaches 6, 7 and 8



Source: Appendix H3

Figure 3.9.14. Post-Project Change in Flood Extents with Water Depths 1 ft and Over in Reaches 4, 5, and 6 and Downstream of Reach 4



Source: Appendix H3

Figure 3.9.15. Post-Project Change in Flood Extents with Water Depths 1 ft and Over Downstream of Reach 4

Impact HWQ-6: 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 Result in Substantial Erosion or Siltation On- or Offsite. (Less than significant)

This impact analysis focuses on changes to flood flows within Coyote Creek that could result in erosion and scour. See Impact HWQ-1 above for a discussion of impacts on water quality from project construction and operation and maintenance activities.

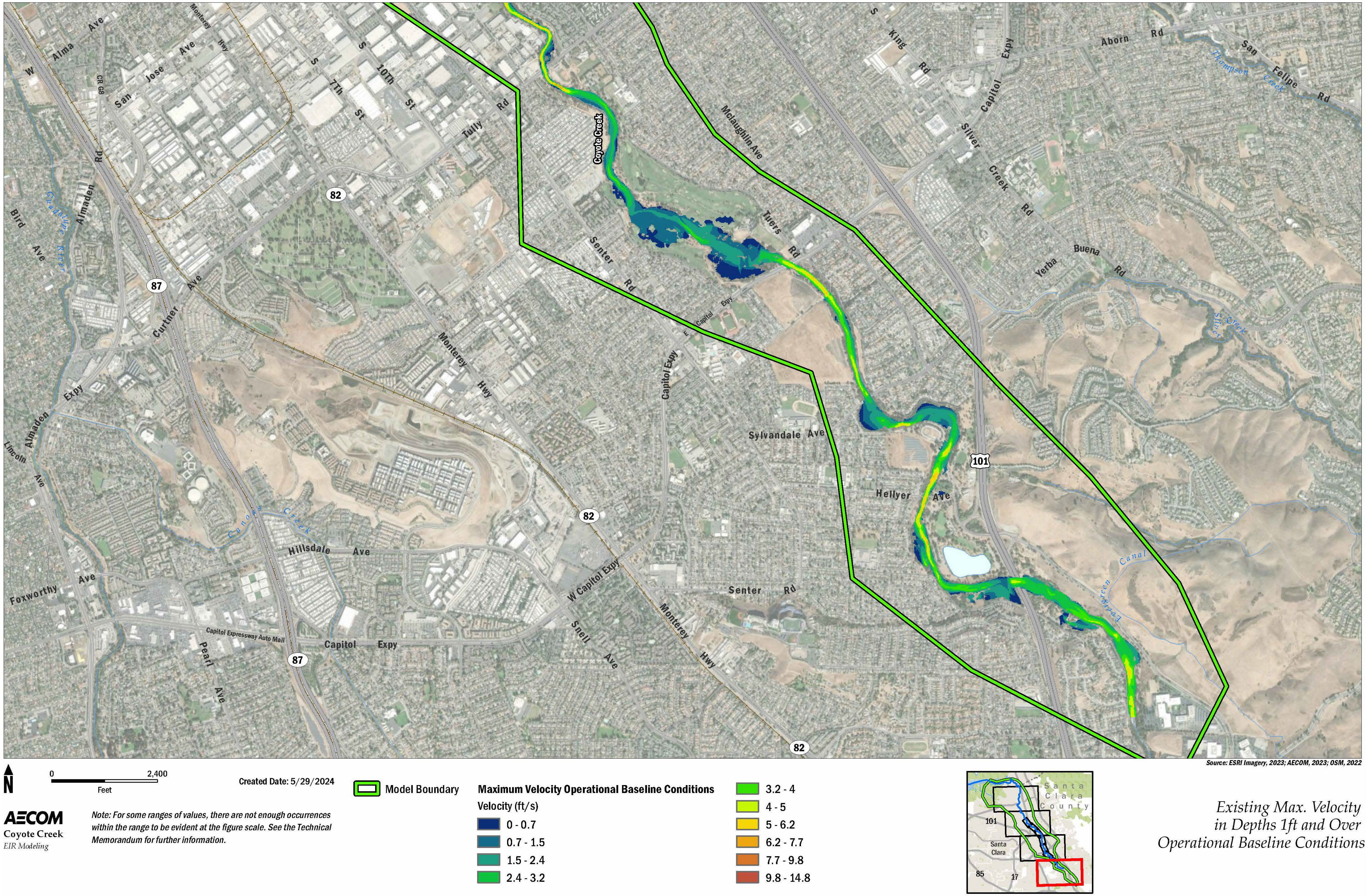
The current drainage pattern within Coyote Creek Reaches 4 through 8 results in overtopping and flooding portions of the City on either side of the creek during the 100-year flood event. The project would result in changes to the hydrology within Coyote Creek by retaining flood flows behind the proposed improvements and within the creek channel and some adjacent open space areas to avoid or minimize the extent of flooding on developed areas along Reaches 4 through 8. As discussed in Impact HWQ-5 above, the project would result in changes to the existing drainage pattern and would increase the water surface elevation and volume of water that remains confined to the creek channel. This confining of water could also increase the velocity of water flowing down Coyote Creek in some areas while reducing velocities in other areas. The increases in velocity confined in the channel could result in greater shear stress along the creek banks that could potentially result in erosion effects on the bank and potentially result in sedimentation within water flowing downstream. Sedimentation within water flowing downstream could potentially degrade water quality within the creek and South San Francisco Bay.

As discussed in the "Analysis Methodology" subsection above, 7.5 fps was determined to be the threshold level of velocity at which point scour and erosion could occur on Coyote Creek in the project area (also referred to as the permissible velocity). The H&H modeling shows that post-project average maximum channel velocities are within the 7.5 fps permissible velocity and were consistent between the operational baseline conditions and post-project conditions (see Appendix H3, Table 4). Erosion risk for specific areas in Coyote Creek was determined by evaluating the post-project changes in maximum velocities. The H&H modeling shows that there are both decreases and increases in maximum velocities within Reaches 4 through 8 after implementation of project improvements. As shown on **Figures 3.9.16** to **3.9.19**, under the operational baseline condition, maximum velocities range from 0 to greater than 13.5 fps along the modeled reaches of Coyote Creek, including the project area and within the extended upstream and downstream areas in the model boundaries. Comparing maximum velocities under the operational baseline condition to post-project maximum velocities shows increases are estimated to occur throughout all modeled reaches of Coyote Creek, as shown on **Figures 3.9.20** through **3.9.23**. These velocity increases range between 0 to 1 fps. In addition, there are many areas within all reaches, except for downstream of Charcot Avenue Bridge, that have no change in maximum velocities or a reduction of up to 2 fps in maximum velocity.

The post-project maximum velocities range between approximately 3 and 11.5 fps. Increases primarily occur where the post-project maximum velocity is maintained below the 7.5 fps permissible velocity. Additionally, increases occur where the maximum velocity already exceeds the 7.5 fps permissible channel velocity in the operational baseline condition, in a very short reach (approximately 185 ft) of the channel in Reach 5 and in Reach 4 and downstream of

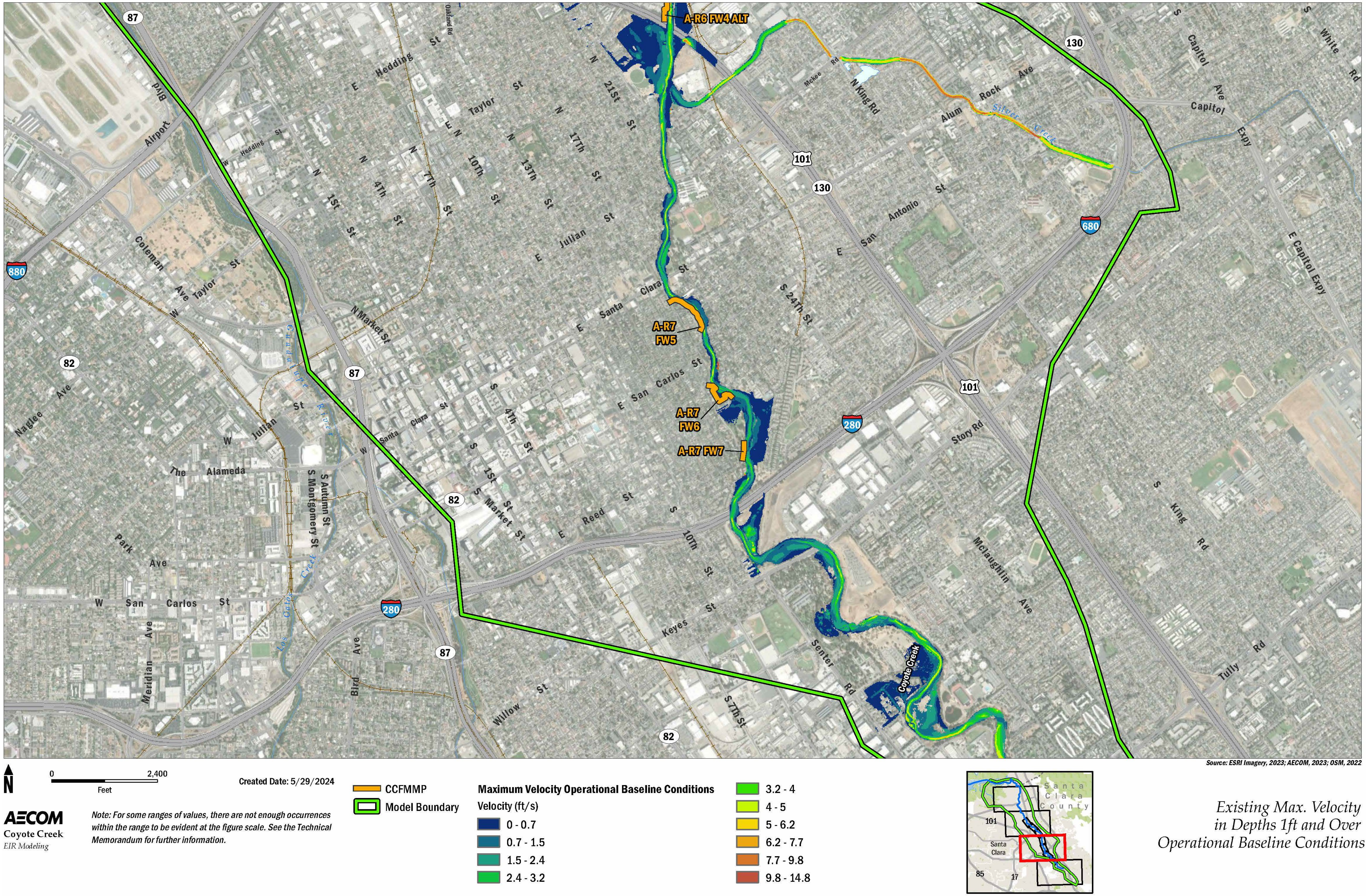
Reach 4, between Old Oakland Road and Highway 237. The increase in post-project maximum velocity at these locations is less than 10 percent. As discussed in the “Analysis Methodology” subsection above, an increase in maximum velocity of 0 to 10 percent above the 7.5 fps permissible velocity is considered to have a minor risk of increased erosion and scour. See Appendix H3 for more details on velocities within the creek channel at a variety of locations within each of the reaches.

As stated previously in the “Analysis Methodology” subsection, flows, and directly related velocities, within Coyote Creek under pre-FERC conditions were much higher (approximately 8,000+ cfs more) than those modeled for the operational baseline condition and the post-project conditions. The historical high flows and velocities in Coyote Creek have resulted in channel bed and bank conditions that shaped the current and past areas of bank erosion within Coyote Creek. However, for areas with predicted reduced flows and velocities under the operational baseline and post-project conditions described above, erosion would not occur as a result of the project. Further, in areas where the maximum velocities under the operational baseline condition are above the 7.5 fps permissible velocity threshold, the project would not result in a change in maximum velocities that would substantially increase erosion risk. Therefore, project impacts related to erosion and sedimentation from alteration of stream flows would be **less than significant**.



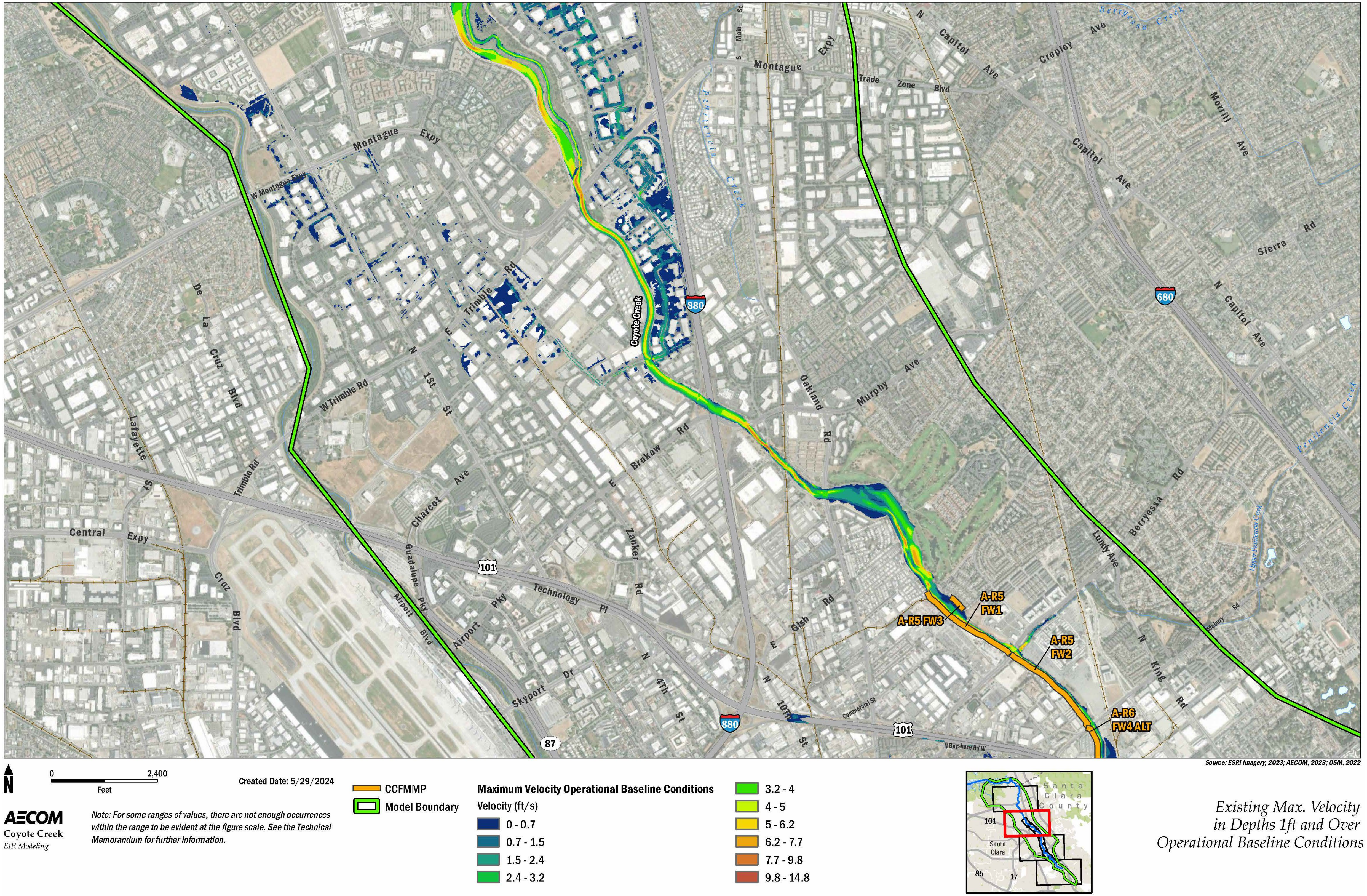
Source: Appendix H3

Figure 3.9.16. Existing Maximum Velocities in Reach 8 and Upstream



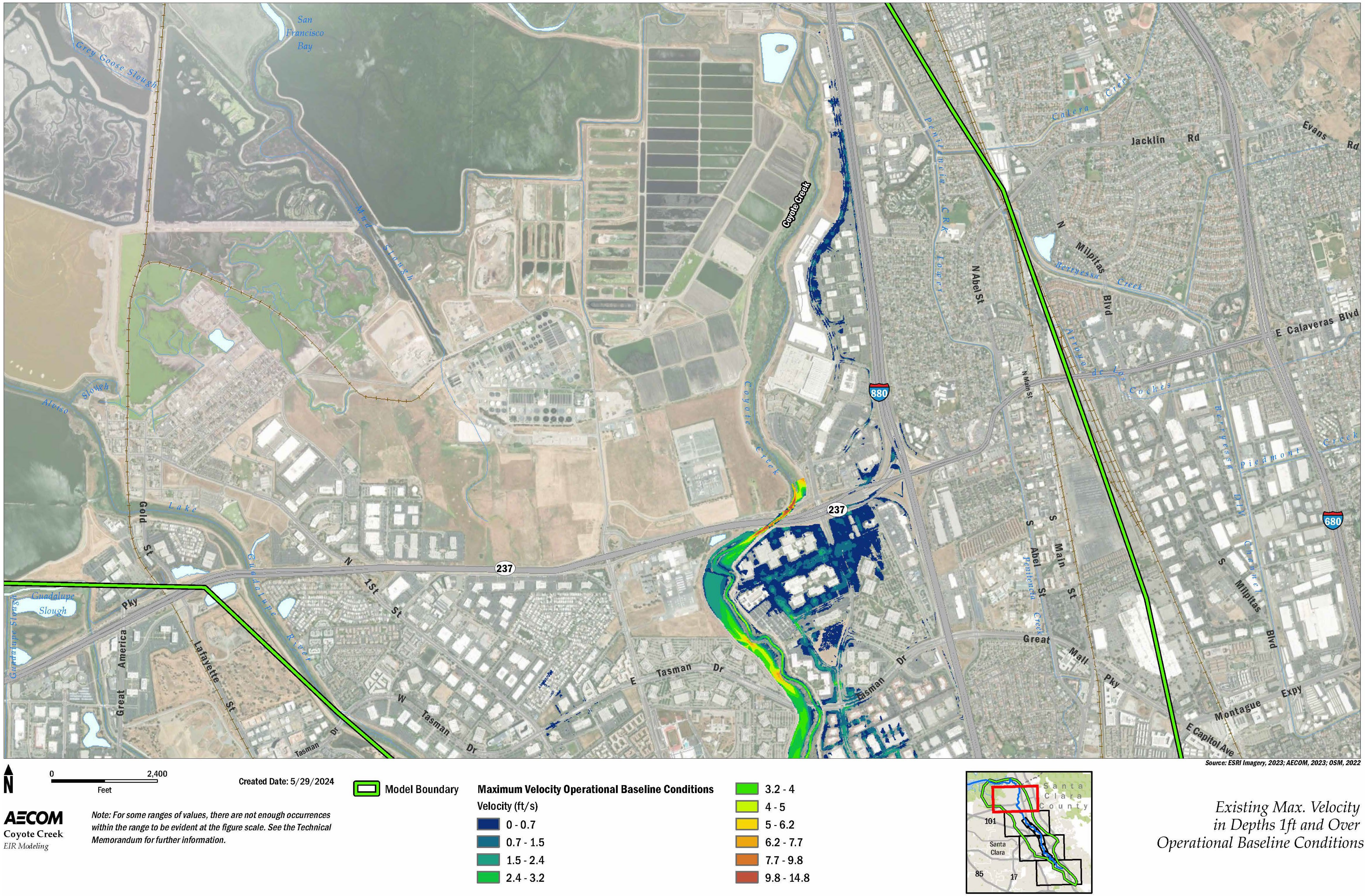
Source: Appendix H3

Figure 3.9.17. Existing Maximum Velocities in Reaches 6, 7, and 8



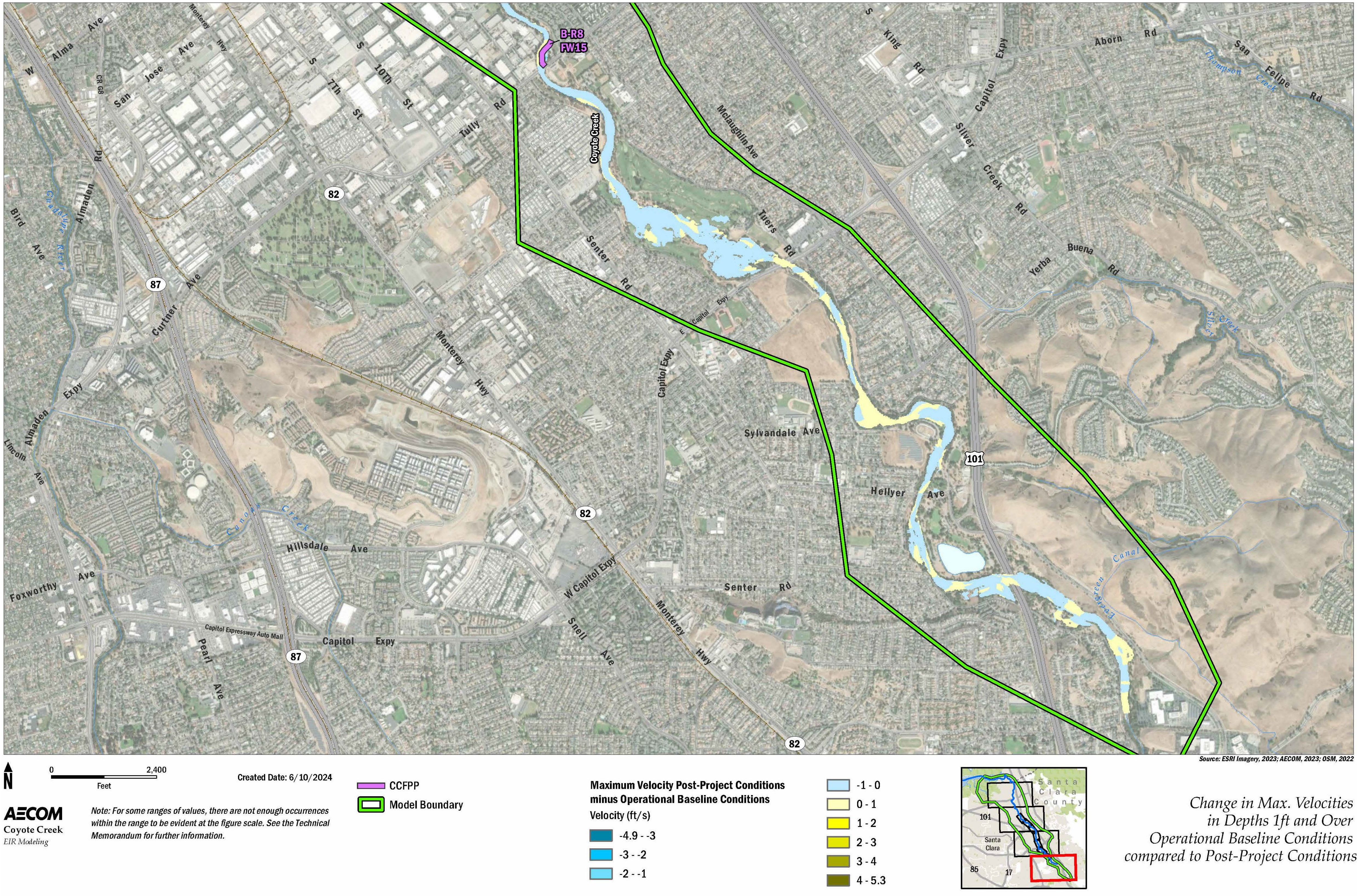
Source: Appendix H3

Figure 3.9.18. Existing Maximum Velocities in Reaches 4, 5, and 6 and Downstream of Reach 4



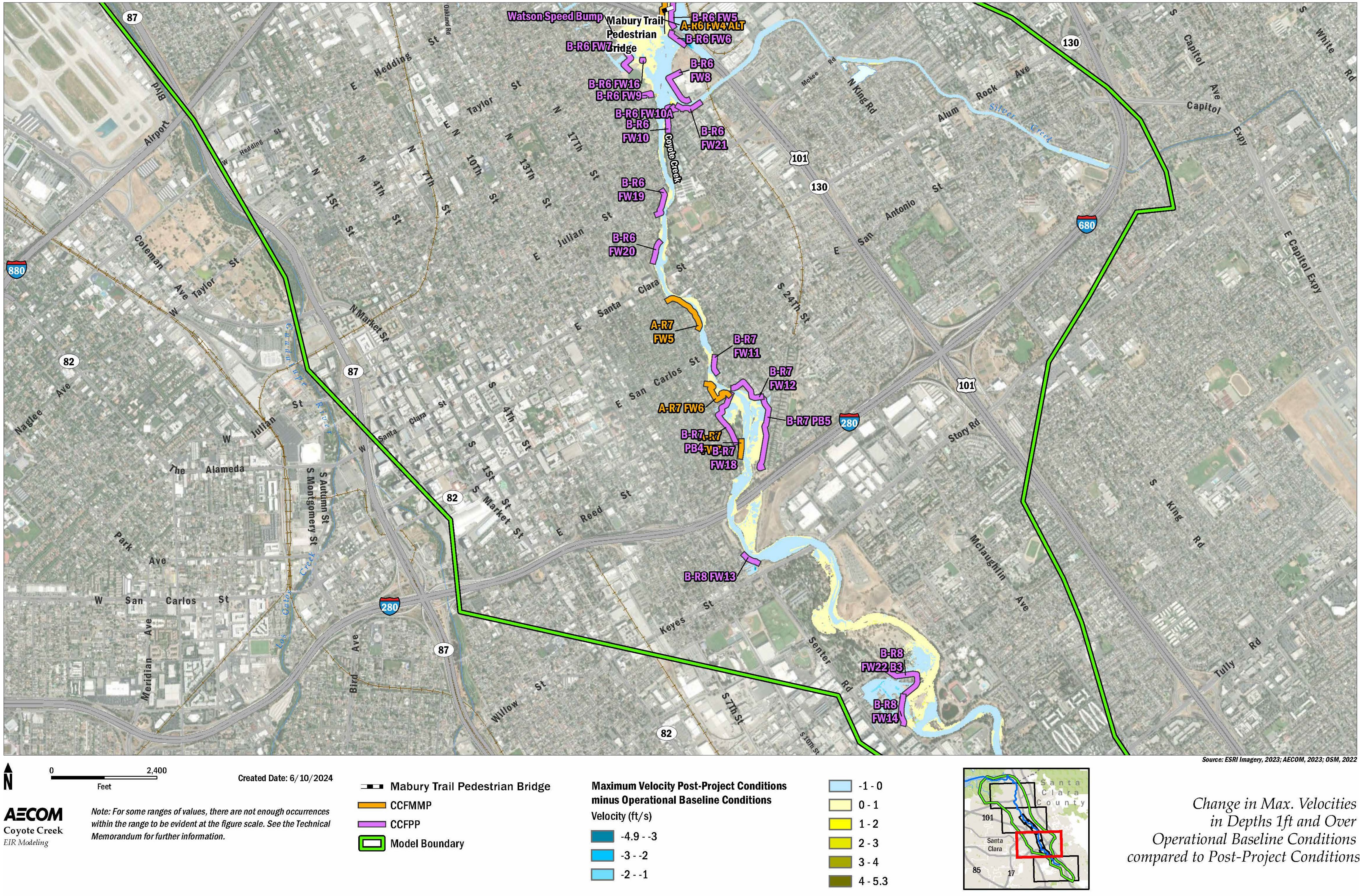
Source: Appendix H3

Figure 3.9.19. Existing Maximum Velocities Downstream of Reach 4



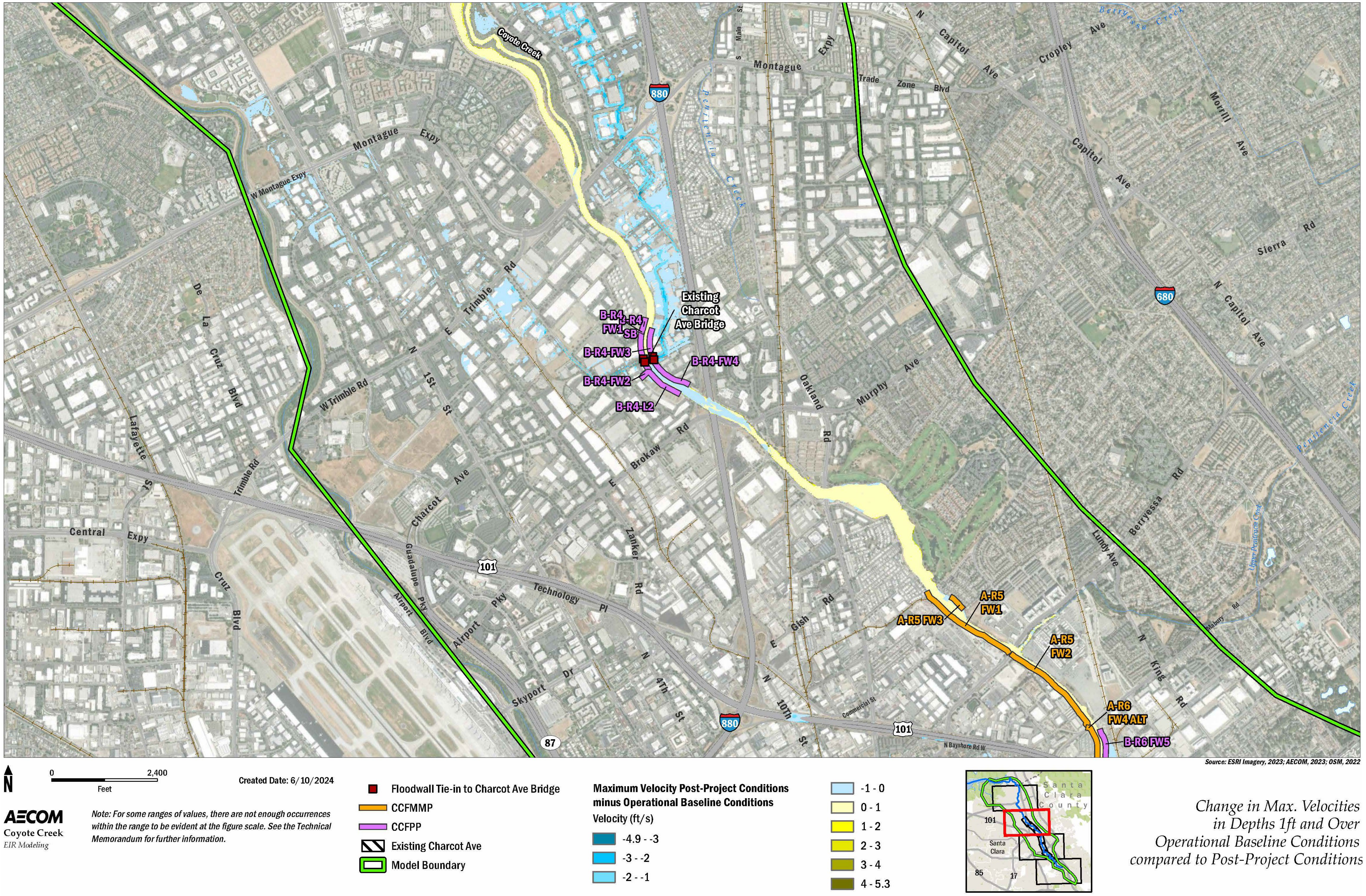
Source: Appendix H3

Figure 3.9.20. Post-Project Change in Maximum Velocities in Reach 8 and Upstream



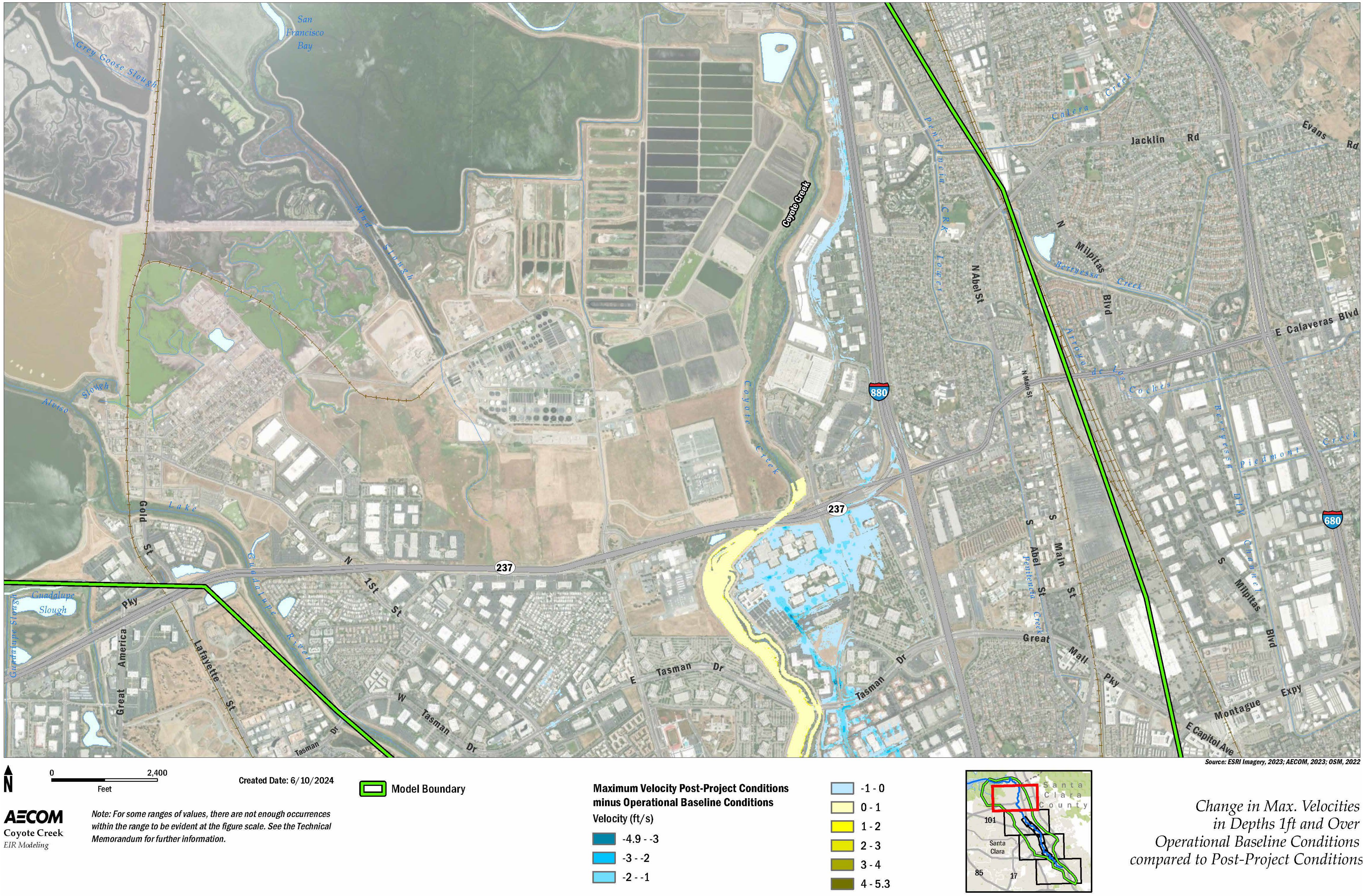
Source: Appendix H3

Figure 3.9.21. Post-Project Change in Maximum Velocities in Reaches 6, 7, and 8



Source: Appendix H3

Figure 3.9.22. Post-Project Change in Maximum Velocities in Reaches 4, 5, and 6 and Downstream of Reach 4



Source: Appendix H3

Figure 3.9.23. Post-Project Change in Maximum Velocities Downstream of Reach 4

Impact HWQ-7: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan. (Less than significant)

As stated previously in Impacts HWQ-1, -2, and -3, construction of the project would be required to meet requirements of the General Construction Permit and Municipal Regional Stormwater Permit (NPDES No. CAS612008), and would be consistent with the policies contained in the MRP by minimizing runoff generation, promoting infiltration of storm water, implementing drainage features within all passive barriers and select floodwalls to convey stormwater flows to the existing City stormwater system or to the creek, and using vegetated areas to filter pollutants from stormwater before it enters the City storm drainage system or creek. Further, Valley Water BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement). In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous VHP AMMs, including 61-74, 83, 84, 96, 97, 102-104, and 114. These AMMs would require measures to reduce the extent of exposed soil and erosion during and after construction activities.

Furthermore, Valley Water SMP BMPs would be implemented during maintenance activities, including GEN-2 (Instream Herbicide Application Work Window), GEN-4 (Minimize the Area of Disturbance), GEN-20 (Erosion and Sediment Control Measures), GEN-21 (Staging and Stockpiling of Materials), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), GEN-29 (Dust Management), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), ~~and~~ REVEG-1 (Seeding), and compliance with the SCVURPPP Municipal Regional Stormwater Permit requirements ~~to~~ would ensure runoff from project improvements would not conflict with or obstruct implementation of water quality control plans.

Based on the above analysis, the project would not impede implementation of the San Francisco Bay Basin Plan, which is the applicable water quality control plan. In addition, as stated in Impact HWQ-2, project improvements would result in a negligible amount of new impervious surfaces, mainly from the construction of passive barriers, that would not significantly impede groundwater recharge compared to the existing amount of impervious surfaces throughout the urbanized areas of the groundwater basin. In addition, the project would not create impervious surfaces within the Coyote Creek channel which is the main source of groundwater recharge in the project area. Therefore, the project would not impede implementation of Valley Water's Groundwater Management Plan.

Therefore, impacts related to impeding implementation of a water quality control plan or sustainable groundwater management plan would be **less than significant**.

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3.10 Land Use and Planning

This section addresses existing land uses on and adjacent to the project area, with the regulatory setting describing the local and regional planning framework providing land use and planning guidance over the project area. The impact analysis identifies how implementing the project could change land use conditions or cause changes that could trigger impacts related to consistency with land use and planning.

3.10.1 Environmental Setting

Regional Land Use

The City of San José (City) is an expansive urban area located near the southern end of San Francisco Bay and large open spaces to the east. Early development of growth boundary policies in San José focused on preserving surrounding hillsides as open space, enabling preservation of parklands or natural habitat, and providing the City's residents with a visual reminder of the nearby natural environment. Development of parklands and trails along the City's protected riparian corridors allows for connectivity and coexistence of urban and natural lands (City of San José 2011).

The project area is located within the City and extends south from the downstream face of the Montague Expressway bridge to the upstream face of the Tully Road bridge. The project would be constructed within and adjacent to Coyote Creek. Land uses surrounding the project area consist of residential, commercial, and industrial development, and open space lands consisting of the Coyote Creek riparian corridor and the following recreational facilities: Selma Olinder Park, Olinder Dog Park, Watson Park, and William Street Park. Additionally, a small portion of the project would be constructed adjacent to Empire Gardens Elementary School and Olinder Elementary School.

General Plan Designation and Zoning

The City's Envision San José 2040 General Plan land use designations for the project area consist of Open Space, Parkland, Habitats, Light Industrial, Mixed-Use Neighborhood, and Residential Neighborhood (**Figures 3.10.1** through **3.10.13**) (City of San José 2023). The project area is zoned as Agriculture, Planned Development (Agriculture, Heavy Industrial, and Commercial), Industrial Park, Light Industrial, Heavy Industrial, Open Space, Public/Quasi-Public, Mixed Use Neighborhood, and Single-Family Residential (City of San José 2023). **Table 3.10.1** shows the land use designation and zoning designation for properties where each flood risk reduction improvement is located, and distance from each to the nearest residence.

Open Space/Agriculture Zoning Districts

Portions of the project area in Reach 4 and a staging area located within Reach 8, adjacent to Phelan Avenue, are zoned as Agriculture. The purpose of the Agriculture Zoning District is to provide areas where agriculture uses are desirable. The regulations contained in this district are intended to provide for a wide range of agricultural uses. Additionally, any property located in the City of San José that has not been specifically designated with a particular zoning district is deemed Agriculture (City of San José 2024).

A large majority of the project area is zoned Open Space. The portions of the project area zoned as Open Space include areas within local parks, including Watson Park, William Street Park, Selma Olinder Park, and the Olinder Dog Park. The purpose of the Open Space Zoning District is “to provide for the public peace, health, safety, and welfare by conserving open space to ensure the continued availability of land for the preservation of natural resources, for the managed production of resources, for outdoor recreation, and for the enjoyment of scenic resources, and by protecting the people and property in the City of San José against physical environmental hazards” (City of San Jose 20224). The zoning code regulations contained in the Open Space district have been established to preserve the scenic visual quality of the land and implement the Open Space and hillside policies of the general plan (City of San José 2024). There are no setback requirements for Open Space zoning.

Planned Development

Throughout the project area there are several parcels zoned as Planned Development within one or more of the following districts: Agriculture, Heavy Industrial, and Commercial. These parcels are currently undeveloped or within the riparian corridor of Coyote Creek. As stated in the City’s Zoning Ordinance, “every Planned Development district shall be combined with an alternative base zoning district or districts” (City of San Jose 2024). The range of uses permitted in the planned development zoning designation are the same as the base zoning designation until the time a planned development permit has been issued by the City (City of San Jose 2024). There are no setback requirements for the planned development zoning designations. Once a planned development permit is issued, the base zoning designation setback requirements would apply.

Public/Quasi-Public

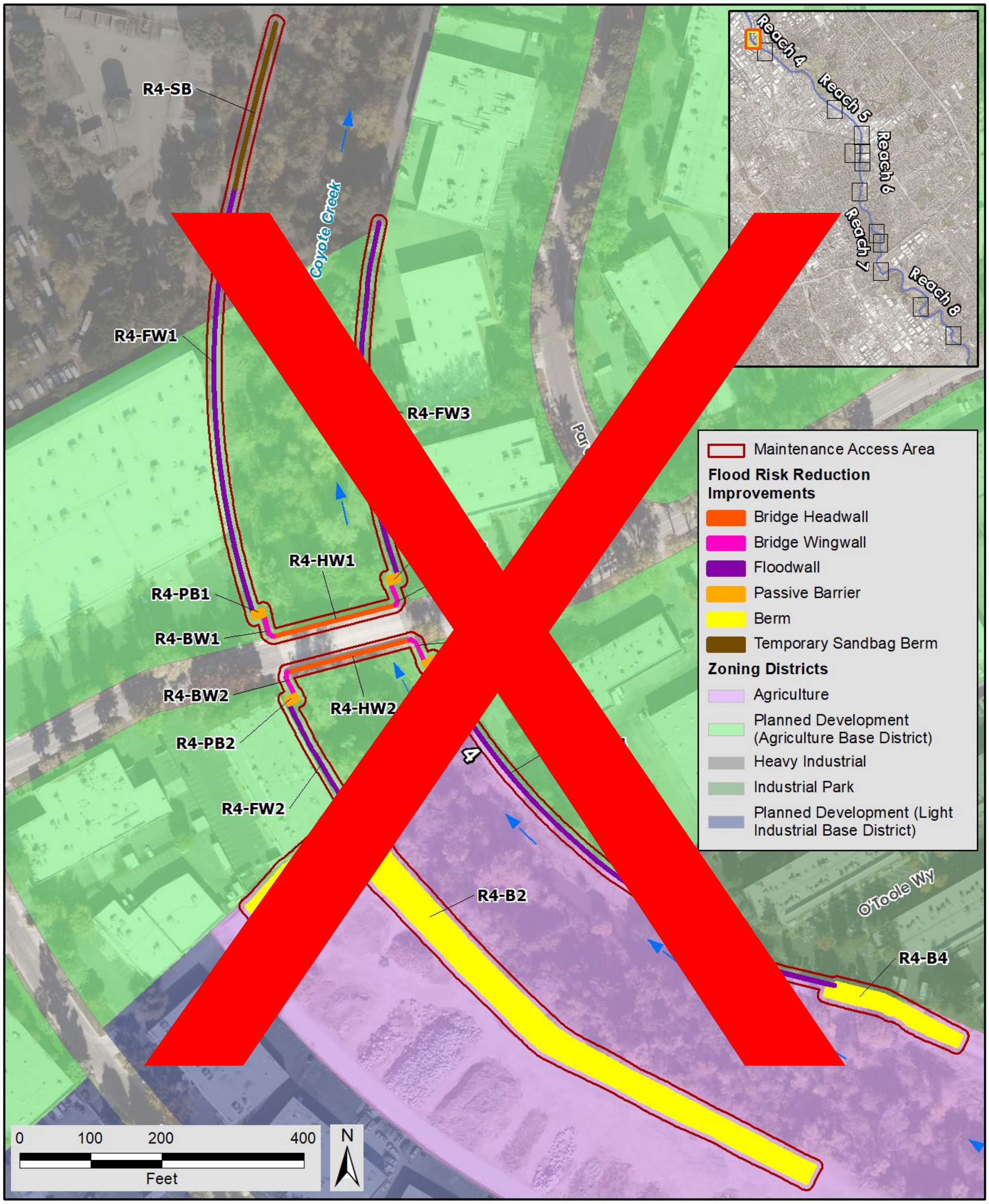
The portions of the project area located immediately adjacent to the Olinder Elementary School and the Empire Gardens Elementary school are zoned as Public/Quasi-Public. Additionally, a few parcels located adjacent to N 18th Street and Roosevelt Park are zoned Public/Quasi-Public. The Public/Quasi-Public District is intended to provide for public service uses, including schools, corporation yards, water treatment facilities, convention centers, governmental offices, and much more. There are no setback requirements for the Public/Quasi-Public zoning designations.

Mixed Use Neighborhood/Single-Family Residential

The project area is in a heavily urbanized area, and therefore, residential development is located adjacent to a large portion of the project area. Residential development located adjacent to the project area, primarily the southern half of the project area, is zoned as Mixed Use Neighborhoods or Single-Family Residential.

Industrial Park/Light Industrial/Heavy Industrial

Small portions of the project area, within Reaches 4, 6, and 8, would be constructed adjacent to industrial areas. The following industrial facilities are located adjacent to proposed flood risk reduction improvements: an industrial park is located adjacent to all flood improvement features in Reach 4, the City of San José Mabury Service Yard is located adjacent to R6-FW5, the Kellogg factory is located immediately adjacent to R6-FW8, and a corporation yard located near Bevin Brook Drive is adjacent to a staging area R8-SA15 in Reach 8.



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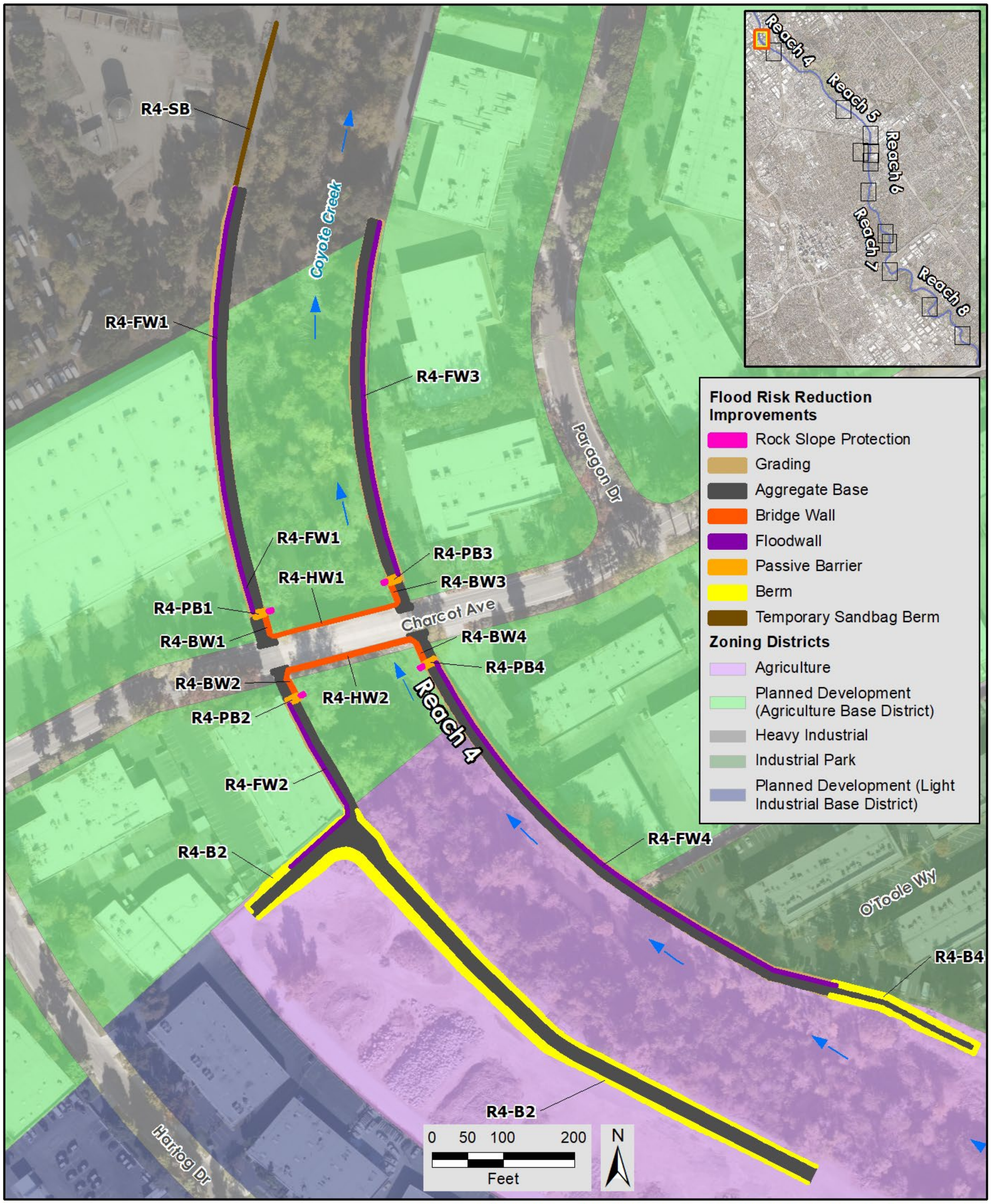

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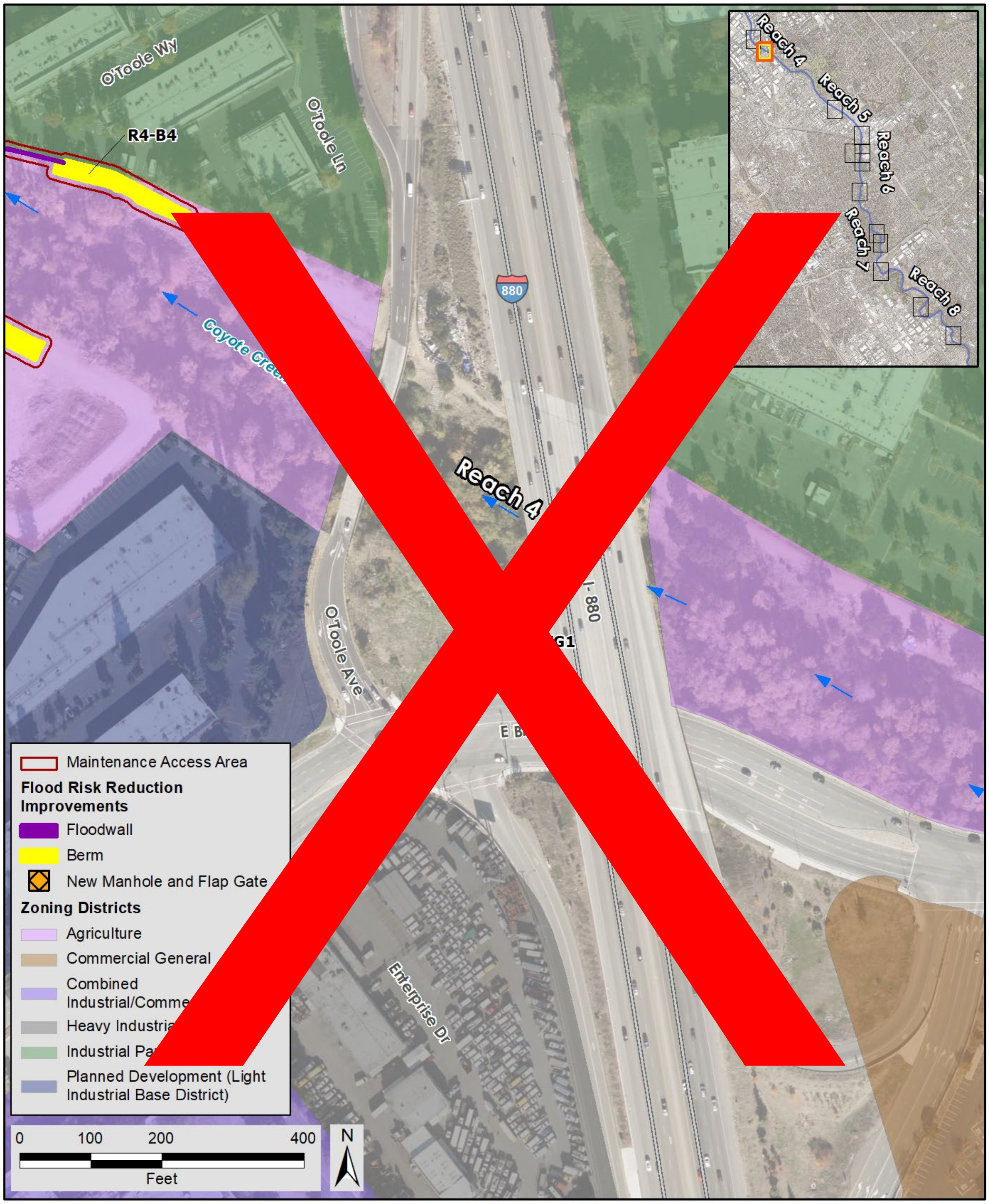
Figure 3.10.1. Zoning Districts (1 of 13)



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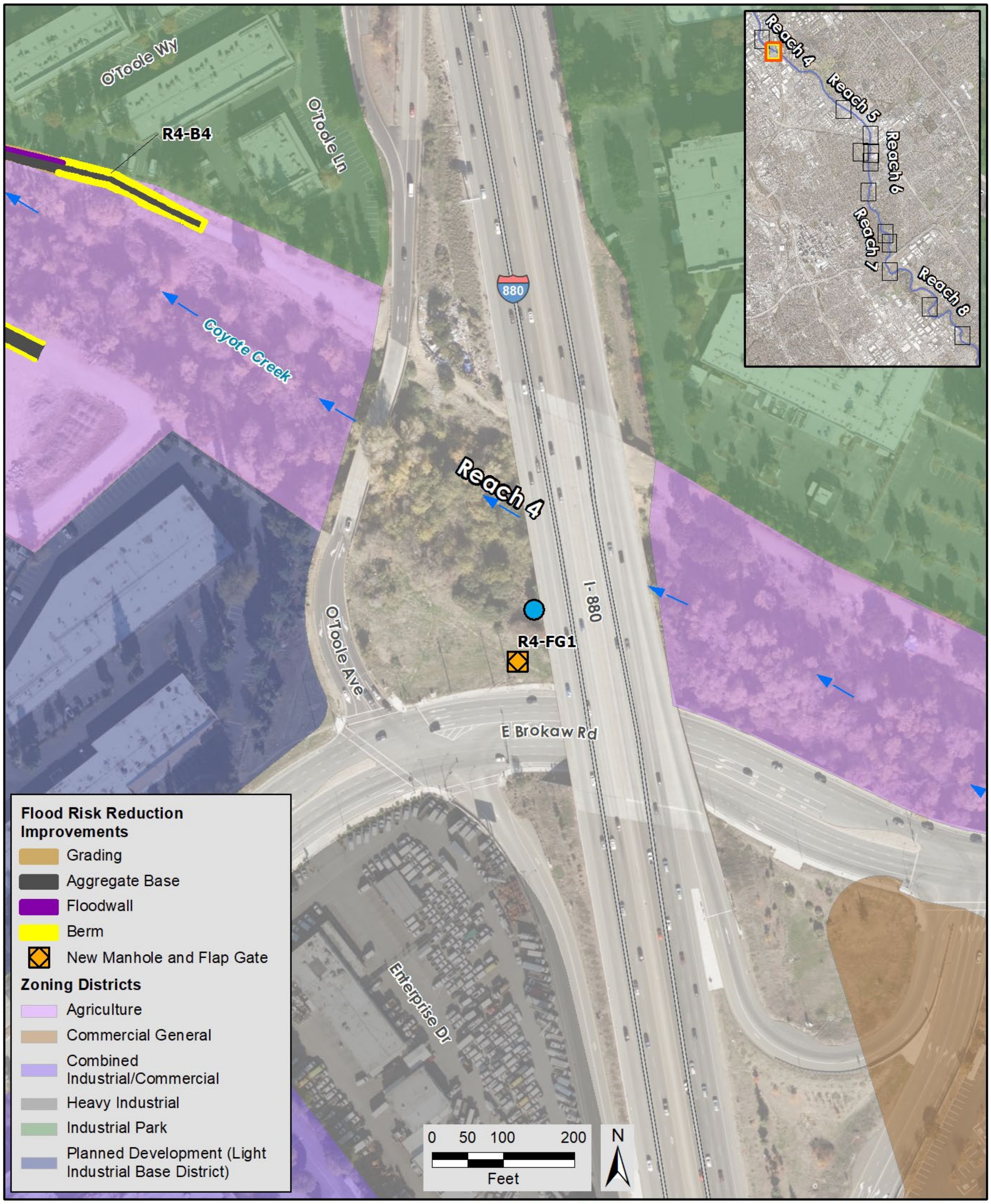

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Figure 3.10.2. Zoning Districts (2 of 13)

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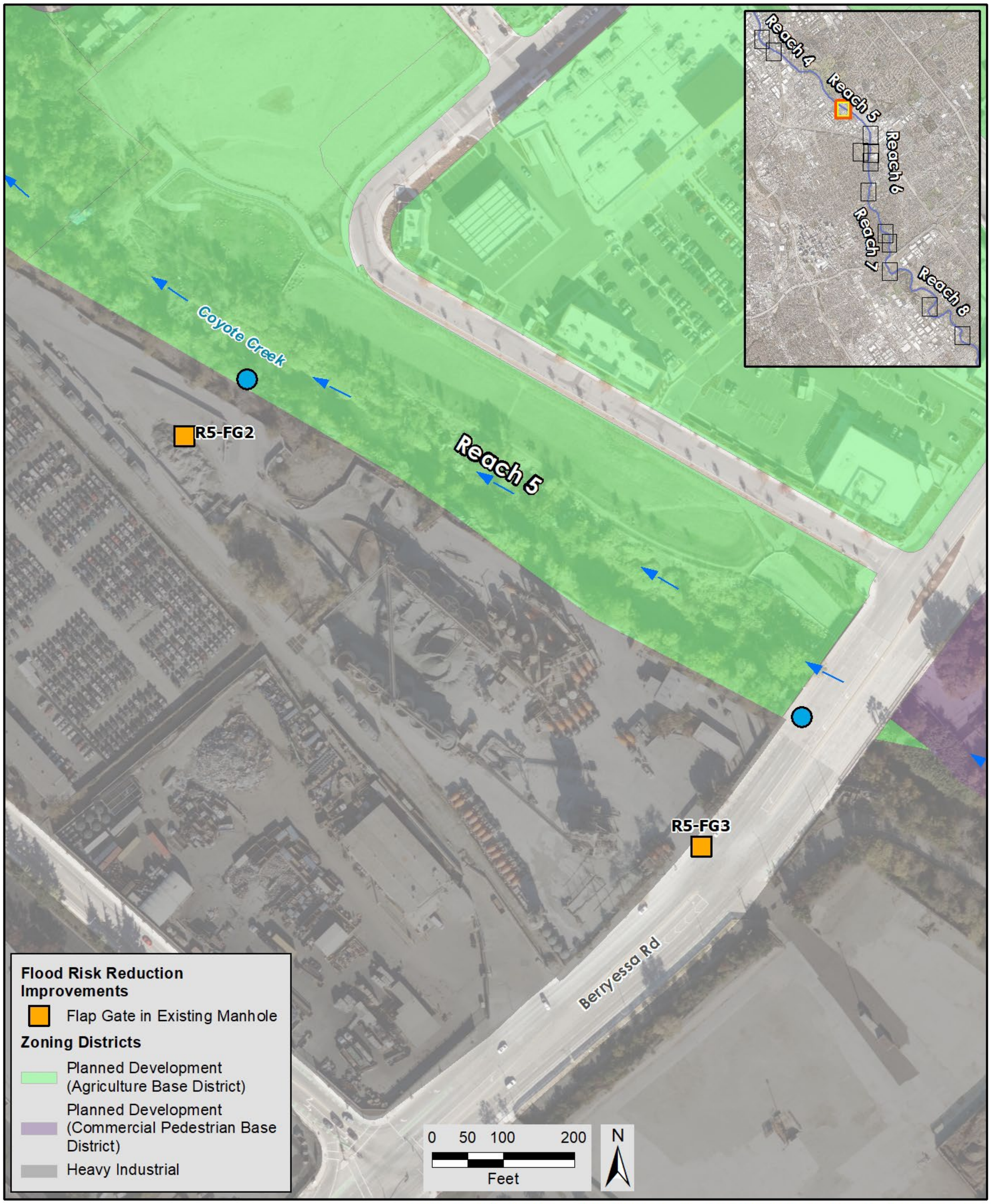

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Figure 3.10.3. Zoning Districts (3 of 13)

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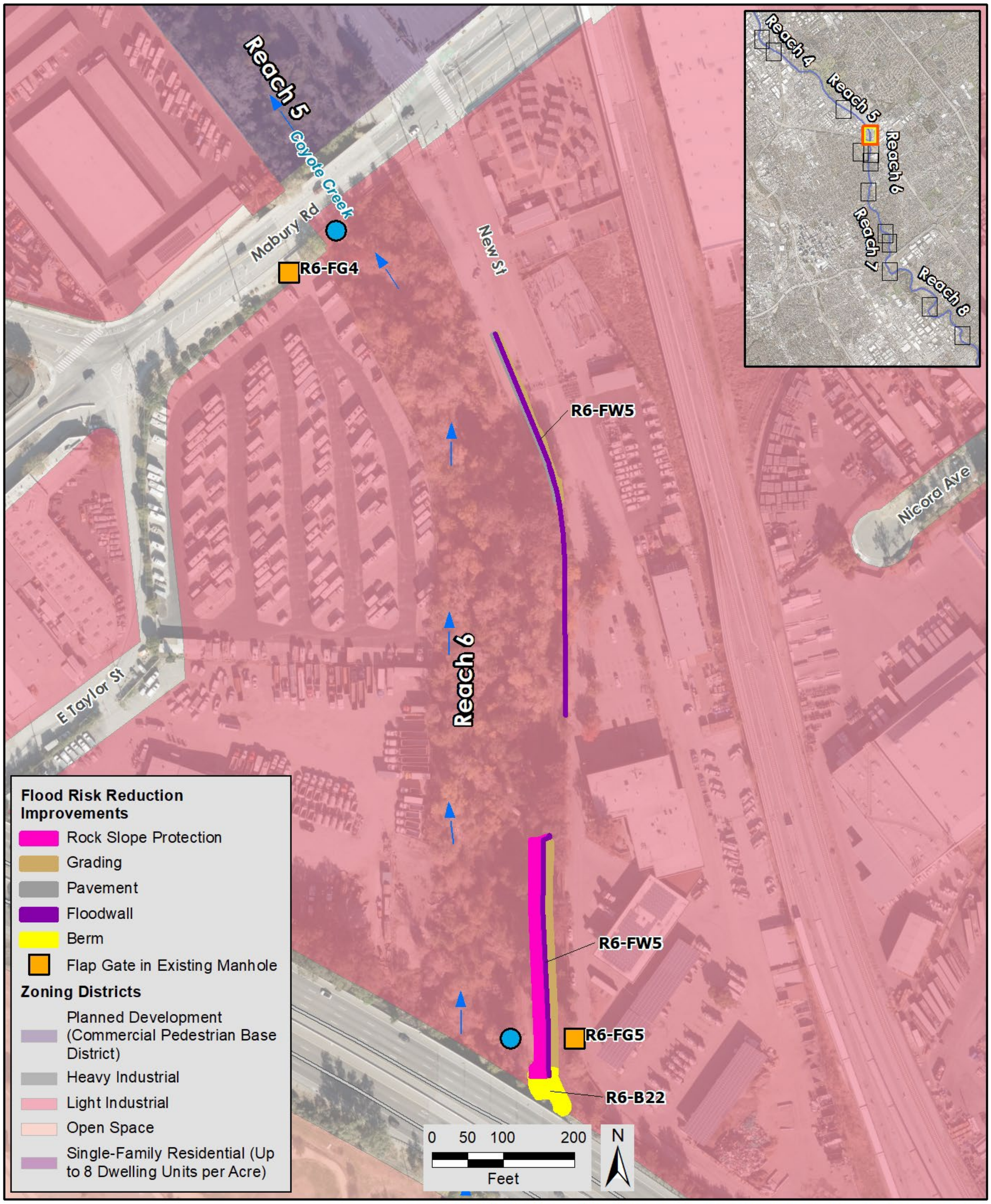

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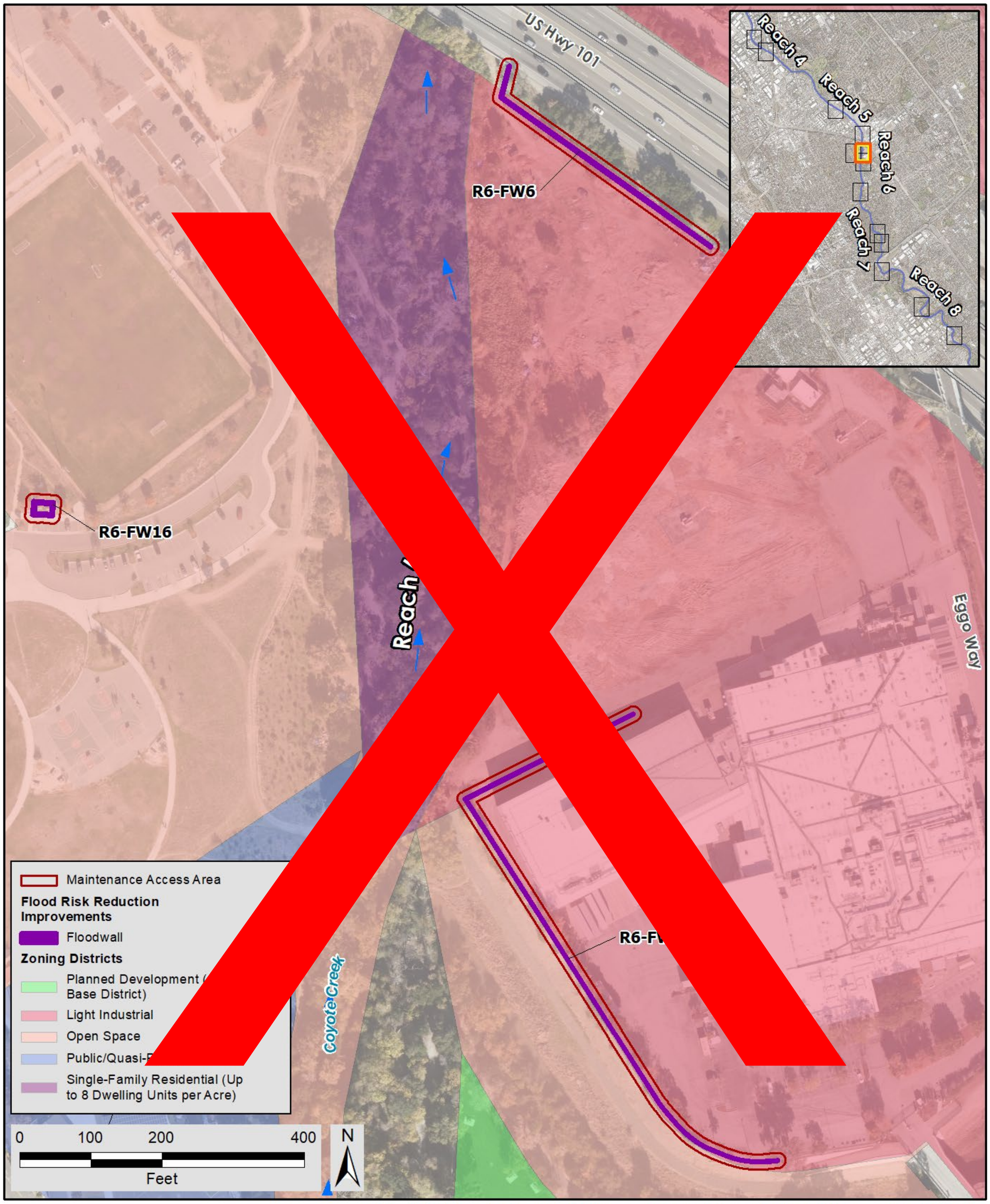
Figure 3.10.4. Zoning Districts (4 of 13)



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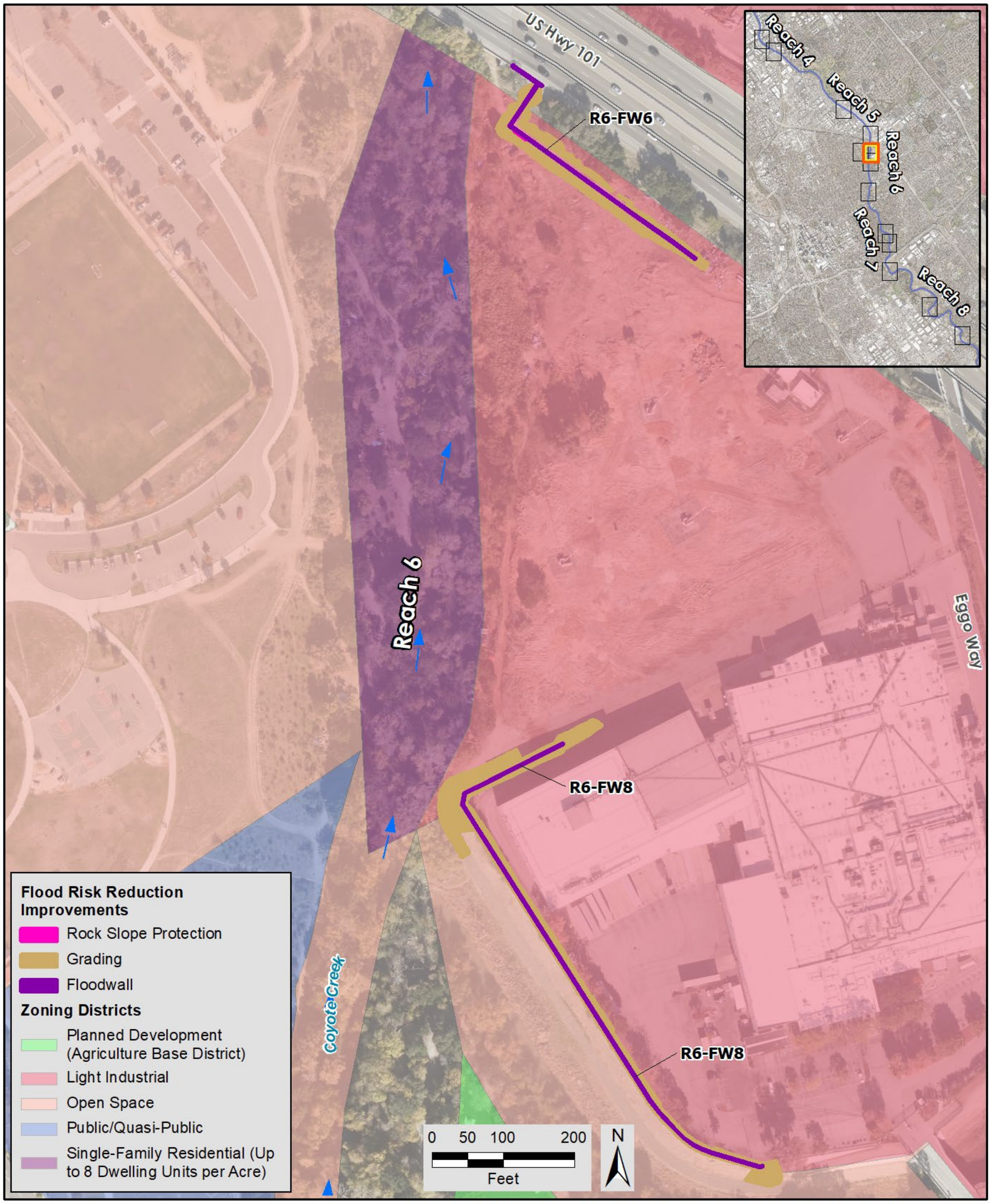

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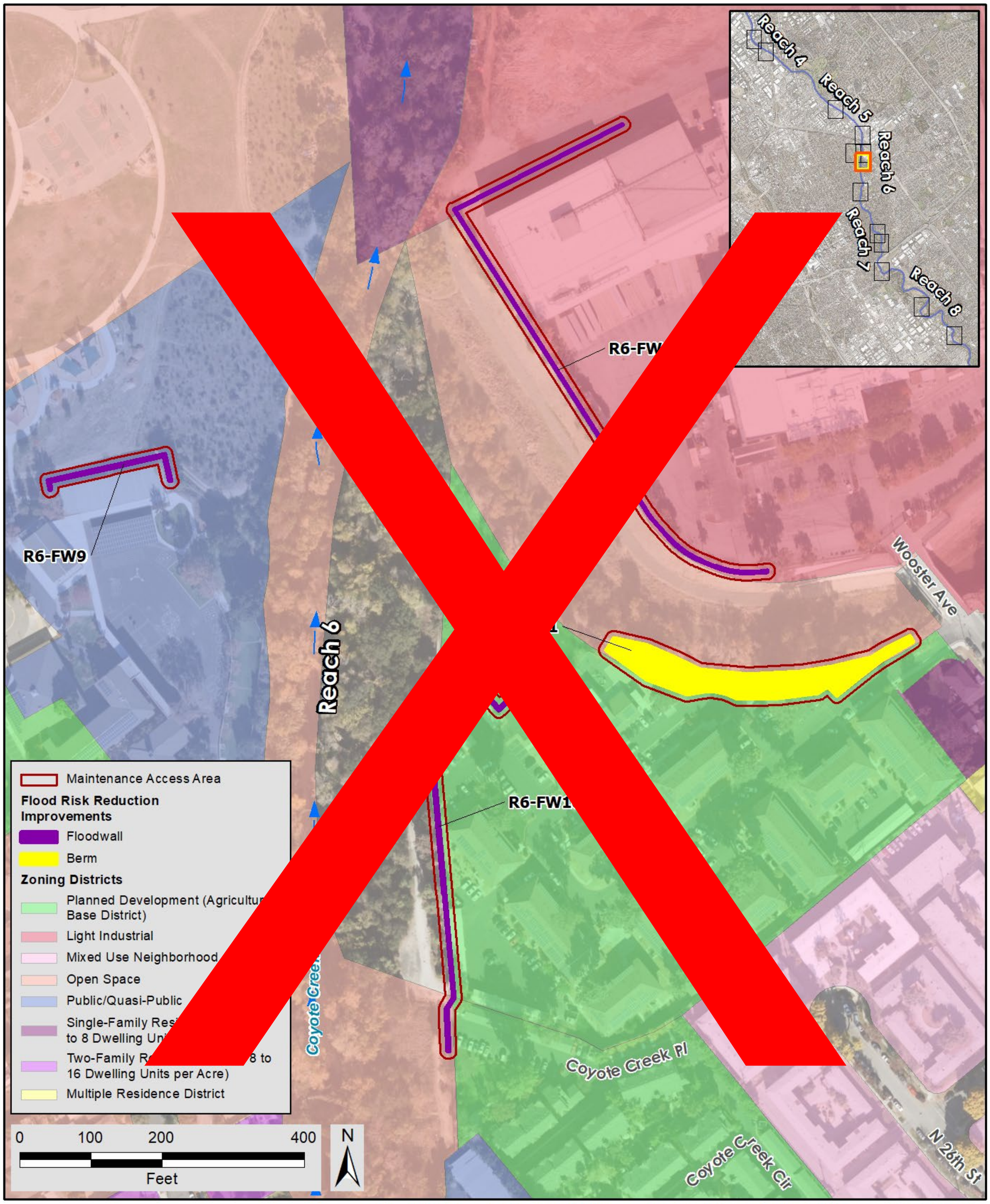
Figure 3.10.5. Zoning Districts (5 of 13)



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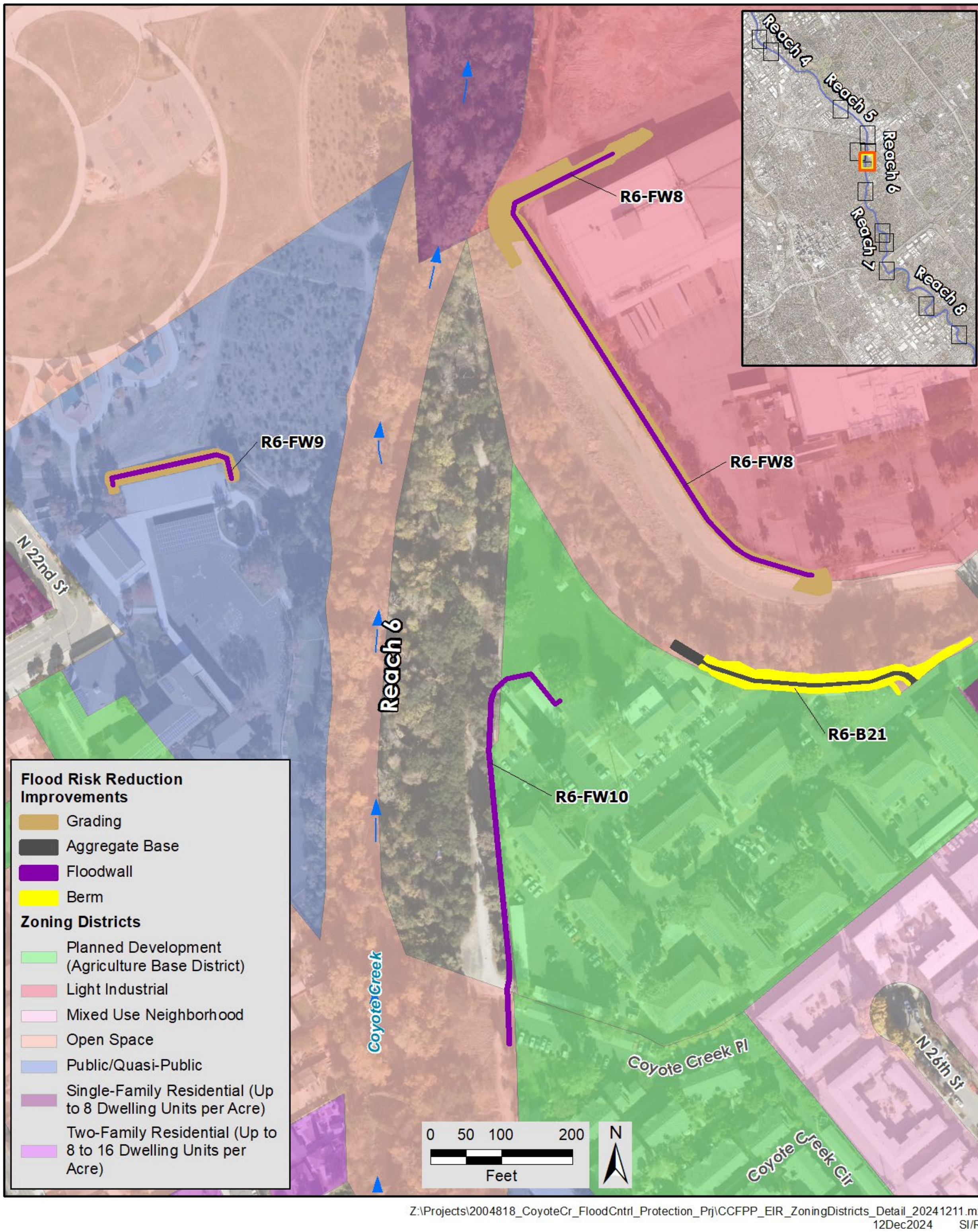

Figure 3.10.6. Zoning Districts (6 of 13)

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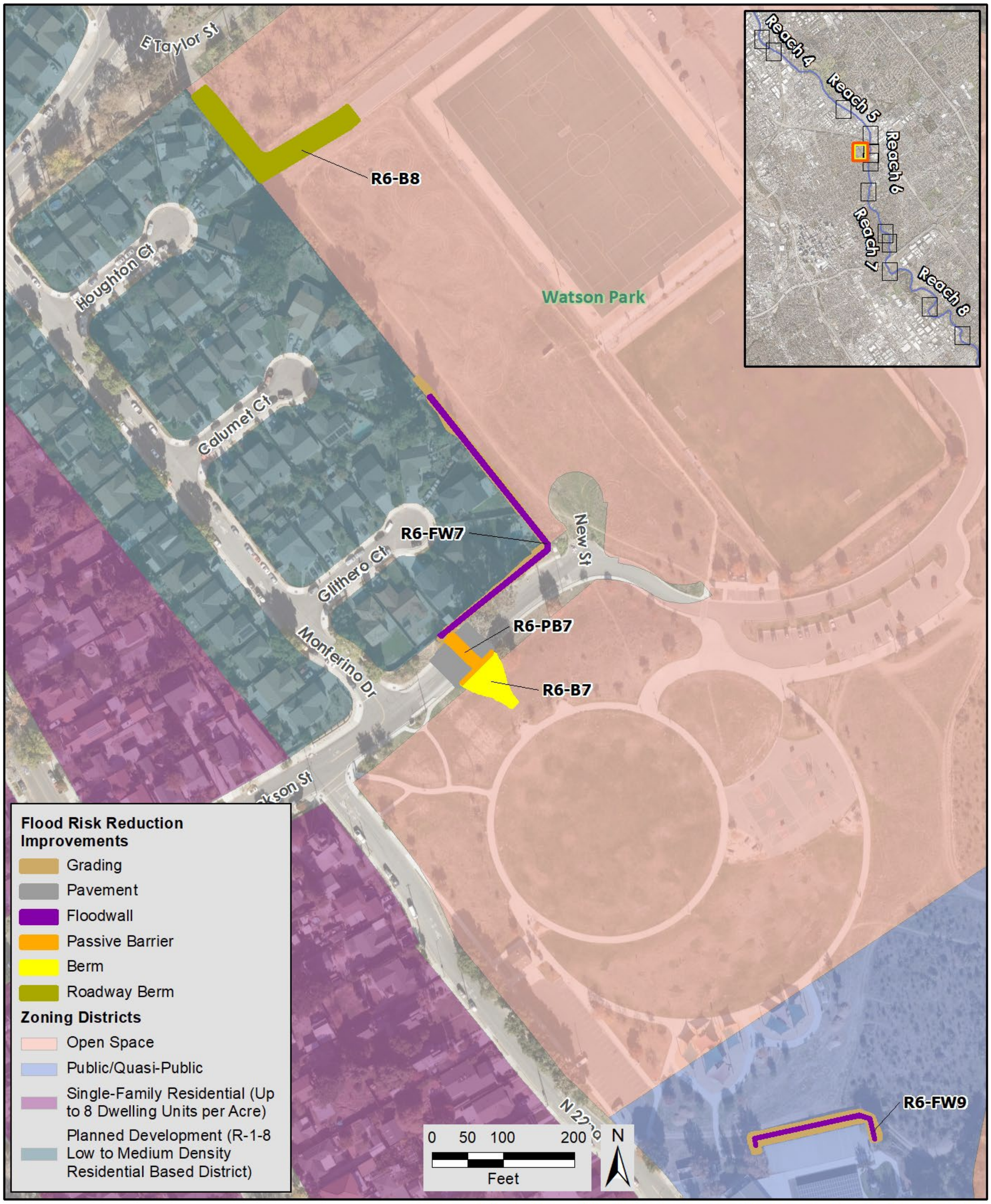

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Figure 3.10.7. Zoning Districts (7 of 13)

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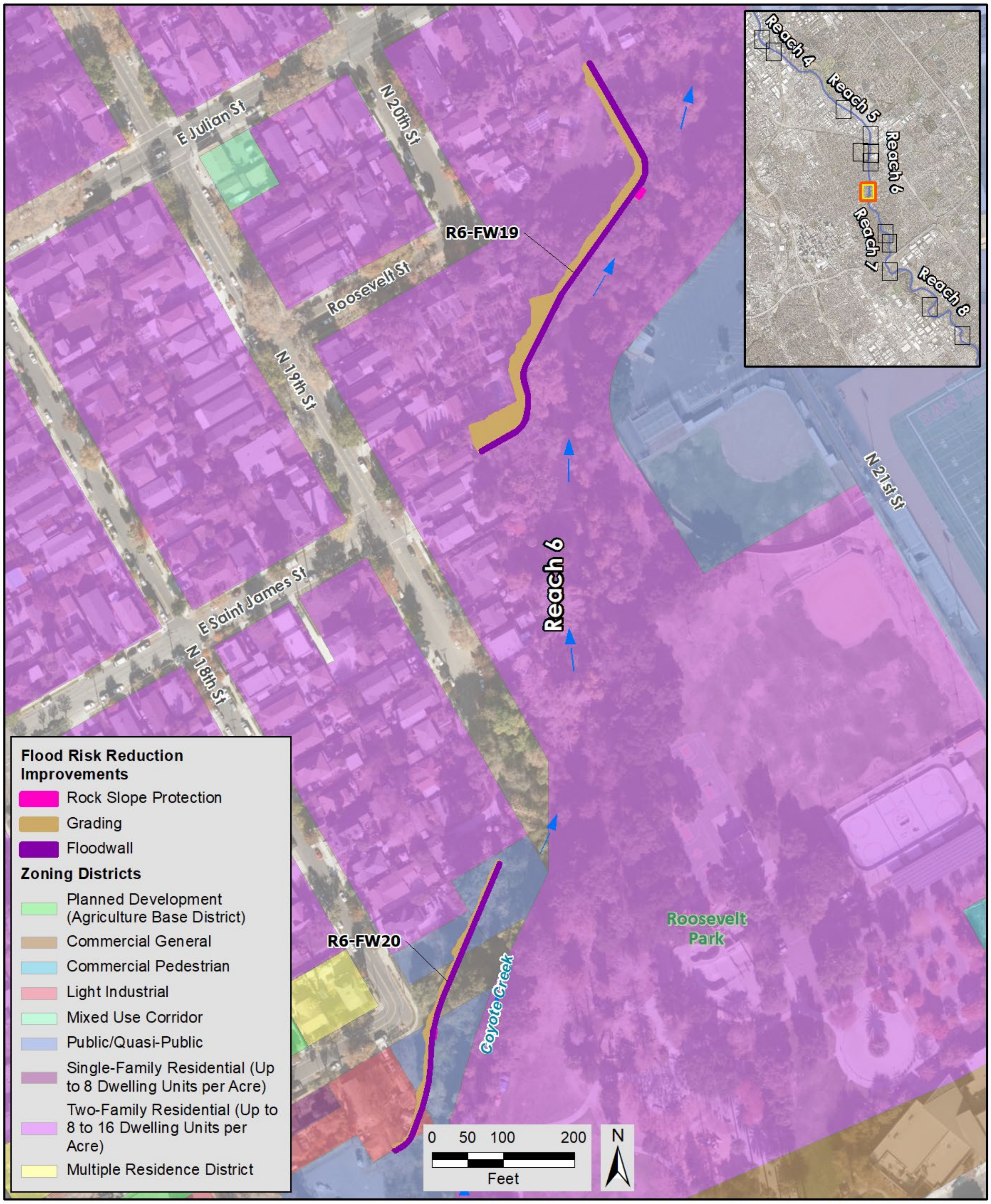

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Figure 3.10.8. Zoning Districts (8 of 13)

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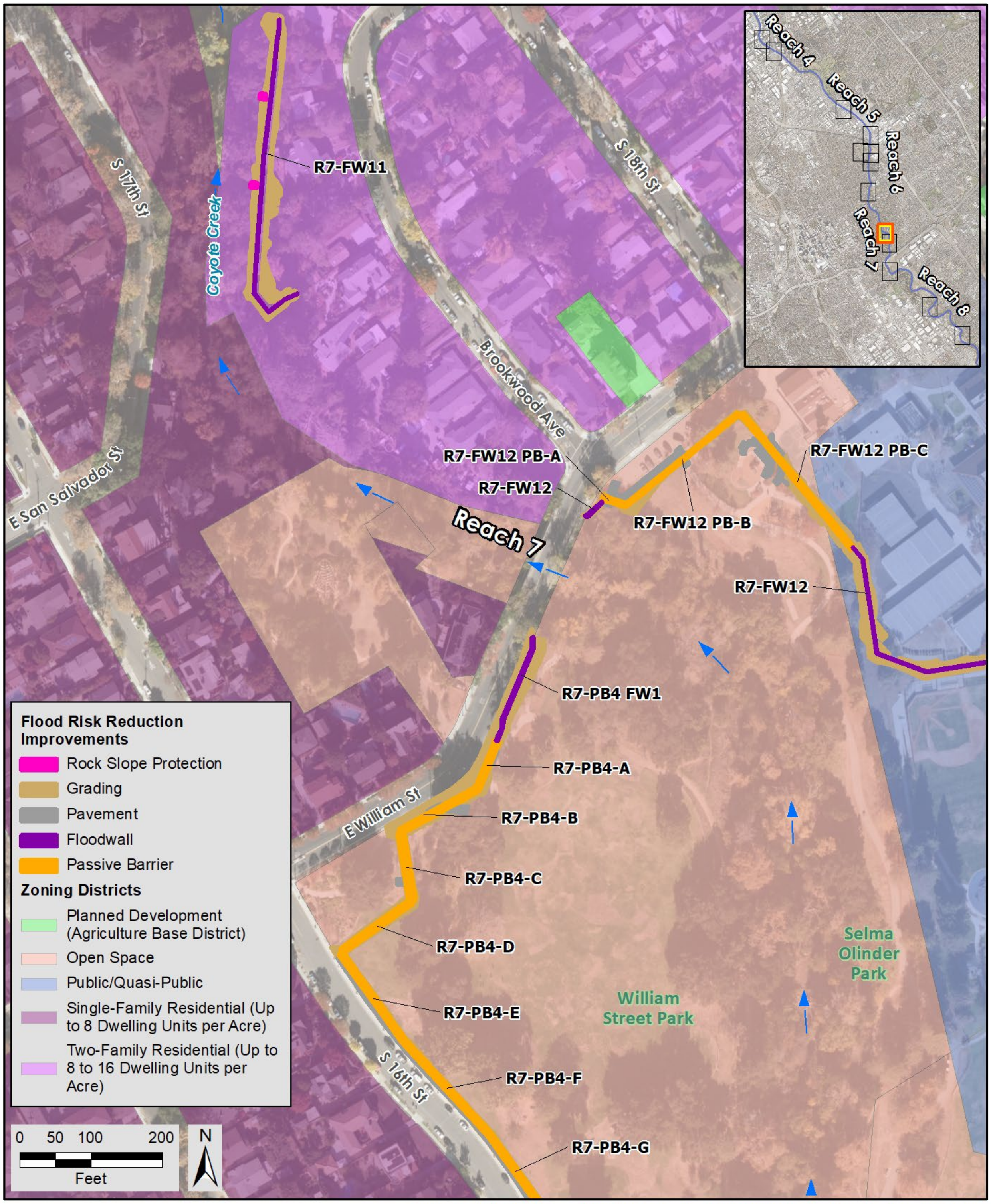

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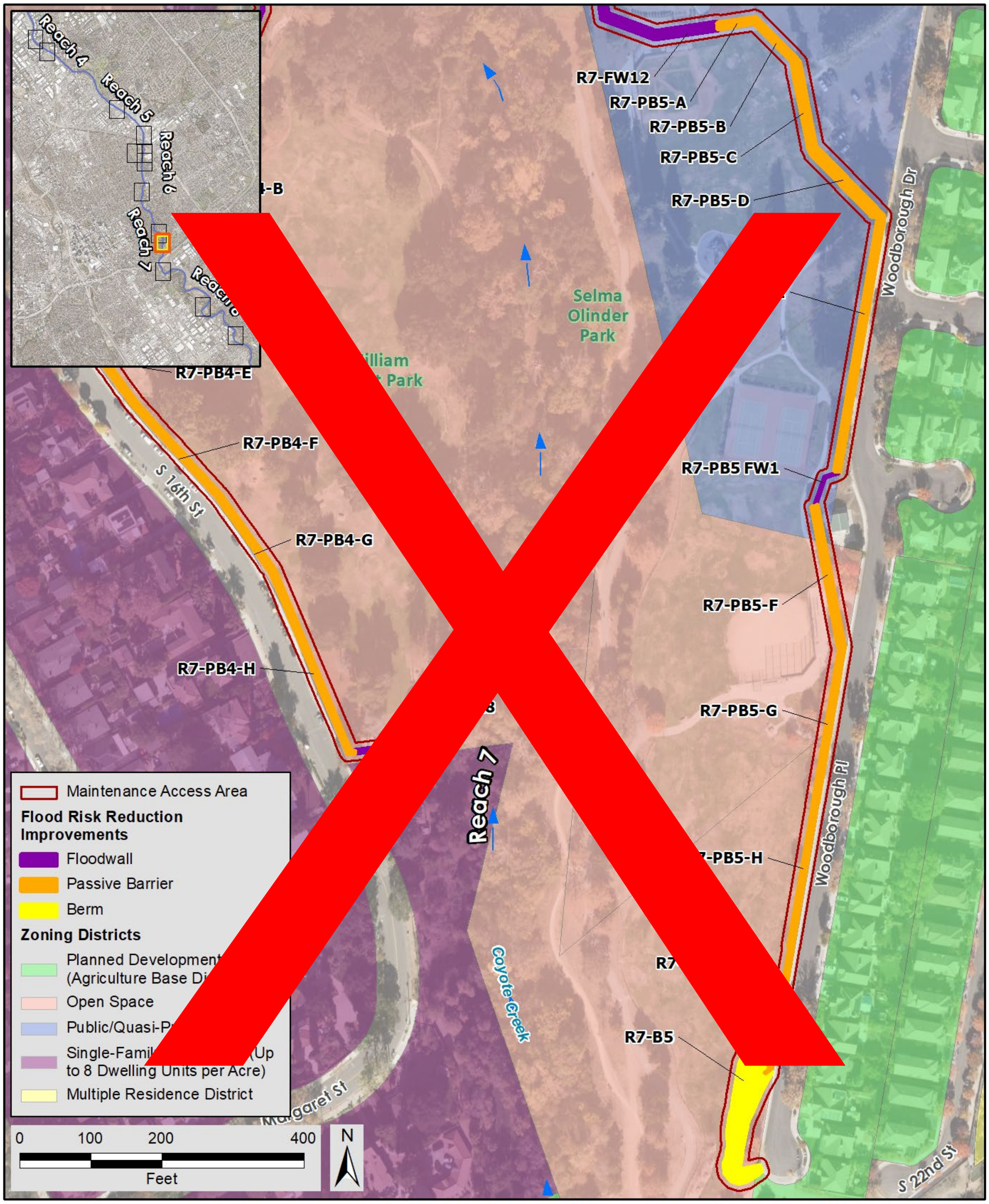
Figure 3.10.9. Zoning Districts (9 of 13)



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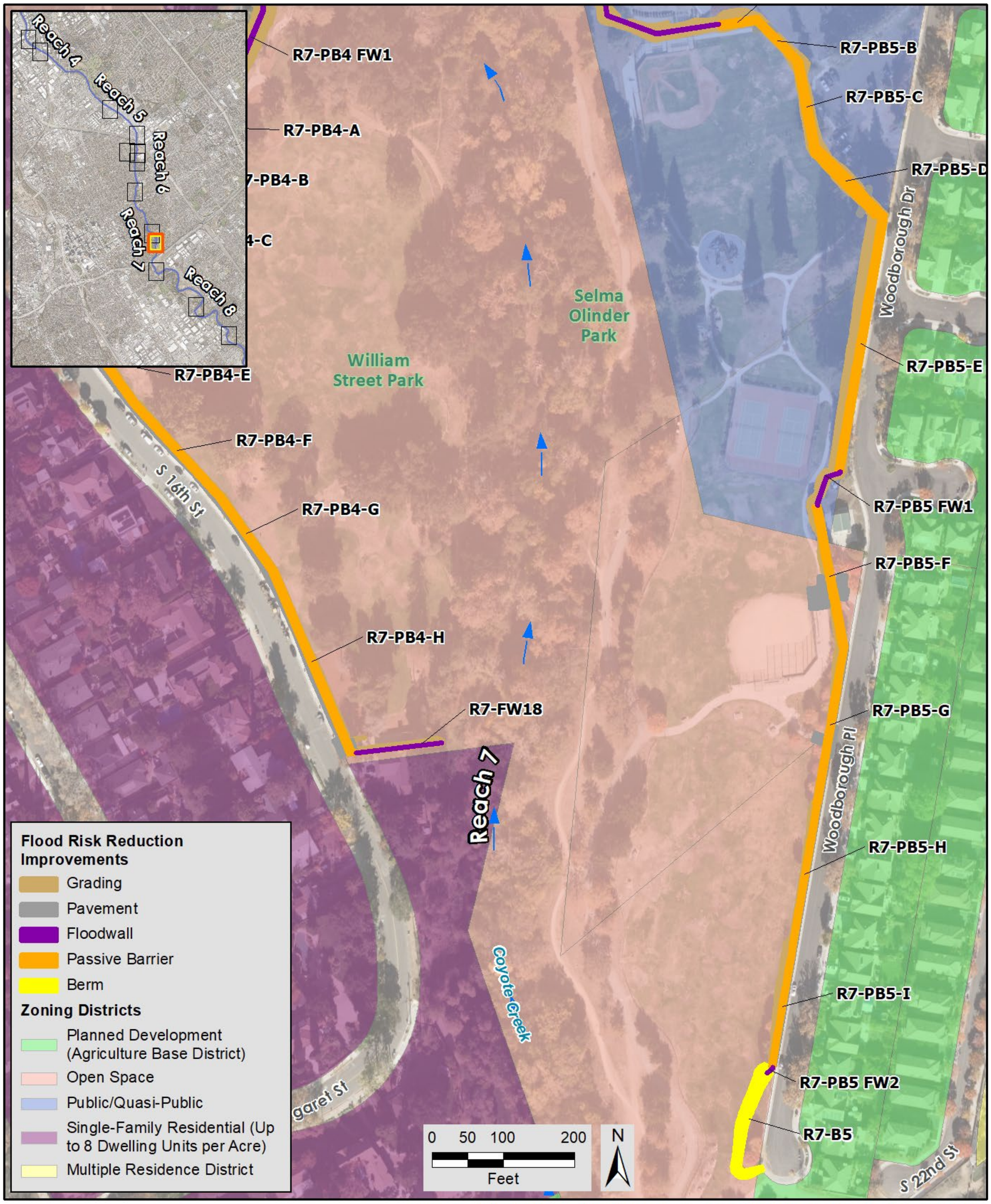

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Figure 3.10.10. Zoning Districts (10 of 13)

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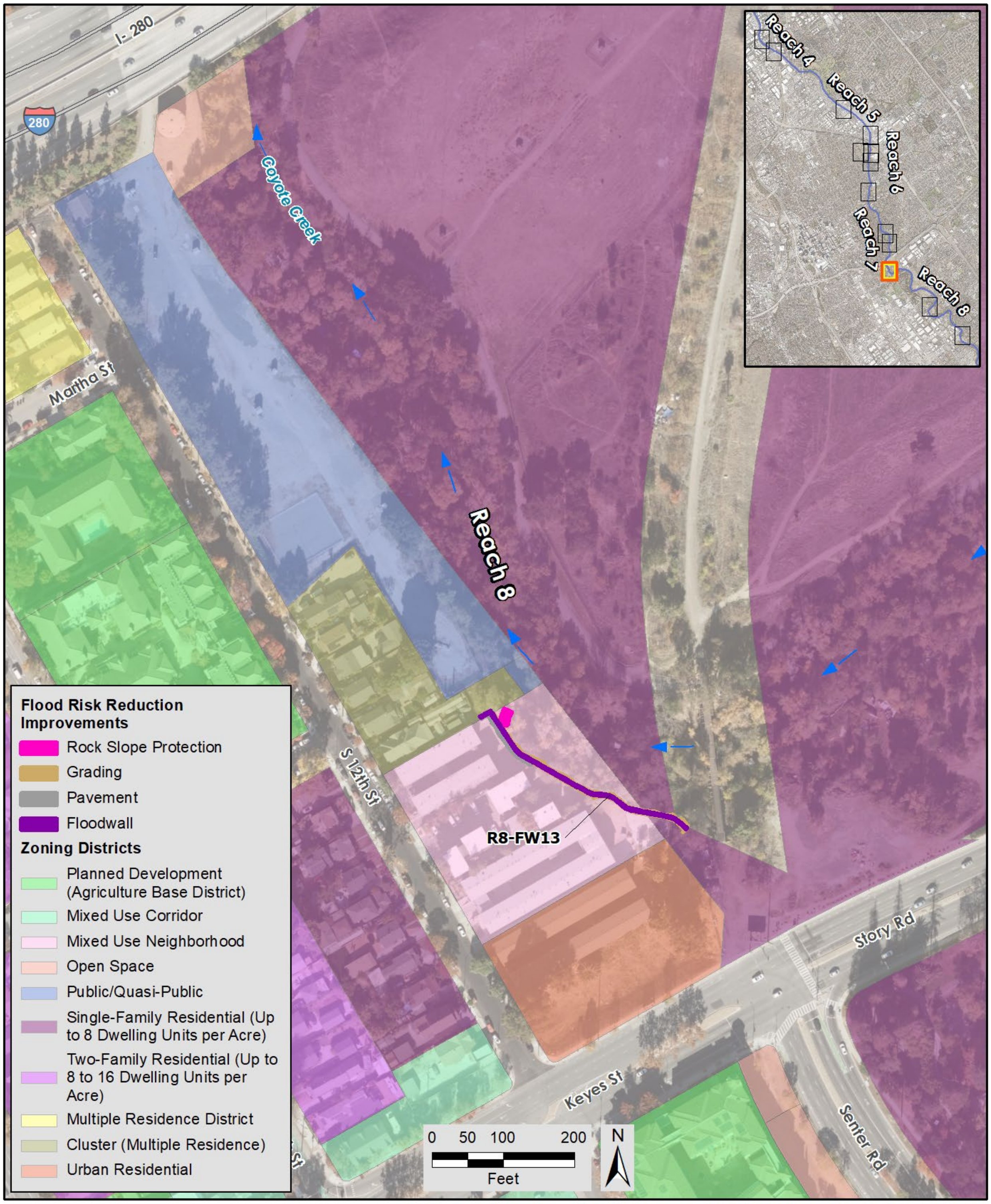

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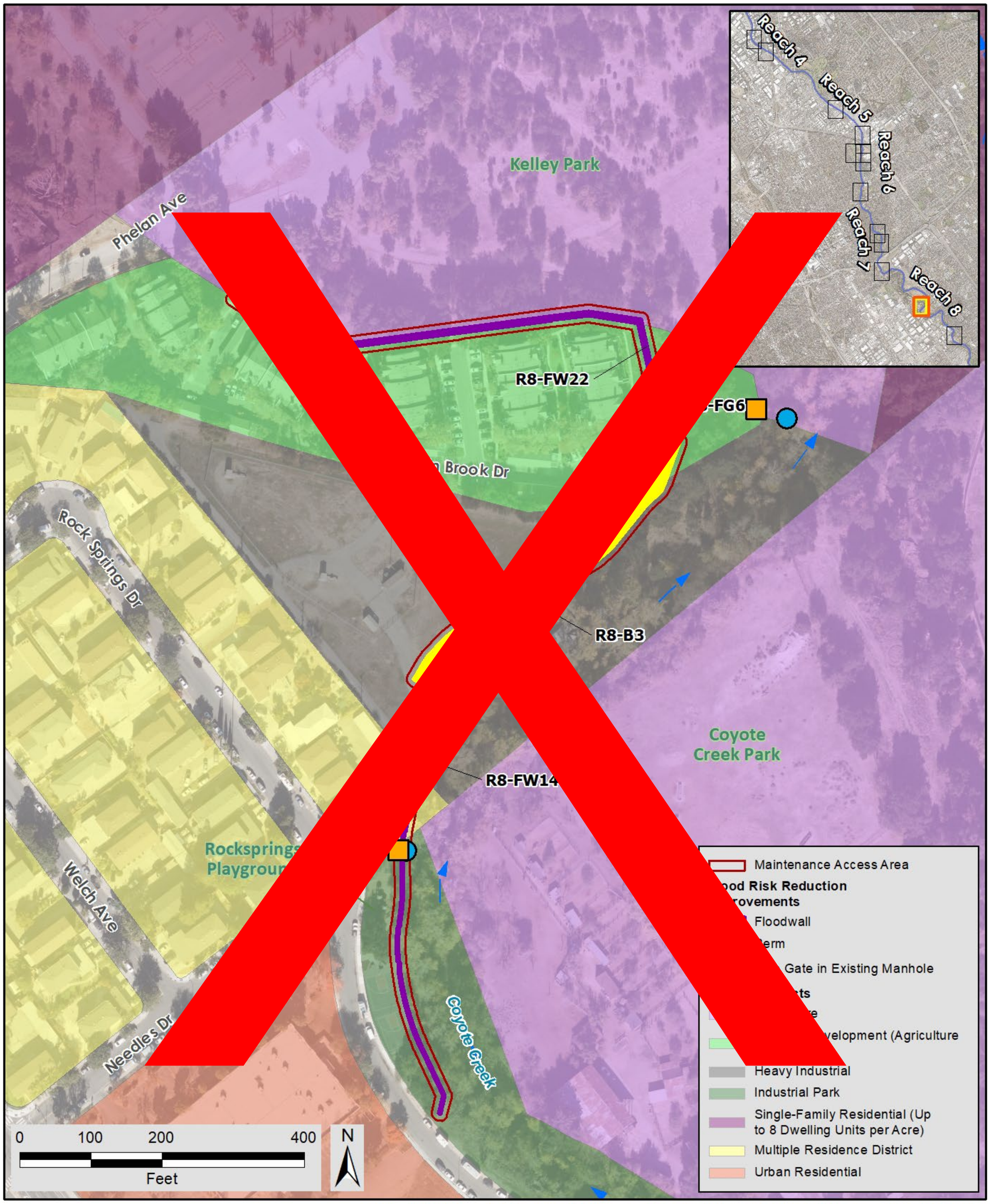
Figure 3.10.11. Zoning Districts (11 of 13)



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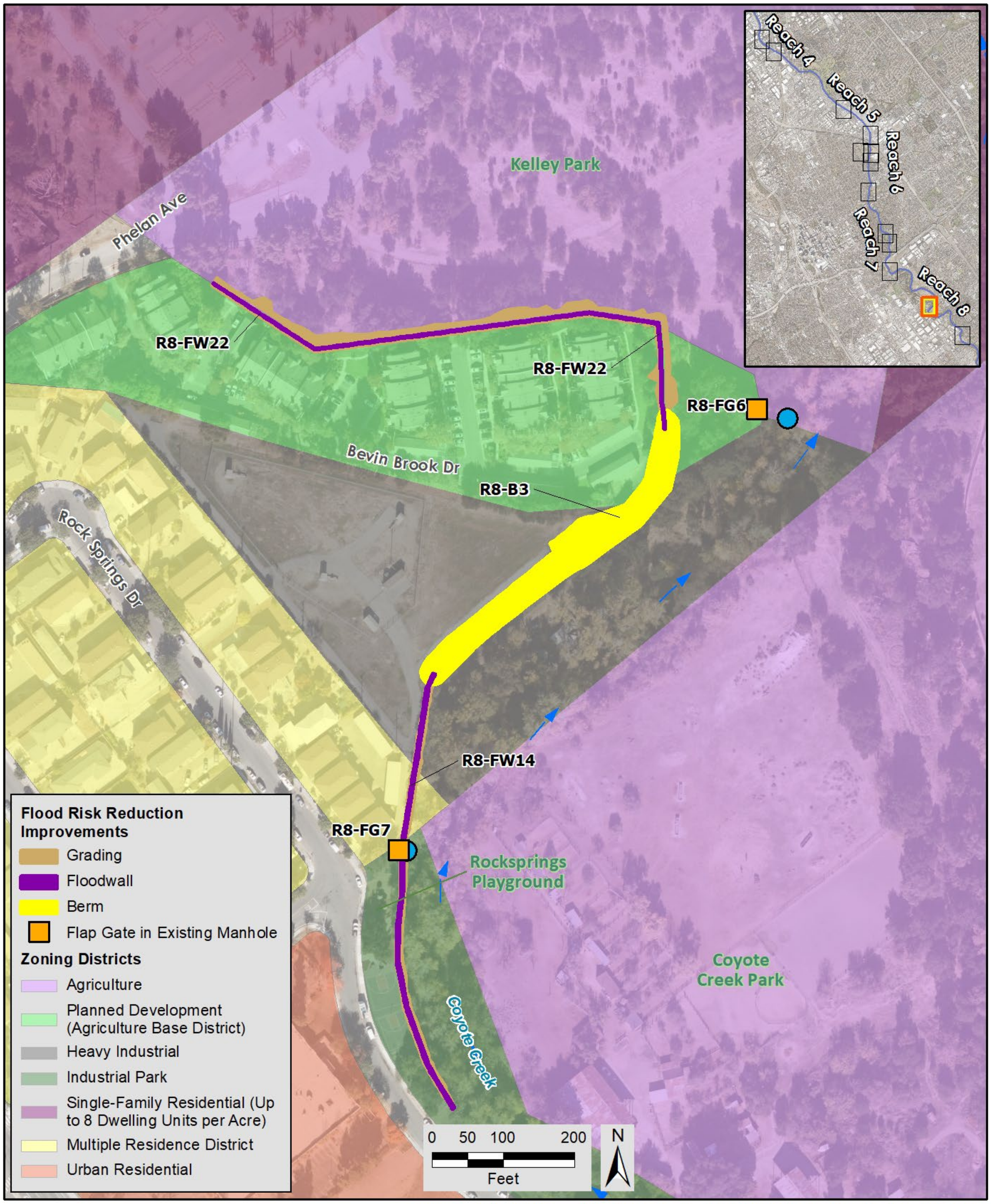

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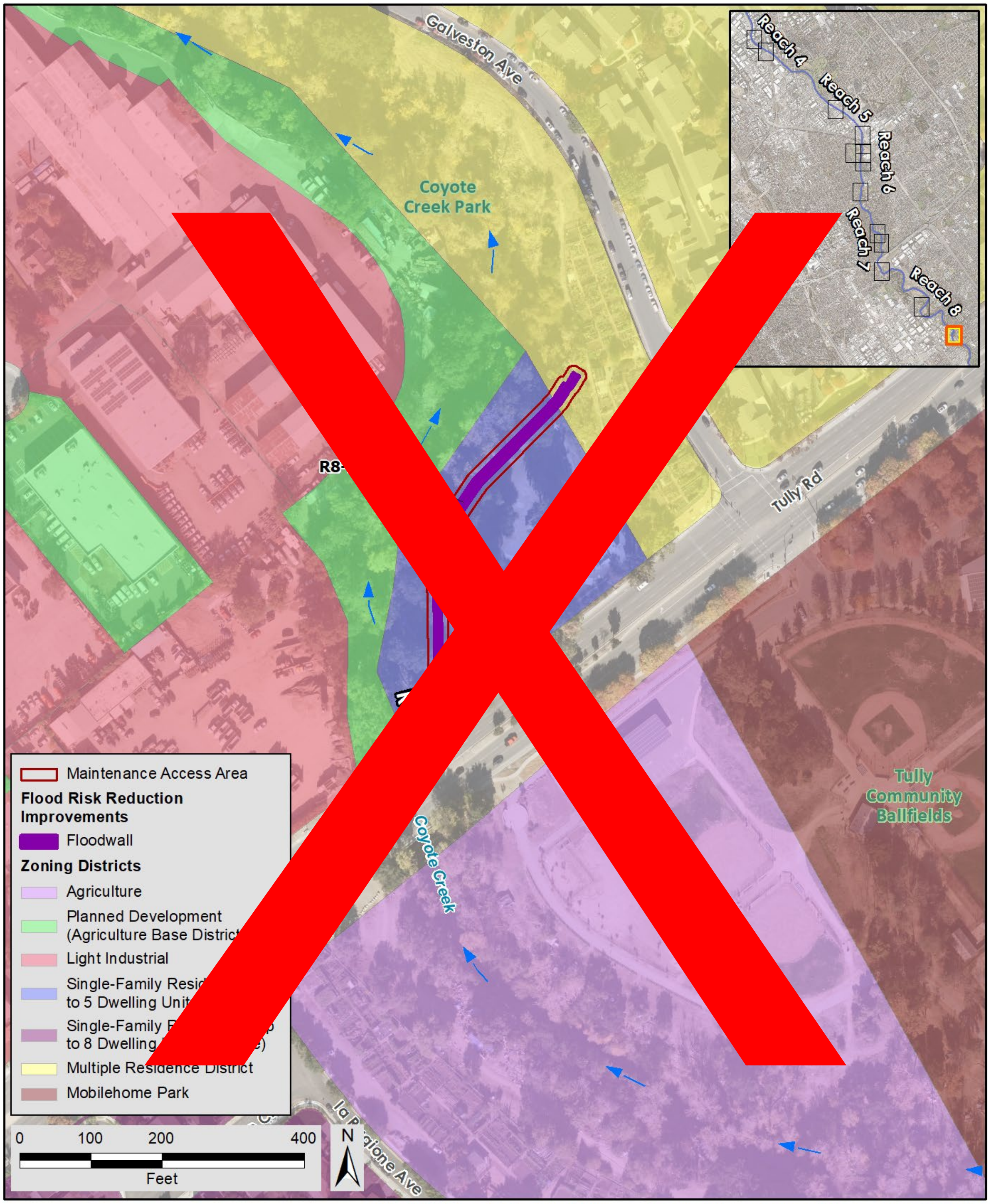
Figure 3.10.12. Zoning Districts (12 of 13)



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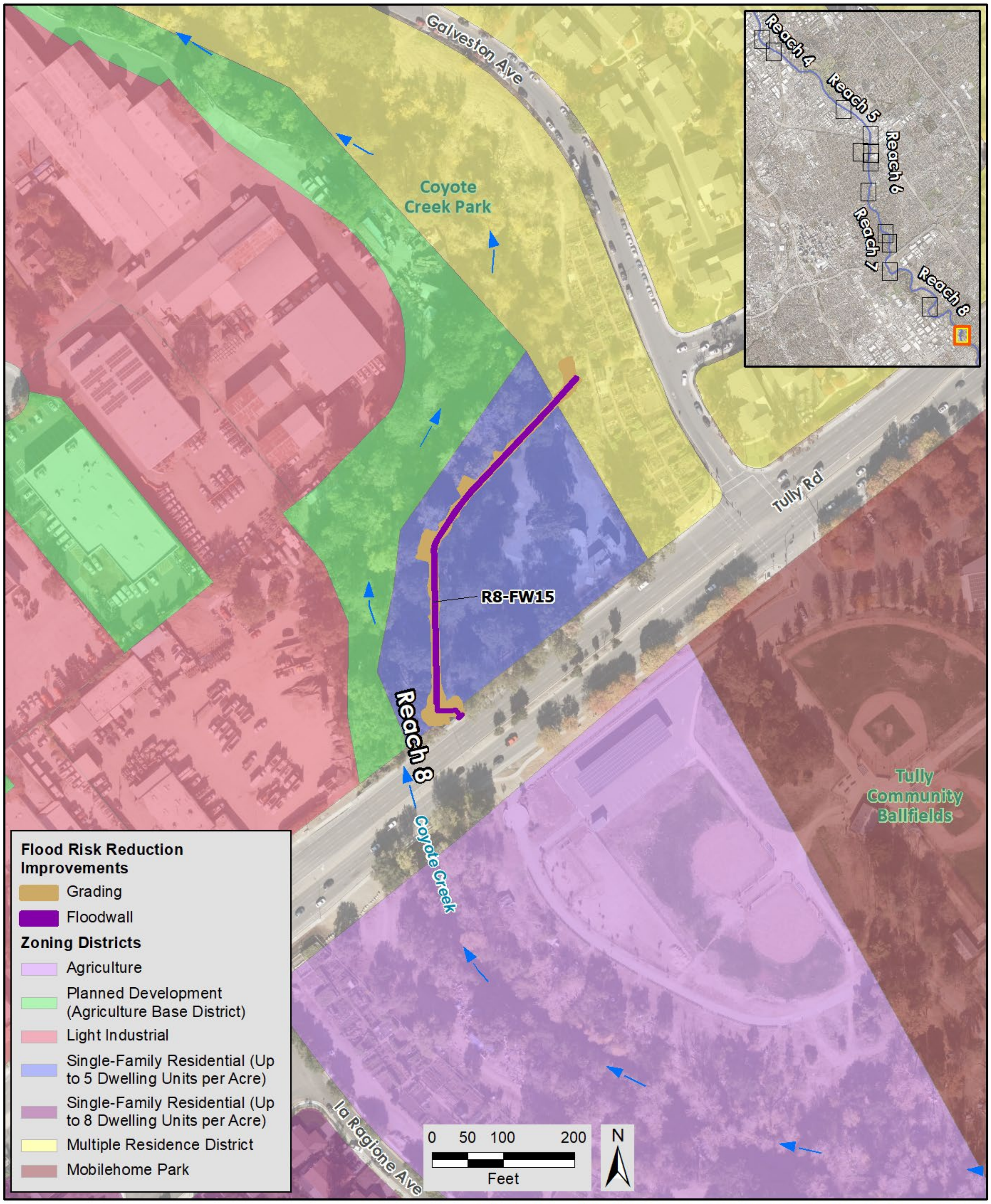

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Figure 3.10.13. Zoning Districts (13 of 13)

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Table 3.10.1. Zoning and Land Use Designations

Improvement ID	Feature Type	Land Use Designation	Zoning Designation	Nearest Residence
R4-HW1, R4-BW1, and R4-BW3	Headwalls and Wingwalls	County Right-of-Way	County Right-of-Way	0.5 mile
R4-HW2, R4-BW2, and R4-BW-4	Headwalls and Wingwalls	County Right-of-Way	County Right-of-Way	0.5 mile
R4-FW1	Floodwall	Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Heavy Industrial	0.5 mile
R4-FW2	Floodwall	Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Agriculture	0.4 mile
R4-FW3	Floodwall	Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Heavy Industrial	0.6 mile
R4-FW4	Floodwall	Open Space, Parklands and Habitat, Industrial Park	Agriculture, Planned Development (Agriculture Base District), Industrial Park	0.6 mile
R4-PB1-A	Passive Barrier	Open Space, Parklands and Habitat	Planned Development (Agriculture Base District)	0.5 mile
R4-PB1-B	Passive Barrier	Open Space, Parklands and Habitat	Planned Development (Agriculture Base District)	0.5 mile
R4-PB2-A	Passive Barrier	Open Space, Parklands and Habitat, Industrial Park	Planned Development (Agriculture Base District)	0.5 mile
R4-SB	Sandbag berm	Open Space, Parklands and Habitat	Heavy Industrial	0.7 mile
R4-PB3	Passive Barrier	Open Space, Parklands and Habitat, Industrial Park	Planned Development (Agriculture Base District)	0.5 mile
R4-B2	Berm	Open Space, Parklands and Habitat	Agriculture	0.5 mile
R4-B4	Berm	Open Space, Parklands and Habitat	Agriculture	0.5 mile
R4-FG1	Flap Gate	Open Space, Parklands and Habitat	County Right-of-Way	0.4 mile
R5-FG2	Flap Gate	Heavy Industrial	Heavy Industrial	
R5-FG3	Flap Gate	County Right-of-Way	County Right-of-Way	
R6-B7	Berm	Open Space, Parklands and Habitat	Open Space	80 feet
R6-PB7	Passive Barrier	Open Space, Parklands and Habitat	Open Space	80 feet
R6-B8	Roadway Berm	Open Space, Parklands and Habitat	County Right-of-Way	4 feet
R6-FW10	Floodwall	Mixed Use Neighborhood, Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Open Space	100 feet
~~R6-FW16~~	~~Floodwall with Access Gate~~	~~Open Space, Parklands and Habitat~~	~~Open Space~~	~~315 feet~~
R6-FW19	Floodwall	Residential Neighborhood	Two-Family Residential (Up to eight to sixteen Dwelling Units per Acre)	30 feet
R6-FW20	Floodwall	Public/Quasi-Public, Residential Neighborhood	Public/Quasi-Public, Light Industrial	20 feet
R6-B21	Berm	Mixed Use Neighborhood, Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Open Space	48 feet
R6-FW5	Floodwall	Light Industrial, Open Space, Parklands and Habitat	Light Industrial	0.25 mile
R6-FW6	Floodwall	Light Industrial, Open Space, Parklands and Habitat	Light Industrial	0.20 mile
R6-FW7[1]	Floodwall/Soundwall	Residential Neighborhood, Open Space, Parklands and Habitat	Open Space, Planned Development (R-1-8 Low to Medium Density Residential Based District)	18 feet
R6-FW8	Floodwall	Light Industrial	Light Industrial	0.10 mile
R6-FG4	Flap Gate	Light Industrial	Light Industrial	0.20 mile
R6-FG5	Flap Gate	Light Industrial	Light Industrial	0.20 mile
R6-FW9	Floodwall	Public/Quasi-Public	Public/Quasi-Public	200 feet
R7-FW12	Floodwall with Flood Doors and/or Access Gate	Public/Quasi-Public, Open Space, Parklands and Habitat	Public/Quasi-Public, Open Space	120 feet
R7-FW12 PB-A	Passive Barrier	Open Space, Parklands and Habitat	Open Space	130 feet
R7-FW12 PB-B	Passive Barrier	Open Space, Parklands and Habitat	Open Space	400 feet
R7-FW12 PB-C	Passive Barrier	Public/Quasi-Public, Open Space, Parklands and Habitat	Open Space, Public/Quasi-Public	120 feet
R7-FW11	Floodwall	Residential Neighborhood, Open Space, Parklands and Habitat	Two-Family Residential (Up to eight to sixteen Dwelling Units per Acre)	Immediately adjacent (0 feet)

Improvement ID	Feature Type	Land Use Designation	Zoning Designation	Nearest Residence
R7-FW18	Retaining Wall	Open Space, Parklands and Habitat	Open Space	Immediately adjacent (5 feet)
R7-PB4 FW1	Floodwall	Open Space, Parklands and Habitat	Open Space	65 feet
R7-PB4-A	Passive Barrier	Open Space, Parklands and Habitat	Open Space	100 feet
R7-PB4-B	Passive Barrier	Open Space, Parklands and Habitat	Open Space	90 feet
R7-PB4-C	Passive Barrier	Open Space, Parklands and Habitat	Open Space	100 feet
R7-PB4-D	Passive Barrier	Open Space, Parklands and Habitat	Open Space	90 feet
R7-PB4-E	Passive Barrier	Open Space, Parklands and Habitat	Open Space	90 feet
R7-PB4-F	Passive Barrier	Open Space, Parklands and Habitat	Open Space	100 feet
R7-PB4-G	Passive Barrier	Open Space, Parklands and Habitat	Open Space	100 feet
R7-PB4-H	Passive Barrier	Open Space, Parklands and Habitat	Open Space	30 feet
R7-PB5 FW1	Floodwall	Public/Quasi-Public	Public/Quasi-Public	65 feet
R7-PB5-A	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-B	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-C	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-D	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-E	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-F	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-G	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-H	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-PB5-I	Passive Barrier	Public/Quasi-Public	Public/Quasi-Public	50 feet
R7-B5	Berm	Open Space, Parklands and Habitat	Open Space	60 feet
R8-B3	Berm	Residential Neighborhood, Open Space, Parklands and Habitat	Planned Development (Agriculture Base District), Heavy Industrial	60 feet
R8-B3 and R-8 FW22	Berm and Floodwall	Residential Neighborhood, Open Space, Parklands and Habitat	Agriculture, Planned Development (Agriculture Base District)	15 feet
R8-FG6	Flap Gate	Residential Neighborhood, Open Space, Parklands and Habitat	Agriculture, Planned Development (Agriculture Base District)	205 feet
R8-FG7	Flap Gate	Residential Neighborhood, Open Space, Parklands and Habitat	Agriculture, Planned Development (Agriculture Base District)	30 feet
R8-FW13	Floodwall	Residential Neighborhood, Open Space, Parklands and Habitat, Mixed Use Neighborhood	Mixed Use Neighborhood, Single-Family Residential (Up to Eight Dwelling Units per Acre), Multiple Residence District	17 feet
R8-FW14	Floodwall	Urban Residential, Open Space, Parklands and Habitat	Heavy Industrial, Industrial Park, Multiple Residence District	20 feet
R8-FW15	Retaining Wall	Open Space, Parklands and Habitat	Single-Family Residential (Up to Five Dwelling Units per Acre), Multiple Residence District	200 feet

Notes: [1] These parcels are zoned as Planned Development (R-1-8 Low to Medium Density Residential Based District) but is developed with residential uses. Therefore, residential setback requirements have been applied.
Source: City of San Jose. 2022.

3.10.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal plans, policies, regulations, or laws related to land use and planning are relevant to the analysis of land use and planning impacts for the project.

State Laws, Regulations, and Policies

No state plans, policies, regulations, or laws related to land use and planning are relevant to the analysis of land use and planning impacts for the project.

Regional/Local Laws, Regulations, and Policies

Envision San José 2040 General Plan

The following goals and policies in the Envision San José 2040 General Plan may apply to the project (City of San Jose 2011):

Goal EC-5: Protect the community from flooding and inundation and preserve the natural attributes of local floodplains and floodways.

- **Policy EC-5.4:** Develop flood control facilities in cooperation with the Santa Clara Valley Water District to protect areas from the occurrence of the "1%" or "100-year" flood or less frequent flood events when required by the state.
- **Policy EC-5.10:** Encourage the preservation and restoration of urban creeks and rivers to maintain existing floodplain storage. When in-channel work is proposed, engineering techniques which include the use of plant materials (bio-engineering) are encouraged.

Goal ER-2: Riparian Corridors. Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.

- **Policy ER-2.4:** When disturbances to riparian corridors cannot be avoided, implement appropriate measures to restore, and/or mitigate damage and allow for fish passage during construction.

Riparian Corridor Policy Study

The purpose of the Riparian Corridor Policy Study is to explore issues related to Envision San José 2040 General Plan policies which promote the preservation of riparian corridors, the areas along natural streams, and how these corridors should be treated for consistency with the General Plan (City of San José 1999). Riparian corridor development guidelines are presented to help protect riparian habitat and minimize impacts to riparian resources. Guidelines that are applicable to the project are the following:

Guideline 7C. Flood Control – Where gabions, floodwalls, and other armoring materials and techniques are necessary for flood protection and slope protection, planting pockets and terraces should be created as an integral part of the structures. Native vegetation should be established and maintained in the planting pockets and terraces.

Bypass channels or culverts are the preferred methods to improve flood flows and channel capacity. Bypass channels/culverts should be designed to preserve riparian areas on both sides of the existing channel. Diversion of natural water flows into pipe systems for any purpose should not be allowed to damage or degrade the natural channel or native plant or animal species.

Where bypass channels are not feasible, flood control projects may consider designs that widen channel areas, preferably on one side only, and create terraced benches for riparian plant establishment where sufficient land is available for this type of project. While these channel modifications will require the removal of substantial quantities of earth and revegetation of terraces using locally-native riparian plant species (see Figure 18 within the study), as much natural vegetation as possible should be preserved.

Maintenance roads should be incorporated along existing levees where possible combining maintenance for flood control with maintenance for utilities and/or park management. Where possible, underground utilities should occur in disturbed areas including levees constructed for flood control.

City of San José Zoning Code

The City's Zoning Code, Section 20.30.500 "Development Standards" states that all other accessory buildings and structures not explicitly noted in Table 20-70 "Accessory Buildings and Structures Development Regulation," do not have any setback requirements (San José 2024). Since flood risk reduction improvements are considered accessory structures, no residential setback requirements pertain to the project.

3.10.3 Applicable BMPs and VHP Conditions/AMMs

Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that may result from the project. AMMs are project specific measures that have been identified to supplement the standard Valley Water BMPs to minimize impacts from project construction and implementation. There are no relevant BMPs, VHP conditions, or AMMs that would apply to land use and planning.

3.10.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the CEQA Guidelines. The CEQA Guidelines significance criteria for land use and planning address impacts related to consistency with land use plans, policies, or regulations adopted for the of purpose of avoiding or mitigating an environmental effect. Land use policies pertain to the type, location, and physical form of new development. For this analysis, policies "adopted for the purpose of avoiding or mitigating an environmental effect" are those that, if implemented and adhered to, would avoid or mitigate physical impacts on the environment. Other policies that relate to avoiding or mitigating an environmental effect are considered in other environmental resource evaluations in Chapter 3, "Environmental Setting, Impact Analysis, and Mitigation Measures." The proposed project would have a significant impact on land use and planning if implementing the project would:

- physically divide an established community; or
- cause a significant environmental impact not analyzed elsewhere in the EIR due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Analysis Methodology

Evaluating potential project impacts on land use was based on a review of planning documents pertaining to the project area: the Envision San José 2040 General Plan (City of San José 2011) and the City of San José Zoning Code (City of San José 2024). Additionally, desktop evaluations were performed using Google Earth and geographic information systems to analyze existing land uses within the project area and vicinity.

Impacts Not Discussed Further in the EIR

Physically Divide an Established Community

The project would result in construction activities within and immediately adjacent to the Coyote Creek riparian corridor. While portions of the project would be located along the perimeter of existing residential communities, the implementation of flood risk reduction improvements would not result in the division of any established communities as improvements would occur outside or along the boundaries of existing residential communities, along the existing Coyote Creek corridor or where there is no development and no future development could occur due to the close proximity to Coyote Creek and associated riparian corridor. Some of the staging areas would occur within or adjacent to residential areas; however, use of these sites would be temporary during the 2-year construction period and would return to pre-project conditions following completion of the project; staging areas would therefore not divide an established community. Therefore, this issue is not further discussed.

Impact Analysis

Impact LUP-1: ***Cause a Significant Environmental Impact Not Analyzed Elsewhere in this EIR Due to a Conflict with any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect. (Less than significant)***

The threshold of significance whether the project would cause of a significant environmental impact not analyzed elsewhere in this EIR due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This criterion recognizes that an inconsistency with an individual plan, policy, or regulation does not necessarily equate to a significant environmental impact.

Project improvements are sited adjacent to development and/or in areas planned for development and include land zoned as Residential, Open Space, Agriculture, Light Industrial, Heavy Industrial, Industrial Park, Public/Quasi-Public, and Planned Development. All land within the project area is either owned by Valley Water, or on lands that Valley Water does not own, Valley Water has or would obtain easements for the construction, operation, and maintenance of improvements. After the project is approved, Valley Water would finalize easement agreements with landowners.

The project would not conflict with any applicable land use plan, policy, or regulations. Within the City Code of Ordinances, Section 20.30.500 “Development Standards” states that all other accessory buildings and structures not explicitly noted in Table 20-70 “Accessory Buildings and Structures Development Regulation,” do not have any setback requirements (City of San José 2024). Since flood risk reduction improvements are considered accessory structures, no residential setback requirements pertain to the project.

Additionally, the General Plan Riparian Corridor Study Guideline 7C states that the construction of floodwalls within a riparian corridor is allowed for the necessity of flood protection (City of San José 1999). It recommends incorporating planting pockets and terraces using native vegetation as an integral part of the structures; however, given the very limited space between urban development and the creek banks, the incorporation of planting pockets or terraces would not be feasible under the project in order to provide the necessary improvements to reduce flood risk. Additionally, the project could not widen the channel enough to incorporate bypass channels due to the limited space within the creek corridor.

The intent of the project is to protect urban development in the City and would help achieve the Envision San José 2040 General Plan Goal EC-5, which calls for community flood protection and preservation of natural attributes of local floodplains and floodways. To help meet this goal, flood risk reduction improvements are restricted to areas located between Coyote Creek and urban development. Additionally, consistent with Envision San José 2040 General Plan Policy ER-2.4, the project would implement appropriate mitigation measures to avoid or lessen impacts to the riparian corridor and allow for fish passage throughout construction activities (see Section 3.4, "Biological Resources," for more information).

Based on the above analysis, the project would not conflict with the City's policies, plans, and regulations in a manner that would cause significant impact not evaluated elsewhere in this EIR. Further, the project is consistent with the City's policies, plans, and regulations meant to protect the City from flood risk (see Section 3.9, "Hydrology and Water Quality," for further discussion regarding flood protection policies, plans, and regulations). There are no significant environmental impacts not analyzed elsewhere in this EIR due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and therefore impacts would be **less than significant**.

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3.11 Noise and Vibration

This section provides an overview of the existing noise conditions within the project area and vicinity, identifies the regulatory framework for noise and vibration, and analyzes potential noise and vibration related impacts from project implementation. Noise measurement data and noise modeling calculations are provided in Appendix G.

3.11.1 Environmental Setting

Acoustic and Vibration Fundamentals

Prior to discussing the noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is provided below for context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale, a way of displaying these very wide ranges of numerical data in a compact way, is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources were producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source. Further, when combining a relatively high noise level with a lower one, the higher noise level contributes greater to the combined noise levels (e.g., 70 dB added to 65 A-weighted dB (dBA) results in 71.2 dB)

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-weighted sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels. **Table 3.11.1** describes typical A-weighted noise levels for various noise sources.

Table 3.11.1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet fly-over at 1,000 feet	100	
Gas lawn mower at 3 feet	90	
Diesel truck at 50 feet at 50 miles per hour	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library, Bedroom at night
Quiet rural nighttime	20	
	10	Broadcast/recording studio

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013: Table 2-5.

Human Response to Changes in Noise Levels

The doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (between 1,000 and 8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013:2-18). In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013:2-10).

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on the factors described below.

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source (Caltrans 2013: 2-28). Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source (Caltrans 2013: 2-29).

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet (Caltrans 2013: 2-30). For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound (Caltrans 2013: 2-31). Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction (Caltrans 2013: 2-41; Federal Transit Administration [FTA] 2018: 42). Barriers higher than the line of sight provide increased noise reduction (FTA 2018: 2-12). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation (FTA 2018: 15, 104, 106).

Noise Descriptors

The perceived loudness of sounds depends on many factors, including SPL and frequency content. However, within the usual range of environmental sound levels, perception of loudness is relatively predictable, and can be approximated through frequency filtering using the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (decibels expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment. All noise levels reported in this section are in terms of A-weighting. Community noise is commonly described in terms of "ambient" or all-encompassing noise level in a given environment. The noise descriptors most often used to describe environmental noise are defined below.

- **dBA:** an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, compared with unweighted decibels, in which no correction is made for audio frequency.
- **L_{max} (*Maximum Noise Level*):** The maximum instantaneous noise level during a specific period of time. The L_{max} may also be referred to as the peak noise level.
- **L_{eq} (*Equivalent Noise Level*):** The average noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then

converted back to dBA to determine the $L_{eq.}$ In noise environments determined by major noise events, such as aircraft overflights, the L_{eq} value is heavily influenced by the magnitude and number of single events that produce the high noise levels.

- **Community Noise Equivalent Level (*CNEL*):** The energy-average of the A-weighted sound levels occurring over a 24-hour period, with penalties of 10 dB and 5 dB, respectively, applied to A-weighted sound levels occurring during the nighttime hours (10 p.m. to 7 a.m.) and the evening hours (7 p.m. to 10 p.m.).
- **Day-Night Noise Level (L_{dn}):** The energy-average of the A-weighted sound levels occurring over a 24-hour period, with a penalty of 10 dB applied to A-weighted sound levels occurring during the nighttime hours (10 p.m. to 7 a.m.).

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point, and can be described in terms of displacement, velocity, or acceleration. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses on buildings (FTA 2018:110, Caltrans 2013:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human sensation of vibration. The RMS amplitude is typically used to assess human annoyance caused by vibration. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018: 7-4). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018: 7-8).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations that can pose risks to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018: 7-5).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. **Table 3.11.2** summarizes the general human response to different ground vibration-velocity levels.

Table 3.11.2. Human Response to Different Levels of Ground and Noise Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1micro inch per second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018: 7-8

Project Area Setting

The project area is located within the City of San José (City) within Santa Clara County and consists of the flood risk reduction improvement sites which are located along 9 miles of Coyote Creek in primarily urban, developed areas with a variety of existing noise sources. The project area collectively refers to all improvement sites and locations where equipment or construction activities would occur. A multitude of land uses including residential, industrial, commercial, and recreational are within the project vicinity. The predominant noise source within the project area is vehicle traffic on the surrounding roadway network. Other sources of noise include typical noise associated with residential neighborhoods (e.g., people walking/talking, dogs barking, landscape equipment) and noise associated with community parks (e.g., people recreating, talking). No major stationary sources of groundborne vibration were identified within the project area.

Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise and vibration to result in sleep disruption. Additional land uses such as schools, unhoused lodging, historic sites, cemeteries, and places of worship are also generally considered sensitive to increases in noise levels. These land use types are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

Based on the locations for each flood risk reduction improvement, nearby sensitive receptors, land use types, and structures were identified using aerial imagery. **Table 3.11.3** summarizes the distance of each project improvement to the nearest noise-sensitive receptor (NSR) and **Figures 3.11.1** through **3.11.14** show the identified NSR (labeled as “NSR” with a unique number) within the project area and vicinity closest to the project improvement sites. It is important to note that, given the linear nature of construction, one identified sensitive receptor could represent multiple sensitive receptors near the known location of construction. For example, NSR 8 represents residential uses along Monferino Drive/Jackson Street, all within the same distance to nearby project improvements. For this analysis, an NSR was identified as a residential, commercial, industrial, or recreational use. In addition, while activities would occur at the identified staging/laydown areas, these activities were not evaluated as construction noise sources; thus, separate NSRs were not identified here. More discussion regarding noise impacts from the staging/laydown areas is provided below under Impact NOI-1.

Existing Noise Levels

To establish existing noise levels, ambient noise surveys were conducted on December 5 through December 6, 2023, as well as January 17 through January 18, 2024. Four long-term (LT) (24-hour) and six short-term (ST) (less than one hour) measurements were conducted using a Larson Davis Laboratories Model 820, a Soft dB Piccolo II, and a Larson Davis Laboratories LxT precision integrating sound level meters. The meters were calibrated before use with a Larson Davis Laboratories Model CAL200 acoustical calibrator to ensure measurement accuracy prior to conducting the surveys. The measurement devices meet all pertinent specifications of the American National Standards Institute. Weather conditions during the measurement periods were mild, ranging from 50 degrees Fahrenheit (˚F) to 62 ˚F, cloudy skies, and average wind speeds of 3 miles per hour.

The locations of the noise monitoring sites are shown in Figures 3.11.1 through 3.11.13. Noise measurement locations were determined based on a review of the project improvements and their proximity to nearby sensitive receptors. Individual locations were selected to represent noise levels of a variety of surrounding land use types (e.g., residential, recreational). Further, a combination of ST and LT measurements were taken to obtain typical daytime and nighttime noise levels. The ST measurements were chosen near sites where only daytime construction would occur to establish existing daytime levels for comparison to project-generated levels, and LT measurements were conducted near locations where a nighttime construction concrete pour could occur, for comparison to project-generated nighttime noise, as well as for the purpose of obtaining nighttime noise levels to establish 24-hour community noise levels (i.e., CNEL). Thus, the noise levels captured provide a representative description of daytime and nighttime noise levels within the project area and vicinity for the purpose of establishing existing conditions as well as for the purpose of determining temporary changes in noise associated with project activities.

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Table 3.11.3. Project Improvements and Proximity to Existing Noise-Sensitive Receptors

Project ID	Improvement Type	Design	Nearest Sensitive Receptor (NSR)	Distance to NSR	NSR ID
Reach 4 – West Bank					
R4-PB1 and R4-BW1	Passive Barrier	Hinged	Commercial/Industrial Use along Charcot Avenue	105 feet	NSR 2
R4-PB2 and R4-BW2	Passive Barrier	Hinged	Commercial/Industrial Use along Charcot Avenue	16 feet	NSR 2
R4-FW1	Floodwall	I-Wall	Commercial/Industrial Use along Charcot Avenue	72 feet	NSR 2
R4-FW2	Floodwall	I-Wall	Commercial/Industrial Use along Charcot Avenue	Adjacent (within approximately 5 feet)	NSR 2
R4-FW1	Floodwall	I-Wall	Commercial/Industrial Use along Charcot Avenue	21 feet	NSR 1
R4-SB	Sandbag berm	Sandbag	Commercial/Industrial Use along Charcot Avenue	360 feet	NSR 1
R4-B2	Berm		Commercial/Industrial Use along Coyote Creek	100 feet	NSR 2
R4-FG1	Manhole and flap gate		Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue adjacent to I-880	1,035	NSR 5
Reach 4 – East Bank					
R4 PB3 and R4-BW3	Passive Barrier	Hinged	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	95 feet	NSR 3
R4 PB4 and R4-BW4	Passive Barrier	Hinged	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	75 feet	NSR 4
R4-FW3	Floodwall	I-Wall	Commercial/Industrial Use along Paragon Drive	17 feet	NSR 3
R4-FW4	Floodwall	I-Wall	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	7 feet	NSR 4
R4-FW4	Floodwall	I-Wall	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	48 feet	NSR 5
Reach 4 – Charcot Avenue Bridge					
R4-HW1 and R4-HW2	Headwall	Concrete	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue	300 feet	NSR 1

Project ID	Improvement Type	Design	Nearest Sensitive Receptor (NSR)	Distance to NSR	NSR ID
R4-HW1 and R4-HW2	Headwall	Concrete	Commercial/Industrial Use along Coyote Creek	80 feet	NSR 2
R4-HW1 and R4-HW2	Headwall	Concrete	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	130 feet	NSR 3
R4-HW1 and R4-HW2	Headwall	Concrete	Commercial/Industrial Use along Coyote Creek and Industrial Plaza at Charcot Avenue/O'Toole Avenue	320 feet	NSR 4
Reach 5 – West Bank					
R5-FG2	Flap gate		Commercial/Industrial Use along Coyote Creek	NA	NA
R5-FG3	Flap gate		Commercial/Industrial Use along Coyote Creek and along Berryessa Road	NA	NA
Reach 6 – West Bank					
R6-B7	Berm	Compacted Earthen	Residential uses along Jackson Street/ N 22nd Street	168 feet	NSR 6
R6-FW7	Floodwall	I-Wall	Residential uses along Monferino Drive/Jackson Street	99 feet	NSR 7
R6-PB7	Passive Barrier	Hinged	Residential uses along Monferino Drive/Jackson Street	90 feet	NSR 8
R6-B7	Berm	Compacted Earthen	Residential uses along Monferino Drive/Jackson Street	90 feet	NSR 8
R6-B7 FW1	Floodwall	T-Wall	Residential uses along Monferino Drive/Jackson Street	78 feet	NSR 8
R6-FW7	Floodwall	I-Wall	Residential uses along Monferino Drive/Jackson Street	Adjacent (within approximately 4 feet)	NSR 8
R6-B8	Roadway berm	Raised asphalt berm in center of road	Residential uses along N 23rd Street/E Taylor Street/Monferino Drive	Adjacent (within approximately 4 feet)	NSR 34
R6-FW9	Floodwall	I-Wall	Residential uses along 22nd Street/East Empire Street	163 feet	NSR 10

Project ID	Improvement Type	Design	Nearest Sensitive Receptor (NSR)	Distance to NSR	NSR ID
R6-FW9	Floodwall	I-Wall	Elementary School along East Empire Street	Adjacent (within approximately 7 feet)	NSR 11
~~R6-FW16~~	~~Floodwall~~	~~I-Wall~~	~~Residential uses along Glithero Court/Calumet Court~~	~~253 feet~~	~~NSR 9~~
R6-FW20	Floodwall	I-Wall	Residential Use along East St. John Street	79 feet	NSR 18
R6-FW20	Floodwall	I-Wall	Residential use along Coyote Creek/East St. John Street	23 feet	NSR 19
Reach 6 – East Bank					
R6-FW5	Floodwall	I-Wall	Industrial use along Coyote Creek/Mabury Road	24 feet	NSR 12
R6-FW6	Floodwall	I-Wall	Industrial use southeast of the site along Bayshore Freeway	159 feet	NSR 13
R6-FW8	Floodwall	I-Wall	Industrial use at the end of Wooster Avenue	8 feet	NSR 14
R6-FW10	Floodwall	I-Wall	Residential use along Coyote Creek, adjacent to Wooster Avenue	8 feet	NSR 15
R6-B21	Floodwall	I-Wall	Residential Use along Lower Silver Creek, adjacent to Wooster Avenue	11 feet	NSR 16
R6-B21	Floodwall	I-Wall	Residential Use along Lower Silver Creek, adjacent to Wooster Avenue	39 feet	NSR 17
R6-FG4	Flap gate		Industrial use along Coyote Creek/Mabury Road	840	NSR 12
R6-FG5	Flap Gate		Industrial use along Coyote Creek	360	NSR 12
Reach 7 – West Bank					
R7-PB4 FW1	Floodwall	I-Wall	Residential uses along East William Street	53 feet	NSR 23
R7-PB4-A	Passive Barrier	Hinged	Residential uses along East William Street	61 feet	NSR 23
R7-PB4-B	Passive Barrier	Hinged	Residential uses along East William Street	61 feet	NSR 23
R7-PB4-C	Passive Barrier	Hinged	Residential uses along East William Street	50 feet	NSR 23
R7-PB4-D	Passive Barrier	Hinged	Residences along South 16th Street/East William Street	50 feet	NSR 24
R7-PB4-E	Passive Barrier	Hinged	Residences along South 16th Street/East William Street	50 feet	NSR 24

Project ID	Improvement Type	Design	Nearest Sensitive Receptor (NSR)	Distance to NSR	NSR ID
R7-PB4-F	Passive Barrier	Hinged	Residences along South 16th Street/East William Street	50 feet	NSR 24
R7-PB4-G	Passive Barrier	Hinged	Residences along South 16th Street/East William Street	50 feet	NSR 24
R7-PB4-H	Passive Barrier	Hinged	Residences along South 16th Street	15 feet	NSR 25
R7-FW18	Floodwall	L-Wall	Residence along South 16th Street	8 feet	NSR 25
Reach 7 – East Bank					
R7-FW11	Floodwall	L-Wall	Residential uses along Brookwood Avenue	14 feet	NSR 20
R7-FW11	Retaining Wall	T-Wall	Residential uses along Brookwood Avenue	12 feet	NSR 20
R7-FW12	Floodwall	I Wall	Residential uses along East William Street	100 feet	NSR 21
R7-FW12	Floodwall	I Wall	Recreational Facility along Coyote Creek Trail	10	NSR 22
R7-FW12 PB-C	Passive Barrier	Hinged	Recreational Facility along Coyote Creek Trail	30 feet	NSR 22
R7-FW12 PB-B	Passive Barrier	Hinged	Recreational Facility along Coyote Creek Trail	130 feet	NSR 21
R7 FW12 PB-A	Passive Barrier	Hinged	Recreational Facility along Coyote Creek Trail	10 feet	NSR 22
R7-PB5	Passive Barrier	Hinged	Residential uses along Woodborough Drive	67 feet	NSR 26
R7-PB5 FW1	Floodwall	I-Wall	Residential uses at Woodborough Court/ Woodborough Drive	44 feet	NSR 27
R7-B5	Berm		Residential uses along Woodborough Drive	720	NSR 27
Reach 8 – West Bank					
R8-FW13	Floodwall	I-Wall	Residential uses along South 12th Street	8 feet	NSR 28
R8-FW14	Floodwall	I-Wall	Residential uses along Rock Spring Drive	53 feet	NSR 31
R8-FW14	Floodwall	I-Wall	Residential uses along Rock Spring Drive	18 feet	NSR 32
R8-FW22	Floodwall	L-Wall	Residential uses along Bevin Brook Drive	13 feet	NSR 30
R8-B3	Berm	Compacted Earthen	Residential uses along Bevin Brook Drive	53 feet	NSR 29
R8-FG6	Flap gate		Residential uses along Bevin Brook Drive	670	NSR 30
R8-FG7	Flap gate		Residential uses along Rock Spring Drive	43	NSR 32
Reach 8 – East Bank					
R8-FW15	Floodwall	T-Wall	Residential uses along Galveston Avenue/ Warfield Way	179 feet	NSR 33

Notes: NSR = Noise Senstive Receptor
Source: Data provided by GEI Consultants, Inc. 2024.

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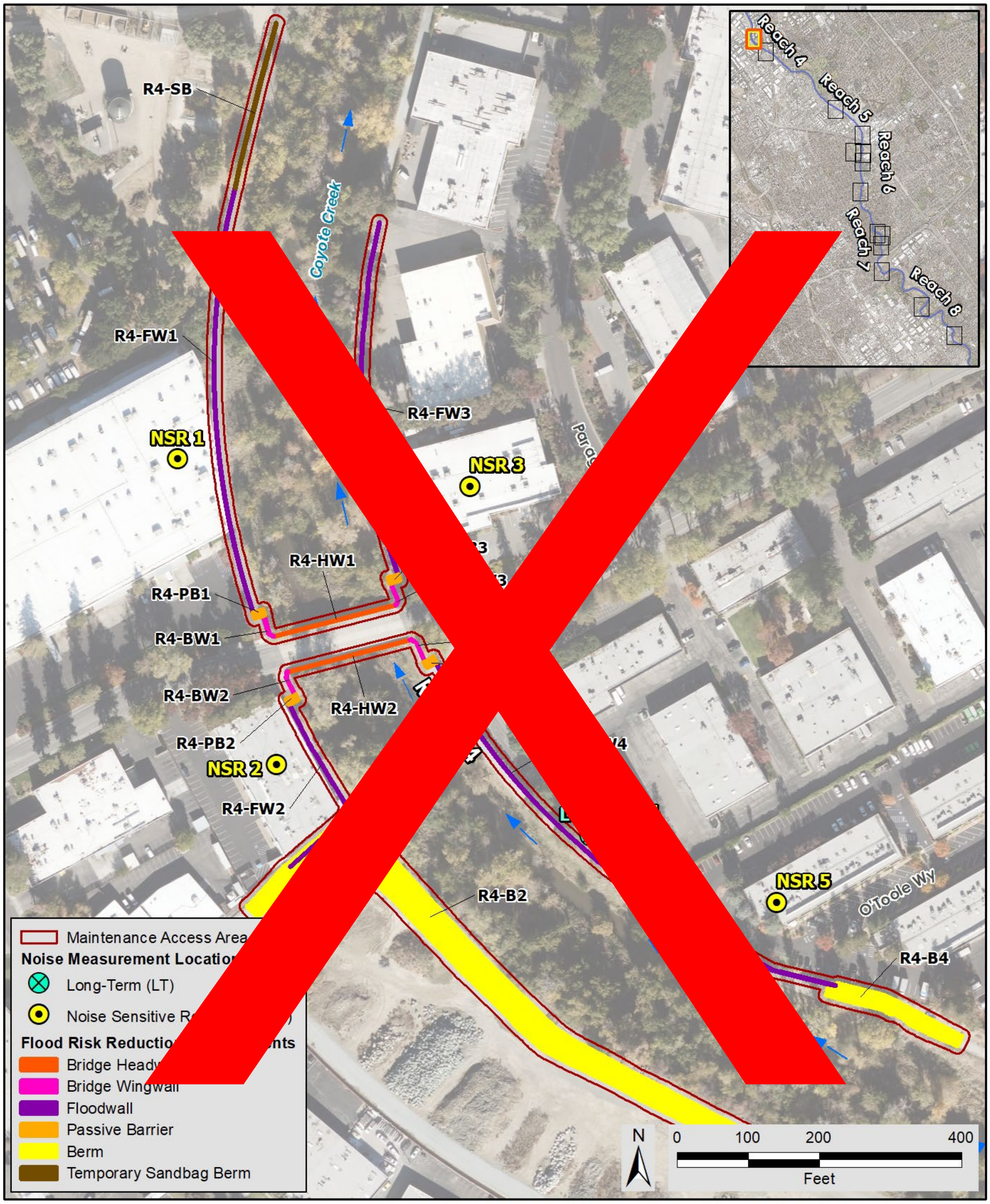

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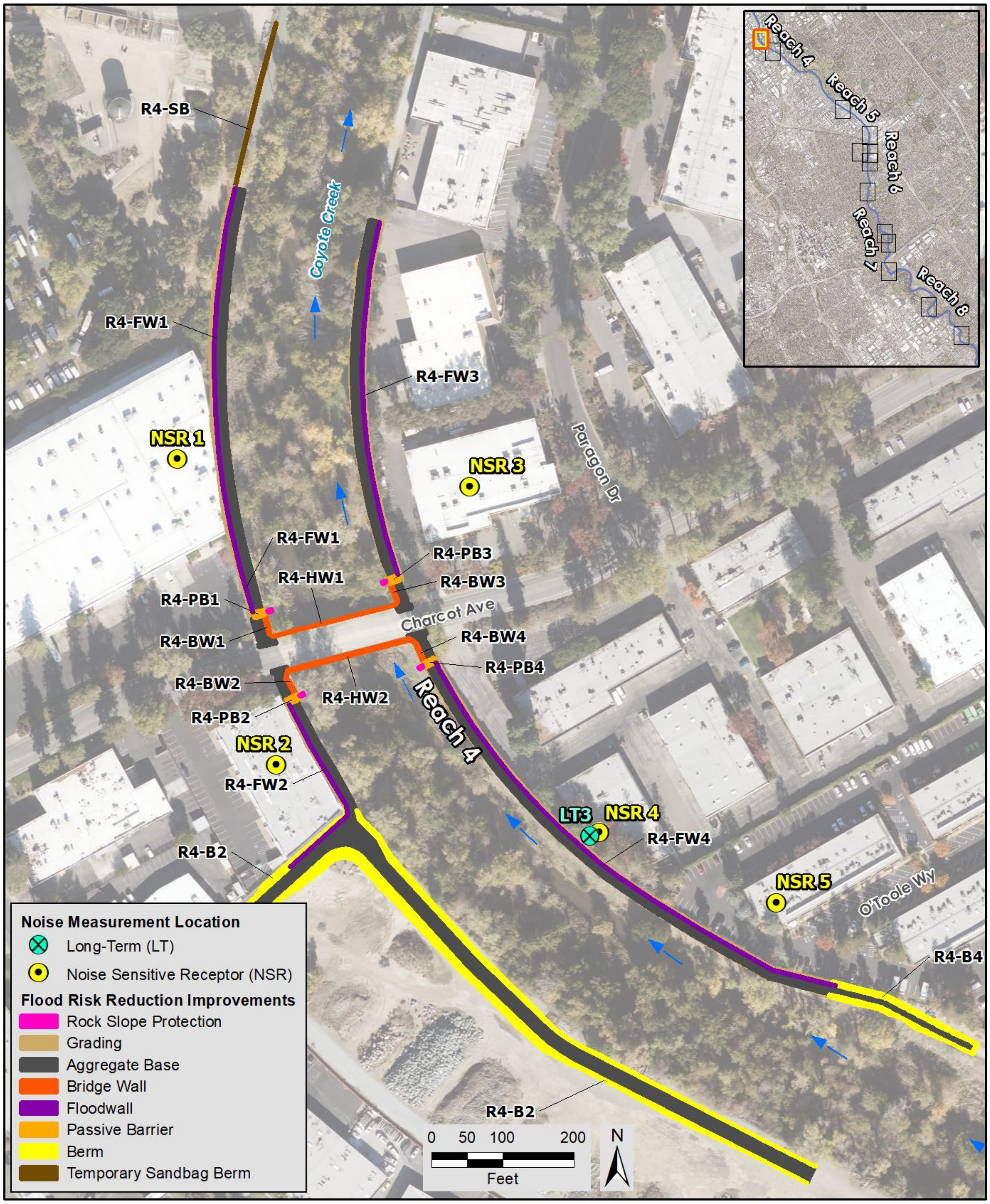

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Sources: Adapted by Ascent in 2024.

Figure 3.11.1. Reach 4 Noise Monitoring Locations and Sensitive Receptors

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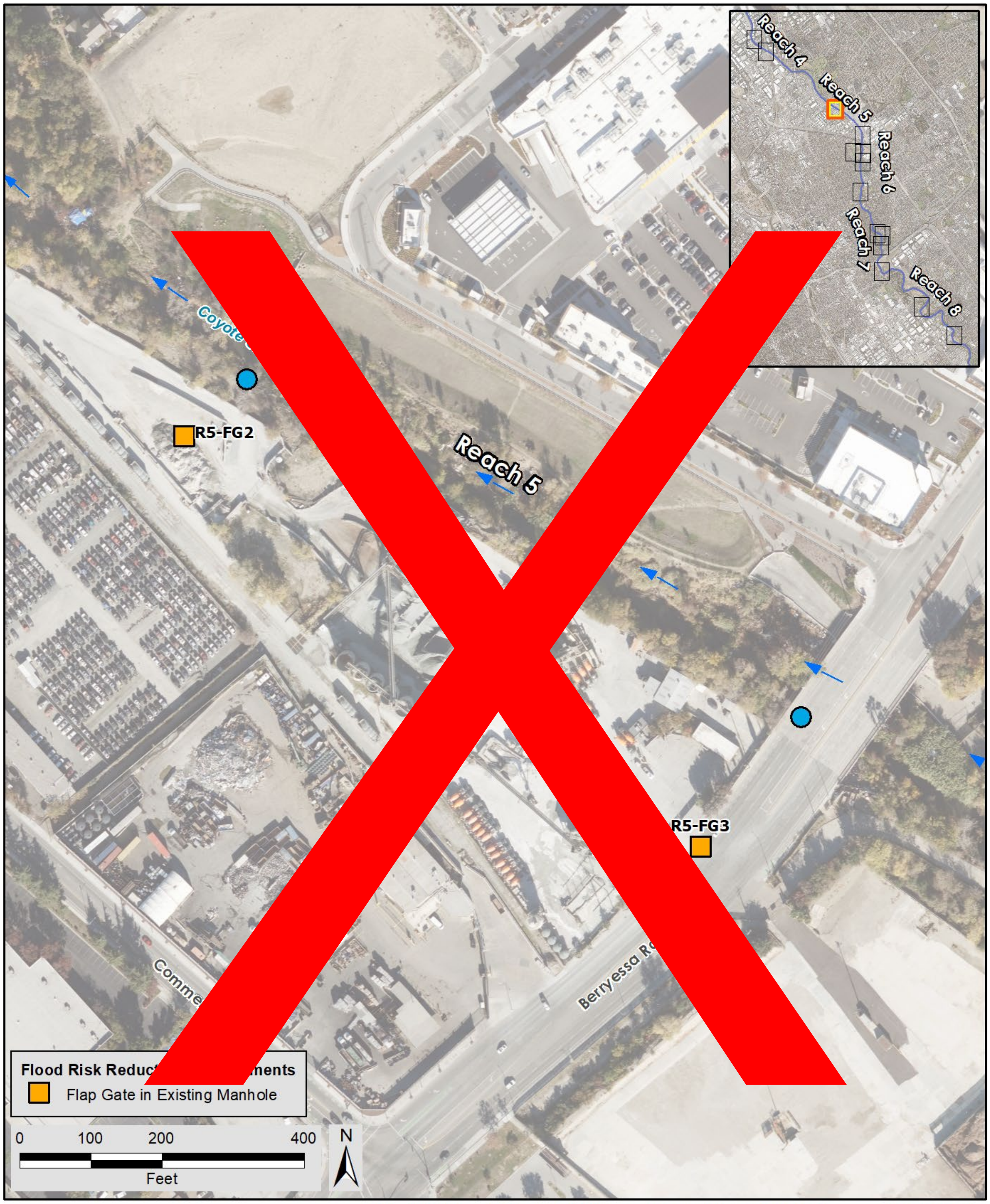
Figure 3.11.2. Reach 4 Noise Monitoring Locations and Sensitive Receptors



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Sources: Adapted by Ascent in 2024.

Figure 3.11.3. Reach 5 Noise Monitoring Locations and Sensitive Receptors

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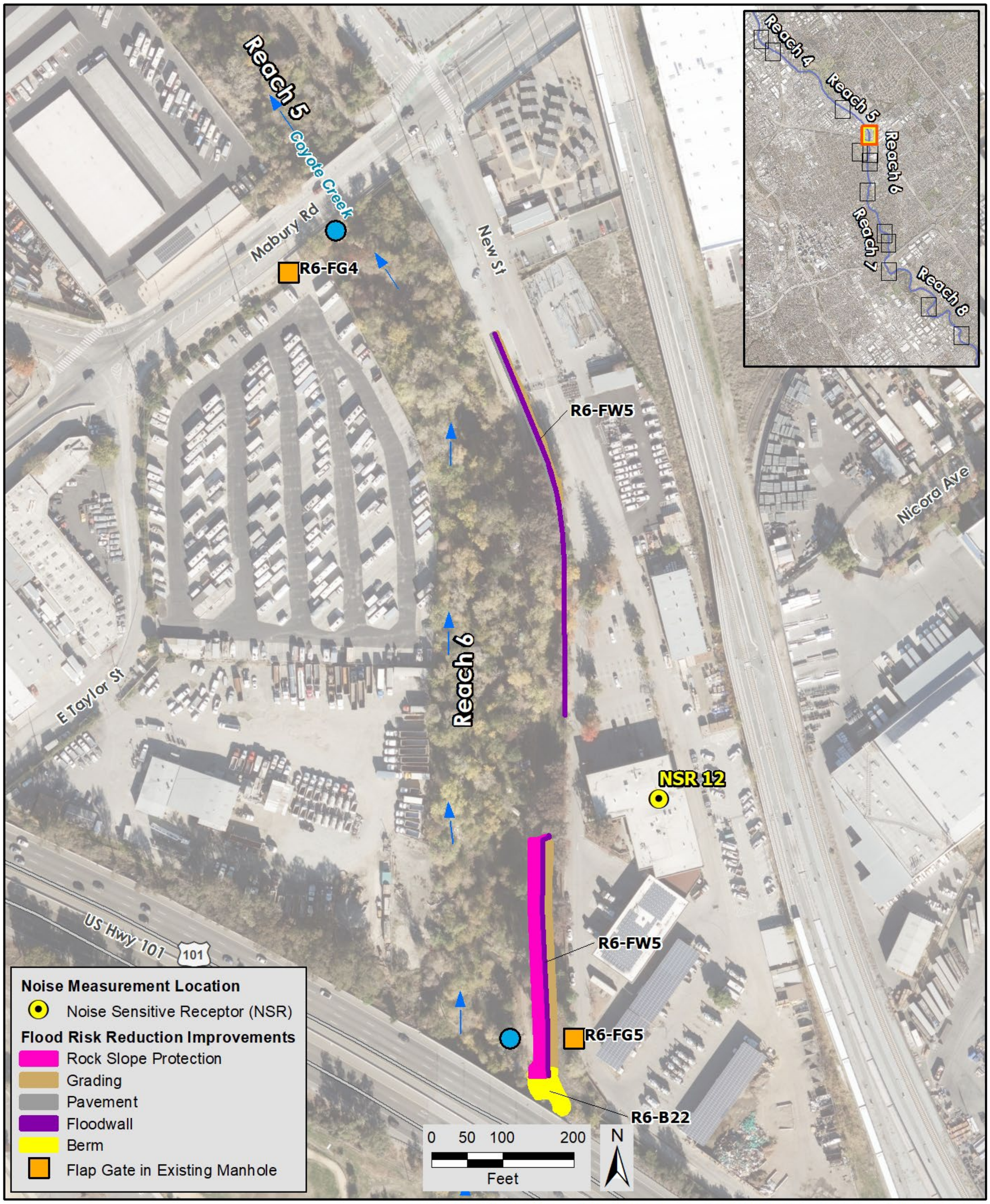

Sources: Adapted by Ascent in 2024.

Figure 3.11.4. Reach 6 Noise Monitoring Locations and Sensitive Receptors, continued

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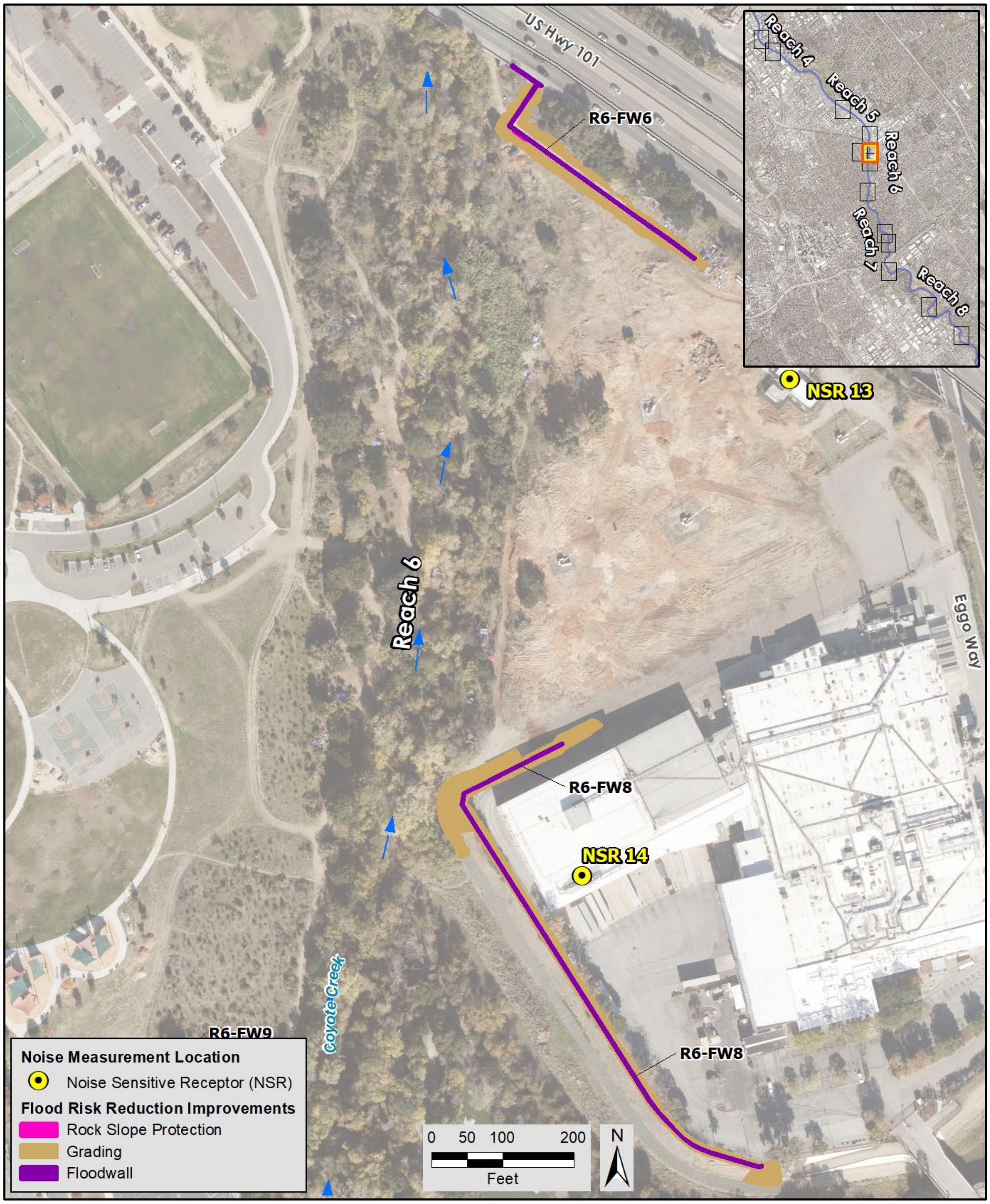

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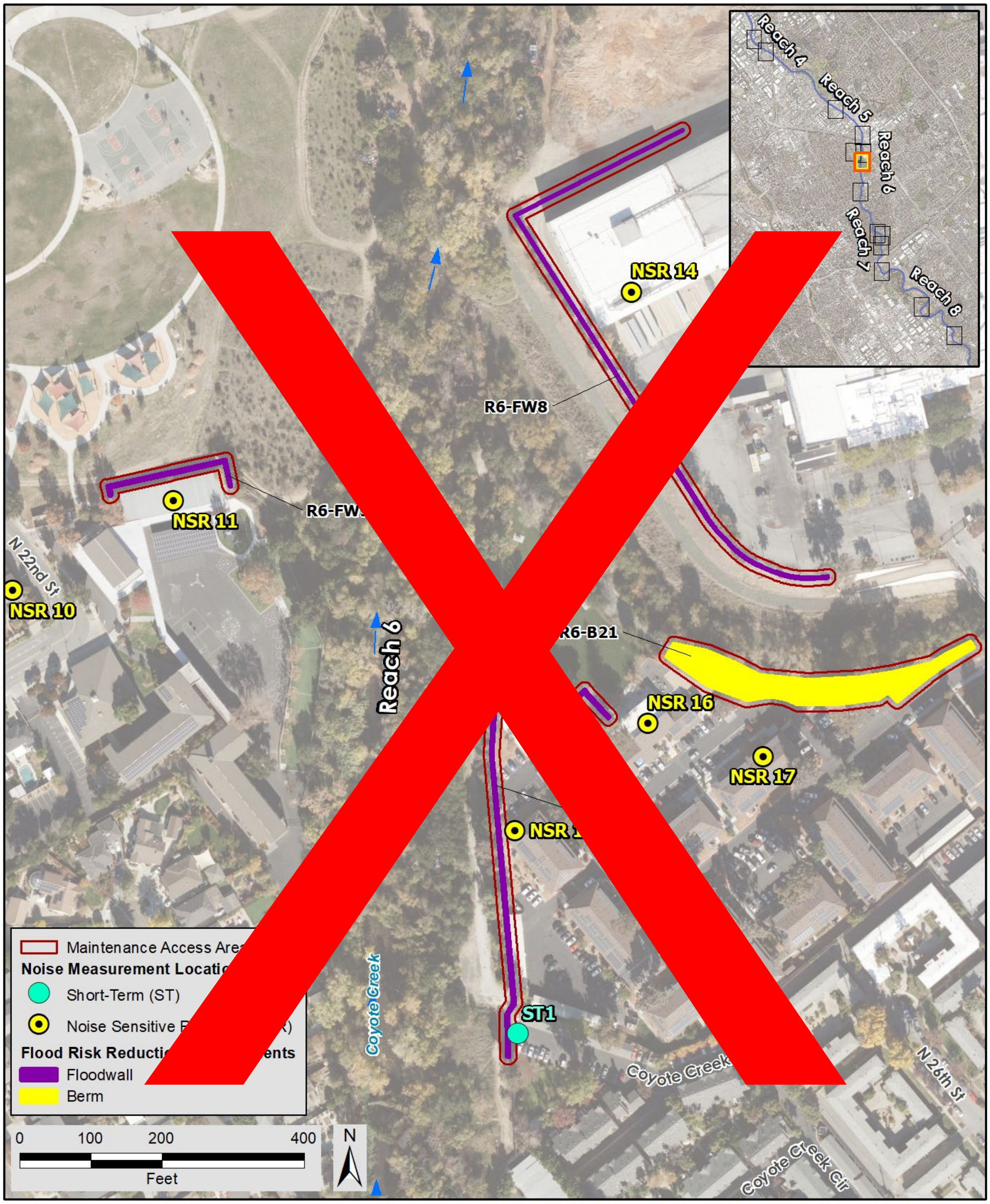
Sources: Adapted by Ascent in 2024.

Figure 3.11.5. Reach 6 Noise Monitoring Locations and Sensitive Receptors, continued



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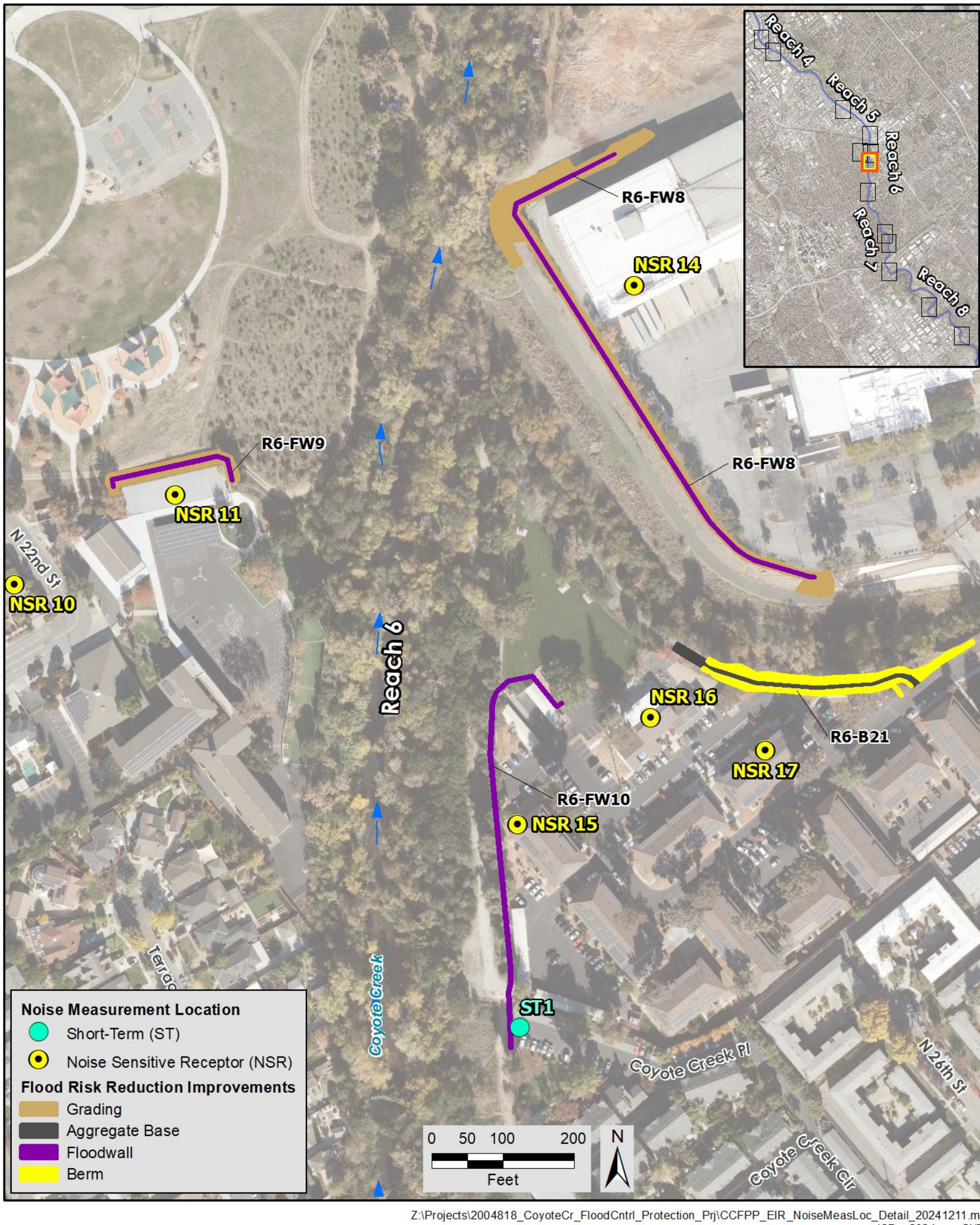

Sources: Adapted by Ascent in 2024.

Figure 3.11.6. Reach 6 Noise Monitoring Locations and Sensitive Receptors, continued

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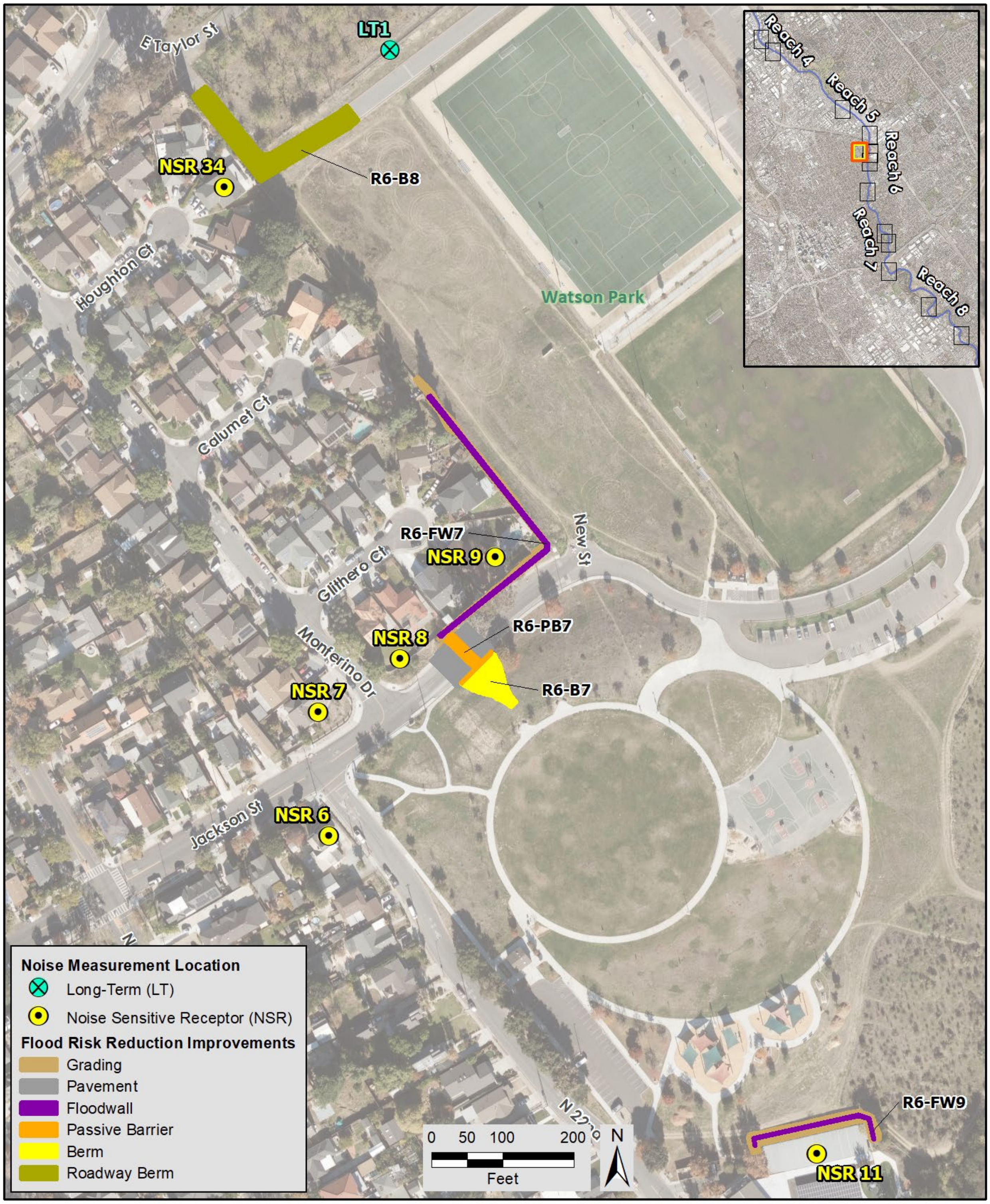

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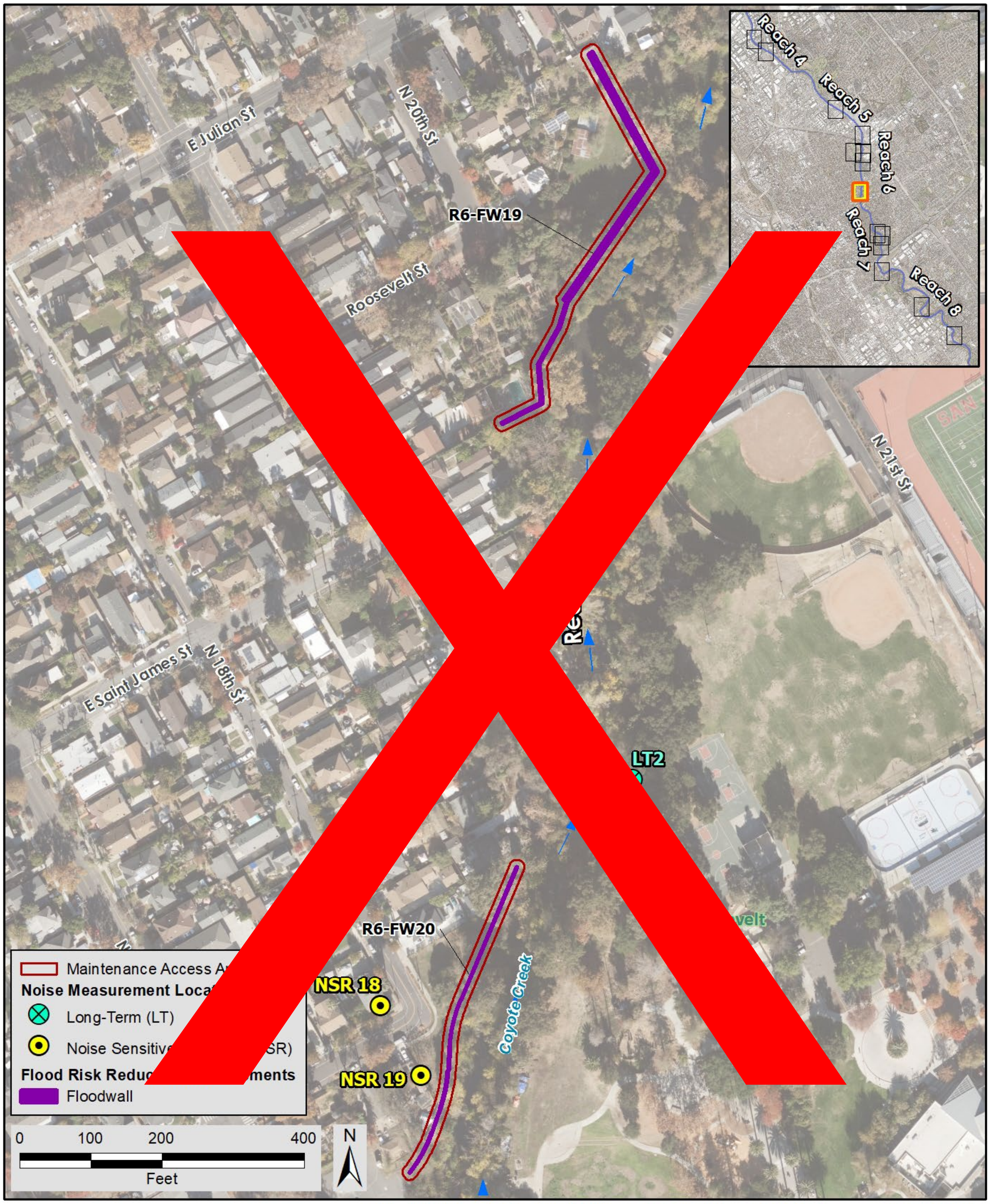
Sources: Adapted by Ascent in 2024.

Figure 3.11.7. Reach 6 Noise Monitoring Locations and Sensitive Receptors, continued



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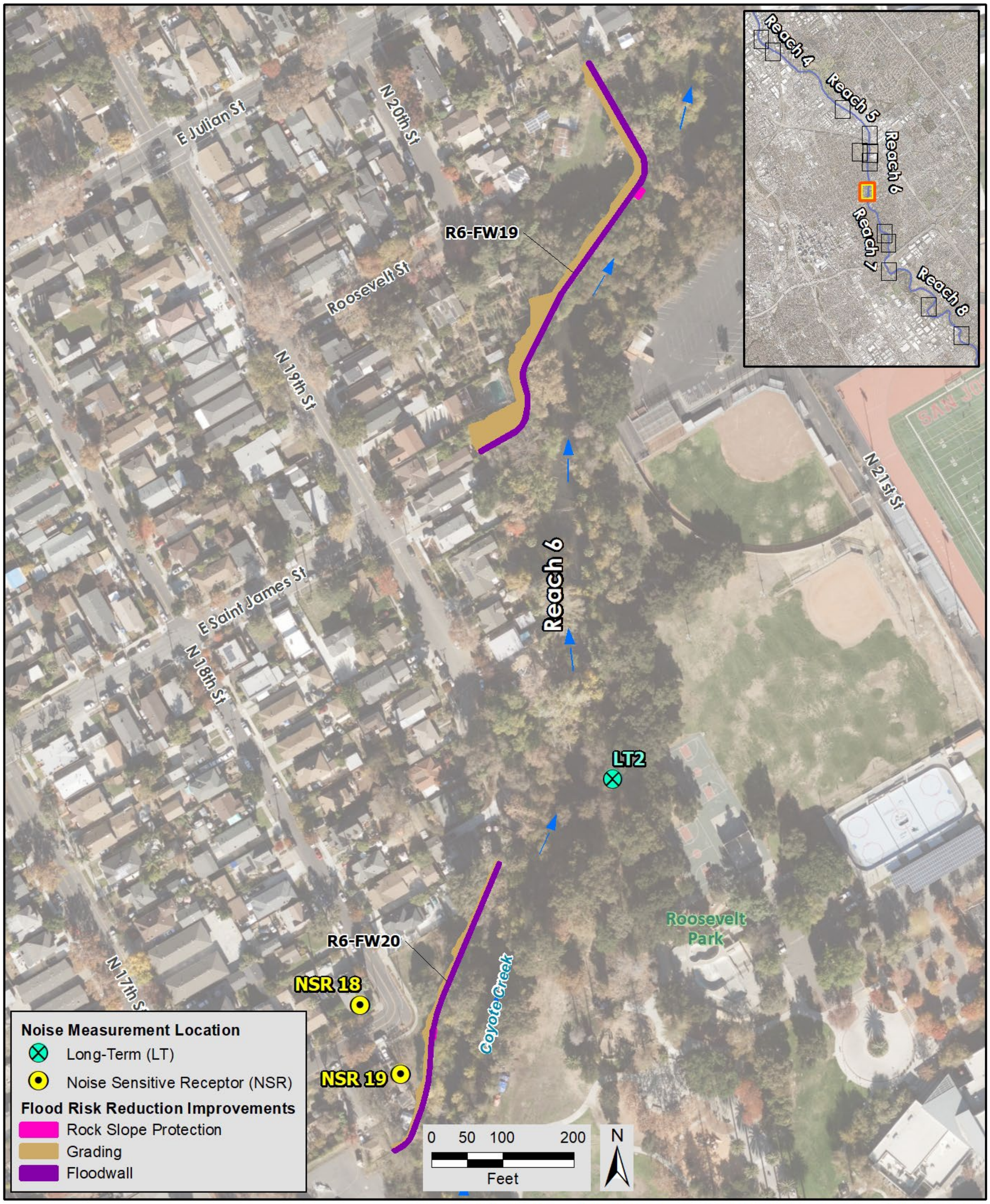

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Sources: Adapted by Ascent in 2024.

Figure 3.11.8. Reach 6 Noise Monitoring Locations and Sensitive Receptors, continued

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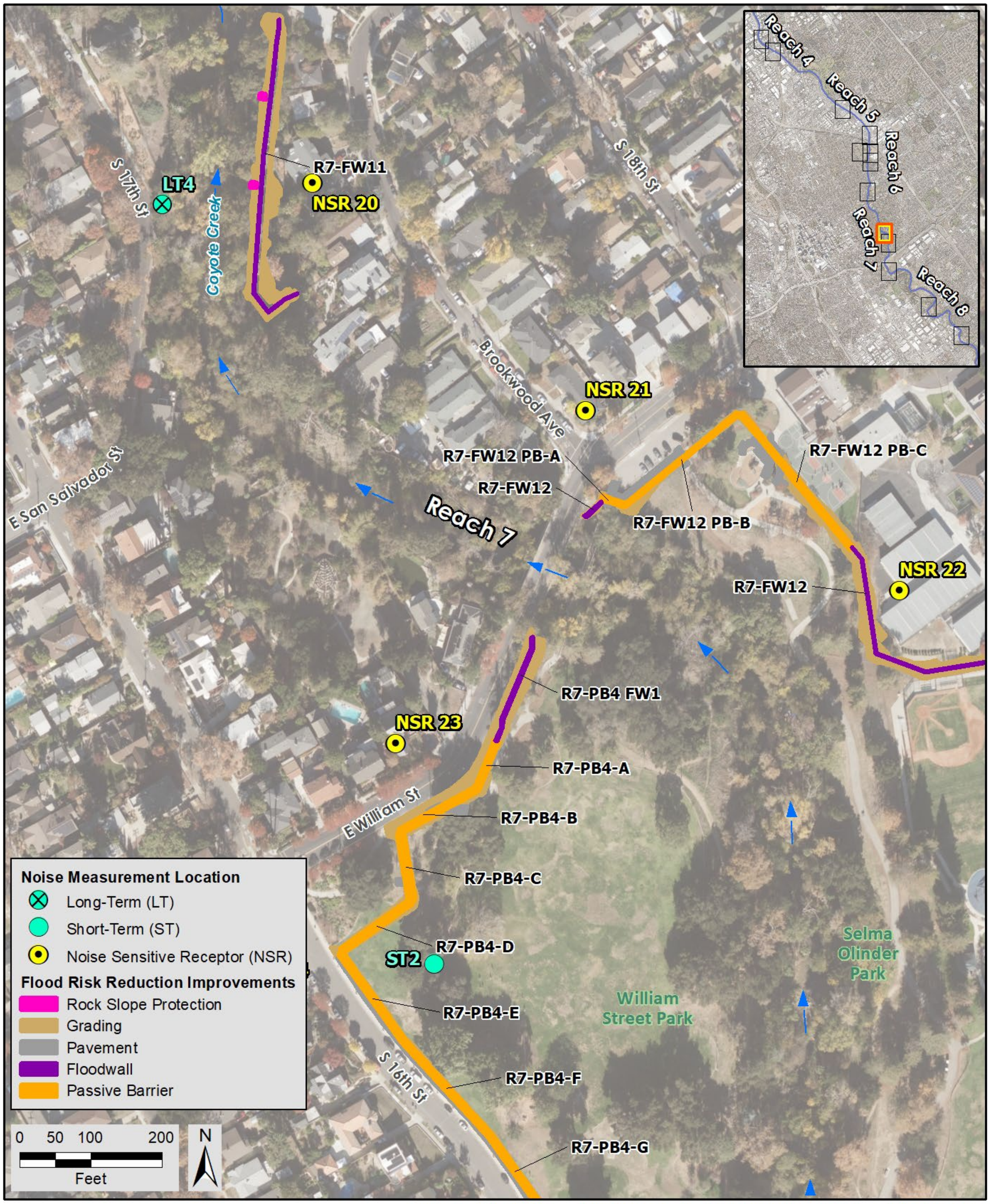

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Sources: Adapted by Ascent in 2024.

Figure 3.11.9. Reach 7 Noise Monitoring Locations and Sensitive Receptors

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Sources: Adapted by Ascent in 2024.

Figure 3.11.10. Reach 7 Noise Monitoring Locations and Sensitive Receptors, continued

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Sources: Adapted by Ascent in 2024.

Figure 3.11.11. Reach 7 Noise Monitoring Locations and Sensitive Receptors, continued

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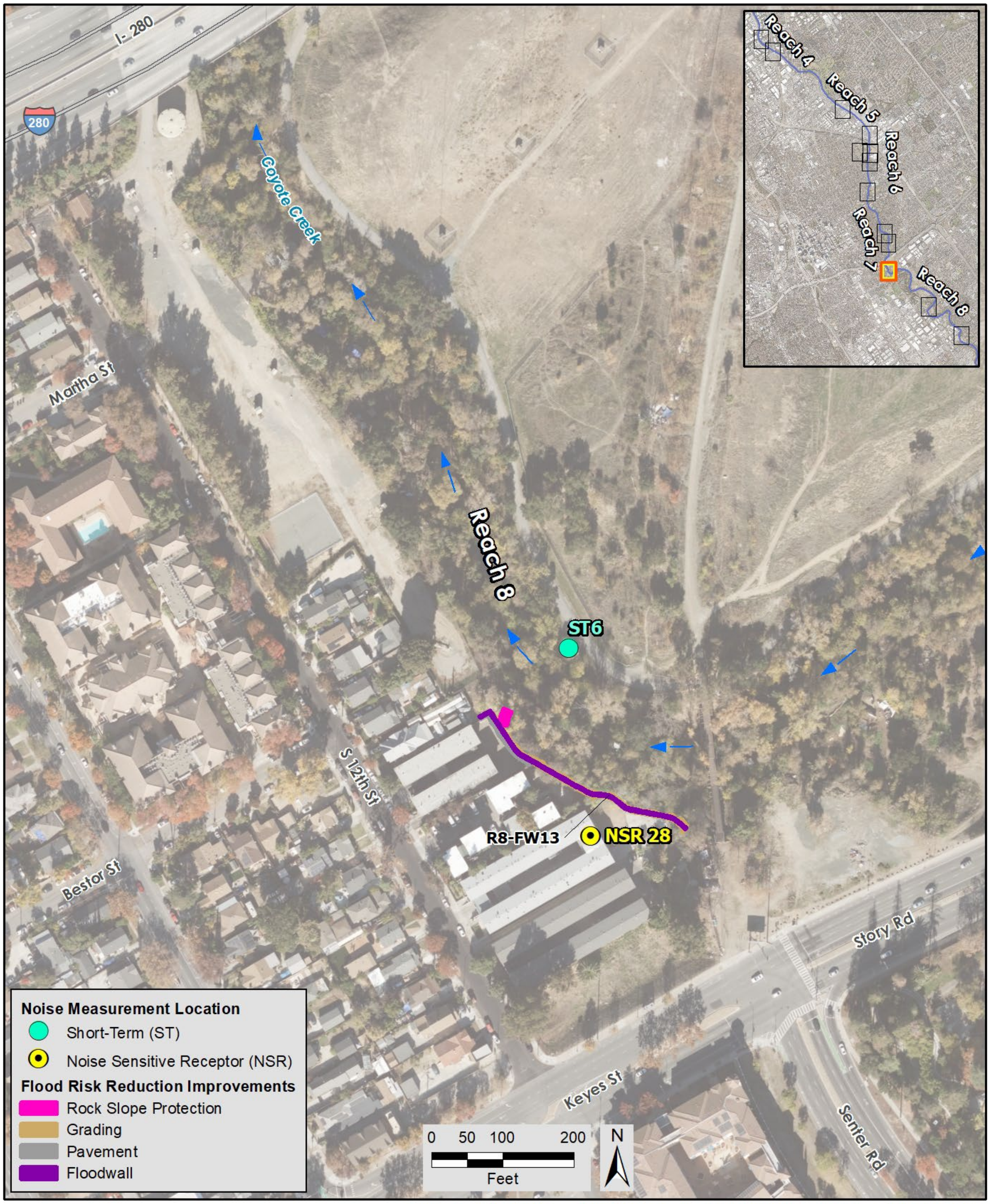

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Sources: Adapted by Ascent in 2024.

Figure 3.11.12. Reach 8 Noise Monitoring Locations and Sensitive Receptors

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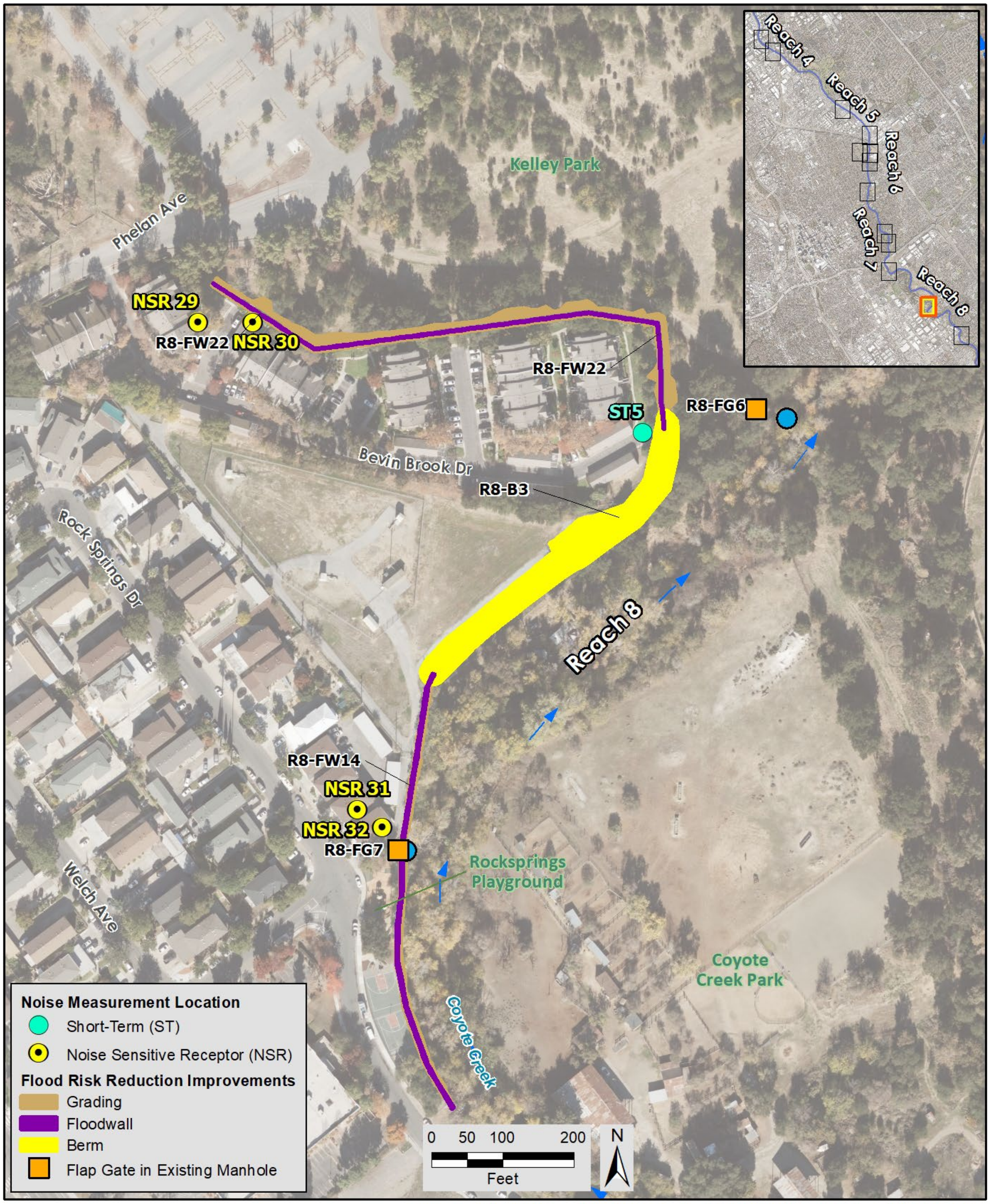

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Sources: Adapted by Ascent in 2024.

Figure 3.11.13. Reach 8 Noise Monitoring Locations and Sensitive Receptors, continued


Galveston Ave
Coyote Creek Park
ST4
NSR 33
Tully Rd
Coyote Creek
Tully Community Ballfields
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Maintenance Access A
Noise Measurement Loca
Short-Term (ST)
Noise Sensitiv
SR)
Flood Risk Redu
ements
Floodwall
0
100
200
400
Feet
N
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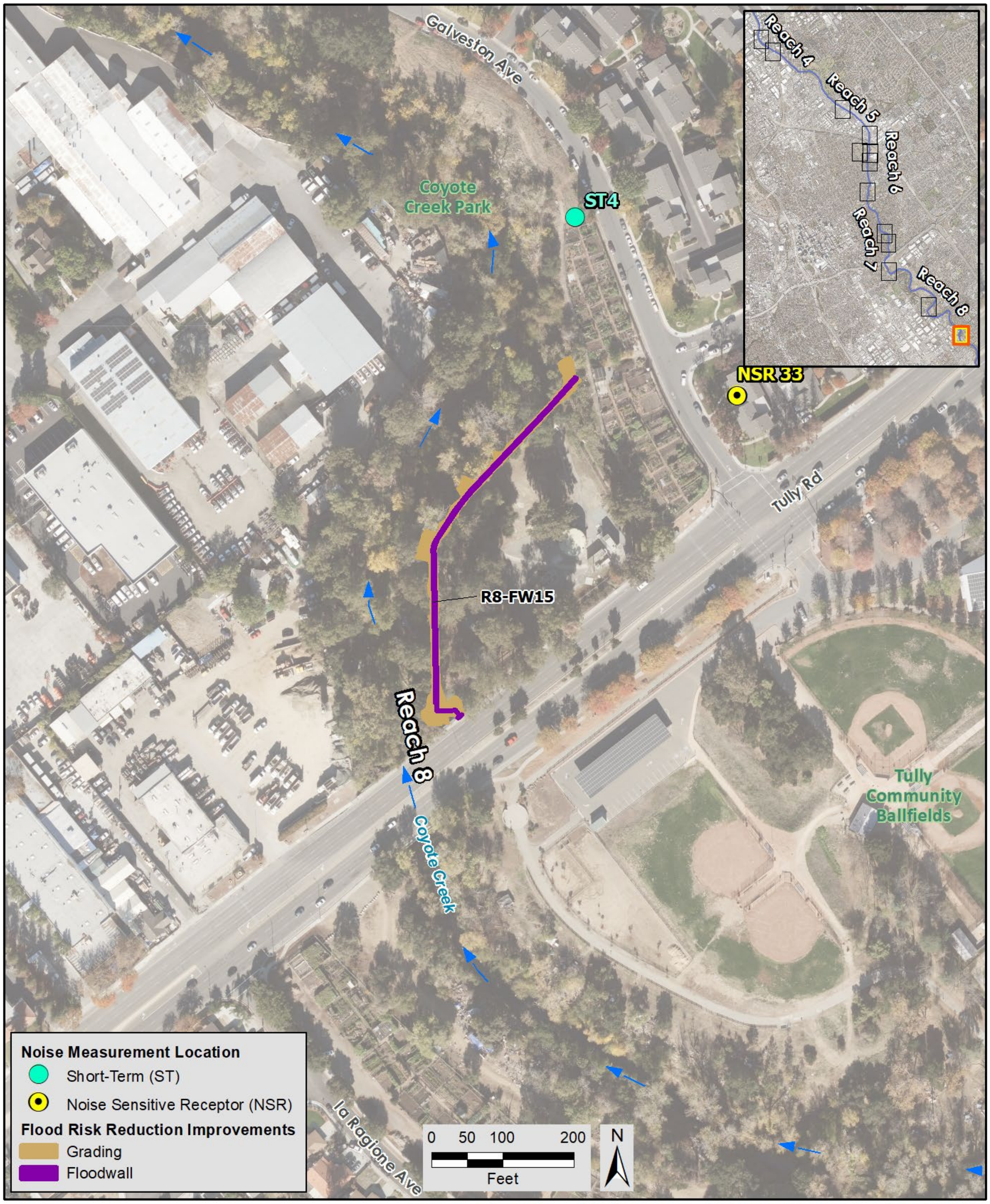

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Sources: Adapted by Ascent in 2024.

Figure 3.11.14. Reach 8 Noise Monitoring Locations and Sensitive Receptors, continued

Results from the ST measurements are summarized in **Table 3.11.4**, and results from the LT measurements are summarized in **Table 3.11.5**. The noise measurements presented establish the existing ambient noise conditions surrounding the project area.

Table 3.11.4. Summary of Short-Term Ambient Noise Level Measurements

Measurement Location ID1	Date and Time	L_{eq} (dBA)	L_{max} (dBA)	Lmin (dBA)	Surrounding Areas	Primary Noise Sources
ST1	December 5, 2023 2:37 p.m. to 3:08 p.m. (31 minutes)	52.8	74.3	42.8	Apartment Complex	People walking and talking, cars starting and parking
ST2	December 5, 2023 3:42 p.m. to 4:13 p.m. (31 minutes)	48.9	62.9	42.3	Wiliam Street Park	Traffic on East William Road and South 16th Street
ST3	December 5, 2023 4:25 p.m. to 5:00 p.m. (35 minutes)	57.5	72.1	51.0	Selma Olinder Park	Traffic on Woodborough Drive
ST4	December 6, 2023 11:12 a.m. to 11:42 p.m. (30 minutes)	51.6	73.6	42.3	Community Garden	Traffic on Galveston Avenue and Tully Road, gardening activities
ST5	December 6, 2023 12:00 a.m. to 12:32 p.m. (32 minutes)	49.3	78.1	39.8	Apartment Complex	People talking, cars starting and parking
ST6	January 18, 2024 2:44 p.m. to 3:04 p.m. (20 minutes)	58.2	72.9	55.2	Bike Trail and Creek	Bikers, joggers, walkers

Notes: ST = short-term; L_{eq} = hourly average; L_{max} = maximum instantaneous noise level; L_{min} = minimum instantaneous noise level; dBA = A-weighted decibel
1. Measurement Identifications correspond to noise measurement locations on Figures 3.11.1 through 3.11.13

Source: Data collected by Ascent in 2023 and 2024.

Table 3.11.5. Summary of Long-Term Ambient Noise Level Measurements

Measurement Location ID1	Date and Time	CNEL (dBA)	12 hour daytime L_{eq} (dBA)	Surrounding Areas	Primary Noise Sources
LT1	December 4, 2023 2:00 p.m. to December 5, 2023 2:00 p.m.	70.0	64.1	Watson Park	Sporting events, traffic on East Taylor Street
LT2	December 4, 2023 2:00 p.m. to December 5, 2023 2:00 p.m.	55.7	50.6	Roosevelt Park	Basketball, dogs, cars
LT3	January 17, 2024 1:00 p.m. to January 18, 2024 1:00 p.m.	65.0	59.2	Business Park on Charcot Avenue	Traffic on Charcot Avenue, parking lot deliveries
LT4	January 17, 2024 1:00 p.m. to January 18, 2024 1:00 p.m.	64.6	57.7	Residential Neighborhood	Traffic on South 17th Street

Notes: LT = long-term; CNEL = community noise equivalent level; L_{eq} = hourly average; dBA = A-weighted decibel
1. Measurement Identifications correspond to noise measurement locations on Figures 3.11.1 through 3.11.13

Source: Data collected by Ascent in 2023 and 2024.

3.11.2 Regulatory Setting

Federal Laws, Regulations, and Policies

United States Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was established to coordinate federal noise control activities. The Office of Noise Abatement and Control established guidelines in response to the Federal Noise Control Act of 1972 (42 USC Section 4901) to identify and address the effects of noise on public health and welfare and the environment. **Table 3.11.6** summarizes EPA's recommended guidelines for noise levels considered safe for community exposure (EPA 1974). The yearly average L_{eq} for a person seeking to avoid hearing loss over his or her lifetime should not exceed 70 dB. To minimize interference and annoyance, noise levels should not exceed 55 dB L_{dn} in outdoor activity areas and 45 dB L_{dn} in residential structures. While the Office of Noise Abatement and Control no longer exists, the Noise Control Act has been used as a resource in developing state and local standards for environmental noise.

Table 3.11.6. Summary of United States Environmental Protection Agency Recommended Noise Level Standards

Effect	Sound Level	Area
Hearing loss	$L_{eq(24)} \leq 70$ dB	All areas
Interference with and annoyance during outdoor activities	$L_{dn} \leq 55$ dB	Outdoor areas of residences and farms, and other areas where people spend widely varying amounts of time or where quiet is a basis for use
Interference with and annoyance during outdoor activities	$L_{eq(24)} \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards and playgrounds
Interference with and annoyance during indoor activities	$L_{dn} \leq 45$ dB	Indoor residential areas
Interference with and annoyance during indoor activities	$L_{eq(24)} \leq 45$ dB	Other indoor areas with human activities, such as schools

Source: EPA 1974: Table 1.

Federal Transit Administration

The FTA Division of Environmental Analysis developed the Transit Noise and Vibration Impact Assessment Manual (FTA 2018), which provides guidance for assessing vibration from construction, operation, and maintenance of projects. To address the human response to ground vibration, the FTA has established guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented below in **Table 3.11.7**. In addition, FTA has also established construction vibration damage criteria, shown below in **Table 3.11.8**.

Table 3.11.7. Ground-borne Vibration Impact Criteria for General Assessment for Human Response

Land Use Category	Frequent Events [a]	Occasional Events [b]	Infrequent Events [c]
Category 1: Buildings where vibration would interfere with interior operations.	65[d]	65[d]	65[d]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB = vibration decibels referenced to 1 microinch per second and based on the root mean square velocity amplitude.

a "Frequent Events" is defined as more than 70 vibration events of the same source per day.

b "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

c "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018: 126.

Table 3.11.8. FTA Construction Damage Vibration Criteria

Land Use Category	PPV, in/sec
Reinforced-concrete, steel, or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Notes: PPV, in/sec = peak particle velocity measured in units of inches/second; * VdB re 1 micro-in/sec.

Source: FTA 2018: 186.

In addition to vibration criteria, FTA has established construction noise criteria based on the land use type (i.e., residential or nonresidential) affected by noise and depending on whether construction noise would occur during the daytime or nighttime. The FTA criteria are as follows:

- Residential: 90 dBA L_{eq} (day) and 80 dBA L_{eq} (night)
- Commercial/Industrial (nonresidential): 100 dBA L_{eq} (day and night)

Federal Highway Administration

The Federal Highway Administration (FHWA) developed the *Roadway Construction Noise Model User's Guide* (FHWA 2006), which provides guidance for estimating construction noise levels and for determining project compliance with applicable noise limits.

State Laws, Regulations, and Policies

No state laws, regulations, or policies related to noise or vibrations apply to the proposed project.

Regional/Local Laws, and Policies

All proposed activities are within the City, and therefore, City noise standards would apply to the project, as summarized below.

Envision San José 2040 General Plan

The Environmental Leadership chapter of the Envision San José 2040 General Plan (General Plan), as adopted in 2011 and most recently updated in 2024, establishes the following standards and policies that are relevant to the analysis of the project (San José 2024a).

- **EC-1.7:** Require construction operations within the City to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:
  - Involve substantial noise generating activities (such as building demolition, grading, or excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.
  - For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.
- **EC-2.2:** Require new sources of ground-borne vibration, such as transit along fixed rail systems or the operation of impulsive equipment, to minimize vibration impacts on existing sensitive land uses to levels at or below the guidelines of the FTA.
- **EC-2.3:** Require new development to minimize continuous vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, including ruins and ancient monuments or buildings that are documented to be structurally weakened, a continuous vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. A continuous vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Equipment or activities typical of generating continuous vibration include but are not limited to: excavation equipment; static compaction equipment; vibratory pile drivers; pile-extraction equipment; and vibratory compaction equipment. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition. On a project-specific basis, this distance of 300 feet may be reduced where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction. Transient vibration impacts may exceed a vibration limit of 0.08 in/sec PPV only when and where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction.

City of San José Municipal Code

The City of San José Noise Control Ordinance as provided in the City's Municipal Code establishes the following standards that are relevant to the project.

- **Section 10.16 – Offenses Against Public Peace** requires that no person disturb the peace, quiet, and comfort of any neighborhood by creating disturbing or unreasonably loud noise.
- **Section 20.100.450 – Hours of construction within 500 feet of a residential unit** requires that, when construction occurs within 500 feet of a residential unit, work hours are limited to 7:00 a.m. to 7:00 p.m. on Monday through Friday, unless otherwise expressly allowed in a Development Permit or other planning approval. The Municipal Code does not establish quantitative noise limits for demolition or construction activities occurring in the City. This section is applicable whenever a development permit or other planning approval is required for construction activity.

3.11.3 Applicable BMPs and VHP Conditions/AMMs

Valley Water would incorporate BMPs, VHP Conditions, and AMMs to avoid and minimize adverse effects on the environment that may result from the project. AMMs are project specific measures that have been identified to supplement the standard Valley Water BMPs to minimize impacts from project construction and implementation. There are no relevant BMPs, VHP conditions, or AMMs that would apply to noise and vibration.

3.11.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines and applied using FTA and local standards. These local standards represent noise levels acceptable to the local community, consistent with Appendix G (Question XIII[a]). The project would have a significant noise and vibration impact if implementation of the project would:

- Generate a substantial temporary 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.

  Based on the City General Plan Policy EC-1.7, municipal code, and applicable FTA construction noise criteria, the project would result in a significant noise impact if the project results in:

  - an exceedance of FTA construction noise limits of 90 dBA L_{eq} (day) and 80 dBA L_{eq} (night) for residential receptors or 100 dBA L_{eq} (day and night) for nonresidential receptors (FTA), or
  - a substantial increase in noise over existing ambient levels, defined for purposes of this EIR as a 10 dBA increase in areas where existing noise is below 65 dBA and a 5 dBA increase in areas where existing noise is above 65 dBA associated with project construction activities located within 500 feet of a residential use or 200 feet of commercial or office use continuing for more than 12 months (City General Plan Policy EC-1.7).
- Generate excessive groundborne vibration or groundborne noise levels.

Based on the City of San José General Plan Policy EC-2.3 and applicable FTA guidance, the project would result in a significant vibration impact if the following standards are exceeded:

- Structural damage (San José General Plan Policy EC-2.3)
  - A limit of 0.08 in/sec PPV for sensitive historic structures, including ruins and ancient monuments or buildings that are documented to be structurally weakened.
  - A limit of 0.20 in/sec PPV for buildings of normal conventional construction.
  - The use of an impact pile driver within 125 feet of any building or within 300 feet of a historical building or building in poor condition, unless determined by a site-specific study that no risk for structural damage would occur.
    - Human Annoyance (FTA)
  - A limit of 80 VdB for infrequent events (typical construction), 75 VdB for occasional events (sheet piles), and 72 VdB for frequent events that occur for extended periods of time (defined as 12 months or more) during the nighttime hours from 7:00 p.m. to 7:00 a.m, or 78 VdB (daytime) for institutional land uses.

- Generate a substantial long-term 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. Based on applicable FTA construction noise criteria, the project would result in a significant noise impact if the project results in:
  - For any operational activity that uses construction equipment (e.g., a grader), an exceedance of FTA construction daytime noise limits for residential receptors (i.e., 90 dBA L_{eq}) or for nonresidential receptors (100 dBA L_{eq})
- Expose people residing or working in the project area to excessive noise levels 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 2 miles of a public airport or public use airport.

Analysis Methodology

Construction Noise

Project-generated construction noise levels were determined based on methodologies, reference noise emission levels for construction activities, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and the FHWA *Roadway Construction Noise Model User's Guide* (FHWA 2006). Reference levels for noise and vibration emissions for specific equipment or activity types are well documented, and their usage is common practice in the field of acoustics.

Construction noise can be characterized based on the type of activity and associated equipment needed. In this analysis, construction noise modeling is based on a project-specific equipment list and by considering the noise levels associated with the likely combination of construction equipment required for the various activities (e.g., grading, foundation/concrete work) associated with each flood risk reduction improvement (i.e., floodwall, passive barrier, headwall/wingwall, berm). To conduct the analysis, existing structures and land use types (i.e., sensitive receptors) and their distance from the nearest proposed flood risk reduction improvements were first identified using aerial imagery (Table 3.11.3). The distance to the nearest sensitive receptor was measured based on the location and features of the improvements. Specifically, for areas that would include multiple improvements, the distance from the center of construction activities (also referred to as the acoustical center) to the nearest sensitive receptor was measured. For all linear construction sites (e.g., floodwall sites), the distance from the edge of the improvement site to the nearest-sensitive receptor was measured.

Six construction noise modeling scenarios were run to capture the noise levels for each improvement, as follows:

- **Passive Barrier Construction and Headwall/Wingwall Construction –** This scenario represents the implementation of passive barriers and headwalls/wingwalls and assumes that up to four pieces of equipment (excavator, roller, concrete mixer truck, and generator) would be operating simultaneously in any one location.
- **Berm Construction –** This scenario represents berm construction and assumes that five pieces of construction equipment (backhoe, dozer, roller, pneumatic tools, and a generator) would be operating simultaneously at any one location.
- **Concrete T-Wall and L-Wall Construction –** This scenario represents T-Wall and L-Wall floodwall construction and assumes that five pieces of construction equipment (excavator, dozer, roller, concrete mixer truck, and generator) would be operating simultaneously at any one location.
- **Sheet Pile I-Wall Construction –** This scenario represents Type 1 and Type 2 I-Wall construction with an impact pile driver and assumes that three pieces of construction equipment (impact pile driver, crane, generator) would be operating simultaneously at any one location. As detailed in Chapter 2, "Project Description," at improvement sites where there are sensitive receptors to noise and/or vibrations, sheet piles would be driven into place by using silent hydraulic press-in piling equipment. However, because specific locations where the silent pile driver could be used are not known at this time, the noise analysis takes a **c**onservative approach to determine where impacts could occur by assuming that conventional pile driving could occur anywhere pile driving is required.
- **Multiple Construction Types –** This scenario represents a conservatively high scenario in which multiple types of construction activities (e.g., floodwall and passive barrier construction) are occurring simultaneously. This modeling scenario assumes that five pieces of construction equipment (concrete pump truck, generator, crane, excavator, impact pile driver) would be operating simultaneously at any one location.
- **Nighttime Construction – Concrete Pour –** This scenario represents construction that would occur at least 500 feet from residential receptors between the hours of 7:00 p.m. and 7:00 a.m., in accordance with Section 20.100.450 of the City Municipal Code. This modeling scenario assumes that three pieces of equipment (concrete mixer truck, pickup truck, and generator) would be operating simultaneously at any one location.

It is important to note that the model assumes that all pieces of construction equipment are operating at the same exact location, which is not physically possible. The model also assumes that conventional impact pile driver equipment instead of silent press-in pile driver equipment would be used to drive sheet piles into place. Therefore, noise levels presented in this analysis are considered conservatively high, and if different combinations or types of equipment were used than what the modeling included, noise levels would be similar or lower than what is presented.

Temporary noise generated from the project was also evaluated in comparison to existing ambient noise levels to determine if a substantial temporary increase in noise would occur. To establish existing ambient noise levels during daytime and nighttime, four long-term and six short-term noise measurements were taken, as summarized in Tables 3.11.4 and 3.11.5. Based on the locations of construction, the most representative nearby noise measurement was used as a proxy for existing conditions. Construction noise at nearby sensitive receptors was then added to existing noise levels to determine I increases in noise.

Consistent with FTA methods, noise levels are presented in L_{max} and L_{eq}; however, due to the fluctuating nature of construction activity intensity throughout the day, the L_{eq} is the appropriate metric used for this analysis. Finally, the project would not result in any new stationary or mobile long-term increases in noise because operation and maintenance activities would be similar to current activities as described in Chapter 2, “Project Description.” Operational activities would involve the use of equipment similar to those used for construction; thus, calculation and propagation methods discussed above for construction were also applied to operational activities.

Construction Vibration

To assess potential short-term construction-related vibration impacts, sensitive receptors and their relative exposure to construction vibration were identified. Project-generated construction vibration levels were determined based on methodologies, reference emission levels, and usage factors from FTA’s *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018). Reference levels for vibration emissions for specific equipment types are well documented, and their usage is common practice in the field of acoustics.

Construction activities could expose nearby buildings to levels of ground vibration that could result in structural damage and/or negative human response. These types of activities were assessed based on the types of construction equipment that would be used, the levels of ground vibration typically generated by these types of equipment, and the proximity of construction activity to nearby structures consistent with FTA guidance and methodology for propagating construction-related vibration levels.

Impacts Not Discussed Further in the EIR

Long-Term Operational Vibration

The project would not result in the development of any major sources of ground vibration during operations and maintenance activities and would not result in long-term unacceptable levels of vibration. This issue is not discussed further.

Airport Noise

The San José Mineta Airport is located approximately 1.5 miles southwest of Reach 4. However, the noise contours identified in the Comprehensive Land Use Plan (CLUP) do not extend into the project area (Santa Clara County Airport Land Use Commission 2016). The Reid-Hillview County Airport is located approximately 1.79 miles east of Reach 8, but the noise contours identified in the airport CLUP also do not extend into the project area (Santa Clara

County Airport Land Use Commission 2007: Figure 5). Additionally, there are no private airstrips in the project vicinity. Therefore, the project would not result in the exposure of people to excessive noise levels associated with airport activity. This issue is not discussed further.

Impact Analysis

Impact NOI-1: ***Substantial Temporary Construction-Related Increase in Noise Levels in Excess of FTA and City of San José Standards. (Significant and Unavoidable)***

Construction Noise Levels by Construction Type

The project would construct flood risk reduction improvements in urban areas along approximately 9 miles of Coyote Creek. Construction is anticipated to begin in early 2025 and last approximately 2 years. Construction activities would be conducted Monday through Friday between 7:00 a.m. and 7:00 p.m. for approximately 10 hours per day. As detailed in Chapter 2, “Project Description,” consistent with the limits established by Section 20.100.450 of the City Municipal Code, nighttime (i.e., 7:00 p.m. to 7:00 a.m.) and weekend construction work would occur only where construction activities are more than 500 feet from residential units.

The types of heavy equipment used during project construction would include dozers, backhoes, excavators, scrapers, cranes, pile drivers, concrete trucks, generators, and haul/concrete trucks. However, construction equipment in use at a given time would vary depending on the phase of construction and the specific type of improvement being constructed. Because the effects of construction noise largely depend on the type of construction activities being performed, noise levels generated by those activities, distances to noise-sensitive receptors, the relative locations of noise-attenuating features such as vegetation and existing structures, and existing ambient noise levels, construction noise levels near each flood risk reduction improvement site would vary. Reference noise levels for construction equipment that would be used are shown in **Table 3.11.9.**

Table 3.11.9. Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA at 50 feet) L_{max}
Backhoes	80
Compactor	82
Concrete Pump Truck	82
Concrete Mixer Truck	85
Crane	83
Dozer	85
Excavator	85
Generator	73
Silent Pile Driver	64
Impact Pile Driver	95
Pickup Truck	75
Pneumatic Tools	85
Roller	85
Truck	84

Notes: dBA = A-weighted decibel; L_{max} = maximum instantaneous noise levels.
Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications.
Sources: FTA 2018: 176; FHWA 2006; Giken 2023.

Based on available project-specific information, noise levels at a starting reference distance of 50 feet from the center of construction activity are shown in **Table 3.11.10** for all individual construction activities, as well as a conservatively high scenario, in which multiple types of construction activities would be occurring simultaneously. The modeling assumed the simultaneous use of multiple pieces of construction equipment as shown below and does not account for any existing intervening topography or structures, and therefore, represents conservatively high noise level generation when all equipment at each location is in operation.

Table 3.11.10. Construction Noise Levels by Construction Type

Construction Type	Construction Equipment	Modeled Construction Noise (dBA L_{max}) at 50 feet	Modeled Construction Noise (dBA L_{eq}) at 50 feet
Passive Barrier	Excavator, Roller, Concrete Mixer Truck, Generator	90.4	86.0
Berm	Backhoe, Dozer, Roller, Pneumatic Tools, Generator	90.8	86.7
Concrete T-Wall and L-Wall Floodwall	Excavator, Dozer, Concrete Truck, Roller, Generator	91.5	86.3
Sheet Pile I-Wall Floodwall	Impact Pile Driver, Crane, Generator	95.6	88.8
Multiple Construction Types	Concrete Truck, Generator, Crane, Excavator, Impact Pile Driver	96.1	89.6

Notes: dBA = A-weighted decibel

Source: Modeling conducted by Ascent in 2024.

As shown in Table 3.11.10, construction noise levels can vary depending on the type and number of pieces of construction equipment used. Based on the modeling conducted, at 50 feet from construction activities, noise levels would range from 86.0 dBA L_{eq} for construction of a passive barrier without the use of a pile driver to 89.6 dBA L_{eq} for construction activities where construction of multiple improvement types (e.g., passive barrier and floodwall) requiring the use of a pile driver would occur in close proximity, combining to result in a conservatively high noise scenario. The entirety of the project would be constructed over an approximately 2-year period and construction would generally occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, unless otherwise expressly allowed, in compliance with Section 20.100.450 of the City Municipal Code.

Construction noise impacts were evaluated in consideration of two primary criteria: 1) maximum anticipated noise levels in comparison to absolute noise limits (i.e., FTA), and 2) substantial temporary increases in noise levels above existing conditions (i.e., City of San José Policy EC-1.7). Each assessment is described in detail below.

Maximum Anticipated Noise Levels

Table 3.11.11 identifies the impact distance (or noise contour distance to the impact threshold criteria) from individual improvement locations at which the FTA construction noise daytime threshold for residential (i.e., 90 dBA L_{eq}) and nonresidential land uses (i.e., 100 dBA L_{eq}) would be reached. A value of not applicable (N/A) is used if there are no residential or commercial land uses located within the impact distance of an improvement site.

Table 3.11.11. Modeled Daytime Construction Noise Levels and Impact Distances

Construction Activity	Daytime Noise Criteria	Distance to Criteria	Locations that Exceed FTA Noise Criteria
Passive Barrier	Residential Receptor: 90 dBA L_{eq}	31 ft	N/A
	Commercial/Industrial Receptor: 100 dBA L_{eq}	10 ft	N/A
Berm	Residential Receptor: 90 dBA L_{eq}	34 ft	N/A
	Commercial/Industrial Receptor: 100 dBA L_{eq}	11 ft	N/A
Concrete T-Wall and L-Wall Floodwall	Residential Receptor: 90 dBA L_{eq}	33 ft	R7-FW11, R7-FW11, R7-FW18
	Commercial/Industrial Receptor: 100 dBA L_{eq}	10 ft	N/A
Sheet Pile I-Wall Floodwall	Residential Receptor: 90 dBA L_{eq}	44 ft	R6-FW9, R6-FW10, R6-B21, R6-FW20, R8-FW13
	Commercial/Industrial Receptor: 100 dBA L_{eq}	14 ft	R6-FW8
Multiple Construction Types	Residential Receptor: 90 dBA L_{eq}	48 ft	R6-FW7, R6-B8, R7-PB5, R8-FW14, R8-B3
	Commercial/Industrial Receptor: 100 dBA L_{eq}	15 ft	R7-FW12, R4-FW4

Notes: dBA= A-Weighted decibel; ft = feet; N/A = Not applicable (i.e., there are no sensitive receptors within the impact distance).
Source: Modeling conducted by Ascent in 2024.

Using the distance to the threshold contours identified above in Table 3.11.11, all project improvement sites, and their associated impact distances were evaluated in consideration of existing nearby sensitive receptors to determine where applicable thresholds would be exceeded. Daytime and nighttime construction noise were evaluated separately, below.

Daytime Construction

In general, construction activity would occur during the daytime hours of 7:00 a.m. to 7:00 p.m., consistent with Section 20.100.450 of the City Municipal Code. **Table 3.11.12** displays each sensitive receptor, the improvement site nearest to the receptor, the construction scenario that was modeled at the receptor, and whether the construction noise level exceeds the applicable threshold.

Regarding activities that would occur at staging/laydown areas and associated access routes, the movement of equipment to/from these areas would generate some noise; however, this noise would not be noticeably different from other existing sources in the vicinity of these areas, such as vehicular noise on nearby roadways or construction noise associated with nearby improvement construction. Thus, noise associated with the staging/laydown areas and access routes would not generate levels of noise that could exceed established thresholds for construction noise.

Based on the review conducted of improvement locations and existing sensitive receptors, daytime construction activity could exceed FTA daytime construction noise thresholds for residential land uses (i.e., 90 dBA L_{eq}) and non-residential land uses (i.e., 100 dBA L_{eq}) at 15 sensitive receptors (Table 3.11.12).

Table 3.11.12. Modeled Daytime Construction Noise at Sensitive Receptors

Receptor ID (Receptor Type)	Nearest Improvement	Construction Noise Scenario/ Construction Type[1]	Distance to Construction Noise (ft)	Noise Exposure Level (dBA L_{eq}) at NSR	Threshold (dBA L_{eq})	Exceeds Threshold?
NSR 1 (Non-Residential)	R4-FW1	Multiple Construction Types conservatively high scenario)	21	97.2	100	No
NSR 2 (Non-Residential)	R4-FW2	Multiple Construction Types (conservatively high scenario)	24	96.0	100	No
NSR 3 (Non-Residential)	R4-FW3	Multiple Construction Types (conservatively high scenario)	17	99.0	100	No
NSR 4 (Non-Residential)	R4-FW4	Multiple Construction Types (conservatively high scenario)	7	107	100	**Yes**
NSR 5 (Non-Residential)	R4-FW4	Multiple Construction Types (conservatively high scenario)	48	90.0	100	No
NSR 6 (Residential)	R6-PB7	Multiple Construction Types (conservatively high scenario)	168	79.1	90	No
NSR 7 (Residential)	R6-PB7	Multiple Construction Types (conservatively high scenario)	99	83.7	90	No
NSR 8 (Residential)	R6-FW7	Multiple Construction Types (conservatively high scenario)	4	112	90	**Yes**
NSR 9 (Residential)	~~R6-FW16~~ R6-FW7	I-Wall	~~253~~ 4	~~74.7~~ 112	90	~~No~~ **Yes**
NSR 34 (Residential)	R6-B8	Roadway berm	4	112	90	**Yes**
NSR 10 (Residential)	R6-FW9	I-Wall	163	78.6	90	No
NSR 11 (School)	R6-FW9	I-Wall	7	106	100	**Yes**
NSR 12 (Non-Residential)	R6-FW5	I-Wall	24	95.2	100	No

Receptor ID (Receptor Type)	Nearest Improvement	Construction Noise Scenario/ Construction Type[1]	Distance to Construction Noise (ft)	Noise Exposure Level (dBA L_{eq}) at NSR	Threshold (dBA L_{eq})	Exceeds Threshold?
NSR 13 (Non-Residential)	R6-FW6	I-Wall	159	78.8	100	No
NSR 14 (Non-Residential)	R6-FW8	I-Wall	8	105	100	**Yes**
NSR 15 (Residential)	R6-FW10	I-Wall	8	105	90	**Yes**
NSR 16 (Residential)	R6-FW10	I-Wall	9	104	90	**Yes**
NSR 17 (Residential)	R6-B21	I-Wall	39	91.0	90	**Yes**
NSR 18 (Residential)	R6-FW20	I-Wall	79	84.8	90	No
NSR 19 (Residential)	R6-FW20	I-Wall	23	95.6	90	**Yes**
NSR 20 (Residential)	R7-FW11	T-Wall	12	98.7	90	**Yes**
NSR 21 (Residential)	R7-FW12 PB-B	Multiple Construction Types (conservatively high scenario)	100	83.6	90	No
NSR 22 (Non-Residential)	R7-FW12	Multiple Construction Types (conservatively high scenario)	10	104	100	**Yes**
NSR 23 (Residential)	R7-PB4	Multiple Construction Types (conservatively high scenario)	70	86.7	90	No
NSR 24 (Residential)	R7-PB4	Multiple Construction Types (conservatively high scenario)	50	89.6	90	No
NSR 25 (Residential)	R7-FW18	Multiple Construction Types (conservatively high scenario)	8	106	90	**Yes**
NSR 26 (Residential)	R7-PB5	Multiple Construction Types (conservatively high scenario)	67	87.1	90	No
NSR 27 (Residential)	R7-PB5	Multiple Construction Types (conservatively high scenario)	44	90.8	90	**Yes**
NSR 28 (Residential)	R8-FW13	I-Wall	8	105	90	**Yes**

Receptor ID (Receptor Type)	Nearest Improvement	Construction Noise Scenario/ Construction Type[1]	Distance to Construction Noise (ft)	Noise Exposure Level (dBA L_{eq}) at NSR	Threshold (dBA L_{eq})	Exceeds Threshold?
NSR 29 (Residential)	R8-B3	Multiple Construction Types (conservatively high scenario)	53	89.1	90	No
NSR 30 (Residential)	R8-B3	Multiple Construction Types (conservatively high scenario)	13	101	90	**Yes**
NSR 31 (Residential)	R8-FW14	Multiple Construction Types (conservatively high scenario)	53	89.1	90	No
NSR 32 (Residential)	R8-FW14	Multiple Construction Types (conservatively high scenario)	18	98.5	90	**Yes**
NSR 33 (Residential)	R8-FW15	T-Wall	179	75.2	90	No

Notes: NSR = Noise-Sensitive Receptor; dBA = A-weighted decibel [1]See Table 3.11.11 for reference noise levels at 50 feet from the construction activities.
Source: Modeled by Ascent in 2024.

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Nighttime Construction

Consistent with Section 20.100.450 of the City Municipal Code, nighttime (i.e., between 7:00 p.m. and 7:00 a.m.) construction could occur where construction activities are more than 500 feet from residential uses. Flood risk reduction improvements that are more than 500 feet from residential units include all features along Reach 4 and improvement R6-FW5 along Reach 6. Nighttime construction could generate noise levels of 83.1 dBA L_{eq} and 86.8 L_{max} at 50 feet. The FTA nighttime construction noise standards for residential uses (i.e., 80 dBA L_{eq}) and non-residential uses (i.e., 100 dBA L_{eq}) would be exceeded within 72 feet and 7 feet, respectively. Nighttime construction along Reach 4 could occur as close as 7 feet from existing non-residential uses (NSR 4 in Table 3.11.12). The nearest residential uses to Reach 4 are located along Silk Wood Lane, approximately 0.38 miles northeast of improvement R4-FW3. Nighttime construction activity at improvement R6-FW5 along Reach 6 could occur as close as 24 feet from existing non-residential uses (NSR 12 in Table 3.11.12). The nearest residential uses (i.e., NSR 9) to Reach 6 are located along Jackson Street, approximately 0.23 miles west of improvement R6-FW5. **Table 3.11.13** identifies the improvement sites at which nighttime construction could occur and the modeled construction noise levels at the nearest residential and non-residential land uses from each site.

Based on the review conducted of project improvement locations and existing noise-sensitive receptors, nighttime construction activity would not exceed FTA criteria for residential or non-residential uses, as shown in Table 3.11.13.

Table 3.11.13. Modeled Nighttime Construction at Sensitive Receptors

Receptor ID (Receptor Type)	Nearest Improvement	Nighttime Construction Noise Scenario/ Construction Type	Distance to Construction Noise (ft)	Noise Exposure Level (dBA L_{eq}) at NSR	Threshold (dBA L_{eq})	Exceeds Threshold?
NSR 4 (Non-Residential)	R4-FW4	Concrete Pour	7	100	100	No
Residences along Silk Wood Lane (Residential)	R4-FW3	Concrete Pour	1,984	51.2	80	No
NSR 12 (Non-Residential)	R6-FW5	Concrete Pour	24	89.5	100	No
NSR 9 (Residential)	R6-FW5	Concrete Pour	1,211	55.5	80	No

Source: Modeled by Ascent in 2024.

Based on the review conducted of project feature locations and existing noise-sensitive receptors, daytime construction activity would exceed FTA criteria for residential and non-residential uses; however, nighttime construction activity would not exceed FTA criteria for residential or non-residential uses, as shown in Table 3.11.13. Therefore, based on the review conducted of project improvement locations and distance to existing noise-sensitive receptors, daytime construction activity could exceed FTA criteria for residential and non-residential uses located near construction activities at 15 sensitive receptors, as shown in Table 3.11.12.

Substantial Temporary Increase in Noise

Project-generated construction noise was also evaluated in comparison to existing ambient noise levels to determine if a substantial temporary (defined as less than 12 months) increase in noise would occur. Existing ambient noise levels were established by 10 noise measurements taken throughout the project area (refer to Tables 3.11.4 and 3.11.5). Based on the locations of construction, the most representative nearby noise measurement was used as a proxy for existing conditions at NSRs. Construction noise at nearby sensitive receptors was then added to existing noise levels to determine increases in noise. Increases in noise were evaluated for daytime and nighttime construction activities separately, below.

Daytime Noise

Project-generated construction noise, existing noise levels, and the change in noise levels with existing and construction noise levels combined at each NSR are summarized below in **Table 3.11.14** and detailed calculations are included in Appendix G. As shown in Table 3.11.14, existing ambient daytime noise levels within the project area range from 39.8 dBA L_{eq} to 74.0 dBA L_{eq}. In accordance with FTA guidance, areas exposed to lower levels of noise are less prone to adverse effects from increases in project noise, whereas areas exposed to higher noise levels become increasingly adversely affected as noise levels increase. Therefore, a 5-dBA increase from project generated noise is appropriate for areas exposed to higher noise (i.e., 65 dBA) and a 10 dBA increase would be appropriate in areas exposed to lower noise (i.e., below 65 dBA). When combining existing noise with project-generated noise, all sensitive receptors would be exposed to noise level increases of more than 10 dBA; thus, construction noise would be perceived as a more than doubling of the existing noise levels. Nonetheless, in addition to the perceived increase in noise, it is important to factor in the duration of noise exposure, as increasing exposure over time to excessive noise levels has the potential to result in increased annoyance impacts. Considering that there are numerous locations where construction would occur, with up to three locations being constructed at the same time, the duration of construction activity at any one location affecting the same receptor would not be more than two months in any location. See Section 3.3, “Air Quality,” Impact AIR-3 for more details on the longest duration of construction activity at any one location. The City of San José considers “significant noise impacts to occur if a project located within 500 feet of a residential use or 200 feet of commercial or office use would involve substantial noise generating activities, (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.” (See Policy EC-1.7 above). In consideration of the short-term duration of project construction, while recognizing that construction periods would result in substantial increases in noise levels, the perceived increases in noise would be temporary and occur during the less sensitive times of the day, and therefore, less likely to result in adverse health impacts (e.g., sleep disturbance leading to sleep deprivation and stress).

Nighttime Noise

Construction activities that occur during the night (i.e., a concrete pour), when ambient background levels are low, are much more perceptible over greater distances compared to when construction occurs during the daytime hours when existing ambient levels are higher. In accordance with Section 20.100.450 of the City Municipal Code, construction could occur between the hours of 7:00 p.m. and 7:00 a.m. at improvement sites located more than 500 feet from a residential unit. All improvements along Reach 4 and improvement R6-FW5 along Reach 6 are located more than 500 feet from residences. There are identified non-residential receptors located near these improvement sites, where typical business hours occur during the daytime; thus, these non-residential buildings would not be occupied and are also not considered places where people sleep. Therefore, a nighttime noise impact would not be likely. The nearest residences to the Reach 4 improvements are located along Silk Wood Lane, approximately 1,984 feet east of the nearest project improvement site (i.e., R4-FW4). The closest residences to improvement R6-FW5 are located along Jackson Street near NSR 9. As shown in **Table 3.11.15**, nighttime construction noise at these residences would attenuate to 51.2 dBA L_{eq} and 55.5 dBA L_{eq}, respectively. Existing ambient noise level measurements were taken as detailed above, and because it is surrounded by residential uses, the data measured at LT 4 for nighttime average L_{eq} was selected to represent nighttime noise levels at residences along Jackson Street and Silk Wood Lane. The nighttime average L_{eq} measured from LT 4 is 54.8 dBA L_{eq}. When combining existing nighttime noise with project-generated noise from nighttime construction at Reach 4 and improvement R6-FW5, residences along Silk Wood Lane and Jackson Road would be exposed to noise level increases of 1.6 dBA and 3.3 dBA, respectively. A 10 dB increase is permissible in areas exposed to lower noise levels (i.e., 65 dBA or less) and a 5 dB increase is permissible in areas exposed to higher noise levels (i.e., more than 65 dBA). However, the increases in noise from nighttime construction would not exceed either threshold at this location, nor would construction occur for more than 12 months at these locations.

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Table 3.11.14. Project-Generated Construction Noise Compared to Existing Noise Levels

NSR ID	Nearest Activity	Nearest Work Site (Distance, ft)	Existing Noise Level (Leq)	Highest Construction Noise Level at Receptor (Leq)	Existing Plus Project Noise Levels (dB Leq)	Change (Existing + Project) Noise Levels (dB)
1	Sheet Pile I-Wall	R4-FW1 (21)	62.7	97.2	97.2	34.5
2	Sheet Pile I-Wall	R4-FW2 (24)	69.2	96.0	96.0	26.8
3	Sheet Pile I-Wall	R4-FW3 (17)	65.4	99.0	99.0	33.6
4	Sheet Pile I-Wall	R4-FW4 (7)	59.2	107	107.0	47.8
5	Sheet Pile I-Wall	R4-FW4 (48)	57.8	90.0	90.0	32.2
6	Berm and Concrete T-Wall	R6-B7 (168)	59.2	79.1	79.2	19.9
7	Sheet Pile I-Wall Floodwall connected to a Sound Wall	R6-PB7 (99)	59.9	83.7	83.7	23.8
8	Sheet Pile I-Wall	R6-FW7 (4)	59.9	112	112	52.1
9	Sheet Pile I-Wall	~~R6-FW16 (253)~~ R6-FW7 (4)	59.9	~~74.7~~ 112	~~74.8~~ 112	~~15.0~~ 52.1
34	Sheet Pile I-Wall	R6-B8 (4)	59.9	112	112	52.1
10	Sheet Pile I-Wall	R6-FW9 (163)	52.8	78.6	78.6	25.8
11	Sheet Pile I-Wall	R6-FW9 (7)	52.8	106	106	53.2
12	Sheet Pile I-Wall	R6-FW5 (24)	64.7	95.2	95.2	30.5
13	Sheet Pile I-Wall	R6-FW6 (159)	69.1	78.8	79.2	10.1
14	Sheet Pile I-Wall	R6-FW8 (8)	66.1	105	105	38.9
15	Sheet Pile I-Wall	R6-FW10 (8)	52.8	105	105	52.2
16	Sheet Pile I-Wall	R6-FW10 (9)	52.8	104	104	51.2
17	~~Sheet Pile I-Wall~~ Berm	R6-B21 (39)	52.8	91.0	91.0	38.2
18	Sheet Pile I-Wall	R6-FW20 (79)	50.6	84.8	84.8	34.2
19	Concrete T-Wall	R6-FW20 (23)	50.6	95.6	95.6	45.0

NSR ID	Nearest Activity	Nearest Work Site (Distance, ft)	Existing Noise Level (Leq)	Highest Construction Noise Level at Receptor (Leq)	Existing Plus Project Noise Levels (dB Leq)	Change (Existing + Project) Noise Levels (dB)
20	~~Sheet Pile I-Wall Floodwall Connected to Passive Barrier Segments~~Concrete T-Wall	R7-FW11 (12)	57.7	98.7	98.7	41.0
21	Sheet Pile I-Wall Floodwall Connected to Passive Barrier Segments	R7-FW12 (100)	49.2	83.6	83.6	34.4
22	Passive Barriers Connected to a Sheet Pile I-Wall	R7-FW12 (10)	39.9	104	104	64.1
23	Concrete L-Wall	R7-PB4 (70)	49.5	86.7	86.7	37.2
24	Passive Barriers Connected to a Sheet Pile I-Wall	R7-PB4 (50)	44.2	89.6	89.6	45.4
25	Passive Barriers Connected to a Sheet Pile I-Wall	R7-FW18 (8)	51.0	106	106	55.0
26	Sheet Pile I-Wall	R7-PB5 (67)	51.0	87.1	87.1	36.1
27	Berm to Concrete L-Wall	R7-PB5 (44)	51.0	90.8	90.8	39.8
28	Berm to Concrete L-Wall	R8-FW13 (8)	57.6	105	105	47.4
29	Sheet Pile I-Wall	R8-B3 (53))	39.8	89.1	89.1	49.3
30	Sheet Pile I-Wall	R8-B3 (13)	39.8	101	101.0	61.2
31	Concrete T-Wall	R8-FW14 (53)	39.8	89.1	89.1	49.3
32	Sheet Pile I-Wall	R8-FW14 (18))	39.8	98.5	98.5	58.7
33	Concrete T-Wall	R8-FW15 (179)	61.4	75.2	75.4	14.0
Residences along Silk Wood Lane	Nighttime Construction-Concrete Pour	R4-FW3	54.8	51.2	56.4	1.6

NSR ID	Nearest Activity	Nearest Work Site (Distance, ft)	Existing Noise Level (Leq)	Highest Construction Noise Level at Receptor (Leq)	Existing Plus Project Noise Levels (dB Leq)	Change (Existing + Project) Noise Levels (dB)
Residences along Jackson St. (NSR 9)	Nighttime Construction-Concrete Pour	R6-FW5	54.8	55.5	58.1	3.3

Notes: NSR = Sensitive Receptor; dBA = A-Weighted decibel.
Source: Modeled by Ascent in 2024.

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Summary

Based on the review conducted of project feature locations and existing noise-sensitive receptors, daytime construction activity would exceed FTA criteria for residential (i.e., 90 dBA L_{eq}) and non-residential uses (i.e., 100 dBA L_{eq}); however, nighttime construction activity would not exceed FTA criteria for residential or non-residential uses.

The City's General Plan considers significant construction noise impacts to occur if a project located within 500 feet of residential use or 200 feet of commercial uses would involve substantial noise generating activity continuing for more than 12 months.

Maximum construction noise levels were evaluated, and it was determined that excessive noise levels could occur during construction, leading to disturbance or annoyance at nearby receptors. However, due to the short-term nature of the construction activities (i.e., less than 12 months at any location) and considering that construction would occur during the less sensitive times of the day, the temporary substantial increases in noise would not result in adverse health effects to nearby sensitive receptors and nighttime construction would not result in substantial temporary increases at nearby receptors. Nonetheless, daytime construction activity could exceed FTA criteria for residential and nonresidential uses located near construction activities at 15 sensitive receptors, exposing them to excessive noise levels during construction activities, as shown in Table 3.11.11. This impact would be **significant.**

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure NOI 1.1: Develop and Implement a Construction Noise Control Plan

Prior to commencement of any construction activity, Valley Water, in coordination with its construction contractors, and a qualified acoustical professional shall prepare a Construction Noise Control Plan, that demonstrates with substantial evidence, based on finalized project-specific information (e.g., specific equipment profiles, construction locations), that all available noise reducing measures, including alternatives to conventional construction equipment and methods, have been implemented to the extent feasible and allowable, considering site-specific physical constraints (e.g., topography, proximity of construction to receptors), while still meeting the construction objectives of the project. The Construction Noise Control Plan shall be consistent with San José General Plan's provisions for a construction noise logistics plan. Measures that shall be included for all construction activities include, but are not limited to, the following:

- Ensure that construction activities are phased such that no one location/receptor is exposed to construction noise for more than 12 months.
- Construction scheduling and phasing shall be designed so that impact equipment (e.g., pile drivers, pneumatic hammers) is used during daytime hours only.
- Housing of stationary equipment (e.g., generators) in sound-attenuating enclosures if equipment would operate within a clear line-of-sight of offsite sensitive receptors.
- Provide clear signage to be posted at all construction sites and equipment staging areas throughout the duration of all construction activities, reminding equipment

operators and construction crews of the onsite best practices that shall be followed to reduce noise, including but not limited to:

- Limiting drop heights (truck loading/unloading, material movement) to the heights necessary to achieve the task.
- All inactive equipment shall not idle for more than five minutes.

Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving

Valley Water shall require its construction contractor to use a silent hydraulic pile driver for all construction activity that would require the use of a pile driver located within the noise or vibration impact distances to existing structures that could cause structural damage (i.e., within 95 feet of pile driving from normal structures and within 178-feet from weakened structures). Based on the analysis conducted above and summarized in Table 3.11.15, this measure applies to the following flood risk reduction improvement sites:

- Reach 4
  - R4-FW1
  - R4-FW2
  - R4-FW3
  - R4-FW4
- Reach 6
  - R6-FW5
  - R6-FW7
  - R6-FW8
  - R6-FW9
  - R6-FW10
  - R6-FW20
- Reach 7
  - R7-PB5 FW1
  - R7-FW12
  - R7-FW11
  - R7-FW18
- Reach 8
  - R8-FW13
  - R8-FW14

Mitigation Measure NOI 1.3: Use of Temporary Sound Barriers

Valley Water shall require its construction contractor to use temporary sound barriers to attenuate noise, such as temporary noise curtains, sound walls, or similar products that provide a barrier to attenuate construction noise, during all daytime construction activities that are located within 50 feet of a residential structure or within 10 feet of a nonresidential structure. Exceptions to this measure could include physical site constraints such as proximity to private property or topography surrounding the creek, making it physically impossible to site temporary sound barriers. Such conditions shall be evaluated on a site-specific basis and determinations made prior to commencement of construction activities, in coordination with and subject to Valley Water review. The temporary sound barrier shall be located between the project construction noise sources and receptors to shield the receptors from construction noise. The installation of any temporary sound barrier shall meet all the following criteria:

- be installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s);
- shall consist of durable, flexible composite material featuring a noise barrier layer bound to sound-absorptive material on one side; and
- shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot, such that a minimum of 10 dBA reduction is achieved on the receiving side of the sound barrier.

Mitigation Measure NOI 1.4: Establish Construction Noise Coordinator

Valley Water and/or its construction contractor(s) shall designate a construction noise coordinator and post that person's telephone number conspicuously around the construction sites. This coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and coordinating implementation of the appropriate measures to reduce the noise issue, which may include measures identified in Mitigation Measures NOI 1.1, NOI 1.2, and NOI 1.3, or other measures deemed appropriate by the noise coordinator in consultation with Valley Water and its construction contractor, that specifically address the nature of the noise complaint and associated noise source and affected receptor. Examples include, but are not limited to, relocation of onsite equipment away from the affected receptor, shielding the noise source with onsite equipment/trailers/barriers, altering construction methods, or altering timing of specific construction activity. In all cases, the noise complaint coordinator shall establish the root cause of the complaint and seek to resolve it with the most appropriate feasible remedy given the noise source and affected party's specific complaint.

Significance after Mitigation: Implementation of Mitigation Measure NOI 1.1 would provide substantial reductions in daytime construction noise levels by requiring a Construction Noise Control Plan that requires use of equipment and construction methods that reduce noise generation; requiring the use of enclosures and alternative, quieter construction methods/equipment; and determining appropriate noise reduction measures suited to the specifics of an improvement site. Implementation of Mitigation Measure NOI 1.2 would require the use of a "silent" hydraulic pile driver that can reduce noise levels substantially (i.e., 30 dBA) compared to typical pile drivers (Giken 2023; Appendix G). Further, implementation of Mitigation

Measure NOI 1.3 would require use of temporary sound barriers, where individual sites allow, with the ability to reduce noise by up to 10 dBA (NCHRP 1999). Implementation of Mitigation Measure NOI 1.4 would establish a noise complaint coordinator that would be responsible for responding to any noise complaints received and would work with the construction contractor to establish the most appropriate remedy to reduce the source of the complaint. While this measure would specifically address individual complaints and would seek remedies to reduce noise, this measure would not prevent an initial complaint from occurring and would not guarantee that in all cases an available alternative to mitigate the complaint exists.

Noise levels with mitigation were calculated by applying the reference noise levels for a silent pile driver and the use of temporary sound barriers at improvement sites, where adequate room between the construction site and nearby receptors (based on a cursory review of aerial imagery and project improvements), as summarized below in Table 3.11.15. The estimated construction noise levels with mitigation only considers the improvements that were determined to exceed applicable thresholds at nearby sensitive receptors without mitigation, as these are the improvements that require mitigation to reduce noise impacts. As shown, these mitigation measures would substantially reduce exposure of sensitive receptors to noise from construction activities; however, because use of temporary sound barriers would likely not be feasible in all locations where needed, it is anticipated that applicable construction noise thresholds would likely to continue to be exceeded at some sensitive receptors. In addition, the use of a silent pile diver, while known to be available in California, availability could potentially be limited based on manufacture supply at the time of construction; thus, it cannot be guaranteed to be available in all instances that this mitigation requires. The mitigation measures provided above include all feasible measures available to reduce construction noise. Therefore, impacts from construction generated noise would remain **significant and unavoidable**.

Table 3.11.15. Construction Noise Levels with Mitigation

NSR ID	Nearest Improvement Site ID	Construction Activity	Construction Noise (dBA Leq) at NSR	Construction Noise (dBA Leq) at NSR with Silent Pile Driver	Applicable Threshold Exceeded?	Reduction from Sound Barrier (dB)	Noise Level with Mitigation	Applicable Threshold (dBA Leq)	Threshold Exceeded?
4	R4-FW4	Sheet Pile I-Wall	107	102	Yes	10	92	100	No
8	R6-FW7	I-Wall Connected to Sound Wall	112	107	Yes	N/A	107	90	**Yes**
9	R6-FW7	I-Wall Connected to Sound Wall	112	107	Yes	N/A	107	90	**Yes**
34	R6-B8	Roadway berm	112	107	Yes	N/A	107	90	**Yes**
11	R6-FW9	Sheet Pile I-Wall	106	98.2	No	N/A	98.2	100	No
14	R6-FW8	Sheet Pile I-Wall	105	97.1	No	N/A	97.1	100	No
15	R6-FW10	Sheet Pile I-Wall	105	97.1	Yes	N/A	97.1	90	**Yes**
16	R6-FW10	Sheet Pile I-Wall	104	96.0	Yes	N/A	96.0	90	**Yes**
17	R6-B21	Sheet Pile I-Wall	91.0	83.3	No	N/A	83.3	90	No
19	R6-FW20	Sheet Pile I-Wall	95.6	87.9	No	N/A	87.9	90	No
~~20[1]~~	~~R7-FW11~~	~~Concrete L-Wall~~	~~97.4~~	~~N/A~~	~~Yes~~	~~N/A~~	~~N/A~~	~~90~~	~~**Yes**~~
20[1]	R7-FW11	Concrete T-Wall	98.7	N/A	Yes	N/A	N/A	90	**Yes**
22	R7-FW12	Sheet Pile I-Wall and passive barrier	104	98.6	No	N/A	98.6	100	No
25	R7-FW18	Concrete L-Wall	106	101	Yes	N/A	101	90	**Yes**
27	R7-PB5	Passive barrier and Sheet Pile I-Wall	90.8	85.7	No	N/A	85.7	90	No
28	R8-FW13	Sheet Pile I-Wall	105	91.6	Yes	N/A	91.6	90	**Yes**
30	R8-B3	Berm and Concrete L-Wall	101	96.3	Yes	N/A	96.3	90	**Yes**
32	R8-FW14	Concrete T-Wall	98.5	93.5	Yes	10	83.5	90	No

Notes: NSR = Sensitive Receptor; dBA = A-Weighted decibel; N/A = not applicable (i.e., sound curtain not feasible).

~~1. Two separate noise scenarios were modeled at this NSR because two different improvement sites, at different distances, would affect this NSR.~~

Source: Modeled by Ascent in 2024.

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Impact NOI-2: Generate Excessive Ground Vibration or Groundborne Noise Levels from Construction Activities. ***(Less than significant with Mitigation)***

Construction activities generate varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increased distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectible vibrations at moderate levels, and, at high levels, cause annoyance, sleep disturbance, or damage to nearby structures.

Pile driving typically generates high vibration levels and is of greatest concern when evaluating construction-related vibration impacts. Pile driving would be required for the project to install sheet pile floodwalls at numerous locations. As detailed in Chapter 2, "Project Description," at improvement sites where there are sensitive receptors to noise and/or vibrations, sheet piles would be driven into place by using silent hydraulic press-in piling equipment. However, because specific locations where the silent pile driver could be used are not known at this time, the vibration analysis takes a conservative approach to determine where impacts could occur by assuming that conventional pile driving could occur anywhere pile driving is required.

The applicable criteria for structural damage to a building of typical conventional construction is 0.20 in/sec PPV and for a historical or weakened structure is 0.08 in/sec PPV. The FTA criteria for human response to occasional vibration events at residential land uses is 75 VdB, applicable only during sensitive times of the day when vibration activities have the potential to result in sleep disturbance. Based on these criteria and using reference vibration levels for the pieces of construction equipment that would generate the highest vibration levels from each construction activity, the distances within which construction activity (i.e., flood protection improvement) would exceed each criterion were modeled. Thus, the distances in **Table 3.11.16** represent the distance within which the use of each piece of construction equipment could result in a significant impact.

Table 3.11.16. Vibration Reference Levels and Impact Distance

Equipment	VdB (Human Response)		PPV (In/Sec) (Structural Damage)		
	Reference Level at 25 ft	Impact Distance (ft) to Human Annoyance Level	Reference Level at 25 ft	Impact Distance (ft) to Conventional Structure Threshold	Impact Distance (ft) to Weakened Structure Threshold
Impact Pile Driver	112	430	1.518	95	178
Vibratory Roller	94	108	0.210	26	48
Large Bulldozer	87	64	0.089	15	27
Loaded Truck	86	59	0.076	14	25
Small Bulldozer	58	7	0.003	2	3

Notes: VdB = vibration decibels; PPV= peak particle velocity; In/Sec= inches per second; ft = feet

1. Human annoyance level applied is 75 VdB
2. Limit for conventional structure is 0.2 PPV in/sec
3. Limit for weakened structure is 0.08 in/sec PPV

Source: FTA 2018; Modeling by Ascent in 2024.

Based on reference vibration levels for typical construction equipment shown in Table 3.11.16, the pieces of equipment that could generate the greatest levels of ground vibration would be an impact pile driver, which would generate ground vibration levels of 112 VdB and 1.518 in/sec PPV at 25 feet, and a vibratory roller that would generate levels of 0.21 in/sec PPV and 94 VdB at 25 feet. Construction of improvements that would require pile driving and/or the use of a roller were identified. Because equipment mixes and use at each improvement site could vary, depending on site-specific construction requirements and physical constraints (e.g., topography), the vibration level associated with a roller was used as a conservatively high proxy for vibration levels associated with all construction activities that would not require a pile driver.

Vibration Damage

Most of the buildings surrounding the improvement sites appear to conform to the FTA's Building Category III (non-engineered timber and masonry) criteria or stronger, with a corresponding vibration damage threshold of at least 0.20 in/sec PPV. However, the residences along E. William Street (NSR 23) in Reach 7, near improvement R7-PB4, are located within a City conservation area and are thus evaluated against the 0.08 in/sec PPV criterion (San José 2024b). Additionally, the Old Home of Benevolence, located near Reach 8, is designated as a city landmark structure (San José 2024b). However, this site is located approximately 550 feet northwest of the nearest construction site at improvement R8-FW13 and therefore would not be susceptible to vibration damage. Considering FTA and City vibration criteria, **Table 3.11.17** shows the distances between construction equipment and the corresponding vibration levels at each sensitive receptor.

As shown in Table 3.11.17, pile driving activities would exceed vibration thresholds for structures of conventional construction at 24 sensitive receptors and the threshold for historic structures at one structure (i.e., NSR 23). Construction from activities without a pile driver would exceed the vibration threshold for structures of conventional construction at 4 sensitive receptors (i.e., NSR 20, NSR 22, NSR 25, and NSR 30). Construction activity without a pile driver was not identified within the structural damage criteria for weakened structures.

Table 3.11.17. Sensitive Receptors Within the Distance for Vibration Damage Criteria

Flood Risk Reduction Improvement Type	Equipment Modeled	Conventional Structure (0.20 in/sec PPV)			Weakened Structure (0.08 in/sec PPV)		
		Distance to Threshold (ft)	NSRs within Impact Distance (ft)	Nearest Improvement Site	Distance to Threshold (ft)	Receptors within Impact Distance (ft)	Nearest Improvement Site
Passive Barrier	Roller	26	NSR 22 (10)	R7-FW12 R7-FW12 PB-B	48	N/A	N/A
Berm	Roller	26	N/A		48	N/A	N/A
T-Wall/ L-Wall	Roller	26	NSR 25 (8) NSR 20 (12) NSR 22 (10) NSR 30 (13)	R7-FW18 R7-FW11 R7-FW12 R8-B3-FW1	48	N/A	N/A

		Conventional Structure (0.20 in/sec PPV)			Weakened Structure (0.08 in/sec PPV)		
Flood Risk Reduction Improvement Type	**Equipment Modeled**	**Distance to Threshold (ft)**	**NSRs within Impact Distance (ft)**	**Nearest Improvement Site**	**Distance to Threshold (ft)**	**Receptors within Impact Distance (ft)**	**Nearest Improvement Site**
Type 1/ Type 2 I-Wall	Impact Pile Driver	95	NSR 1 (21) NSR 2 (24) NSR 3 (17) NSR 4 (7) NSR 5 (48) NSR 8 (4) NSR 9 (4) NSR 11 (7) NSR 12 (24) NSR 14 (8) NSR 15 (8) NSR 16 (9) NSR 17 (39) NSR 18 (79) NSR 19 (23) NSR 20 (12) NSR 22 (10) NSR 23 (70) NSR 26 (67) NSR 27 (44) NSR 28 (8) NSR 31 (53) NSR 32 (18)	R4-FW1 R4-FW2 R4-FW3 R4-FW4 R4-FW4 R6-FW7 R6-FW7 R6-FW9 R6-FW5 R6-FW8 R6-FW10 R6-FW10 R6-B21 R6-FW20 R6-FW20 R7-FW11 R7-FW12 R7-PB4 FW1 R7-FW12 R7-PB5 FW1 R8-FW13 R8-FW14 R8-FW14	178	NSR 23 (50)	R7-PB4

Notes: NSR= Noise-Sensitive Receptor; in/sec = inches per second; PPV = peak particle velocity

[1] City José threshold for buildings of normal constructional convention

[2] City José threshold for historic buildings

Source: San José 2024a; Modeling conducted by Ascent in 2024.

Human Response

Vibration levels can also result in interference or annoyance impacts for residences or other land uses where people sleep, such as residential uses, hotels, and hospitals. FTA vibration annoyance potential criteria depend on the frequency of vibration events. When vibration events occur from the same source between 30-70 times per day, as would likely be the case with construction equipment used during project construction, they are considered "occasional events." Occasional events that exceed 75 VdB during the sensitive nighttime hours (i.e., 7:00 p.m. to 7:00 a.m.) are considered to result in a significant vibration impact. Land uses where daytime operations are sensitive (e.g., schools, laboratories) were also evaluated and have a slightly higher susceptibility threshold (i.e., 78 VdB); however, for a conservative assessment, the 75 VdB level was applied. **Table 3.11.18** below summarizes the locations at which the threshold of significance for "occasional events" would be exceeded. As shown below in Table 3.11.18, vibration from construction activity would exceed established FTA criteria for human response to "occasional events" at 32 sensitive receptors.

Table 3.11.18. Sensitive Receptors and Distance to Human Response Thresholds

Flood Risk Reduction Improvement Type	Equipment Modeled	Human Response (75 VdB)		
		Distance to Threshold	Receptors Within Distance to Threshold (ft)	Nearest Improvement Site
Passive Barrier	Roller	108	NSR 2 (38) NSR 3 (34) NSR 7 (99) NSR 8 (90) NSR 21 (100) NSR 22 (10) NSR 23 (70) NSR 24 (50) NSR 26 (67) NSR 27 (44)	R4-PB1 R4-PB2 R6-PB3 R6-PB3 R7-FW12 R7-FW12 R7-PB4 R7-PB4 R7-PB5 R7-PB5
Berm	Roller	108	NSR 8 (90) NSR 29 (53) NSR 30 (13) <u>NSR 34 (4)</u>	R6-B7 R8-B3 R8-B3 <u>R6-B8</u>
Concrete T-Wall and L-Wall Floodwall	Roller	108	NSR 8 (90) NSR 25 (8) NSR 20 (12) NSR 30 (13) NSR 29 (53)	R6-B7 R7-FW18 R7-FW11 R8-B3-FW1 R8-B3

Flood Risk Reduction Improvement Type	Equipment Modeled	Human Response (75 VdB)		
		Distance to Threshold	Receptors Within Distance to Threshold (ft)	Nearest Improvement Site
Sheet Pile I-Wall Floodwall	Impact Pile Driver	430	NSR 1 (21)	R4-FW1
			NSR 2 (24)	R4-FW2
			NSR 3 (17)	R4-FW3
			NSR 4 (7)	R4-FW4
			NSR 5 (48)	R4-FW4
			NSR 8 (4)	R6-FW7
			~~NSR 9 (253)~~	~~R6-FW16~~
			NSR 9 (4)	R6-FW7
			NSR 10 (163)	R6-FW9
			NSR 11 (7)	R6-FW9
			NSR 12 (24)	R6-FW5
			NSR 13 (159)	R6-FW6
			NSR 14 (8)	R6-FW10
			NSR 15 (8)	R6-B21
			NSR 16 (9)	R6-FW20
			NSR 17 (39)	R7-PB4
			NSR 18 (79)	R7-PB5
			NSR 19 (23)	R7-FW20
			NSR 20 (12)	R7-FW11
			NSR 21 (100)	R7-FW12
			NSR 22 (10)	R7-FW12
			NSR 23 (70)	R8-FW14
			NSR 24 (50)	R7-PB4
			NSR 26 (67)	R7-PB5
			NSR 27 (44)	R7-PB5
			NSR 28 (8)	R8-FW13
			NSR 29 (53)	R8-B3-FW1
			NSR 31 (53)	R8-FW14
			NSR 32 (18)	R8-FW14

Notes: VdB = vibration decibels
Source: Modeled by Ascent in 2024.

While receptors identified within the FTA-recommended criteria for purposes of evaluating human response to vibration sources have been identified, these activities would be limited to the daytime hours at all locations except for the potential for nighttime construction activities in areas where construction activities would be located beyond 500 feet from occupied residential uses. Therefore, although construction activities would be considered perceptible (i.e., within 430 feet of pile driving and 108 feet of other construction), construction activities would be short-term and temporary (i.e., conservatively, shorter than two months at any improvement location), and occur during the less-sensitive daytime hours. Nighttime construction concrete pours would not include pile driving or the use of heavy-duty equipment that generate excessive vibration and would occur only at distances beyond 500 feet from occupied residences, which is beyond the distances identified where vibration could result in adverse human response. Therefore, the project would not result in excessive vibration levels that could lead to adverse effects related to human response such as sleep disturbance because construction activity would be short-term and temporary, most active during the less sensitive daytime hours, and imperceptible during isolated nighttime construction concrete pours.

Summary

Due to the proximity of improvements and the type of construction equipment that would be used, vibration levels would exceed the applied criteria of 0.20 in/sec PPV (vibration damage for non-engineered timber and masonry structures), 0.08 in/sec PPV (vibration damage for historic/weakened structure), and 75 VdB (vibration annoyance) at NSR 11, which is a school (refer to Tables 3.11.17 and 3.11.18). Project construction activities would not result in excessive vibration levels that could lead to adverse effects related to human response at existing nearby residential receptors; however, because pile driving could occur in proximity to existing structures, exceeding FTA and City structural damage criteria as well as result in potential disturbance to nearby institutional uses, the temporary vibration impact would be **significant**.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving

Refer to Impact NOI-1 above for full text of this mitigation measure.

Mitigation Measure NOI 2.1: Implement Alternative Construction Methods to Reduce Vibration

Valley Water and/or its construction contractor shall implement alternative methods/equipment and for all construction activities that require the use of vibration-inducing equipment (e.g., vibratory rollers, dozers, loaded trucks) within the vibration impact distances to existing structures that could cause structural damage (i.e., within 26 feet from normal structures and within 48 feet from weakened structures). Valley Water shall verify that the alternative method/equipment is shown on the construction plans prior to the beginning of construction. Based on the analysis conducted in this EIR and summarized in Tables 3.11.17 and 3.11.18, this measure applies to work at all improvement sites except sites and areas located beyond 48 feet from nearby structures.

Alternative methods/equipment shall include, but are not limited to, the following:

- For compaction activities, the use of a static roller in lieu of a vibratory roller shall be implemented.
- For grading and earthwork activities, off-road equipment shall be limited to 100 horsepower or less, unless it is determined that such equipment is not available or would not adequately complete the necessary construction activity.
- For earthwork, small dozers (e.g., CAT D1, D2, D3) shall be used and remain as far away from existing structures as possible.

Mitigation Measure NOI 2.2: Develop and Implement a Vibration Control Plan

Prior to commencement of construction activities, Valley Water or its construction contractor shall prepare a construction vibration monitoring plan/program that ensures and demonstrates that construction vibration would not result in structural damage or disturbance to nearby receptors (i.e., school uses). The plan shall be prepared and implemented by a qualified acoustical consultant or structural engineer, for review and approval by the City of San José. The plan shall include the following:

- Pre-construction surveys to identify any pre-existing structural damage to buildings that may be affected by project-generated vibration.
- Identification of minimum setback requirements for different types of ground-vibration-producing activities (e.g., pile driving) for the purpose of preventing damage to nearby structures and preventing adverse effects on people. Factors to be considered include the nature of the vibration-producing activity, local soil conditions, and the fragility/resiliency of the nearby structures. Initial setback requirements (identified in Mitigation Measure NOI 1.2 and NOI 2.1) can be reduced if a project- and site-specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage to buildings or structures would occur.
- Phasing of pile-driving and high-impact activities so as not to occur simultaneously with other construction activities, shall be determined. The total vibration level produced could be significantly less when each vibration source is operated at separate times.
- Development of a vibration monitoring and construction contingency plan, which shall identify where monitoring would be conducted, establish a vibration monitoring schedule, define structure-specific vibration limits, and require photo, elevation, and crack surveys to document conditions before and after demolition and construction activities. Construction contingencies shall be identified for when vibration levels approach the limits. If vibration levels approach limits, suspend construction, and implement contingencies to either lower vibration levels or secure the affected structure.
    - Specifically for pile driving located within 20 feet of institutional uses such as schools (e.g., NSR 11), vibration-inducing activities shall occur outside of regular school hours and a minimum of a 10-day notice shall be given.
- Preparation of a construction vibration monitoring report that summarizes the results of all vibration monitoring and submission of the report after the completion of each phase identified in the project construction schedule. The vibration monitoring report shall include a description of measurement methods, equipment used, calibration certificates, and graphics as required to clearly identify vibration-monitoring locations. An explanation of all events that exceeded vibration limits shall be included together with proper documentation supporting any such claims.

Significance after Mitigation: Implementation of Mitigation Measure NOI 1.2 would require the use of a “silent” hydraulic pile driver which would reduce the potential for structural damage from 95 feet (for conventional structures) to 4 feet and from 178 feet (for weakened structures) to 9 feet (Giken 2023). Considering the location of all proposed construction activities and nearby structures, pile driving would not occur within 4 feet of any existing structure of conventional construction. The only structure identified as potentially weakened is the residences identified as NSR 23, and proposed construction activity at that location is well beyond 9 feet from the structure. The use of a silent pile driver would eliminate the potential for structural damage at existing structures. Regarding human perception, a silent pile driver would reduce the impact distance from 430 feet to 20 feet and NSR 11 (a school) is located within 20 feet.

Implementation of Mitigation Measure NOI 2.1 would require alternative methods or equipment to be implemented that can substantially reduce vibration levels. Mitigation Measure NOI 2.2 would require the preparation and implementation of a vibration control plan, which would include site-specific evaluation of nearby structures, monitoring, and verification of vibration levels to ensure no damage occurs, as well as appropriate noticing and scheduling of said activities. These measures would minimize ground vibration and groundborne noise levels at sensitive receptors from construction activities and would ensure that construction activity would not result in structural damage or disturbance to nearby sensitive uses. Therefore, this impact would be reduced to **less than significant with mitigation.**

Impact NOI-3: Result in Long-Term Substantial Increases in Noise that Exceed FTA Noise Standards. (Less than significant)

Maintenance activities would be conducted at the improvements following project construction and would include trash and debris removal, vegetation management (e.g., removing vegetation along maintenance roads), maintenance road grading, management of wildfire conflicts, and graffiti removal. `Inspections and maintenance would occur once or twice annually and immediately following a natural hazard. Valley Water would obtain a grading permit from the City of San José prior to grading activities. Additionally, in compliance with City Code, maintenance activities would occur Monday through Friday from 7:00 a.m. to 7:00 p.m., and thus would not occur during times of the day when people are more sensitive to disturbance. Due to the short-term nature and types of maintenance activities, there would be no new stationary sources that could result in a long-term operational substantial increase in noise and impacts would be **less than significant**.

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3.12 Recreation

This section describes both water- and land-based recreational resources and facilities in the project area and vicinity and analyzes the potential impacts of the project on recreational resources and facilities.

3.12.1 Environmental Setting

Regional Setting

The project area is situated in a densely populated urban area in the City of San José (City), Santa Clara County (County), California. The U.S. Census Bureau estimated the total population of San José at 1,013,221 in 2020 (U.S. Census Bureau 2023). Dominant land uses in the area include industrial, commercial, residential, and recreational uses. Specifically, the project area encompasses light and heavy industrial, combined industrial/commercial, mixed-use commercial, residential neighborhood, and open space and park land uses.

The City operates more than 200 parks and more than 60 miles of developed urban trails (City of San José 2022a). There are several recreational facilities within the County, including regional parks, neighborhood parks, community centers, golf courses, a zoo, open space, and multi-use trails. Regional parks attract visitors from throughout the Bay Area and include larger or unique amenities such as access to native open space, cultural heritage buildings, and festival sites for large community events (City of San José 2011a). Neighborhood/community parks serve the immediate neighborhood providing amenities such as playgrounds, water features, dog parks, baseball/softball fields, tennis courts, soccer fields, among others (City of San José 2011a). Open space areas provide nature viewing, walking, biking, and fishing where there is access to a waterway. The *San José 2023 Community Opinion Survey Summary Report* identified that 83 percent of respondents indicated that their household had visited a park in the City at least once during the past 12 months, with the majority (51 percent) doing so at least seven times during this period (True North Research 2023). The City's 2020 service level objective for City-owned neighborhood/community serving parkland is 3.5 acres of land per 1,000 population. The City surpassed this goal in 2020 by a surplus of 127.4 acres of parkland (City of San José 2011a).

Project Area and Vicinity

There are several recreational facilities within the project area and vicinity, including parks, trails, and open space. All recreational facilities are owned and maintained by the City of San José Parks, Recreation, and Neighborhood Services (PRNS). **Table 3.12.1** lists and **Figures 3.12.1** and **3.12.2** show the recreational facilities within the project area and vicinity, and their proximity to the proposed flood risk reduction improvements. A description of each recreational facility with proposed flood risk reduction improvements either within the facility or directly adjacent to it is provided below in this section. The City's Trail Count from 2022 estimates annual daily use of Coyote Creek Trail and Five Wounds Trails at approximately 408 people and 177 people, respectively (City of San José 2022b).

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Table 3.12.1. City of San José Recreational Facilities in the Project Vicinity

Recreational Facility	Location	Proximity to Project Area	Description
Parks and Open Spaces			
Watson Park	Reach 6/ 1082 Jackson St.	Several improvements (R6-PB7, R6-B7, R6-B8, R6-FW7, R6-FW9, ~~R6-FW16~~) and staging/laydown areas located within the park.	Neighborhood park with basketball court, playground, picnic areas, and dog play area; 26 acres
William Street Park	Reach 7/ E. William St & 16th St.	Proposed improvements (R7-PB4, R7-PB4 FW1, R7-FW18) and staging/laydown area located within the park.	Neighborhood park with picnic areas; 14.9 acres
Selma Olinder Park	Reach 7/ 848 E. Williams St.	Proposed improvements (R7-FW12, R7-FW12 PBA through C, R7-PB5, R7-PB5 FW1, R7-B5) and staging and laydown area located within the park.	Neighborhood park with softball field, tennis courts, and dog park; 13 acres
Kelley Park	Reach 8/ 1300 Senter Rd	Proposed improvements (R8-FW22, R8-B3, R8-FG6) border the park to the south and southwest.	Regional park with wedding site and amphitheater; 172 acres; Nearby facilities are the Happy Hollow Park & Zoo, History Park, and Japanese Friendship Garden
Rock Springs Park	Reach 8/ Rock Springs Dr & Needles Dr	Proposed improvement (R8-FW14, R8-FG7) located on the edge of park.	Neighborhood park with playground, basketball court, and picnic area
Roosevelt Park and Community Center	Reach 6/ 901 E Santa Clara St	East bank of Reach 6; staging and proposed improvement located across the creek, approximately 70 feet	Neighborhood park with skate park, basketball court, softball field, handball courts, and playground; 16.72 acres
Forestdale Tot Lot	Forestdale Ave & Hwy 280	300 ft east of proposed improvement and staging area in Reach 7	Neighborhood park with playground BBQ pits, and picnic area; 0.40 acre
Martin Park	Forestdale Ave & Melbourne Blvd	417 ft east of proposed improvement (~~B-~~R7-PB5-I) and staging area in Reach 7	Neighborhood park with picnic areas; 9.3 acres
San José Municipal Golf Course	1560 Oakland Rd	Borders the east side of Reach 5 and 0.9 mile from staging area; no proposed improvements nearby	Maintained golf course with 72-par layout
Orchard Park	Oakland Rd & Pear Orchard Dr	Borders east side of Reach 5; 0.5 mile east of staging area; no proposed improvements nearby	Neighborhood park with playground and picnic area; 1.02 acres
Trails			
Coyote Creek Trail (part of the Bay Area Ride Trail)	Hwy 237 Bikeway to Montague Expressway (gravel- 1.4 miles); William Street-Hwy 280 Selma Olinder Park (paved – 0.5 mile); Tully Rd extending south above the project area near Anderson County Park (paved – 16.8 miles)	Located within Reaches 4, 5, and 7; Segment through Selma Olinder Park passes next to or abuts proposed improvements	Trail – Planned and partially developed trail network; provides views of the waterway, and urban and rural settings.
Five Wounds Trail	Extends east and north from the Coyote Creek Trail bordering Martin Park	Adjacent to Reach 7; Proposed staging and laydown area at the intersection of Coyote Creek Trail	Paved trail with connection to the Coyote Creek Trail
Penitencia Creek Trail	Central and east San José (2.8 miles)	Nearby (to the west) of Reach 5	Planned and partially developed trail system that connects Penitencia Creek from Coyote Creek to Alum rock Park. Portions of the trail system are developed from King Road to Dorel Drive, with a mixture of paved and unpaved surfaces.

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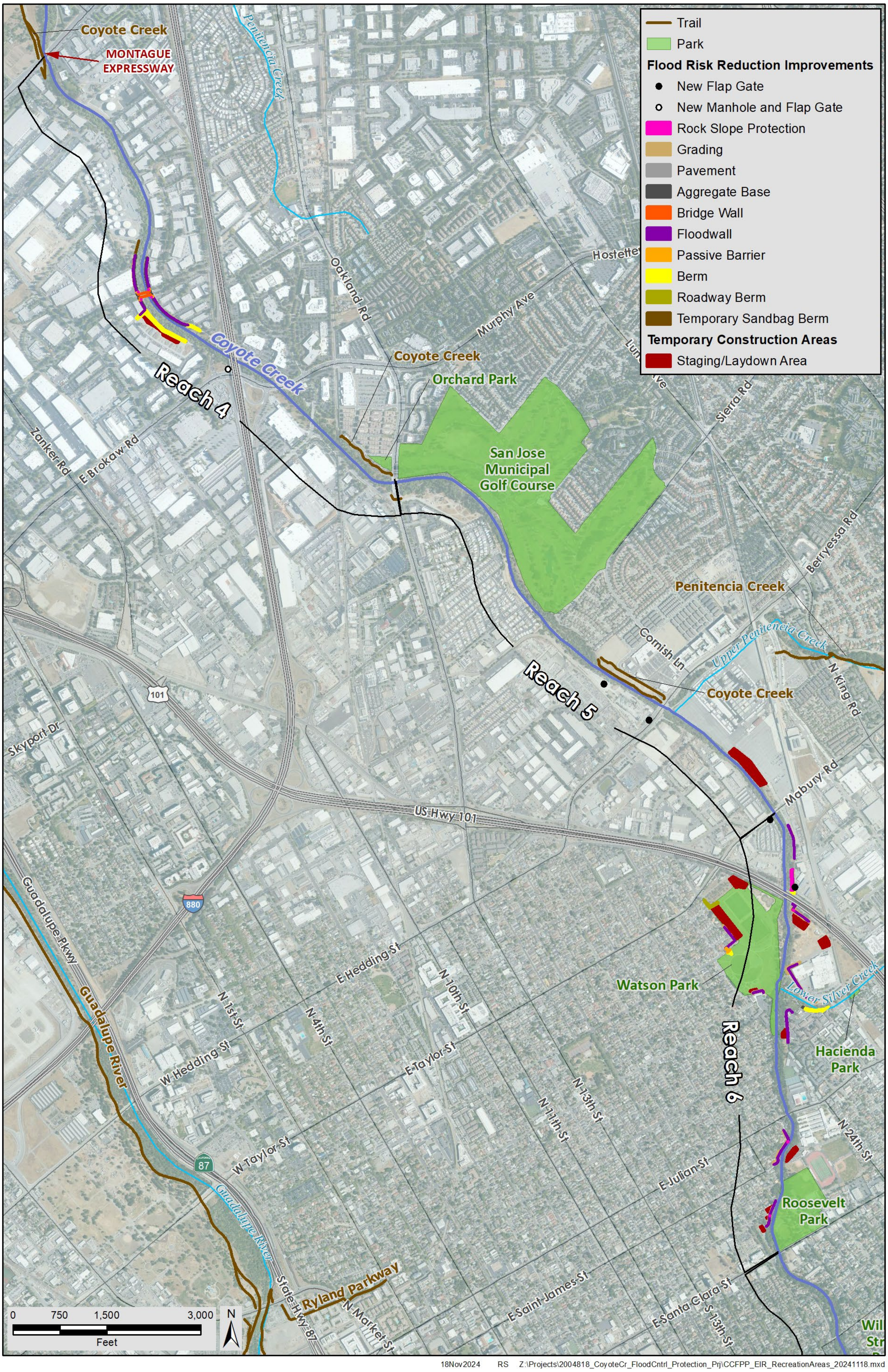

Source: San José PRNS 2023b

Figure 3.12.1. Recreational Facilities in Project Reaches 4 through 6


Trail
Park
Flood Risk Reduction Improvements
New Flap Gate
Floodwall
Passive Barrier
Berm
Construction Areas and Access
Staging/Laydown Area
Temporary Cofferdam
Temporary Creek Crossing
Roosevelt Park
William Street Park
Martin Park
Five Wounds Trail
Selma Olinder Park
Autumn Terrace Pocket Park
Rocksprings Park
Coyote Creek Community Garden
Tully Community Ballfields
Stonegate Park
Coyote Creek
Highway 97 Bikeway
Guadalupe River
E Julian St
E Saint James St
E Santa Clara St
E San Antonio St
N 24th St
S 24th St
N 13th St
N 11th St
N 10th St
S 4th St
S 1st St
Keyes St
E Alma Ave
W Alma Ave
San Jose Ave
Story Rd
Havana Dr
Holly Hill Dr
Tully Rd
Curtner Ave
Monterey Hwy
Almaden Rd
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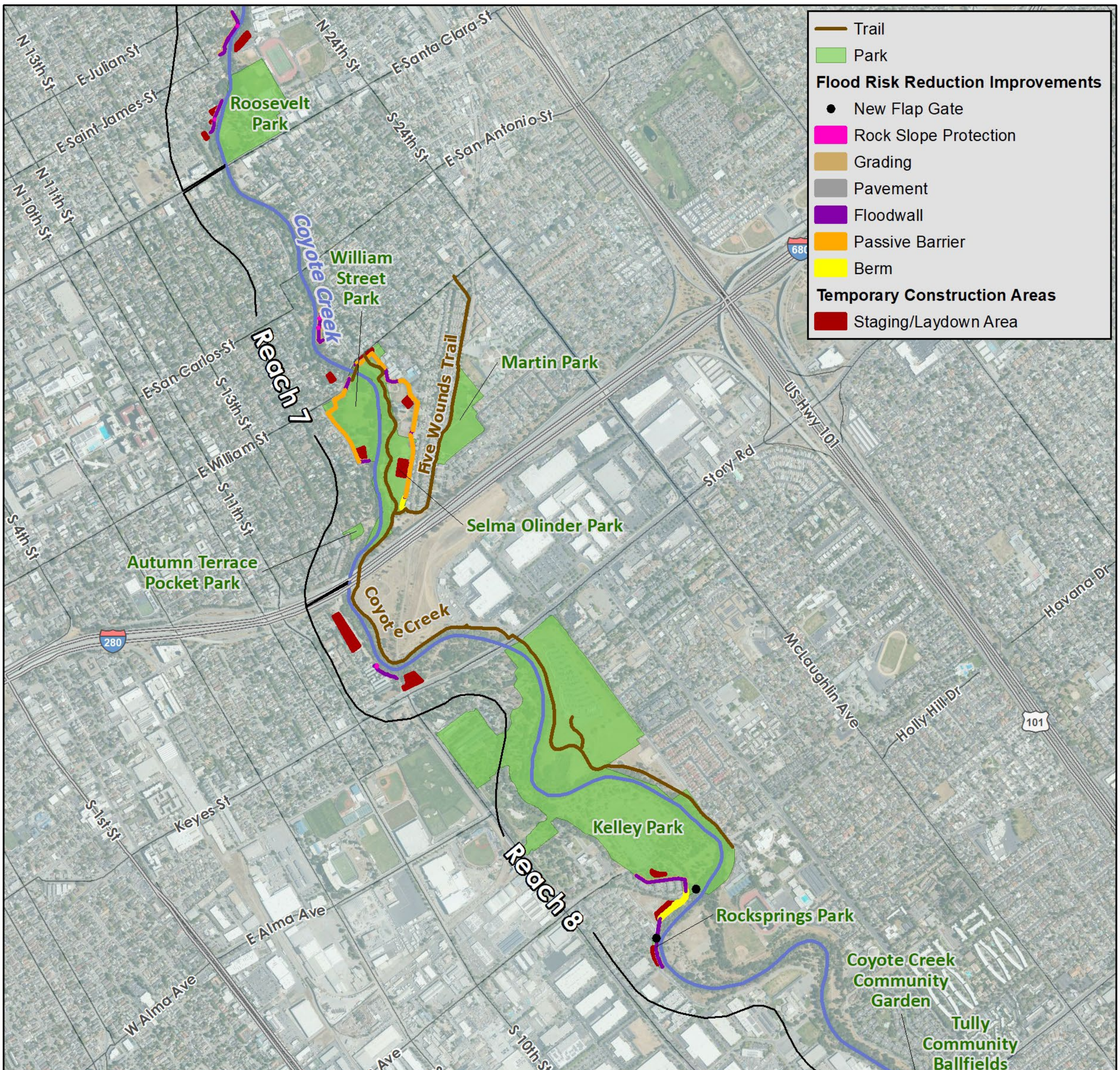


Source: San José PRNS 2023b

Figure 3.12.2. Recreational Facilities in Project Reaches 7 and 8

Parks

Parks with or adjacent to the project area are described below.

Watson Park

Watson Park is a 26.6-acre neighborhood park located at Jackson Avenue and 22nd Street. It is owned and maintained by PRNS (City of San José 2023a). It provides amenities for picnicking, playing soccer and basketball, and a youth play area.

William Street Park

William Street Park is a 14.9-acre neighborhood park located at 16th Street and E William Street. It is owned and maintained by PRNS (City of San José 2023b). It provides users with picnic areas on a first come, first serve basis.

Selma Olinder Park

Selma Olinder Park is a 13-acre neighborhood park located at E William Street and 18th Street. It is owned and maintained by PRNS. The park provides amenities for playing sports, including tennis and softball, as well as a youth playground, an off-leash dog area, and picnic areas (City of San José 2023c). Selma Olinder Elementary School is located adjacent to the park, to the north.

Rock Springs Park

Rock Springs Park is a 0.4-acre neighborhood park located at Rock Springs Drive and Needles Drive and provides a youth playground. It is situated adjacent to a 15-acre lot that is designated by PRNS as a future park, known as the Carroll Property (City of San José 2023d).

Kelley Park

Kelley Park is a 172-acre regional park located on the north side of the City at 1300 Senter Road (City of San José 2023e). Kelley Park's amenities include picnic areas with BBQ pits; a wedding site with wisteria arbor, amphitheater, and reception center; and nearby attractions including the Happy Hollow Zoo, Japanese Friendship Garden, and History Park.

Other Parks

Other parks located in the vicinity of the project area are Roosevelt Park, Forestdale Tot Lot, Martin Park, the San José Municipal Golf Course, and Orchard Park. Please see Table 3.12.1 for more information on these recreational facilities and their proximity to the project area.

Trails

In addition to the parks described above, the City's trail network encompasses over 60 miles of trails available to pedestrians, bicyclists, and equestrians. The City's Core Trail Systems serve high volumes of recreational users due to adjacency or access to high density development and significant distances or linkage to regional systems outside the City boundaries. They often serve commuters by connecting many residential areas to employment centers. The Core Trail Systems includes the Coyote Creek Trail, Guadalupe River Trail, Los Alamitos Creek Trail, Los Gatos Creek Trail, Highway (Hwy) 87 Bikeway, and Hwy 237 Bikeway (City of San José 2011a). The Coyote Creek Trail is the only trail network that is located within the project vicinity and is described below.

Coyote Creek Trail

The Coyote Creek Trail is partially developed in segments, with the remaining undeveloped segments planned for future development. The trail begins in the South San Francisco Bay and extends south to the City's southern boundary and is managed by PRNS. The northern end of the Coyote Creek Trail begins at the Hwy 237 Bikeway and will extend to its southern end at the Walnut Rest Area near Anderson Lake County Park in Morgan Hill. The Coyote Creek Trail, when complete, will be approximately 30 miles long and link the community to open space, public transportation nodes, retail and employment centers, other regional trails, and other planned open spaces (City of San José 2011b).

Currently, approximately 19.7 miles of the trail are developed, including the northern reach, a 1.4-mile gravel segment, from Hwy 237 Bikeway to Montague Expressway; the central reach, a 0.5-mile paved segment, from William Street to Hwy 280, in Selma Olinder Park; and the southern reach, a 17.8-mile paved segment, from Tully Road to Morgan Hill, near Anderson County Park (City of San José 2023f). The portion within the project area includes the northern, central, and southern reaches up to Tully Road.

Other Trails and Bikeways

Other trails in the project vicinity include the Five Wounds, Penitencia Creek, and Guadalupe River Trails (Figures 3.12.1 and 3.12.2). The Hwy 87 Bikeway is the only bikeway in the vicinity of the project area, and it is located approximately 1.6 miles west. Bikeways are discussed in greater detail and in Chapter 3.13, "Transportation and Traffic."

3.12.2 Regulatory Setting

This section summarizes state, regional, and local laws, regulations, policies, and plans relevant to the project and its assessment of impacts to recreational resources.

Federal Laws, Regulations, and Policies

No specific federal laws, regulations, or policies related to recreation are relevant to the project.

State Laws, Regulations, and Policies

The Public Park Preservation Act of 1971 (Public Resources Code Section 5400 et seq.) prohibits public entities from acquiring any property that is in use as a park at the time of acquisition from "using" such property for nonpark purposes unless the acquiring entity provides compensation to the operating entity to replace the park and its facilities.

Regional/Local Laws, Regulations, and Policies

Activate SJ Strategic Plan (2020 to 2040)

The Activate SJ Strategic Plan (City of San José 2020) is the City of San José PRNS 20-year strategic plan for 2020 to 2040. Its vision is people-focused and service-driven, and the plan outlines guiding principles under five categories including stewardship, nature, equity and access, identity, and public life. Strategies that may be relevant to the project are listed below.

- S2. Maximize the lifespan of all parks and buildings.

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* (City of San José 2023) sets forth a vision and a comprehensive road map for growth and development through the year 2040. Chapter 4, "Quality of Life" details goals and policies for parks, open space, and recreation. Goals and policies that may be relevant to the project are listed below.

- **Goal CD 1.9.** Maintain a network of publicly accessible streets and pathways that are safe and convenient for walking and bicycling and minimize automobile use; that encourage social interaction; and that increase pedestrian activity, multi-modal transit use, environmental sustainability, economic growth, and public health.
- **Goal PR 1.** High Quality Facilities and Programs. Provide park lands, trails, open space, recreation amenities, and programs, nationally recognized for their excellence, which enhance the livability of the urban and suburban environments; preserve significant natural, historic, scenic and other open space resources; and meet the parks and recreation services needs of San José's residents, workers, and visitors.
- **Goal PR 3.** Provide an Equitable Park System. Create a balanced park system that provides all residents access to parks, trails, open space, community centers, dog parks, skate parks, aquatic facilities, sports fields, community gardens, and other amenities.
    - **Policy PR 3.1.** Provide equitable access to parks, trails, open spaces, community centers, dog parks, skate parks, aquatic facilities, sports fields, community gardens, and other amenities to the greatest extent feasible in order to provide a high quality of life for our residents.

3.12.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, "Project Description", Valley Water would incorporate BMPs, VHP Conditions and AMMs to avoid and minimize adverse effects on the environment that could result from the project. All relevant BMPs for the project are included in Appendix B. In reference to recreation resources, applicable BMPs focus on public noticing, safety measures, and impact reduction in construction-related impacts (e.g., traffic and noise). No VHP Conditions/AMMs directly apply to recreational resources. Valley Water Handbook BMPs relevant to recreational resources include the following:

- **TR-1**: Use Public Safety Measures – Would require installation of signs, safety fencing, and access to detours (if feasible) that provide adequate warning to the public of the construction work area.

The following Valley Water SMP BMPs are applicable to recreational resources during operation and maintenance of the project:

- **GEN-36**: Public Outreach – Would specify measures to notify the public of project construction activities, including noticing and signage, and allow for the public to adjust recreational use to other area facilities.
- **GEN-37**: Implement Public Safety Measures – Would specify public safety measures to notify and warn the recreating public of project measures construction and mitigate public safety impacts at recreational facilities and trails.

- **GEN-38:** Minimize Noise Disturbances to Residential Areas – Would specify construction and maintenance practices that minimize disturbances to residential areas and recreational facilities and users.
- **GEN-39**: Planning for Pedestrians, Traffic Flow, and Safety Measures – Would schedule bicycle and pedestrian facility closures outside the peak morning and afternoon periods to minimize the effect of project measure construction on recreational access and use.

3.12.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the CEQA Guidelines. The project would have a significant impact on recreation if implementing the project would:

- 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; or
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Analysis Methodology

Impacts on recreational resources from the project's construction and operational and maintenance activities were analyzed qualitatively using the thresholds of significance identified above. For construction impacts, locations of recreational facilities were compared to locations of project construction activities to qualitatively assess impacts.

Impacts Not Discussed Further in the EIR

Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities

The project includes the construction of flood risk reduction improvements along 9-miles of Coyote Creek from Montague Expressway to Tully Road. The project would not construct recreational facilities or result in an increase in demand that would require the construction of new or expansion of existing recreational facilities. Therefore, the project would not result in an adverse physical effect on the environment and this issue is not discussed further.

Impact Analysis

Impact REC-1: ***Increase in Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such that Substantial Physical Deterioration of the Facilities Would Occur or be Accelerated. (Less than significant)***

Construction Impacts

The project includes flood risk reduction improvements and construction staging/laydown areas that are located within parks or intersecting trails, as indicated in Table 3.12.1 and Figures 3.12.1 and 3.12.2, including Watson Park, William Street Park, Selma Olinder Park, Rock Springs Park, and the Coyote Creek Trail. Chapter 2, "Project Description", provides a detailed description of improvements and construction staging/laydown areas located within these parks and trails.

Recreational access to parks or trails where improvements and staging/laydown areas are located would be maintained outside of active construction zones during project construction. The closed areas of parks and trails during construction would be small and closures would be limited in duration at any individual location, typically lasting between approximately 3 to 6 months at any individual project improvement. These partial closures to parks and trails in which some features may be temporarily unavailable would include noticing and signage, which would identify alternative parks and detour routes for recreational access, as described previously under Valley Water applicable BMP TR-1 (Incorporate Public Safety Measures).

Construction activities could result in a temporary decline in public use of these recreational facilities during construction activities and a potential increase in the use of other recreational facilities in the project vicinity. There are a number of other nearby recreational facilities (e.g., Kelley Park, San José Municipal Golf Course, Orchard Park, Martin Park, Guadalupe River Trail, Penitencia Creek Trail) in the vicinity of the project area that would remain available to the public throughout project construction activities. The impacts would also be temporary and short in duration at any one location. Therefore, impacts from increased use of other nearby recreational facilities would not be substantial at any one location. For these reasons project construction activities would not result in the physical deterioration of other recreational facilities. Therefore, impacts related to an increase in the use of recreational facilities during construction would be **less than significant**.

Operational and Maintenance Impacts

Parks and trails with flood risk reduction improvements would remain open during project operations and maintenance activities. As described in Chapter 2, “Project Description”, operations and maintenance activities would be similar to existing conditions and consistent with Valley Water District’s Stream Maintenance Program. Maintenance activities would occur in the project area following construction, and may include trash and debris removal, graffiti removal, maintenance road grading, vegetation management (e.g., removing vegetation along maintenance roads), and management of wildlife conflicts. Maintenance activities would be limited to a 10-foot area around each flood risk reduction improvement. Vegetation that has re-established within this maintenance area after construction of the project could be trimmed or removed as part of project maintenance activities to facilitate access for maintenance work. Since the maintenance areas are small, adjacent to the improvements, and within the areas designated for the project, these activities would not interfere with recreational activities or adversely affect recreational facilities in the project area that could result in increased usage of nearby recreational facilities. Furthermore, maintenance activities would be conducted one to two times annually and Valley Water SMP BMPs GEN-36 (Public Outreach), GEN-37 (Implement Public Safety Measures), GEN-38 (Minimize Noise Disturbances to Residential Areas), and GEN-39 (Planning for Pedestrians, Traffic Flow, and Safety Measures) would be implemented to further reduce interruptions and effects on recreational facility users. Additionally, operation of passive barriers and floodwalls would result in infrequent and temporary closures of some areas of parks that may be inundated with flood waters blocked by project flood improvements. Under current conditions, flood inundation would occur over more areas within parks and trails than with the project. Further, any areas inundate would be unusable to recreationists until flood flows recede, which is estimated to take between approximately 2 to 5 days depending on the level of flood flows along Coyote Creek. Due to the infrequent and temporary occurrence of flood events, maintenance activities, and minimal nature of the maintenance activities that would be undertaken, impacts related to an increase in the use of onsite or offsite recreational facilities during operations and maintenance of the project would be **less than significant**.

3.13 Transportation and Traffic

This section discusses existing transportation and circulation issues within the project area and vicinity; describes applicable federal, state, regional, and local regulations; and analyzes short- and long-term impacts of the project on the transportation system, including roadways, freeways, and bicycle/pedestrian facilities.

3.13.1 Environmental Setting

Transportation Terminology

The following definitions from the Envision San José 2040 General Plan (San José 2011) are used in this section.

- **Freeway.** Provides for inter-regional and intra-regional mobility. Access to freeways is restricted to primary arterials and expressways via interchanges. Freeways are designed solely for traffic movement of automobiles, trucks, and express transit buses.
- **Expressway.** County expressways are facilities designed primarily for traffic movement and provide limited access to abutting properties.
- **Arterials.** Arterial streets are designed mainly for the movement of through traffic; providing access to abutting properties is a secondary function. Although abutting properties have access to arterial streets, on-street parking and loading may be restricted or prohibited to improve the roadway's capacity for moving traffic. Arterial streets are distinguished by width. Minor arterials typically have an 80- to 106-foot right-of-way and major arterials have a right-of-way width between 115 and 130 feet.
- **Major Collectors.** Major collector streets serve internal traffic movements within a specific area or neighborhood and provide connections to the arterial street system. Major collector streets typically do not serve through trips but can provide access to abutting properties.
- **Local Streets.** Local streets are roadways whose primary function is to provide access to immediately adjacent properties.

Regional Roadways

Regional access to the project area is provided by the following facilities:

- **U.S. Route (US) 101** is a north-south freeway in the City of San José (City) and includes four travel lanes per direction including high occupancy vehicle (HOV) lanes. US 101 extends from the southern city limits near Morgan Hill to the City's boundary with Santa Clara, north of Trimble Road.
- **Interstate (I) 880** is a north-south freeway extending from the City at the I-280/I-880/State Route (SR) 17 interchange to the City of Oakland and includes three to four mixed-flow lanes per direction. From the north, I-880 enters the City at Montague Expressway.
- **I-280** is designated as a "north-south freeway", although it runs primarily east-west within the City between Stevens Creek Boulevard and US 101. From the US 101 interchange, i it runs first west, then north to San Francisco. East of the US 101 interchange, I-280 is designated as I-680. The freeway includes four to five travel lanes per direction.

- **Montague Expressway** is an east-west, six- to eight-lane divided roadway extending from US 101 east to I-680. It is designated San Tomas Expressway south of US 101 and becomes Landess Avenue east of I-680. Montague Expressway connects with I-880 and includes directional HOV lanes during peak periods. Within the City, the expressway extends between the Guadalupe River at the border with the City of Santa Clara and Trade Zone Boulevard at the border with the City of Milpitas.

Local Roadways

Local roads provide access to the project area and adjacent properties and connect with regional roadways. Local roadways that serve as access roads to the project area consist of the following:

Reach 4

- **Charcot Avenue** is a two-lane minor arterial with a bike lane and a speed limit of 35 miles per hour (mph).

Reach 6

- **Marbury Road** is a two-lane minor arterial with a speed limit of 35 mph.
- **Wooster Avenue** is a two-lane local street with a speed limit of 25 mph.
- **East Julian Street** is a two-lane minor arterial with a bike lane and a speed limit of 35 mph.
- **North 17th Street** is a two-lane collector street with a protected bike lane for approximately half of the road length and painted sharrows[1] for the remainder. The speed limit on this road is 25 mph.
- **East Santa Clara Street** is a four-lane minor arterial with a speed limit of 25 mph.
- **East St John Street** is a two-lane local street with painted sharrows and a speed limit of 25 mph.

Reach 7

- **South 17th Street** is a two-lane local street with painted sharrows and a speed limit of 25 mph.
- **East Williams Street** is a two-lane minor arterial with painted sharrows and a speed limit of 25 mph.
- **South 11th Street** is a two-lane minor arterial with painted sharrows and a speed limit of 30 mph.
- **South 16th Street** is a two-lane local street with painted sharrows and a speed limit of 25 mph.
- **Story Road** is a six-lane major arterial with protected bike lanes and a speed limit of 40 mph.
- **South 12th Street** is a two-lane local street with a speed limit of 25 mph.

[1] Sharrows are road markings indicating a shared lane environment for bicycles and automobiles.

- **South 7th Street** is a two-lane collector street with protected bike lanes and a speed limit of 35 mph.
- **Martha Street** is a two-lane local street with a speed limit of 25 mph.
- **Senter Road** is a six-lane major arterial with a protected bike lanes and a speed limit of 40 mph.

Reach 8

- **Phelan Avenue** is a two-lane local street with painted sharrows and a speed limit of 25 mph.
- **Rock Spring Drive** is a two-lane local street with a speed limit of 25 mph.
- **Tully Road** is a six-lane major arterial with protected bike lanes and a speed limit of 40 mph.
- **Galveston Avenue** is a two-lane local street with painted sharrows and a speed limit of 25 mph.

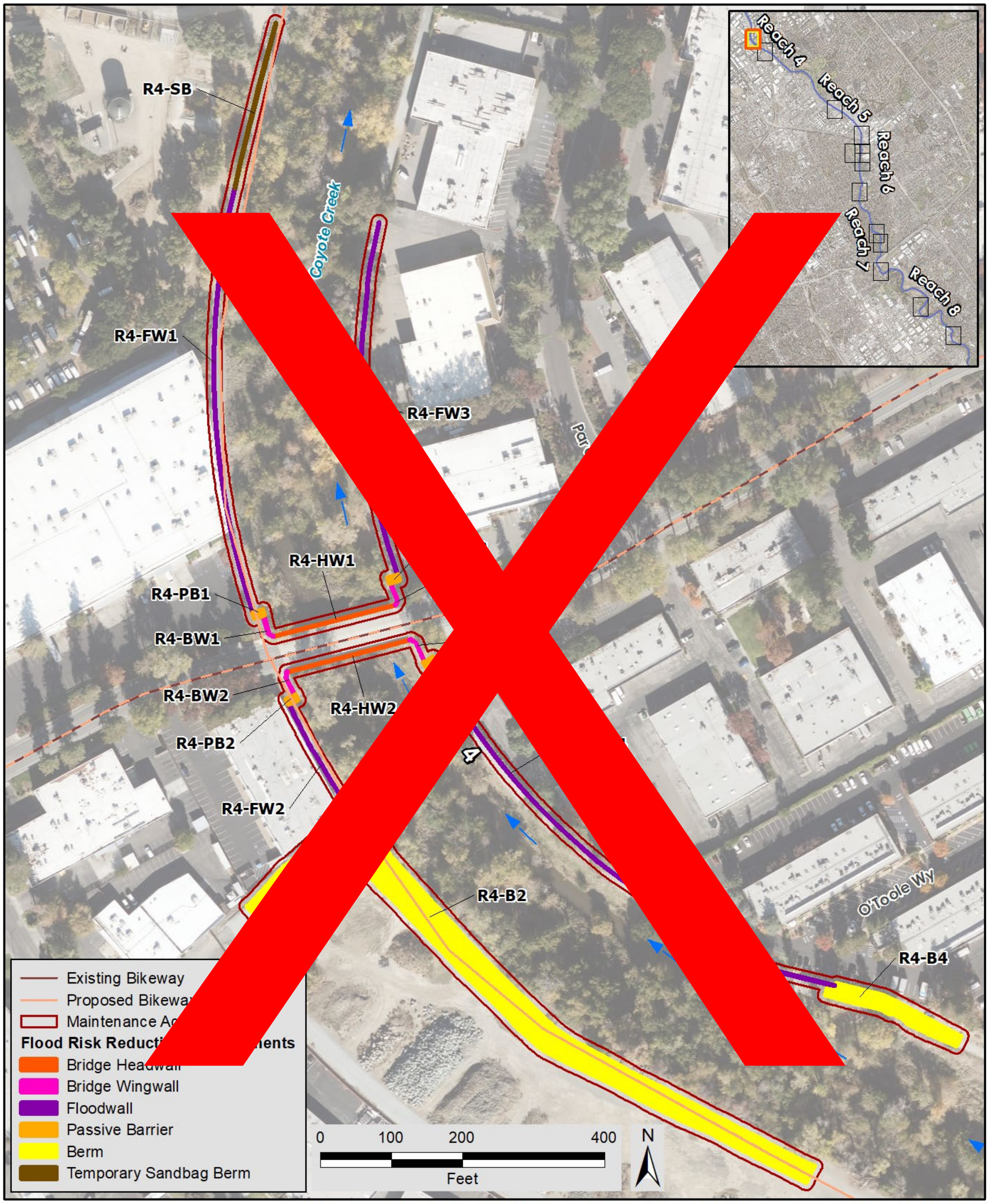
Pedestrian Facilities

Pedestrian facilities in the project area consist of trails, walking paths, sidewalks, marked crosswalks, and signal heads at signalized intersections. There are pedestrian trails throughout the project area, specifically Coyote Creek Trail, Five Wounds Trail, and Penitencia Creek Trail, as discussed in detail in Section 3.12 “Recreation.” Additionally, walking paths are provided in William Street Park and Selma Olinder Park.

Bicycle Facilities

As defined in the San José Better Bike Plan 2025 (San José 2020), California bicycle facilities are categorized as follows:

- Class I bikeways (multi-use trails that are off-street two-way bikeways physically separated from vehicles).
- Class II bikeways (striped bike lanes on street).
- Class III bikeways (on-street bikeways where bicyclists share the lane with vehicles).
- Class IV bikeways (separated bike lane that combine user experience of a multi-use trail but are located on a street).



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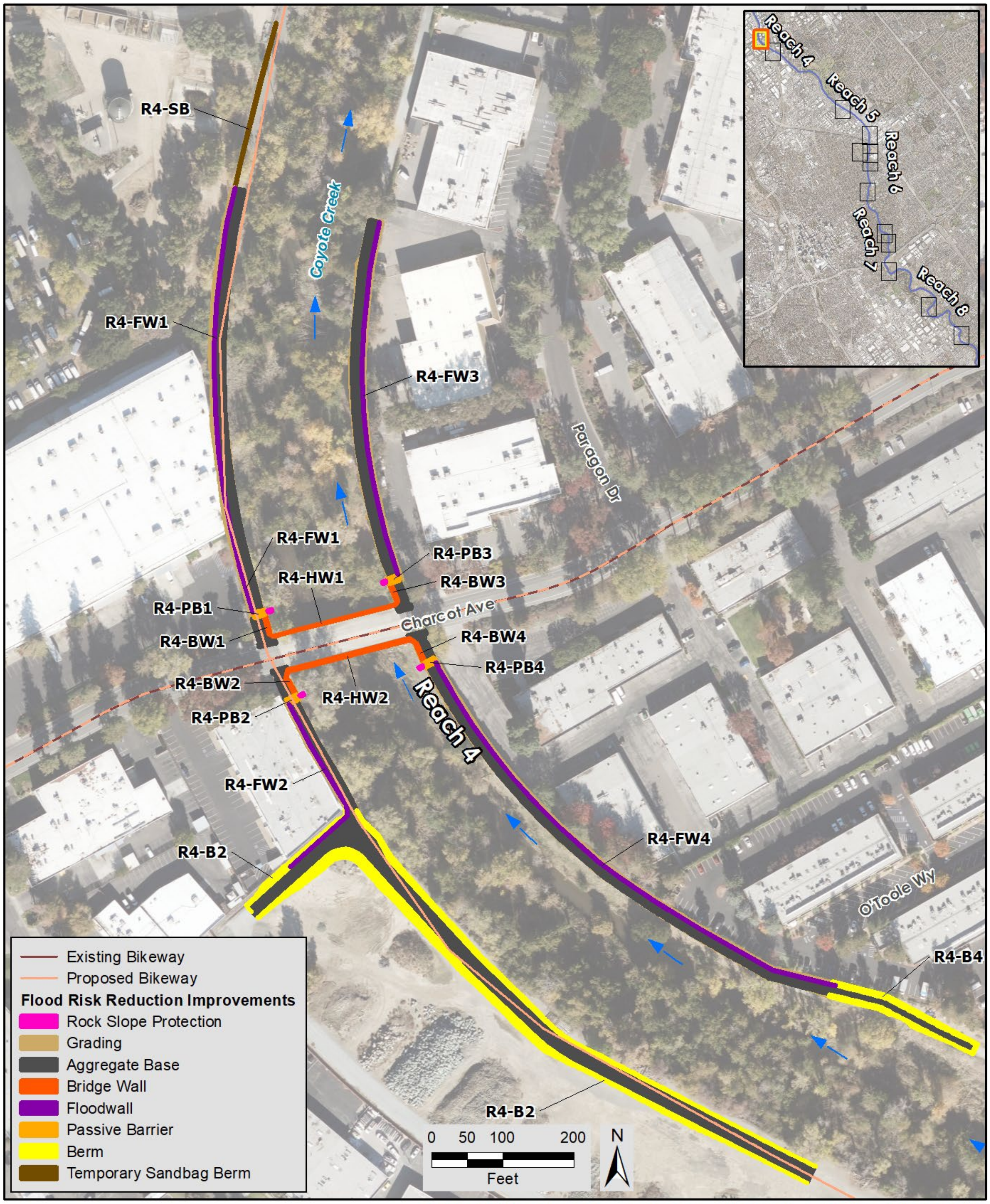

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Figure 3.13.1. Bikeways and Transit Stations (1 of 13)

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Figure 3.13.2. Bikeways and Transit Stations (2 of 13)

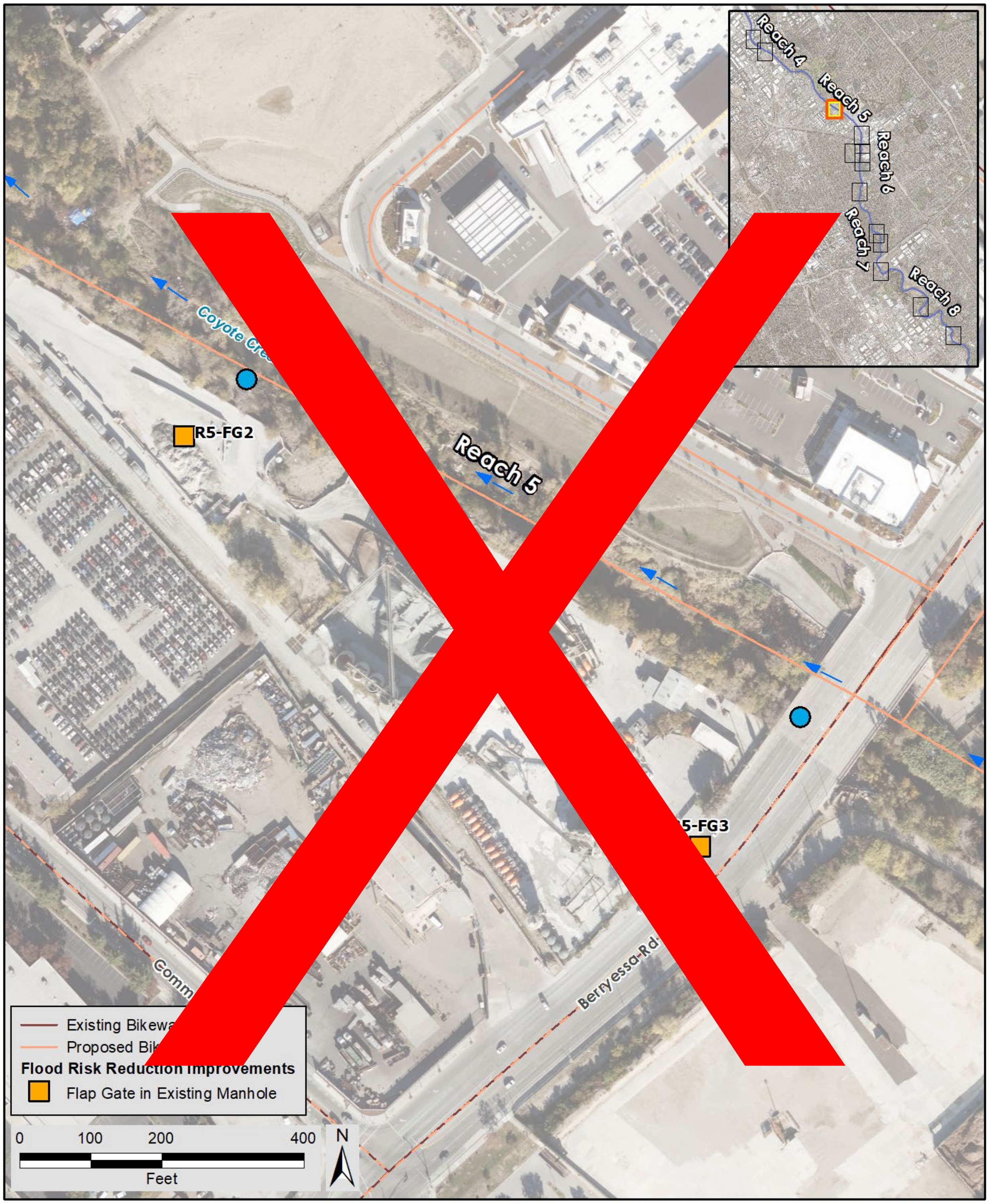

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Figure 3.13.3. Bikeways and Transit Stations (3 of 13)

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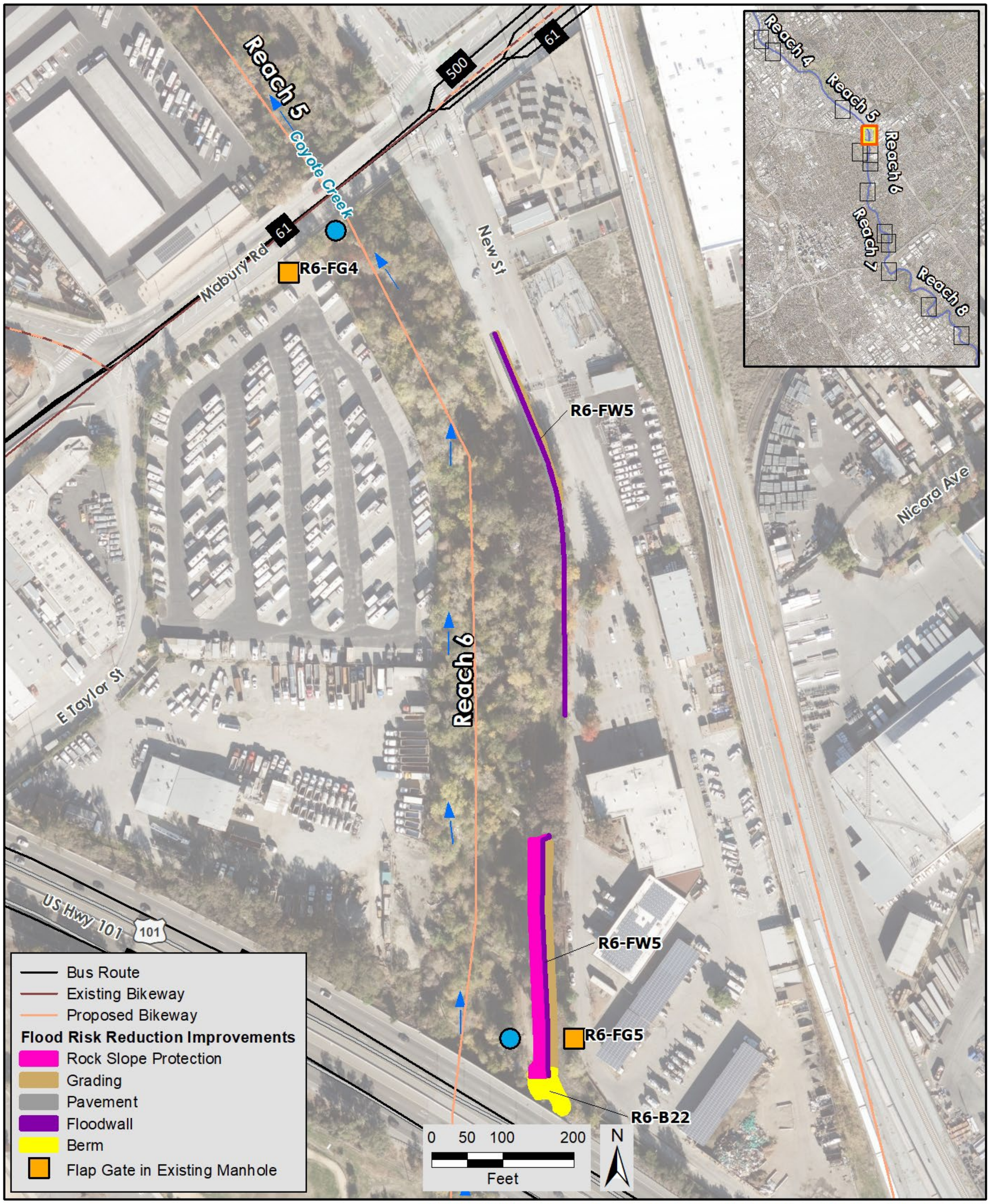

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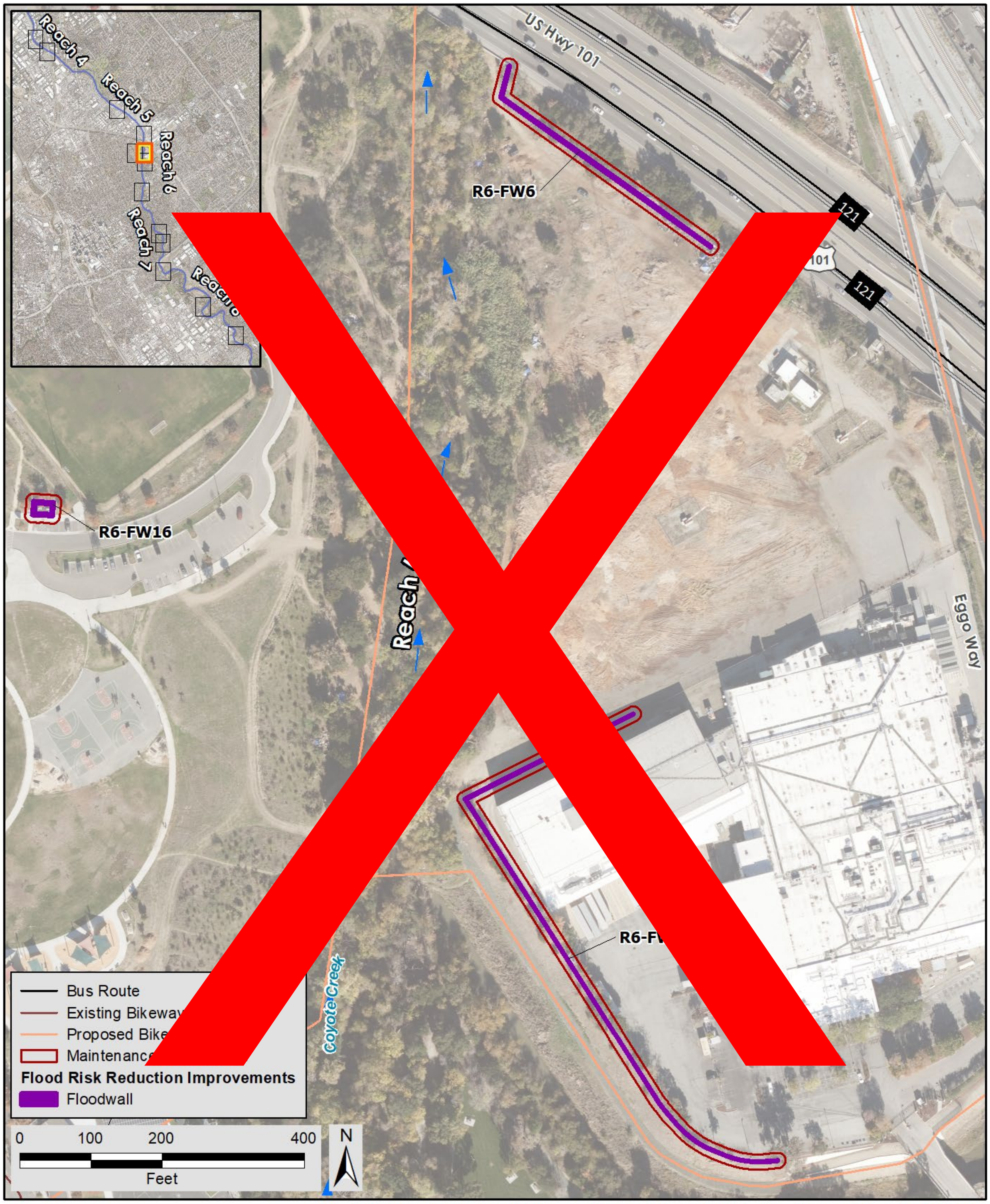
Figure 3.13.4. Bikeways and Transit Stations (4 of 13)



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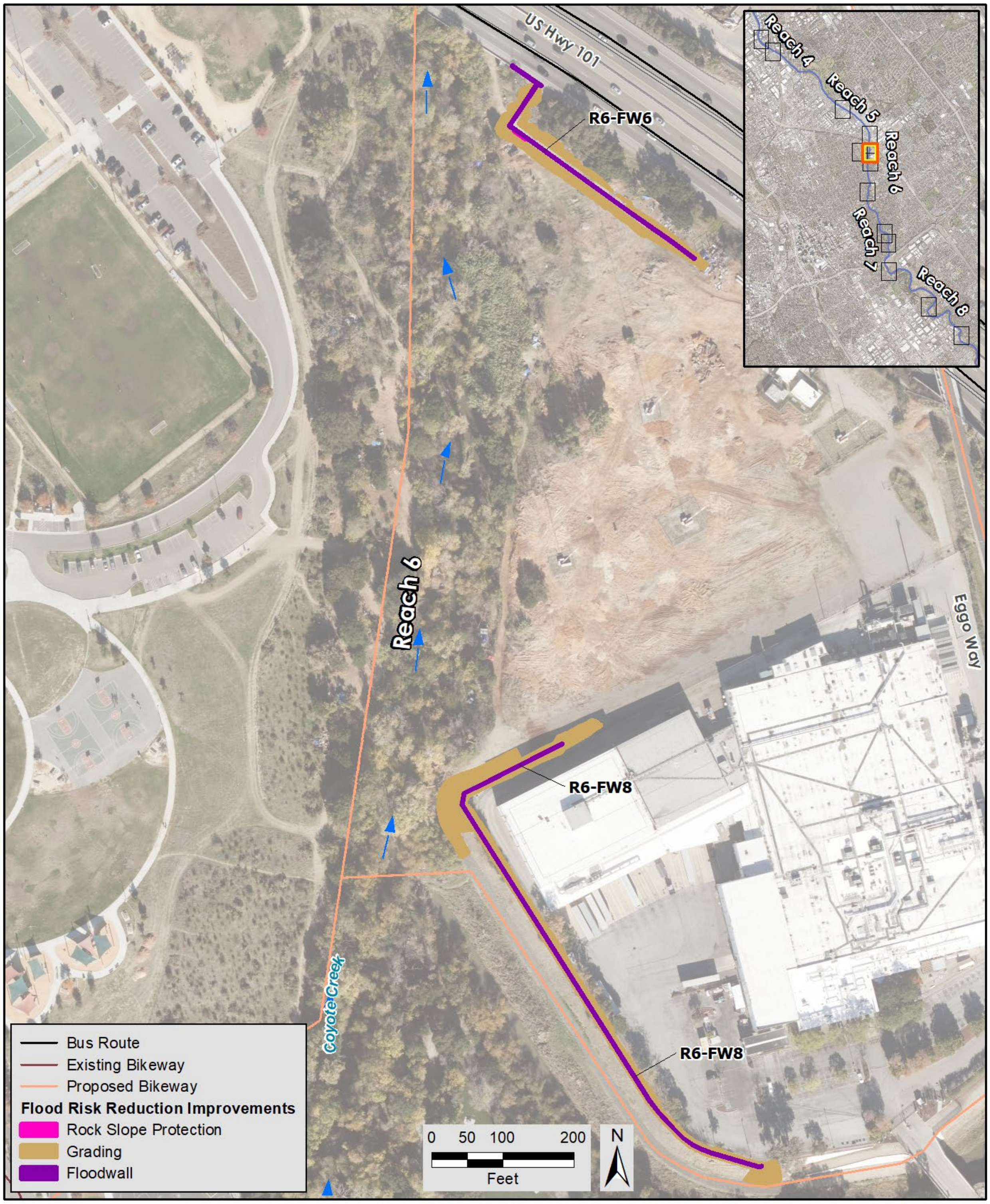

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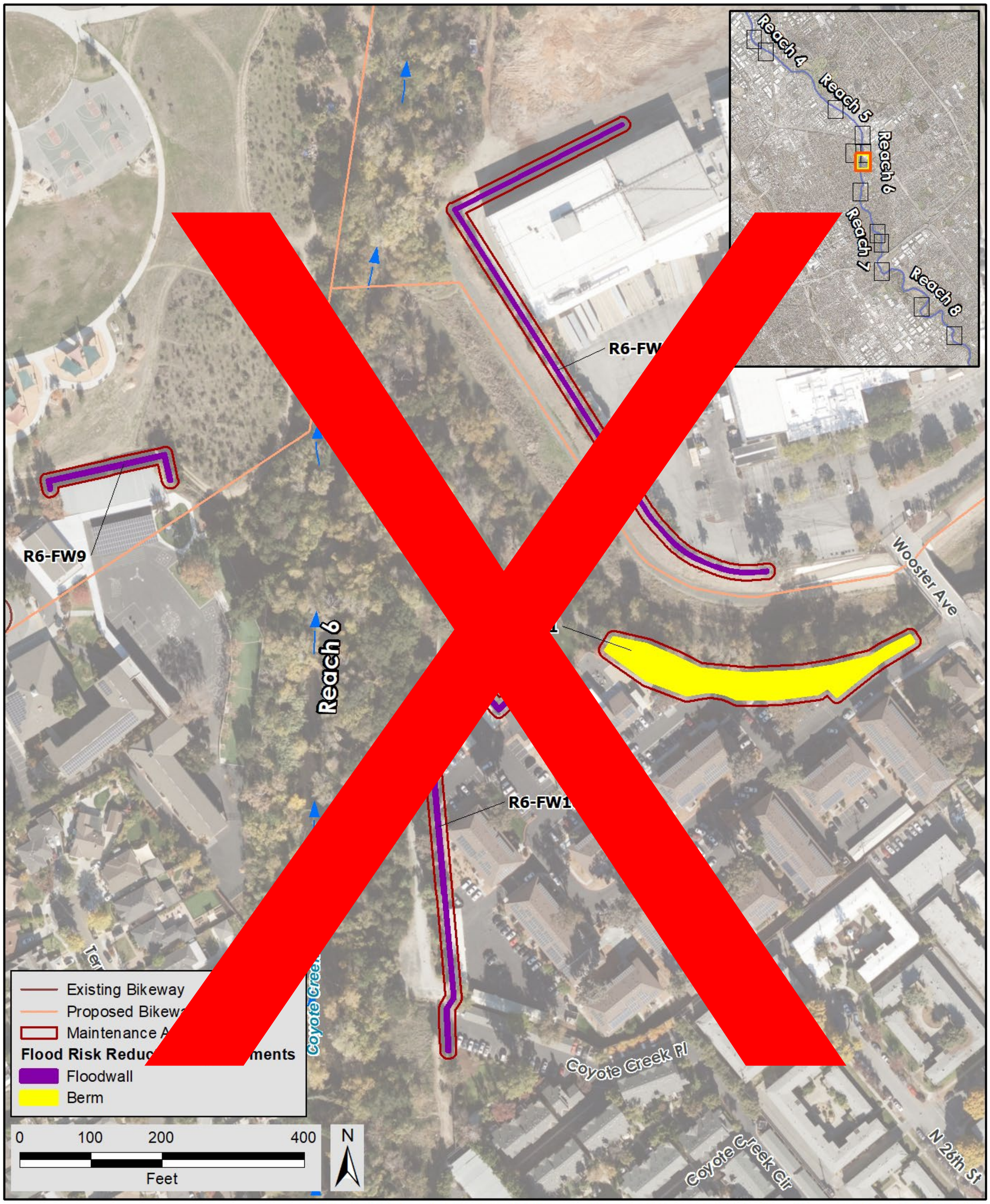
Figure 3.13.5. Bikeways and Transit Stations (5 of 13)



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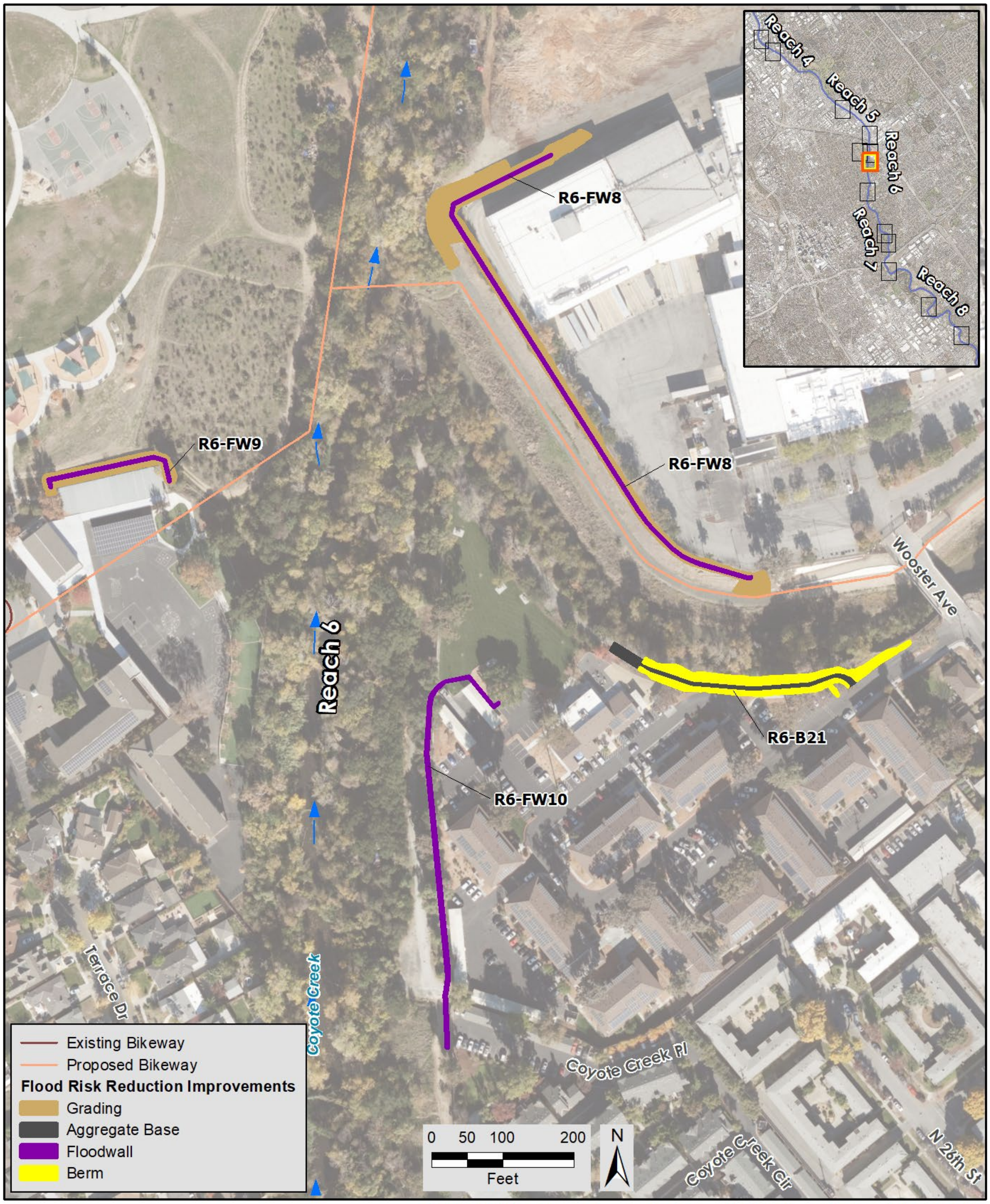

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Figure 3.13.6 Bikeways and Transit Stations (6 of 13)

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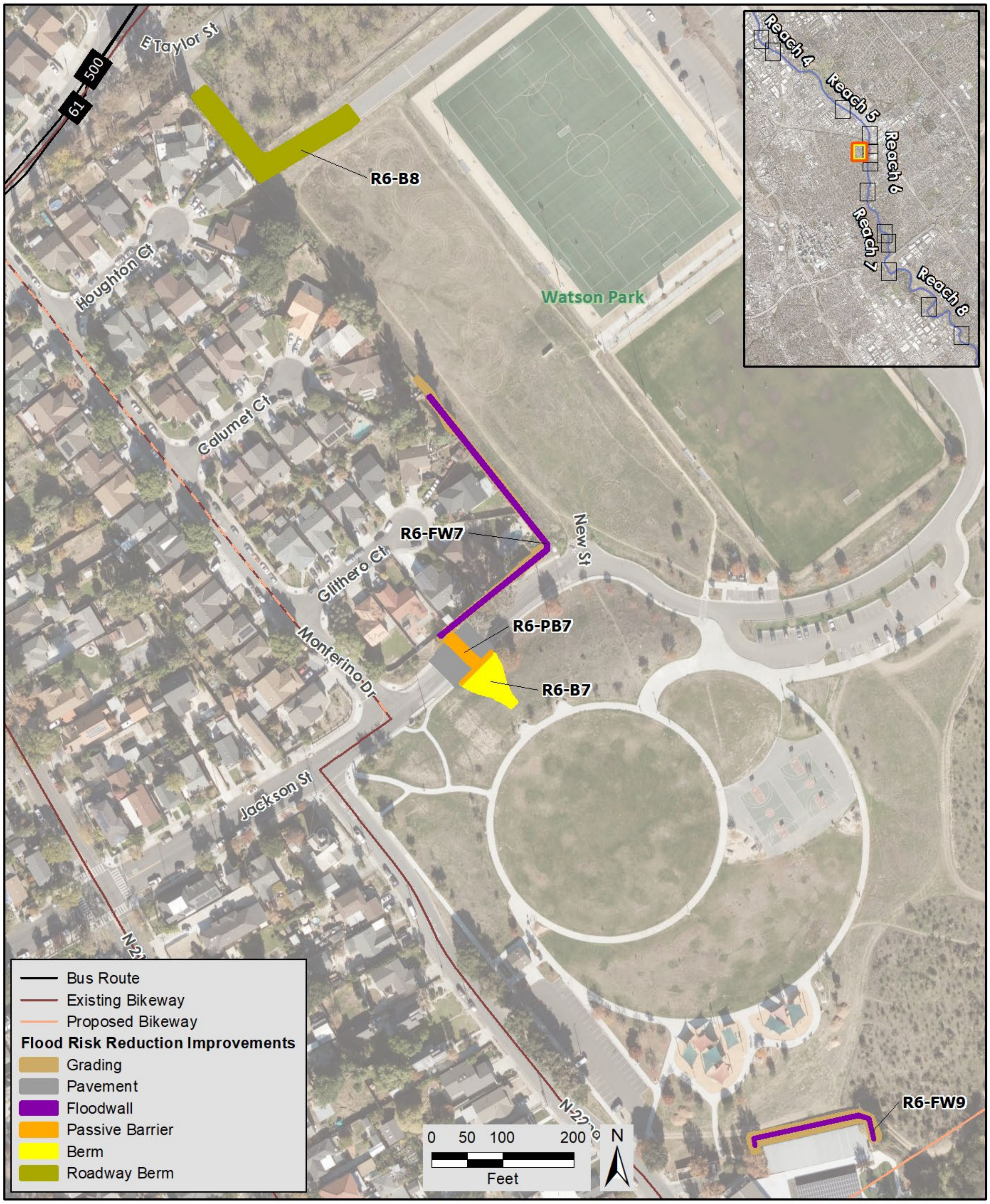

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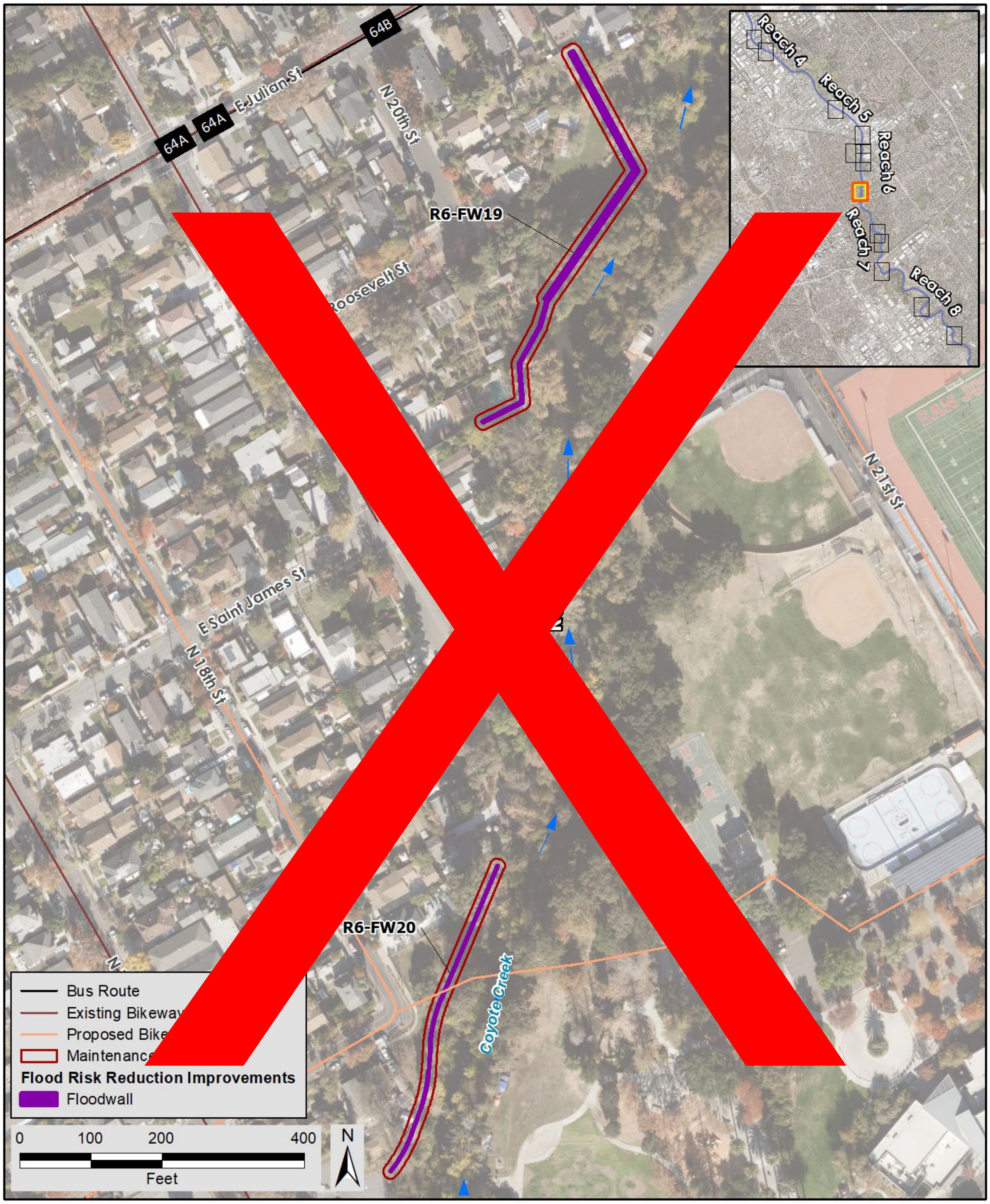
Figure 3.13.7. Bikeways and Transit Stations (7 of 13)



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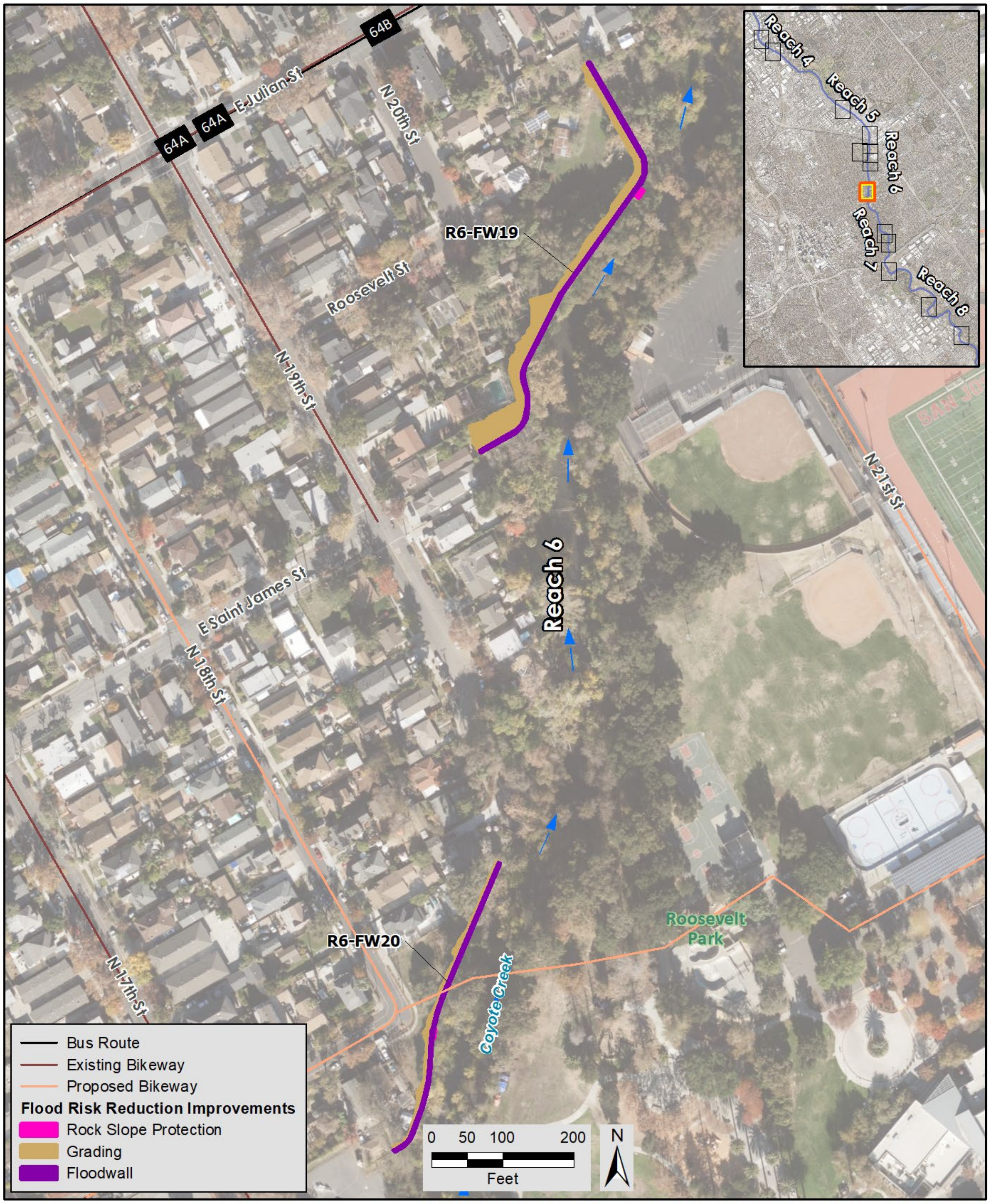

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Figure 3.13.8. Bikeways and Transit Stations (8 of 13)

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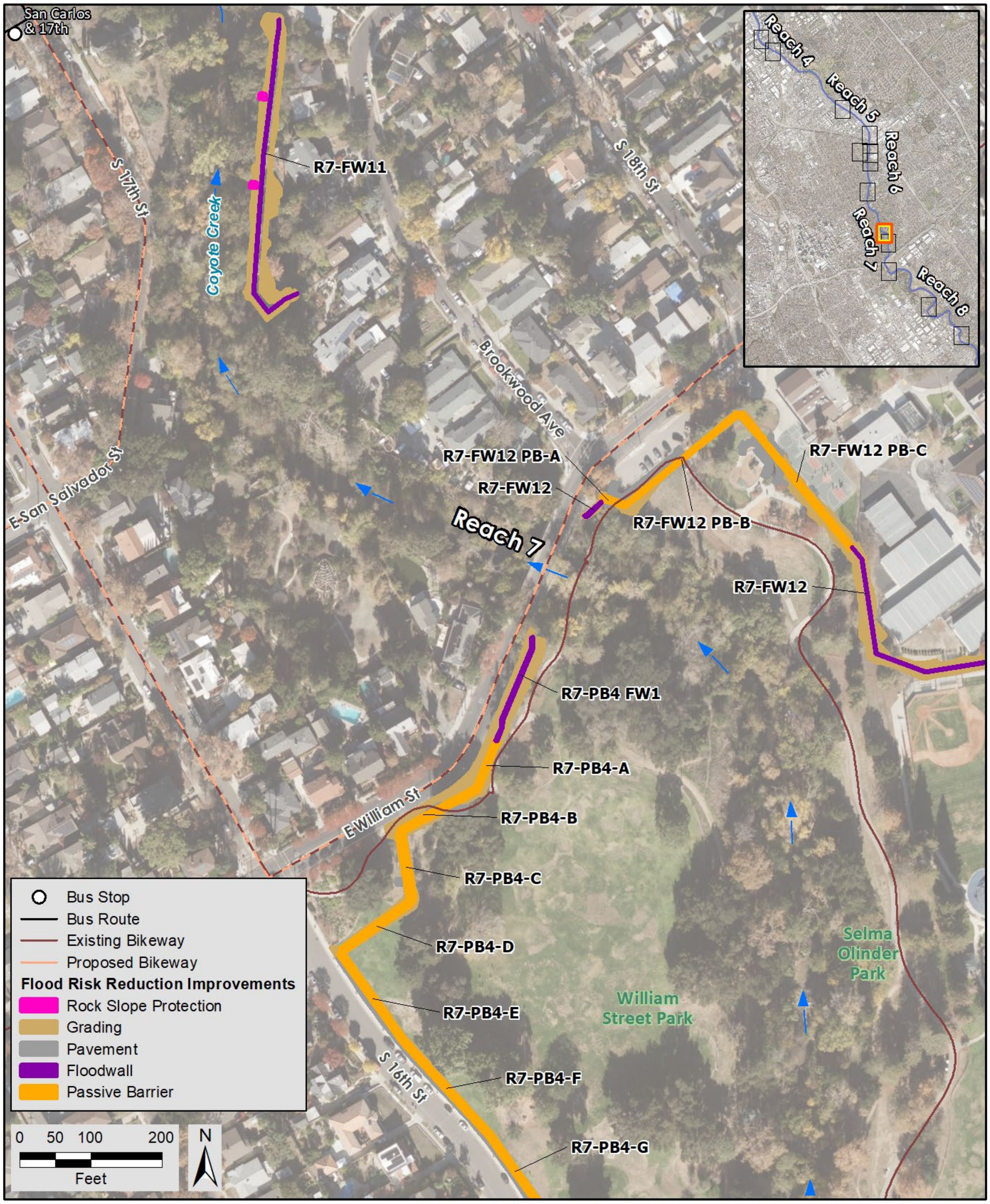

Figure 3.13.9. Bikeways and Transit Stations (9 of 13)

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Figure 3.13.10. Bikeways and Transit Stations (10 of 13)

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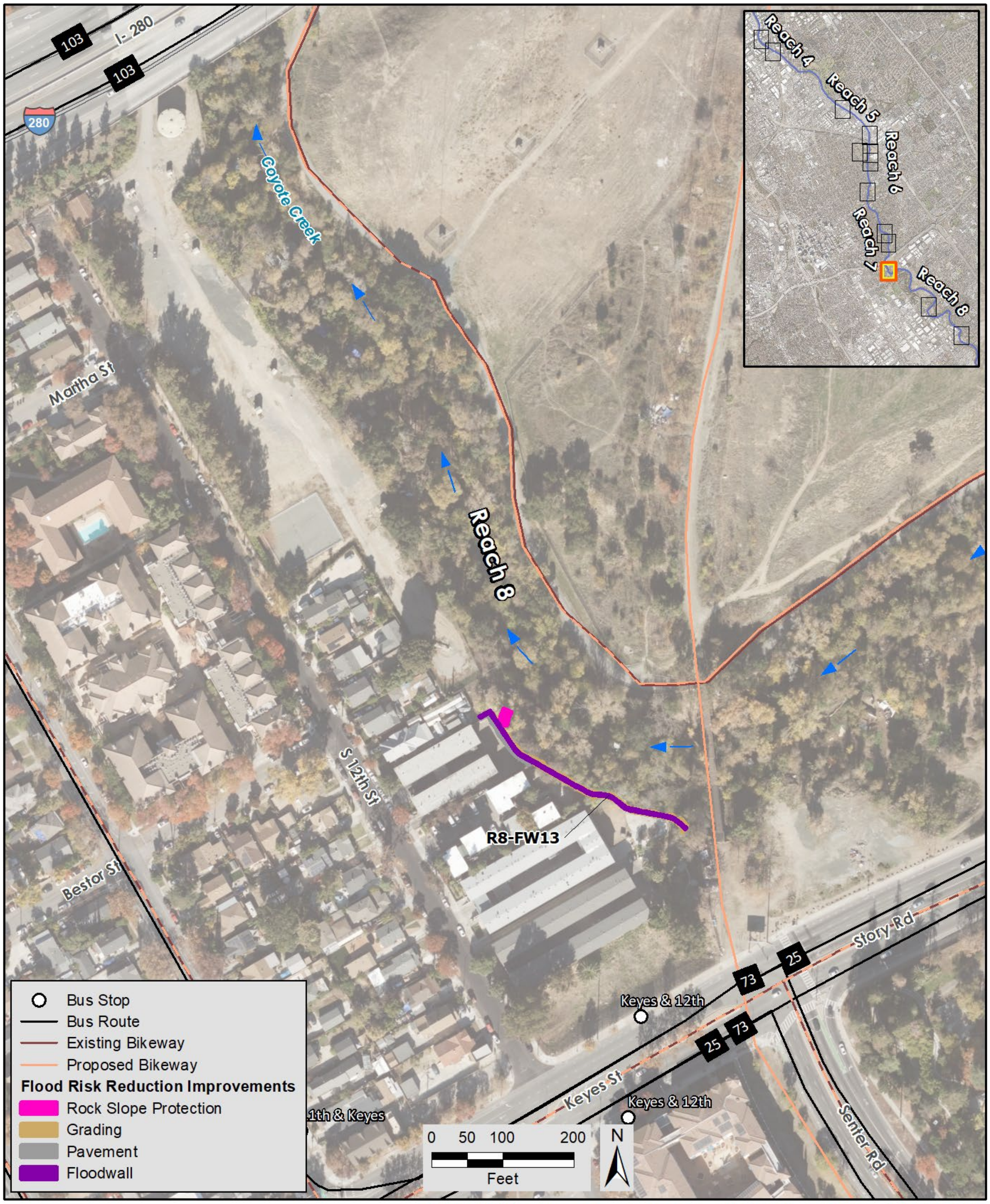

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Figure 3.13.11. Bikeways and Transit Stations (11 of 13)

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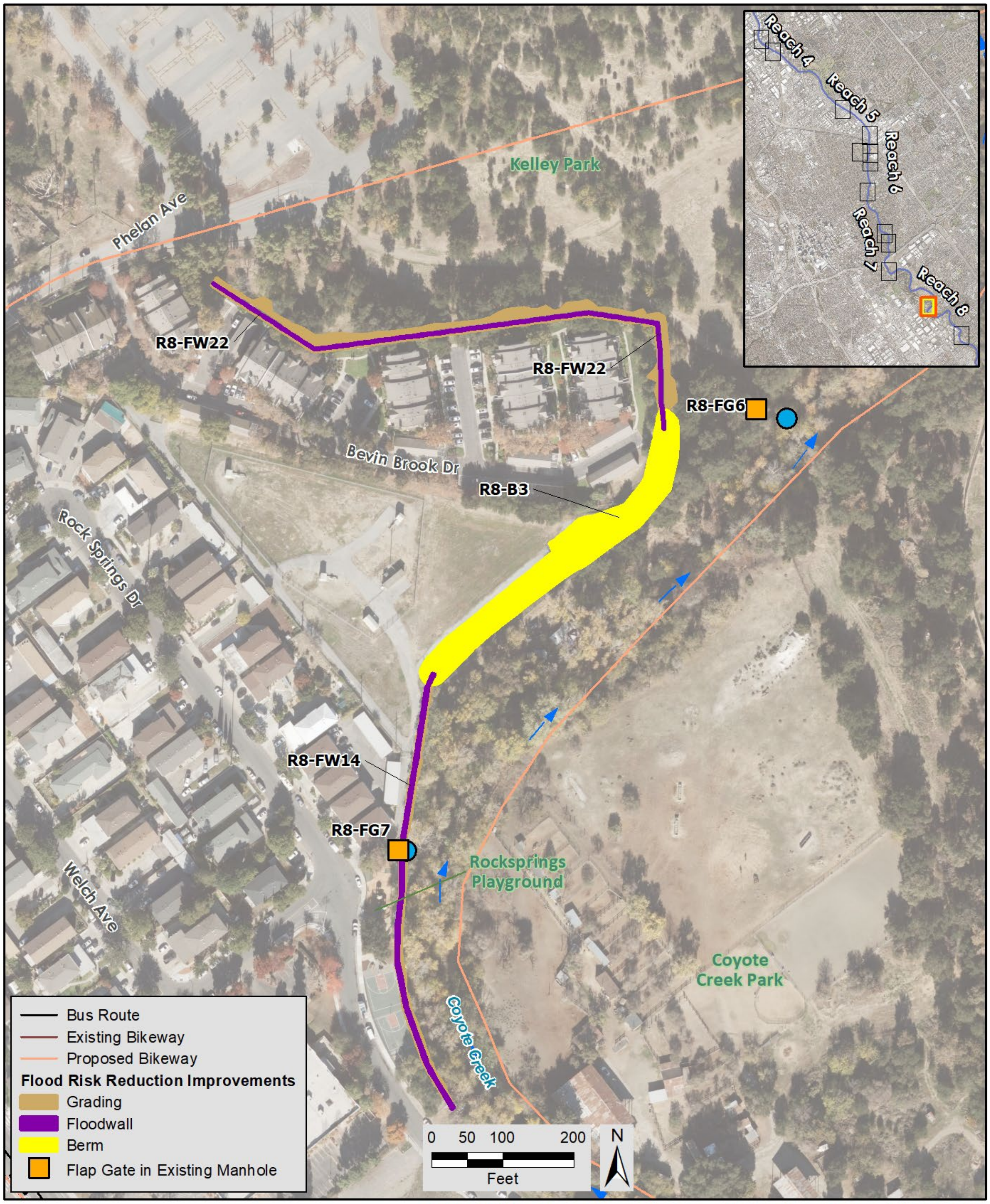

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Figure 3.13.12. Bikeways and Transit Stations (12 of 13)

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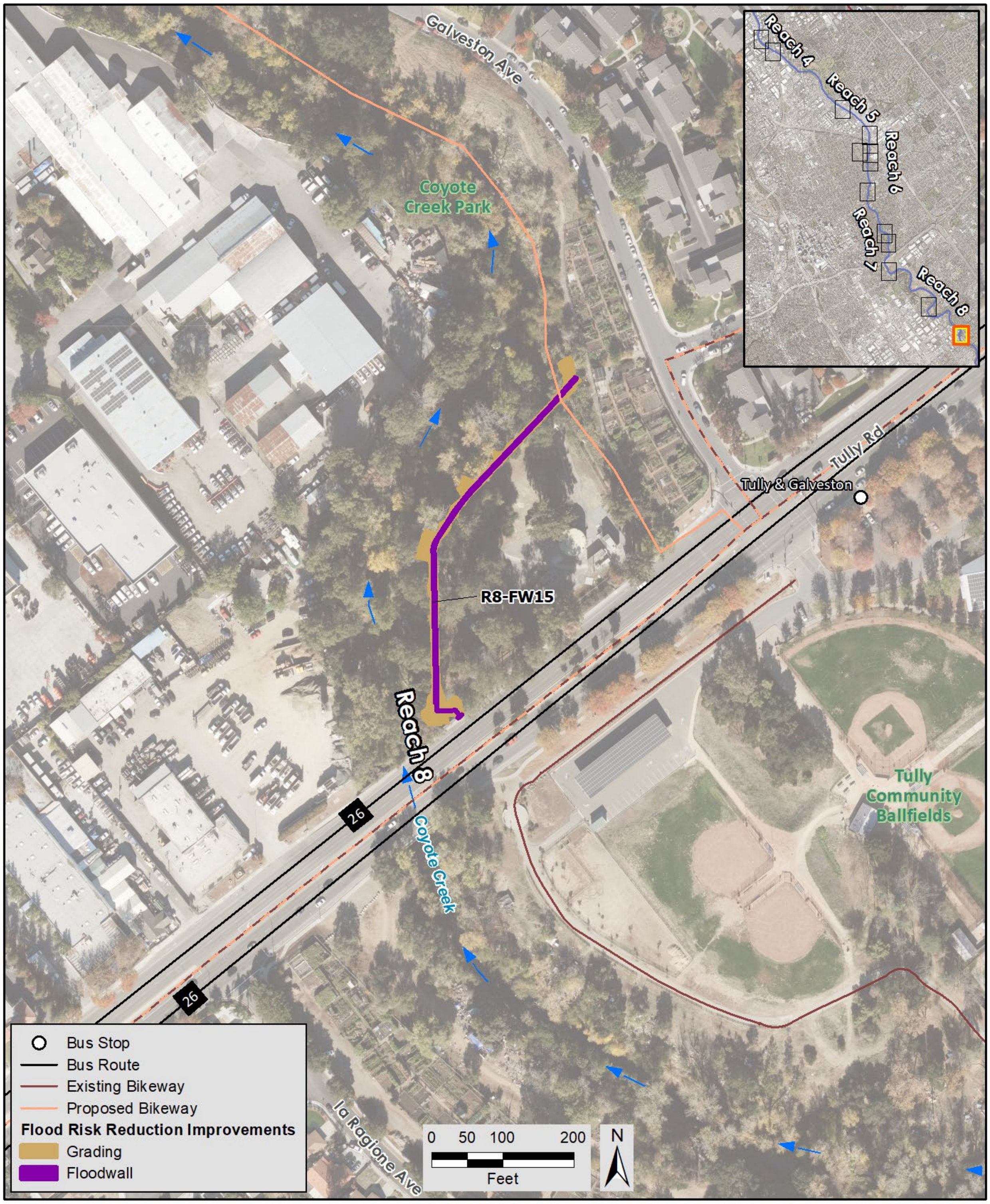

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Figure 3.13.13. Bikeways and Transit Stations (13 of 13)

The following existing bikeways, upgrades to existing bikeways, and proposed new bikeways listed in the San José Better Bike Plan 2025 are in the project site and immediate vicinity (**Figure 3.13.1** through **3.13.13**).

- Charcot Avenue (from Zanker Road to O'Toole Avenue), the existing Class II bikeway is proposed to be upgraded to a Class IV bikeway.
- Coyote Creek Trail (from Charcot Avenue to 21st Street), a new proposed Class I bikeway.
- Coyote Creek Trail (from East William Street to I-280) an existing Class I bikeway.
- Coyote Creek Trail (from I-280 to Kelley Park), a new proposed Class I bikeway.
- Coyote Creek Trail (from Phelan Avenue to Tully Road), a new proposed Class I bikeway.
- Mabury Road (from East Taylor Street to San José Flea Market Mabury Entrance), existing Class IV bikeway.
- Monferino Drive (from East Taylor Street to Jackson Street), the existing Class III bikeway is proposed to be upgraded but will remain Class III.
- North 22nd Street (from East Empire Street to Jackson Street), existing Class III bikeway.
- Lower Silver Creek Trail (from Eggo Way to Dobern Way), a new proposed Class I bikeway.
- North 18th Street (from East St. John Street to East Empire Street), a new proposed Class III bikeway.
- East St. John Steet (from North 24th Street to North 18th Street), a new proposed Class I bikeway.
- South 17th Street (from East Santa Clara Street to East San Salvador Street, the existing Class III bikeway will be upgraded but will remain Class III.
- East Willian Street (from North 16th Street to McLaughlin Avenue), the existing Class III bikeway will be upgraded but will remain Class III.
- South 22nd Street (from East William Street to I-280), existing Class I bikeway.
- Story Road (from Senter Road to Roberts Avenue), the existing Class II will be upgraded to a Class IV bikeway.
- Five Wounds Trail (from I-280/22nd Street to Keyes Street), a new proposed Class I bikeway.
- Keyes Street (South 10th Street to Roberts Avenue), the existing Class II will be upgraded to a Class IV.
- Senter Road (Keyes Street and Story Road to east Capitol Expressway), the existing Class II will be upgraded to a Class IV.
- Phelan Avenue (from Belvin Brooks Drive to Roberts), a new proposed Class I bikeway.
- Tully (Monterey Road to McLaughlin Avenue), the existing Class II will be upgraded to a Class IV.

Transit Services

Transit services in the project area and vicinity are provided by the Santa Clara Valley Transportation Authority (VTA), an independent special district. VTA provides bus, light rail, and paratransit services to the City. The project area and vicinity are served by local bus routes 25, 26, 60, 64A, 64B and 73, as well as express route 103 and 121, and rapid bus route 500 (Figure 3.13-1 through 3.13-10). The Berryessa Transit Center, which contains the Berryessa BART station, is located approximately 1,000 feet northeast of the project area in Reach 6 and provides frequent connections to VTA buses that service a large portion of the City and rapid services to the City's downtown area. The routes that service the project area and vicinity are described below.

- **Local 25** operates on Keyes Street and Senter Road in the project vicinity. Due to construction, Route 25 is temporarily closed.
- **Local 26** operates on Tully Road, immediately adjacent to the project area. This route runs from the Campbell Avenue and Saratoga Avenue to Eastridge Transit Center, from 5:20 a.m. to approximately midnight.
- **Local Route 60** operates on Brookshaw Road, approximately 0.15 mile from the project area. It runs from the Winchester Station to the Milpitas Road BART, from 5:20 a.m. to approximately midnight.
- **Local 64A** operates on East Julian Street in the project vicinity. This route runs from the Ohlone – Chynoweth Station to McKee Road, from approximately 5:20 a.m. to midnight.
- **Local 64B** operates on East Julian Street in the project vicinity. This route runs from Almaden and Camden Avenue from approximately 6:00 a.m. to midnight.
- **Local Route 61** operates on East Taylor Street and Berryessa Road, in the project vicinity. This route runs from the Good Samaritan Hospital to the Sierra Road and Piedmont Road, from approximately 5:30 a.m. to 11 p.m.
- **Local Route 73** operates on Senter Road, Story Road, and 11th Street in the project vicinity, on its route from Senter and Monterey to 1st/2nd and Bassett Street. This route runs from approximately 5:30 a.m. to 10:40 p.m. Due to construction, Route 73 is temporarily closed.
- **Express 103** operates along I-280 in the project vicinity. This route operates from Hansen Way and Page Mill Drive to the East Transit Center from approximately 2:40 p.m. to 6:20 p.m.
- **Express 121** operates along US 101 immediately adjacent to the project area. This route operates from the Gilroy Transit Center to the Lockheed Martin Transit Center, from approximately 4:20 a.m. to 9:00 a.m.
- **Rapid Route 500** operates on 11th Street, Taylor Road, and Mabury Road in the project area, before ending at the Berryessa Station. This route operates from approximately 4:30 a.m. to midnight.

3.13.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal laws, regulations or policies related to transportation and traffic apply to the project.

State Laws, Regulations, and Policies

Senate Bill 743

Previously under CEQA, transportation impacts were evaluated by examining whether project-generated traffic would be likely to cause delays at intersections and congestion on nearby individual highway segments, and whether this delay would worsen operational performance based on existing and future traffic conditions (i.e., level of service [LOS] analysis). Section 15064.3 of the CEQA Guidelines, adopted in 2018 in response to SB 743, changed how lead agencies evaluate transportation impacts. Since July 1, 2020, agencies analyzing the transportation impacts of new projects must use vehicle miles traveled (VMT) as a transportation impact metric instead of LOS. VMT measures how much actual vehicle travel (additional miles driven) a proposed project would create on California roads.

To assist with implementation of the VMT metric, the Office of Planning and Research (OPR) prepared a Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). OPR's Technical Advisory recommends that for land use projects, a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. In making this recommendation, OPR recognized that land use development projects (i.e., those involving residential, office, and retail proposals) tend to have the greatest influence on VMT. For other types of projects, lead agencies should consider the purposes in Public Resources Code section 21099(b)(1) (i.e., promote reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses) in applying a threshold of significance. In addition, OPR states that projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact (OPR 2018). Qualitative analyses are acceptable when methods do not exist for undertaking a quantitative analysis.

A primary goal of VMT reduction is to reduce air quality and lessen GHG emissions, and further information on how construction VMT contributes to these emissions is presented in Section 3.3, "Air Quality," and 3.7, "Greenhouse Gas Emissions and Energy."

California Department of Transportation Requirements

The California Department of Transportation (Caltrans) is the primary state agency responsible for the construction and maintenance of the state highway system. Caltrans facilities within the project area consist of I-280, I-680, I-880, SR 237, and US 101. Caltrans has established standards for roadway traffic flow and has developed procedures to determine if state-controlled facilities require improvements. Improvements or modifications to the highway system, including ramps and access points, within the study area would need to be approved by Caltrans.

For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD) (California State Transportation Agency 2024). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers. For projects that would not physically affect facilities but may influence traffic flow at such facilities, Caltrans may recommend measures to improve traffic operations.

In its 2020 memorandum on CEQA significance determinations, Caltrans stated that VMT is the most appropriate measure of transportation impacts under CEQA (Caltrans 2020). While the VMT metric is appropriate for CEQA analyses, Caltrans does continue to use the LOS metric for operating state highway facilities to evaluate their operations and as one of its measures of effectiveness.

Regional/Local Laws, Regulations, and Policies

Santa Clara Valley Transportation Authority Valley Transportation Plan 2040

As the Congestion Management Agency for Santa Clara County, the Santa Clara Valley Transportation Authority (VTA) is responsible for countywide transportation planning which includes congestion management, design and construction of specific highway, pedestrian, and bicycle improvement projects, and promoting transit development. VTA's Valley Transportation Plan 2040 (VTP 2040) provides a long-range vision for the transportation system in Santa Clara County. The VTP 2040 identifies programs, projects, and policies that the VTA's Board of Directors will pursue over the lifetime of the plan. The VTP 2040 connects projects and programs with anticipated funds and provides a framework for the development and maintenance of County transportation over the 25-year life of the VTP 2040. The VTP 2040 considers all travel modes and addresses the links between transportation, land use, air quality, energy use, and community livability (VTA 2014). At the time of Draft EIR preparation, VTA was preparing an updated Valley Transportation Plan 2050, which is scheduled for adoption in Winter 2024 (VTA 2024).

City of San José Better Bike Plan 2025

The San José's Department of Transportation prepared the Better Bike Plan 2025 with the aim to construct a safe and connected network of on-street bikeways (City of San José 2020). The goals of the plan are to improve safety, increase mode sharing, and lead with equity. The plan identifies policies and programs, as well as priority programs, to help advance the plan's goals and objectives.

City of San José Council Policy 5-1

Council Policy 5-1, "Transportation Analysis Policy" was amended in 2022 and aligns the City's transportation analysis with Senate Bill 743 and the City's goals to reduce VMT as set forth in the City's Envision San José 2040 General Plan. The purpose of the policy is to establish VMT as the metric to measure transportation environmental impacts in conformance with CEQA and sets forth a framework for transportation analysis associated with proposed developments, land use plans, transportation projects, and any other plans or development in the City. These types of projects are required to perform Local Transportation Analysis to demonstrate conformance with multimodal transportation strategies, goals, and policies in the General Plan and address adverse effects to the transportation system.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan (2040 General Plan) includes the following goals and policies that may be applicable to the project.

Goal TR-1: Complete and maintain a multimodal transportation system that gives priority to the mobility needs of bicyclists, pedestrians, and public transit users while also providing for the safe and efficient movement of automobiles, buses, and trucks.

- **Policy TR-1.1:** Accommodate and encourage use of non-automobile transportation modes to achieve San José's mobility goals and reduce vehicle trip generation and VMT.
- **Policy TR-1.2:** Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects.
- **Policy TR-1.5:** Design, construct, operate, and maintain public streets to enable safe, comfortable, and attractive access and travel for motorists and for pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.

Goal TR-5: Vehicular Circulation. Maintain the City's street network to promote the safe and efficient movement of automobile and truck traffic while also providing for the safe and efficient movement of bicyclists, pedestrians, and transit vehicles.

- **Policy TR-5.4:** Maintain and enhance the interconnected network of streets and short blocks that support all modes of travel, provide direct access, calm neighborhood traffic, reduce vehicle speeds, and enhance safety.

Goal TR-6: Goods Movement. Provide for safe and efficient movement of goods to support commerce and industry.

- **Policy TR-6:** Minimize potential conflicts between trucks and pedestrian, bicycle, transit, and vehicle access and circulation on streets with truck travel.
- **Policy TR-6.3:** Encourage through truck traffic to use freeways, highways, and County Expressways and encourage trucks having an origin or destination in San José to use Primary Truck Routes designated in the Envision General Plan.

Goal TR-9: Reduce VMT per service population by 20 percent (2030 goal) and by 45 percent (2040 goal), from the 2017 levels.

3.13.3 Applicable BMPs and VHP Conditions/AMMs

Valley Water would incorporate BMPs to avoid and minimize adverse effects on the environment that may result from the project. No VHP Conditions or AMMs are applicable to transportation. All relevant Valley Water BMPs for the project are included in Appendix B and incorporated in the project, as described in Chapter 2, "Project Description." Valley Water Handbook BMPs relevant to transportation and traffic are:

- **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.

The following Valley Water SMP BMPs relevant to transportation and traffic are:

- **GEN-36: Public Outreach** - Public will be informed of maintenance work in advance.
- **GEN-37: Implement Public Safety Measures** - Signage will be posted in advance and temporary fencing and staff, or site security will provide traffic control.

- **GEN-39: Planning for Pedestrians, Traffic Flow, and Safety Measures** - Maintain two-way traffic as much as possible. If two-way traffic cannot be maintained, then temporary lane closures will be coordinated with the local jurisdiction and conducted outside of peak traffic hours. Advance notification of any lane closures will be done. Bicycle and pedestrian closures will be scheduled outside of peak traffic hours. Adequate parking will be provided for maintenance-related vehicles. Access to driveways and private roads will be maintained. If necessary, property owners will be notified in advance of temporary access blockage.

3.13.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the CEQA Guidelines. The proposed project would have a significant impact on traffic and transportation if implementing the project would:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access,

Analysis Methodology

Evaluation of the potential impacts of the project on transportation was based on a review of planning documents pertaining to the project area, particularly the 2040 Envision San José General Plan (San José 2011a), the Draft Program Environmental Impact Report for the 2040 General Plan (San José 2011b), and the San José Better Bike Plan 2025 (San José 2020).

VMT Evaluation

CEQA Guidelines section 15064.3(b)(3) states that “if existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively.” It also states that “a qualitative analysis of construction traffic may be appropriate.” Although the City uses VMT as the metric to assess long-term operational transportation impacts from proposed developments, land use plans, transportation projects, and any other plans or developments in the City, it has not adopted an impact threshold for determining impacts from construction of infrastructure, as would occur from the project. The purpose of SB 743 was focused on reducing long-term VMT to help achieve the state’s GHG reduction targets, this type of VMT analysis is not focused on evaluating temporary construction-related trips. Even though one particular project may generate a large number of construction trips, the number of construction generated VMT for an individual project is small when compared to the total annual operational VMT in a jurisdiction generated by residential, commercial, industrial, and office uses.

In the absence of an adopted policy with impact thresholds relevant to the project, project impacts on transportation and traffic are evaluated based on a qualitative approach and relies on the City’s transportation guidelines, the guidelines published by OPR in its Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018), Caltrans Memorandum titled “Transportation Impact Analysis and CEQA Significance Determinations for Projects on the State Highway System” (Caltrans 2020), and review of the above mentioned planning documents pertaining to the project area.

Impacts Not Discussed Further in the EIR

Conflict with CEQA Guidelines Section 15064.3(b) During Project Operation

Operation and maintenance of the flood risk reduction improvements would be similar to current Valley Water practices and maintenance activities as described in Chapter 2, “Project Description”. Improvements developed with the project would be inspected one to two times per year, and therefore, operations and maintenance activities would generate a negligible increase in the number of added vehicle trips and VMT compared to existing conditions and would not conflict with CEQA Guidelines Section 15064.3(b). Therefore, this issue is not discussed further in this EIR.

Impact Analysis

Impact TR-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities. (Less than significant)

During construction, the project would temporarily disrupt bicycle and pedestrian routes along the Coyote Creek Trail, Watson Park, William Street Park, Selma Olinder Park, and local roadways where construction access points are located. Construction of the project would temporarily limit access to portions of these public facilities, slow traffic within local roadways, and require some to seek alternative routes within adjacent neighborhoods. Construction would occur at up to three locations simultaneously during the construction period, and impacts would be isolated to the active construction sites within the project area and vicinity. While impacts would conflict with the City’s policies regarding the maintenance of traffic flows and encouragement of non-automobile transportation, these impacts would be temporary, limited to working hours and days described in Chapter 2, “Project Description,” and access and traffic flows would return to pre-project conditions following the completion of construction activities. The project would not result in any long-term operational-related impacts. Further, implementation of Valley Water BMP TR-1 (Incorporate Public Safety Measures) during construction would ensure the installation of safety measures. Additionally, SMP BMPs GEN-36 (Public Outreach), GEN-37 (Implement Public Safety Measures), and GEN-39 (Planning for Pedestrians, Traffic Flow, and Safety Measures) would be implemented to ensure coordination with the City prior to operations and maintenance activities, notify the public of temporary detours or alternate routes to use during the operations, if needed, and provide notification and traffic safety measures during maintenance activities, as needed. Therefore, impacts would be **less than significant**.

Impact TR-2: Conflict with CEQA Guidelines Section 15064.3(b) during Construction. (Less than significant)

The project would generate a temporary increase in VMT during the construction period from mobilization and demobilization of construction equipment, materials deliveries, off hauling construction debris, and worker vehicle trips to and from the project area each day of construction. Daily worker commutes and occasional material delivery trips would generate the most vehicle trips. Up to 30 construction workers would be present in the project area dispersed among a maximum of three separate construction sites at any given time over the 2-year construction period. Access to the project area includes use of highways, major roads, and local roads. Construction personnel would likely come from the local workforce in the greater San Francisco Bay area (Bay Area) and inland Central Valley region. Supplier markets are distant from the construction area and the choice of construction contractors by Valley Water would depend on several factors, including availability when the work is scheduled. it is likely that Valley Water would contract primarily with the local workforce and vendors. As a result, opportunities to substantially lessen VMT during the construction period are limited.

The 2040 General Plan established truck routes for the transport of materials and goods (San José 2011a). The project would use these designated truck routes, such as Marbury Avenue, Story Road, and Senter Road, to the extent possible when transporting materials to and from the project area. This would increase efficient delivery speed to the project area and reduce the project's use of trucks on smaller local roadways. Except for transport on regional highways, such as US 101, I-880, I-280, truck trips would be spread among different improvement sites that are geographically separated, resulting in the use of different local roadways and access points throughout the construction period. Because construction would occur at only three improvements sites at any given time during the 2-year construction period, the relative increase in traffic volume from construction of each improvement site would be much less compared to the overall existing traffic volumes affecting the project area and vicinity.

Staging and laydown areas would be used to station equipment and materials during construction which would greatly reduce the need for multiple deliveries of materials. In addition, the reduction in distance between the staging and laydown areas and nearby improvement sites would reduce trip distance and time on local roadways. Furthermore, VMT generated by construction activities would not persist after project construction is complete. Caltrans, in its guidance for implementing SB 743, states that "vehicle trips used for construction purposes would be temporary, and any generated VMT would generally be minor and limited to construction equipment and personnel and would not result in long-term trip generation" (Caltrans 2020).

Based on the above analyses, VMT associated with project construction would be temporary and not contribute to a substantial change in long-term VMT. Therefore, project construction would not conflict with CEQA Guidelines section 15064.3(b), and impacts would be **less than significant**.

Impact TR-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Use. (Less than significant)

The project includes constructing flood risk reduction improvements, including passive barriers at various locations throughout the project area that occur in and adjacent to local roadways. Passive barriers would remain at ground level until flood conditions trigger deployment. Once deployed, passive barriers would automatically rise to approximately 3- to 8 -feet in height as water infiltrates under the base of the barrier, as described in Chapter 2, "Project Description." After flood conditions subside, generally within 2 to 5 days of a flood event, passive barriers would return to ground level. Passive barriers are designed to deploy during a 20-year flood event, which means there is a 5 percent chance for deployment in a given year, and therefore is likely to occur once in a 20-year period. Passive barriers would be constructed at the following roadway, bicycle, or pedestrian access locations:

- at the entrance to Watson Park, across Jackson Street (~~R6-PB3~~ R6-PB7),
- along the west and south side of Selma Olinder Elementary School (R7-FW12 PB-A through PB-C),
- near the sidewalk along the western perimeter of William Street Park (R7-PB4-A to -H), and
- at the eastern edge of Selma Olinder Park and athletic facilities (R7-PB5).

During flood events, passive barriers would be triggered at these locations and roadway, pedestrian, and bicycle access would be temporarily blocked until flood conditions recede and the passive barriers return to ground level. When traffic is blocked by passive barriers, traffic signals installed on Jackson Street at Watson Park and signage on the passive barriers would indicate designated detour routes are available until flood flows diminish and passive barriers return to ground level. As described in Chapter 2, "Project Description," operation and maintenance of the traffic signals would be done in compliance with encroachment permits from the City.

Because passive barriers would be deployed infrequently during flood events, and because traffic would be precluded from passing through the flooded areas, with or without the passive barriers, the project would not substantially increase hazards due to a geometric design feature or from an incompatible use. Further, the barriers would prevent people from crossing into areas that are flooded and would minimize flood-related hazards compared to existing conditions. Additionally, project improvements include a roadway berm consisting of approximately less than 1-foot mound of asphalt would be contoured onto the road at the northern entrance to Watson Park to create a high point within North 23rd Street for additional flood protection. Roadway recontouring would not create a new roadway hazard or create an incompatible use as the roadway would continue to be used for its current purpose after implementation, and the fundamental geometric design of the roadway would remain the same. Therefore, the impact from the project would be **less than significant**.

Impact TR-4: ***Result in Inadequate Emergency Access.***
(Less than significant with Mitigation)

Construction

During construction, temporary lane closures would be required to install passive barriers across Jackson Street, which could impair emergency access and increase emergency response times. Additionally, the northern entrance to Watson Park would be closed temporarily during roadway berm construction (R6-B8). While this entrance is used by the public and Valley Water staff, alternative entrances to Watson Park would remain open and available for use.

Lane closures would occur outside of peak commute hours (6 a.m. to 8:30 a.m. and 3:30 p.m. to 7:00 p.m.), Monday through Friday, and would occur over approximately 30 days. One lane would remain open to traffic with signage, flaggers, and/or other traffic controls implemented to maintain traffic flow safety during construction and for emergency access along Jackson Street.

Project activities would generate approximately 83 average daily one-way truck trips; however, these trips would be spread across up to three improvement sites at any time during the 2-year construction period. Improvement sites would typically have different access routes as described in Chapter 2, "Project Description." Because of the temporary nature of construction activities, dispersed improvement locations, and the low number of daily vehicle trips, construction of the project would not substantially increase traffic levels to the extent of affecting emergency response times or access on roadways in the project area and vicinity. Further, implementation of Valley Water BMP TR-1 (Incorporate Public Safety Measures) would improve safety by requiring fences, barriers, lights, flagging, guards, and signs to be installed as determined appropriate by the City to provide adequate warning to the public of construction activities and of any temporary access limitations on local roads. However, temporary lane closures during construction of passive barriers <u>and a roadway berm at R6-B8</u> on roads could still result in increased response times and inadequate emergency access, and this impact would be **significant**. The following mitigation measure would reduce this impact.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

Mitigation Measure TR 4.1: Implement a Traffic Safety Plan and Coordinate with Local Emergency Service Providers.

The construction contractor(s) shall develop a traffic safety and management plan for portions of the City of San José that would be affected by construction traffic. Before the start of construction-related activities involving high volumes of traffic, the plan shall be submitted for review to the City of San José. A fundamental goal of the Traffic Safety Plan shall be to minimize construction-related delays to the greatest extent feasible. The plan shall include the following elements:

- posting warnings about the potential presence of slow-moving vehicles;
- using traffic control personnel when appropriate; and,
- placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans's California Manual on Uniform Traffic Control Devices (2014) and in accordance with county requirements.

Before project construction begins, the contractor(s) shall train construction personnel in appropriate safety measures as described in the Traffic Safety Plan and shall document and report implementation of the plan to Valley Water and the City of San José. The plan shall include the prescribed locations for staging equipment and parking trucks and vehicles. Provisions shall be made for overnight parking of haul trucks to avoid causing traffic or circulation congestion.

Before project construction begins, Valley Water and/or its construction contractor(s) shall provide notification of project construction and potential delays and closure of Jackson Street to all appropriate emergency service providers in the City of San José. Valley Water and/or its construction contractor(s) shall coordinate with emergency service providers throughout the construction period to maintain emergency access through construction areas to the extent possible. Coordination shall include notice of when temporary road closures are anticipated.

Significance After Mitigation: Implementation of Mitigation Measure TR-4.1 would reduce the impact related to inadequate emergency access at any of the improvement sites by requiring a Traffic Safety Plan focused on minimizing construction-related traffic delays, and coordination with emergency service providers. With implementation of this mitigation measure, temporary delays for emergency responders would not result in inadequate emergency access, and this impact would be **less than significant with mitigation**.

Operations

During operations, use of passive barriers at various locations, as detailed in Impact TR-2 above, would require road closures. However, this would only occur infrequently during flood events, which are estimated to occur once in 20 years When passive barriers are deployed during flood events, blocked routes would not be passable or safe to use by anyone, including emergency vehicles for a 2- to 3-day period. When traffic is blocked by passive barriers, traffic signals installed on Jackson Street at Watson Park and signage on the passive barriers would indicate designated detour routes are available until flood flows diminish and passive barriers return to ground level. As described in Chapter 2, “Project Description,” operation and maintenance of the traffic signals would be done in compliance with encroachment permits from the City. Maintenance activities would be infrequent and similar to those conducted under existing conditions and would be conducted in a manner that would not affect emergency access or response. Implementation of Valley Water BMP TR-1 (Incorporate Public Safety Measures), and SMP BMPs GEN-36 (Public Outreach), GEN-37 (Implement Public Safety Measures), and GEN-39 (Planning for Pedestrians, Traffic Flow, and Safety Measures) would improve safety by requiring fences, barriers, lights, flagging, guards, and signs to be installed as determined appropriate by the City and provide adequate warning to the public of maintenance activities and of any temporary access limitations on local roads. Based on the above analysis, project operations would not cause inadequate emergency access, and this impact would be **less than significant**.

3.14 Utilities and Service Systems

This section characterizes the existing utilities and service systems within and near the project area and evaluates impacts to utilities and service systems that would result from implementing the project.

3.14.1 Environmental Setting

Water Supply

Valley Water provides water for potable and non-potable uses in County and the City. Long-term average water use in the County is approximately 350,000 acre-feet per year and is used for domestic, municipal, industrial, and agricultural uses (Valley Water 2019).

Water in the County is sourced from a combination of imported water from the Sierra Nevada mountain range delivered through the State Water Project and Central Valley Project (approximately 40 percent), as well as from the San Francisco Public Utilities Commission (15 percent), local groundwater (15 percent), local surface water (20 percent), and recycled water (5 percent) (Valley Water 2019).

San José residents are served drinking water by one of three drinking water suppliers: the San José Municipal Water System (owned and operated by the City), privately-owned San Jose Water Company (SJW), and privately-owned Great Oaks Water Company.

The San Jose Water Company is the drinking water service provider for the project area (SJW 2019). SJW has three sources of potable water supply, including imported, treated water from Valley Water (52 percent), groundwater from the Santa Clara Subbasin (43 percent), surface water from local watersheds (3 percent), and non-potable recycled water (2 percent) (SJW 2021). The drinking water supply within the project area is primarily sourced from groundwater from the Santa Clara Subbasin (SJW 2019). Water supply pipelines and associated infrastructure are located within the project area.

Stormwater

The City's storm sewer system refers to infrastructure that conveys water away from areas within the City to local water bodies, such as Coyote Creek rather than a wastewater treatment plant. This type of system is known as a Municipal Separate Storm Sewer System or MS4. The City's MS4 consists of inlets, such as storm drains and gutters, conveyance pipelines, stormwater quality treatment vaults, detention ponds, and outfalls that discharge stormwater to Coyote Creek. Pump stations are employed in low lying areas of the City to facilitate drainage when gravity drainage is not feasible. Coyote Creek is the main waterbody that provides conveyance of stormwater from the City's MS4 discharges into the South San Francisco Bay.

The City manages the MS4 by monitoring and maintaining the system to convey all flows within the City boundaries, including the project area, and Valley Water provides stewardship of Coyote Creek. Stormwater pipelines and associated infrastructure are located within the project area and vicinity.

Wastewater

The City's sanitary system is comprised of approximately 2,200 miles of sewer pipeline ranging from 6 to 90 inches in diameter (City of San José 2011). San José's topography allows for most of the sanitary sewer system to be gravity-fed; however, there are 16 sewer pump stations where gravity-fed pipelines are not feasible. Sewer lines are inspected and maintained by the City of San José Department of Transportation and are rehabilitated or replaced by the Department of Public Works. The San José-Santa Clara Regional Wastewater Facility treats wastewater for the project area and is located at 700 Los Esteros Road. It is co-owned by the City of San José and City of Santa Clara and serves approximately 1.4 million residents and over 17,000 businesses in 8 cities and 4 sanitary districts. Sanitary sewer lines or pump stations are located within the project area and vicinity.

Solid Waste

The County's Solid Waste Programs have a mission to preserve and enhance the health, safety and wellbeing of its community members and to provide services for solid waste enforcement, medical waste management, and pumper vehicle registration programs, and by assisting with resolving solid waste problems (Santa Clara County 2024). The City generates approximately 1.7 million tons of solid waste annually (City of San José 2011). Solid waste and recycling collection services are provided by various franchised waste and recycling companies. **Table 3.14.1** displays landfills in Santa Clara County, their distance from the project site, maximum capacity, remaining capacity, percentage of capacity remaining, and remaining capacity date. Nearby landfills include Zanker Material Processing Facility (ZMPF) (100 percent remaining capacity), Newby Island Landfill (29 percent remaining capacity), Guadalupe Sanitary Landfill (39 percent remaining capacity), and Kirby Canyon Recycling and Disposal Facility (44 percent remaining capacity) (CalRecycle 2019).

The ZPMF is limited to receiving primarily construction and demolition debris, wood waste, mixed debris and soil generated from throughout the Bay area. ZPMF primarily functions as a resource recovery facility and secondarily functions as a landfill facility for residual waste. The facility is terminating landfill operations in 2025 (APTIM 2020). Therefore, it is likely that ZMPF's 100 percent remaining capacity is due its primary function as a processing facility, limitations to acceptance of certain types of waste, and upcoming closure date.

Electrical and Natural Gas Service

The City receives most of its electricity and natural gas services from Pacific Gas & Electric (PG&E), which produces energy from renewable sources, such as wind, solar, and nuclear, as well as natural gas and coal (City of San José 2011). According to data published by the California Energy Commission, two 115 kilovolts (kV) electrical transmission lines cross Coyote Creek within the project area; one that follows parallel to the Montague Expressway bridge and one through the southern portion of Kelley Park (California Energy Commission 2023). Additionally, there is a reported 230 kV line running north-south from Los Esteros Road to Metcalf Road which follows closely to the east bank of Coyote Creek just north of Watson Park. There are three natural gas pipelines that cross Coyote Creek in the project area, as reported by PG&E (PG&E 2023). From north to south in the project area they are located: (1) along Berryessa Road, (2) along Maybury Road, and (3) along Story Road. There may be other electrical or natural gas transmission lines within or near the project area.

Telecommunications

There are several telecommunications service (including telephone, cable television, and fiber optic internet) providers throughout the City including, Verizon, T-Mobile, Crown Castle, Zayo, and others (City of San José, 2024). Within the project area, Verizon, AT&T, Comcast, and Crown Castel OH Fiber are the primary owners of telecommunications infrastructure, including fiber optic cables, telephone lines, and TV cables (AECOM 2023). Underground telecommunication lines are located along Charcot Avenue, and along Woodborough Drive. Both over-head and underground telecommunication lines are located along East William Street in the project area (AECOM 2023). However, these may not represent all telecommunications infrastructure within the project area as utility surveys are ongoing.

Table 3.14.1. Landfills in Santa Clara County

Landfill	Distance from the Project Site	Maximum Capacity	Remaining Capacity	Percentage of Capacity Remaining	Remaining Capacity Date
Zanker Material Processing Facility – Solid Waste Landfill	3.5 miles	640,000	640,000	100%	8/22/2012
Guadalupe Sanitary Landfill	7.5 miles	28,600,000	11,055,000	39%	1/1/2011
Newby Island Landfill	5 miles	57,500,000	16,400,000	29%	1/31/2020
Kirby Canyon Recycling & Disposal Facility	13 miles	36,400,000	16,191,600	44%	7/31/2015

Notes: Units = cubic yards
Source: CalRecycle 2019

3.14.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (4 42 U.S.C. Section 690 et seq. is a federal act regulating the potential health and environmental problems associated with solid waste hazards and non-hazardous wastes. Specific regulations addressing solid waste issues are contained in Title 40 of the Code of Federal Regulations, Sections 257 and 258.

State Laws, Regulations, and Policies

California Integrated Waste Management Act

The California Integrates Waste Management Act of 1989 (CIWMA) (PRC Section 40000 et seq.), enacted through AB 939 and modified by subsequent legislation, required all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of its total waste that a jurisdiction diverts from disposal through reduction, reuse, and recycling programs. Per capita disposal rates are used to determine compliance with this act.

Title 8, Section 1541 of the California Code of Regulations

Section 1541 of Title 8 of the California Code of Regulations requires, among other things, that excavators identify the location of subsurface utilities prior to initiating construction, as follows:

"The approximate location of subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other subsurface installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation." (Section 1541[b][1]). Additional requirements of Section 1541 include training of employees involved in excavation work, notification by excavators of regional notification centers and all known owners of subsurface installations, protection of subsurface installations when the excavation is open, and notification of regional notification centers and utility owners in the event of damage or accidents.

Regional/Local Laws, Regulations, and Policies

Envision San José 2040 General Plan

The following goals and policies from the Envision San José 2040 General Plan may be relevant to utilities resources within the project area (City of San José 2023):

Goal IN-1 – General Provision of Infrastructure. Provide and maintain adequate water, wastewater, stormwater, water treatment, solid waste and recycling, and recycled water infrastructure to support the needs of the City's residents and businesses.

- **Policy IN-1.1.** Provide and maintain adequate water, wastewater, and stormwater services to areas in and currently receiving these services from the City.
- **Policy IN-1.9.** Design new public and private utility facilities to be safe, aesthetically pleasing, compatible with adjacent uses, and consistent with the Envision General Plan goals and policies for fiscal sustainability, environmental leadership, an innovative economy, and quality neighborhoods.

San José Municipal Code Chapter 13.36 – Public Right-of-Way Permits

Chapter 13.36(a) of the City's municipal code, "Public Right-of-Way Permits," requires any person that wishes to undertake construction or reconstruction within or affecting the City's public rights-of-way (existing or proposed) or other public easements to obtain an encroachment permit. Permit terms in Section 13.36.030(g) require the permittee, or the permittee's contractors or subcontractors, to promptly repair any damage done, directly or indirectly, to any public improvement, public property, utility facilities, survey markers, monuments, or benchmarks. Alternatively, the City may choose to perform the repair work itself, in which case the permittee must reimburse the City for the full costs of the work.

3.14.3 Applicable BMPs and VHP Conditions/AMMs

As noted in Chapter 2, "Project Description", Valley Water would incorporate a range of BMPs, including measures from the VHP, to avoid and minimize adverse effects on the environment that could result from the project. All relevant BMPs for the project are included in Appendix B. There are no relevant VHP conditions that would apply to utilities and services systems applicable to the project. BMPs from the Handbook that are relevant to utilities resources and the project are listed below.

- **WQ-17**: **Manage Sanitary/Septic Waste**. Temporary sanitary facilities will be located on jobs that last multiple days and would avoid the need for relocation or construction of wastewater treatment facilities.

The following SMP BMP is applicable to the project regarding utilities during operations and maintenance:

- **GEN-42:** Investigation of Utility Line Locations - Evaluation of utility lines prior to maintenance activities to avoid interruptions in utility services.

3.14.4 Environmental Impacts and Mitigation Measures

Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines. The project would have a significant impact on utilities and service systems if implementing the project would:

- 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;
- lack sufficient water supplies to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- result in a determination by the wastewater treatment provider that serves or may serve the project that it lacks adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- 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; or not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Analysis Methodology

Impacts to utilities from construction and operations and maintenance activities are analyzed qualitatively using the thresholds of significance identified above.

Impacts Not Discussed Further in the EIR

Require New or Expanded Wastewater Treatment or Stormwater Drainage Facilities that Could Result in Significant Environmental Impacts

The project would construct proposed flood risk reduction improvements consisting of passive barriers, berms, manhole, flap gates, floodwalls, roadway recontouring, and reinforcement and construction of headwalls and wingwalls on Charcot Avenue Bridge along an approximately 9-mile section of Coyote Creek within the City. Additionally, all passive barriers within Reaches 6 and 7 would include internal drainage systems to collect and convey flows to new connections with the existing City of San José stormwater system. Passive barriers within Reach 4 would collect any stormwater that enters through the small gaps between the passive barrier wall and the foundation and drain out through pipes to outfalls equipped with riprap slope protection at the top of the bank of the creek. Floodwall R6-FW19, R6-FW-20, R7-FW11, R8-FW13 would include pipes equipped with flap gates to drain any stormwater that collects on the land side of the floodwalls and discharge on riprap bank protection that would be installed on the creek bank. Additionally, at Floodwall R8-FW13 a stormwater collection grate and stormwater discharge pipeline would be installed adjacent and along the landside of the floodwall and would connect to the stormwater pipe with flap gates discussed above.

The primary objective of the project is flood risk reduction along Coyote Creek from a potential 20-year flood event. The project would not require wastewater services with implementation of Valley Water's BMP WQ-17 (Manage Sanitary/Septic Waste), as described previously. Additionally, the project would include stormwater drainage features within passive barriers and select floodwalls to allow stormwater collection to continue to either the City of San José stormwater system or the creek. The project would not require the expansion of the City of San José stormwater system that could cause significant environmental impacts. Therefore, the project would not: increase demand for wastewater or storm water drainage services or require the construction of new wastewater treatment or stormwater facilities, require the expansion of existing facilities, or result in a determination by the wastewater provider that there is inadequate capacity to serve the project. Therefore, these issues are not discussed further.

Impact Analysis

Impact UTL-1: Require or Result in the Relocation or Construction of Existing or New Utility Infrastructure Which Could Cause Significant Environmental Effects. (Less than significant)

Construction Impacts

As discussed in Chapter 2, "Project Description", Valley Water plans to protect existing utilities in place, including where they intersect sheet pile floodwall cut off walls below ground. However, existing utilities may need to be relocated within public roadways where excavation occurs for floodwalls and passive barrier foundations, if required by encroachment permits issued to Valley Water for the project. Relocation of utilities would be either deeper underground beneath proposed flood risk reduction improvements or rerouted within the roadway. Prior to implementation of the project, Valley Water would conduct surveys to locate all utilities within and adjacent to project improvement sites. Surveys would also ensure that identified utilities be inspected, supported, and protected in place to the extent possible and ensure that only those utilities that could not be protected in place would be relocated to minimize the number of relocated utilities. Additionally, any necessary relocations would be confined to the roadway and within proximity to the proposed flood risk reduction improvements within approximately 20 feet. Therefore, any environmental effects from relocation would be in or adjacent to areas within the project area. If utility infrastructure relocation is required, new connections would be constructed prior to disconnecting the utilities within the construction alignment so there would be no interruption of services.

As discussed in Section 3.14.1, there are two reported electrical lines and three known natural gas pipelines that cross Coyote Creek, over-head and underground telecommunications lines within the project area and one electrical line that runs adjacent to and in proximity of Coyote Creek. Valley Water would require the contractor to notify Underground Service Alert North prior to the start of construction activities and would coordinate with utility owners and operators to ensure that project construction does not damage lines or disrupt service.

Impacts related to construction activities, including from potential utility relocation, are discussed in other resource sections of this EIR, including Chapter 3.4, “Air Quality,” Chapter 3.5, “Biological Resources,” Chapter 3.7, “Geology” Soils and Paleontological Resources,” Chapter 3.8, “Greenhouse Gas Emissions and Energy”, and Chapter 3.10, “Hydrology and Water Quality.” Therefore, impacts from utility relocation during construction not already discussed in other EIR sections would be **less than significant**.

Operational Impacts

Maintenance activities, including trash and debris removal, vegetation management, maintenance road repairs, management of wildlife conflicts, and graffiti removal would be conducted under Valley Water’s Stream Maintenance Program. Inspections of flood risk reduction improvements would be conducted one to two times annually and immediately after a natural disaster, should one occur. Maintenance activities would be limited to a 10-foot area around each flood risk reduction improvement. Vegetation that has re-established within this maintenance area after construction of the project could be trimmed or removed as part of project operations to facilitate access for maintenance work. Since the maintenance areas are small, adjacent to the improvements, above ground, and within the construction areas designated for the project, utility infrastructure would not need to be relocated to facilitate access. Further, implementation of SMP BMP GEN-42 (Investigation of Utility Line Locations) would ensure that any maintenance activities would require prior identification of utilities and coordination with utility provider to prevent disruption of service. Due to the limited number of maintenance inspections, the small area around each proposed improvement where maintenance would occur, and the nature of the maintenance activities being above ground surface, impacts related to existing or new utilities during operations and maintenance would be **less than significant**.

Impact UTL-2: ***Lack Sufficient Water Supplies to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years. (Less than significant)***

Construction Impacts

As described in Chapter 2, “Project Description”, construction activities would include excavation and grading which would require the use of water trucks for dust control during the construction season (see Section 3.3, “Air Quality” for more information on dust emissions). Non-potable or recycled water would be supplied by Valley Water contractors for these purposes. Water use for dust control would be minimal and temporary, only occurring intermittently during construction, and only in areas where proposed improvements are located. Due to the minimal amount of water that would be used and short-term duration, the water supply impact would be **less than significant**.

Operational Impacts

The project does not require water to serve its primary function of flood risk reduction. Water may be used for temporary irrigation of areas requiring re-vegetation until mature vegetation is established; typically, less than a year. Plantings would be native, and therefore, drought resistant and would not require substantial amounts of irrigation and would not otherwise adversely affect water supplies. The project would not construct development, and there would be no requirement for use of water after establishment of re-vegetated areas. The water supply impact would be **less than significant**.

Impact UTL-3: ***Generate Solid Waste Potentially Exceeding Permitted Capacity of Local Landfills or Fail to Comply with Statutes and Regulations Related to Reducing Solid Waste. (Less than significant)***

Construction Impacts

As described in Chapter 2, "Project Description," construction activities would involve excavation and grading. Excavated material would be used to the greatest extent practicable within the project area for constructing portions of the floodwalls, developing construction access areas, and increasing elevations where necessary to support development of improvement sites. Excavated material that is not reused would be hauled offsite and disposed of at an approved landfill in accordance with local, state, and federal laws.

Approximately 29,000 cubic yards of excavated material and other construction debris would require export (personal communication from Valley Water on October 2, 2023). As described above in Section 3.14.1, "Environmental Setting," and listed in Table 3.14.1, there are four solid waste landfills listed in the County, all of which have adequate capacity to accommodate the waste disposal resulting from the project's construction activities. The waste from construction activities would be between 0.1 and 3 percent of the remaining capacity for the available landfills listed previously in Table 3.14.1. Construction activities would not generate solid waste that would exceed federal, state, or local standards, or exceed the capacity of local infrastructure, or impair the attainment of any solid waste goals. Therefore, impacts related to generation of solid wastes from construction of the project would be **less than significant**.

Operational Impacts

Generation and disposal of solid waste during project operation would be similar to existing conditions. As described in Chapter 2, "Project Description", Valley Water's ongoing maintenance activities, such as trash removal, vegetation management, and minor maintenance road repairs, would continue following project construction. New maintenance activities for the additional project flood risk reduction improvements and trimming and removal of vegetation within maintenance areas to facilitate access may generate additional amounts of solid waste, but not substantially more than under existing conditions. Additionally, operation activities would not generate sold waste that would exceed federal, state, or local standards, or exceed the capacity of local infrastructure, or impair the attainment of any solid waste goals. All operations activities would follow any applicable management and reduction regulations related to solid waste. Therefore, long-term effects relating to the generation of solid wastes would be **less than significant**.

Chapter 4. Other Statutory Requirements

4.1 Introduction

This chapter describes other types of impacts that the CEQA Guidelines require in EIRs, including growth-inducing impacts, significant and unavoidable impacts, significant irreversible and irretrievable commitment of resources, and the relationship between short-term use of the environment and the maintenance and enhancement of long-term productivity. Additionally, this section addresses cumulative impacts from the project in conjunction with past, present, and probable (i.e., reasonably foreseeable) future projects.

4.2 Irreversible Impacts

CEQA Guidelines Section 15126.2(d) describes irreversible environmental changes as follows:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The CEQA Guidelines refer to the need to evaluate and justify the consumption of nonrenewable resources and the extent to which the project commits future generations to similar uses of nonrenewable resources. In addition, CEQA requires that irreversible damage which could result from an environmental accident associated with a project be evaluated. As described below, project implementation would result in the irreversible and irretrievable commitments of energy and material resources during project construction, operations, and maintenance, including the following:

- construction materials, including such resources as metal, wood, soil, and rock; and
- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction.

Construction of the project would commit nonrenewable natural resources used in the construction process and during operation, including petroleum products and other materials. As described in Chapter 2, "Project Description," the project would develop new flood risk reduction improvements, (improvements), including floodwalls, passive barriers, headwalls, and berms; all of which consist of various nonrenewable resources.

In addition, the project involves demolition and removal of existing cement railings on each side of the Charcot Avenue Bridge prior to constructing new headwalls and could include demolition and removal of existing light poles, signs, concrete curbs, and fences to obtain access along designated access routes.

Construction and operation of the project would also commit energy resources such as fossil fuels and electricity. Construction and operation activities would directly use energy in the form of petroleum products and electricity to operate equipment, and indirectly consume energy used to extract raw materials, manufacture items, and transport the goods and people necessary for construction activities. Construction-related energy consumption would be temporary and would be confined to the construction period. Nevertheless, construction activities would, as with any construction project, cause irreversible and irretrievable commitments of finite nonrenewable energy resources, such as gasoline and diesel fuel. The selected construction contractor(s) would use the best available engineering techniques, construction practices, and equipment operating procedures. Fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary, and would be similar to that associated with other urban/built-up cities and counties.

Although there is some irreversible and irretrievable commitment of resources associated with the project as described above, the amount consumed by the project is ordinary and the types of consumption are unavoidable with a construction project of this nature and magnitude.

4.3 Growth Inducement

The CEQA Guidelines Section 15126.2(e) requires that an EIR evaluate the growth-inducing impacts of a project. The CEQA Guidelines describe the required growth-inducement analysis as follows:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this definition are projects which would remove obstacles to population growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project could result in direct growth inducement if it would result in construction of new housing, which would facilitate new population in an area. Indirect growth inducement or secondary growth-inducement potential could occur if a project would establish substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises), or if it would involve a substantial construction effort with substantial long-term employment opportunities which could indirectly stimulate the need for additional housing and services to support the new employment demand.

Similarly, a project could indirectly induce growth if it would remove a physical obstacle to additional growth and development, such as removing a physical or land use constraint to development or adding a required public service. Examples of removing a physical obstacle would include construction of a new roadway into an undeveloped area or construction of a wastewater treatment plant with sufficient capacity to serve additional new development. Construction of these types of infrastructure projects cannot be considered isolated from the immediate development that they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in the area. The growth-inducing potential of a project could also be considered significant if it fosters growth in excess of what is assumed in local master plans and land use plans, or in projections made by regional planning agencies.

4.3.1 Direct Growth Inducement

The project does not include the construction of new housing or businesses, requires acquisition of private property, or create new connections to undeveloped land. The project would implement a series of improvements to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek in the City of San José (City). The project would maintain vegetation within 10 ft of the improvements to facilitate long-term access to improvement sites; however, it would not develop new roadways or expand the capacity of local roadways or access areas. The project also would not create permanent employment as construction activities are temporary and inspections and maintenance activities for the project would primarily be coordinated and combined with existing maintenance activities of Coyote Creek.

Furthermore, the proposed flood risk reduction improvements would not directly induce development or remove existing impediments to urban growth; rather, the project would be growth accommodating. The City and County General Plans all plan for increased growth. The project area is largely built-out and developed with residential, commercial, and recreational uses in accordance with anticipated growth projected and planned for in the City and County General Plans. It is likely that redevelopment of project areas would occur over time to serve the growing population, regardless of flood risks within the area. Implementation of the proposed flood risk reduction improvements within the project area would mitigate flooding risks and serve the existing and projected population. The project therefore would not result in substantial direct growth-inducing impacts.

4.3.2 Indirect Growth Inducement

The project would not establish new permanent employment opportunities, but project construction activities would generate temporary and short-term employment over the 2-year construction period. These construction jobs are anticipated to be filled from the existing local employment pool, and they would not indirectly result in a population increase or induce growth by creating permanent new jobs. Furthermore, the project would not involve constructing businesses or extending roadways or other infrastructure and would not indirectly induce population growth. Consequently, the project would not induce growth leading to changes in land use patterns and population densities and related impacts on environmental resources. Furthermore, the City and Santa Clara County have adopted general plans consistent with state law, which provide an overall framework for growth and development in the project area and vicinity. Consequently, no indirect growth-inducing effects would occur.

4.4 Cumulative Impacts

As defined in CEQA Guidelines Section 15355, a cumulative impact is an environmental impact that is created as a result of the combination of the incremental contribution of the project together with other projects causing related impacts. CEQA requires that an EIR discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable (CEQA Guidelines Section 15130(a)).

"Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects (CEQA Guidelines Section 15065(a)(3), though it should be noted that the effects of past projects are encompassed in the baseline environmental conditions, as described in the environmental setting, consistent with CEQA Guidelines Section 15125(a). If an incremental effect is not cumulatively considerable, then the lead agency does not need to consider that effect significant and must briefly describe the reason why (CEQA Guidelines Section 15130(a)).

CEQA Guidelines Section 15130(b) states that the discussion of cumulative impacts need not provide as much detail as the discussion of the effects attributable to the project. The level of detail should be guided by what is practical and reasonable.

The elements provided below are necessary for an adequate discussion of significant cumulative impacts (CEQA Guidelines Section 15130(b)).

- A list of past, present, and reasonably foreseeable probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- A defined geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limits identified.
- A summary of expected environmental effects that might be produced by those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

The following terminology is used in this EIR to describe the various levels and types of cumulative environmental impacts associated with the project:

- **Cumulative Impact**. Under CEQA, a cumulative impact refers to an impact created by the project evaluated in the EIR, together with impacts of other reasonably foreseeable probable projects causing similar impacts. A significant cumulative impact is one in which the cumulative effect would exceed the applicable significance threshold.
- **Significance Threshold.** Like that used to evaluate the impacts resulting from the project and alternatives, this is the criterion used in the EIR to determine whether the magnitude of a cumulative environmental impact would be significant.
- **Significant Cumulative Impact.** A cumulative impact is considered significant if it would result in a substantial adverse change in the physical conditions of the environment, as determined by whether it exceeds the applicable significance threshold.

- **Cumulatively Considerable.** Incremental project impacts are cumulatively considerable, and thus significant, when they are significant when viewed in connection with the effects of other projects [CEQA Guidelines Section 15064(h)(1)]. CEQA Guidelines Section 15130(a) states that, if the contribution of the project to a significant cumulative impact is less than considerable, the incremental impact is less than significant.

4.4.1 Approach to Analysis

The analysis of cumulative impacts focuses on whether the impacts of the project are cumulatively considerable within the context of impacts resulting from the project together with other past, present, or reasonably foreseeable probable future projects. The cumulative impact analysis considers other projects proposed within the area defined for each resource that have the potential to contribute to significant cumulative impacts.

This EIR uses the 'list approach' for analyzing cumulative impacts described by CEQA Guidelines Section 15130 and described in the previous section. Activities related to the project that are included in the cumulative analysis were determined using several factors, including the location and type of activity and the characteristics of the activity related to resources with the potential to be affected by the project. In addition, regional or statewide conditions that might lead to cumulative impacts (e.g., greenhouse gas (GHG) emissions) are also described.

This cumulative impact analysis has three steps as defined below:

1. Define and present the geographic scope of cumulative impacts by resource topic.
2. List and summarize past, present, and reasonably foreseeable probable projects to include in the cumulative analysis.
3. Conduct cumulative impact analyses.

In addition, the following factors were used to determine an appropriate list of projects for consideration in this cumulative analysis:

- **Similar Environmental Impacts.** A relevant project contributes effects on resources also affected by the project. The project could have either less-than-significant impacts or significant impacts that could contribute to cumulative impacts. Relevant projects in this cumulative analysis are those that could contribute impacts to the same environmental resources.
- **Geographic Location.** A relevant project is located within a defined geographic location for the cumulative effect. The potential for the Project to contribute to a cumulative impact arises if projects are located within the same geographic area.

Geographic Scope

The level of detail of a cumulative impact analysis should consider a project's geographic scope and other factors (e.g., a project's construction or operational activities, the nature of the environmental resource being examined) to ensure that the level of detail is practical and reasonable. The discussion below focuses on the cumulative impacts of the project for environmental resources that could be expected to be cumulatively affected by the project in conjunction with other past, present, and reasonably foreseeable probable future projects. The specific geographic scope for environmental resource topics analyzed for cumulative impacts is provided below in Table 4.1.

Table 4.1. Geographic Scope of Cumulative Impacts by Resource Topic

Resource Topic	Geographic Scope of Cumulative Impacts
Aesthetics	Areas where the project is visible as determined by physical constraints of the environment and the physiological limits of human sight.
Air Quality	San Francisco Bay Area Air Basin (SFBAAB)
Biological Resources	Santa Clara County Habitat Conservation Planning Area, Coyote Creek and Upper Penitencia Creek watersheds, and the South San Francisco Bay
Cultural Resources and Tribal Cultural Resources	Areas of ground disturbance within City
Greenhouse Gas Emissions and Energy	Regional (San Francisco Bay Area Basin) and state for GHG emissions, and areas of Santa Clara County within the project area for Energy
Geology, Soils, and Seismicity	Areas within and adjacent to the project area
Hazards and Hazardous Materials	Areas within the City within or adjacent to the project area
Hydrology and Water Quality	Coyote Creek and Upper Penitencia Creek watersheds, Santa Clara groundwater basin, and South San Francisco Bay
Land Use and Planning	Areas within the City of San José within or adjacent to the project area
Noise and Vibration	Areas within the City of San José within or adjacent to the project area
Recreation	Recreation resources within Santa Clara County
Transportation and Traffic	Roadways in the project area and vicinity
Utilities and Service Systems	Areas within the City within or adjacent to the project area

Projects, Plans, and Programs Included in Cumulative Impact Analysis

Table 4.2 lists the past, present, and reasonably foreseeable probable future projects ("projects" also include certain plans and programs) considered in the cumulative impact analysis. These projects were reasonably foreseeable and probable at the time of preparation of this Draft EIR. Land-based projects (including development or redevelopment projects to be constructed and operated/maintained) are primarily projects throughout Santa Clara County that could affect resources similar to or the same as those affected by the project. The list was developed, in part, by reviewing CEQAnet (the Governor's Office of Planning and Research internet repository of projects that file CEQA documents), Valley Water's Five-Year Capital Improvements Program list, and current project lists and databases for the City and Santa Clara County. While not every potential cumulative project is specifically listed, the list of cumulative projects is considered to be sufficiently thorough, such that it represents the types of impacts that would be generated by these other projects and in similar ways as the project.

Table 4.2. Past, Present, and Reasonably Foreseeable Probable Future Projects

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Water Supply and Water Quality Improvement Projects			
Anderson Dam FERC Order Compliance Project (FOCP) – Valley Water The FOCP is a set of actions to comply with the FERC IRRM order including: • Drawdown of Anderson Reservoir to deadpool • Construction and operation of the Anderson Dam Tunnel • Modification of the North Channel of Coyote Creek to support the outlet structure from the Anderson Dam Tunnel for reservoir releases • Reconnection of the North Channel of Coyote Creek • Anderson Reservoir bank and rim stability improvements • Construction of Coyote Creek Chillers • Construction of Cross Valley Pipeline Extension • Construction of the Coyote Percolation Dam Phase I Project • Coyote Creek Flood Management Measures • Implementation of the FOCP Habitat Mitigation and Monitoring Plan (includes restoration activities throughout Coyote Creek, including the Live Oak Reach Restoration Plan) • Valley Habitat Avoidance and Minimization Measures • Construction of weirs in the North and South Channels of Coyote Creek In addition to the FOCP activities discussed in Section 1.3.3, Valley Water has purchased 9 houses along the rim of the reservoir that are subject to landslide risk. The purchase, abandonment, and eventual demolition of these houses will be done as part of the FOCP reservoir stability improvements, near the Hoot Owl Way landslide. (Valley Water 2020)	Coyote Creek	Under construction; completion in 2026 ~~2025~~	Aesthetics Biological Resources Groundwater Hydrology Water Quality Recreation Transportation Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Anderson Dam Seismic Retrofit Project (ADSRP) – Valley Water The ADSRP involves retrofitting and upgrading Anderson Dam and associated facilities to meet public safety requirements. The ADSRP would also include the decommissioning of the hydroelectric facility at Anderson Dam to reduce operating costs, implementing conservation measures to offset project impacts, and continuing to operate and maintain Anderson Dam using Fish and Habitat Collaborative Effort (FAHCE) rule curves after the retrofit.	Coyote Creek Watershed – Anderson Dam and Reservoir, Coyote Creek, Ogier Ponds and Coyote Percolation Pond	Construction 2027 ~~2025~~ – ~~2032~~ 2034	Aesthetics Biological Resources Hydrology Groundwater Water Quality Recreation Transportation Utilities and Service Systems
Singleton Road Fish Barrier, Stream Restoration, and Pedestrian Bridge Project –San José Removal of the existing Singleton Road low-water crossing, restoration of a portion of Coyote Creek, and construction of a bicycle and pedestrian bridge. The removal of the existing low-water crossing barrier and restoration of Coyote Creek is to provide opportunities for protected and endangered aquatic species to migrate upstream to better spawning areas. (Valley Water 2024c)	Coyote Creek	Completed 2021	Biological Resources Hydrology Water Quality
Coyote Creek Erosion Repair Project – Valley Water Installation of an approximately 160-foot-long sheet pile wall and rehabilitation of an eroding channel bank along Coyote Creek, adjacent to San José High School. The primary objective of the project is to restore and stabilize the channel bank to reduce instream sedimentation and avoid potential damage to adjacent properties (Valley Water, Andrew Martin, personal communication).	Coyote Creek	Construction 2025	Biological Resources Hydrology Water Quality

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Guadalupe Dam Seismic Retrofit Project – Valley Water Improvements to Guadalupe Dam to stabilize the embankment to withstand a Maximum Credible Earthquake; implement improvements as necessary for the Dam to safely pass the Probable Maximum Flood; ensure that the outlet works, and hydraulic control system meet DSOD requirements; relocate the intake structure out of the upstream berm; and incorporate other measures to address seismic and other dam safety deficiencies that are identified through the project delivery process. (Valley Water 2024d)	Guadalupe Watershed	Construction 2028 – 2031 ~~2030~~	Biological Resources Groundwater Utilities and Service Systems
Almaden Dam Improvements Project –Valley Water Modification or construction of a new intake structure to meet DSOD regulatory standards; reconfiguration of the spillway as a result of potential findings from the reservoir's future probable maximum flood investigation; and correction of ongoing operation and maintenance issues to aging hydraulic lines, valves and energy dissipaters. The project also includes a separate future element to fix the Almaden-Calero Canal to restore operational capacity to the canal and stabilize and improve maintenance access; however, these improvements are on hold until Valley Water completes improvements at the Anderson, Calero, and Guadalupe Dams. (Valley Water 2024e)	Guadalupe Watershed	Construction ~~2026~~ 2030 – 2032 ~~2033~~	Biological Resources Groundwater Utilities and Service Systems
Calero Dam Seismic Retrofit Project – Valley Water Improvements to the Calero Dam to stabilize the Calero Dam embankment to withstand a Maximum Credible Earthquake; modify or replace the outlet works if determined to be inadequate; modify the spillway or increase the freeboard of the dam for safe passage of the Probable Maximum Flood; provide modifications that do not preclude potential future expansion of dam and reservoir to provide additional reservoir storage; and remove or relocate the Bailey Ranch structures and breach Fellow's Dike. (Valley Water 2024f)	Guadalupe Watershed	Construction ~~2028 -~~ 2027 – 2036	Biological Resources Groundwater Recreation Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
~~**Purified Water Project – Valley Water**~~ ~~Construction of facility to purify water treated at wastewater treatment plant(s) for groundwater recharge or raw water augmentation. Includes construction of water conveyance pipelines, lateral pipelines, and associated facilities. (Valley Water 2021a)~~	~~San José, Sunnyvale, Santa Clara, Palo Alto, Los Gatos~~	~~Construction 2026 – 2029 (Palo Alto to Los Gatos)~~	~~Groundwater~~ ~~Water Quality~~ ~~Utilities and Service Systems~~
Valley Water-Wide Programs and Projects			
Fish and Aquatic Habitat Collaborative Effort (FAHCE) – Valley Water FAHCE is a collaborative process to identify actions to balance fish and aquatic habitat needs with Valley Water's water supply operations. The program seeks to improve aquatic spawning and rearing habitat and fish passage for migration to and from the watersheds of the Coyote Creek, Stevens Creek, and Guadalupe River. The FAHCE EIR evaluates impacts of implementing these measures in the Stevens Creek and Guadalupe watersheds. These measures include (a) modifications to reservoir operations to provide instream flows; (b) restoration measures to improve habitat conditions and provide fish passage; and (c) monitoring and adaptive management. Environmental and community benefits include providing flows to improve habitat conditions; resolving water rights concerns; and complying with regulatory requirements. A Final Program EIR was issued in June 2023 that included project-level review for some project components. (Valley Water 2023a)	Coyote Creek, Stevens Creek, and Guadalupe Watersheds	Project for Stevens Creek, and Guadalupe River was approved in August 2023 and is currently being implemented. Under early implementation, numerous fish passage improvements had already been completed.	Biological Resources Hydrology Groundwater Water Quality Recreation

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Stream Maintenance Program (SMP) – Valley Water The SMP removes sediment, manages vegetation, clears trash and debris, and stabilizes banks within channel reaches that have been modified for flood protection. Work is performed annually between June and October following approval of the season's proposed work by the regulatory agencies. The program also includes the removal of nonnative/invasive vegetation and management of upland vegetation on Valley Water properties to comply with local fire codes and ensure access to the channels for maintenance and emergency work. An SMP mitigation measure, Stream and Watershed Land Preservation, includes acquisition and preservation of land in the upper watersheds. (Valley Water 2024g)	Portions of Santa Clara County below the 1,000-foot elevation contour	Ongoing/long term	Biological Resources Cultural and Tribal Cultural Resources Geology, Soils, and Seismicity Hydrology Groundwater Water Quality Noise Recreation
Water Supply Master Plan 2040 (WSMP) – Valley Water The WSMP analyzes what additional water supplies and infrastructure are necessary for Valley Water to meet future water demand assuming population growth, climate change, regulatory changes in imported supplies, and infrastructure constraints. The WSMP identifies purified water, additional demand management and water conservation efforts, Pacheco Reservoir, Los Vaqueros Reservoir, and the Delta Conveyance Project as potential projects to pursue to ensure future water supply reliability. The Water Supply Master Plan is updated every five years. (Valley Water 2019)	Santa Clara County	Ongoing, long term	Groundwater Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
2020 Urban Water Management Plan (UWMP) – Valley Water The 2020 UWMP complements other Valley Water water resource planning efforts including planning for annual operations, sustainable groundwater management, recycled water, integrated water resource management, and integrated regional water management. The UWMP documents current and projected water supplies and demands over the next 25 years during normal and drought years, as well as water reliability analysis and conservation efforts. The plan provides an overall picture of current and future water conditions and management in Santa Clara County. Most importantly, it provides the demand and supply projections that form the basis of Valley Water's Water Supply Master Plan and includes Valley Water's Water Shortage Contingency Plan (WSCP) establishing actions and procedures for managing water shortages due to droughts and other emergencies consistent with state regulations. The Urban Water Management Plan is updated every five years. (Valley Water 2021b)	Santa Clara County	Ongoing	Groundwater Utilities and Service Systems
Countywide Water Reuse Master Plan – Valley Water The Countywide WRMP complements other plans, including the 2020 UWMP, to help meet Valley Water's Water Supply Master Plan 2040 goals. Valley Water initiated the WRMP to identify locally reliable, sustainable, and efficient recycled and purified water to address its water supply challenges. Valley Water's goal is to develop recycled and purified water to provide for at least 10% of the total County water demands by 2025. To achieve this, Valley Water plans to develop up to 24,000 acre-feet per year (AFY) of additional highly purified water for potable reuse by the year 2025 and support continued production and expansion of recycled water. Valley Water's planning evaluates development of up to 45,000 AFY of purified water for potable reuse. Valley Water finalized its Countywide WRMP in June 2021. (Valley Water 2021c)	Santa Clara County	Ongoing, long term	Groundwater Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Encampment Clean Up Program – Valley Water Valley Water, working with the City of San José, removes illegal encampments on Valley Water-owned property to reduce damage to riparian habitat, reduce trash entering the waterway, and improve water quality. (Valley Water 2024h)	Coyote Creek, Guadalupe River	Ongoing, long term	Biological Resources Hydrology Water Quality Utilities and Service Systems
Dam Maintenance Program – Valley Water The Dam Maintenance Program is comprised of four key elements – periodic engineering studies, surveillance and monitoring, inspection and maintenance, and emergency response and preparedness. Maintenance on the dams consists of vegetation management on the dam face, along access roads, and around infrastructure such as spillways, outlets, and control systems. (Valley Water 2024b)	Valley Water dams in Santa Clara County	Ongoing, long term	Air Quality Biological Resources Cultural and Tribal Cultural Resources Greenhouse Gas Emissions and Energy Hydrology Groundwater Water Quality Noise Utilities and Service Systems
Valley Water Additional Conservation and Stormwater Projects and Programs – Valley Water Incentivizing the use of advanced metering infrastructure; customer side leak repair incentives; graywater program expansion; rebates for the installation of rain barrels, cisterns, and rain gardens; partnerships to construct stormwater capture basins; and a flood-managed aquifer project. Implementation ongoing.	Santa Clara County	Operations	Hydrology Groundwater Water Quality Utilities and Service Systems
Valley Water 10-Year Pipeline Inspection and Rehabilitation Program – Valley Water This program is intended to keep approximately 140 miles of large diameter water pipelines reliable. The work includes inspecting, repairing, and replacing distressed pipe sections, defective or older valves and flowmeters. It also includes update of electric and control systems, repair of corrosion protection systems and installation of a new pipeline monitoring system. (Valley Water 2024i)	Valley Water pipelines in Santa Clara County	Ongoing, long term	Hydrology Groundwater Water Quality Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Regional Projects			
San Francisco Bay Shoreline Protection Project – Valley Water, California State Coastal Conservancy, USACE, regional stakeholders. This project is a partnership with the California State Coastal Conservancy, USACE, and regional stakeholders to provide tidal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities. Initial construction for flood protection is planned for of the San Francisco Bay shoreline between Alviso Slough and Coyote Creek in north San José and the community of Alviso. (Valley Water 2024j)	Coyote Creek, Guadalupe River, south San Francisco Bay	In construction, completion in 2028	Biological Resources Water Quality
Non-Valley Water Projects			
Residential, Commercial, Industrial, and Recreation Area Development – Santa Clara County Santa Clara County, San José, Morgan Hill and other cities may implement a number of larger residential, industrial, commercial, and recreation area development projects that could impact similar resource areas are the Project. The build out of these projects would add impacts that are discussed in various EIRs, Specific Plans, and General Plan EIRs for relevant cities in Santa Clara County. Example projects include: • Downtown West – Google (San José) Diridon Station Area Plan (San José) • Five Wounds Urban Village / Downtown BART (San José) (City of San José 2024a)	Santa Clara County	Current and ongoing	Air Quality Biological Resources Geology, Soils, and Seismicity Greenhouse Gas Emissions and Energy Water Quality Noise Transportation and Traffic Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Santa Clara Valley Habitat Restoration Plan (SCVHRP) – Santa **Clara County, Santa Clara Valley Habitat Agency** Santa Clara Valley Habitat Agency Reserve System involves land acquisition, restoration, and protection of an estimated 46,900 acres of land that accomplishes the following: • Acquires and permanently protects an estimated 33,600 acres of land for the benefit of covered species, natural communities, biological diversity, and ecosystem function. • Incorporates about 13,300 acres of existing open space areas and enhances the long-term management and monitoring on those lands within the Reserve System. • Protects 100 miles of streams. • Restores up to 500 acres of riparian woodland and scrub, wetlands, and ponds and up to 10.4 miles of streams to offset losses and contribute to species recovery. • Provides management and monitoring of habitats on protected lands to enhance populations of covered species and maintain ecosystem processes. Preserves major local and regional connections between key habitat areas and between existing protected areas. (Santa Clara Valley Habitat Agency 2024)	Santa Clara County	Ongoing, long term	Aesthetics Biological Resources

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Santa Clara County Parks Planning Projects and Natural Resource Management – Santa Clara County Parks Santa Clara County Parks has a number of current planning and development projects in the Santa Clara County park system. Current projects include the following: • Alviso Dock Feasibility Study • Coyote Highlands – Coyote Canyon Interim Management Plan Sanborn County Park Master Plan • Creekside and Meadowbrook Shelters Improvements Project Motorcycle County Park Site Improvements Project • Los Gatos Creek Trail and Irrigation System Improvements Projects In addition, Santa Clara County Parks Natural Resource Management Program protects, enhances, and restores regional parks. Preservation of natural systems, biodiversity and special status species, and restoration of degraded habitats are all goals of the Santa Clara County Parks' Natural Resource Program. Programs within the Natural Resource Management Program include vegetation management, rare plants, inventory and monitoring, fisheries and wildlife and the trails program. (Santa Clara County Parks 2024)	Recreational areas of Santa Clara County	Ongoing	Biological Resources Cultural and Tribal Cultural Resources Water Quality Recreation

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
City of San José Parks, Recreation & Neighborhood Services (PRNS) Capital Improvement Program – City of San José The City has a number of current community facilities development projects and projects under construction in the PRNS system. Current projects include the following (City of San José 2023a): • Spartan Keyes Area Park Development • Coyote Creek (Story Road to Tully Road) • Police Athletic League Stadium Electrical Improvements • Hanchett Park Development • Camden Community Center Improvements • St. James Park Phase I Design • River Glen Park Basketball Court Renovation • Emma Prusch Park Electrical Improvements • Guadalupe River Park Ranger Station Rehabilitation • Doerr Park Tot Lot Replacement • Murdock Park Lighting Improvements • Almaden Community Center Roof Replacement • All Inclusive Playground - Almaden Lake Park • Happy Hollow Park and Zoo Lower Zoo Electrical Improvements • Lake Cunningham Prototype Wetland Restoration Design	Recreational areas within City of San José	Current and ongoing	Biological Resources Cultural and Tribal Cultural Resources Water Quality Recreation Utilities and Service Systems

Project Description	Location	Timeframe	Examples of Cumulative Affected Resources
Other Land Use/Development Projects – City of San José There are 107 development projects within the City and in the vicinity of the project area (City of San José).	City of San José	Current and ongoing	Aesthetics Air Quality Biological Resources Cultural and Tribal Cultural Resources Geology, Soils, and Seismicity Greenhouse Gas Emissions and Energy Hazards and Hazardous Materials Hydrology and Water Quality Land Use and Planning Noise and Vibration Recreation Transportation and Traffic Utilities and Service Systems

4.4.2 Cumulative Impact Analysis

Aesthetics

Cumulative Impact AES: Cumulative Impacts on Aesthetics. (Less than significant)

The geographic scope of cumulative impacts related to aesthetics includes areas where the project is visible as determined by physical constraints of the environment and the psychological limits of human sight. These views/viewsheds generally includes areas within and adjacent to the project area along the Coyote Creek corridor.

Cumulative aesthetic impacts could occur if the project and past, present, and reasonably foreseeable probable future projects (cumulative projects) identified in Table 4.2 involve concurrent activities that would result in substantial adverse effects on a scenic vista, damage scenic resources, degrade the existing visual character or quality of public views of the project area, conflict with applicable zoning and other regulations governing scenic quality, or create substantial new light or glare in the area. These potential impacts could occur if cumulative projects include the construction of new facilities, removal of natural habitat, or include other adverse changes that would affect the same scenic and visual resources as the project. Temporary cumulative impacts to aesthetics could occur if the cumulative projects' construction schedules overlap with that of the project's and are visible in the same viewsheds.

The FOCP, ADSRP, SCVHRP, and numerous development and recreation projects within the City would be implemented within the geographic scope of cumulative aesthetic impacts and within the same timeframe as the project. All other cumulative projects identified in Table 4.2 would be located far enough away from the project area such that they would not be visible within the same viewsheds and would not contribute to cumulative aesthetic impacts associated with the project.

The SCVHRP would not result in detrimental impacts on aesthetics because it would result in restoration of natural habitats, and therefore, would not contribute to cumulative impacts related to visual resources within the project area. The FOCP and ADSRP would result in less-than-significant impacts on scenic resources (including scenic vistas) and light and glare with the implementation of mitigation measures to reduce such impacts. However, the FOCP and ADSRP are expected to result in significant and unavoidable impacts in the project viewshed from degradation of existing visual character and quality of the area.

As described and analyzed in Chapter 3.2, "Aesthetics," the project would result in no impacts to scenic vistas or scenic resources and would not conflict with applicable zoning or other scenic regulations. Further, the project would result in less-than-significant impacts to the visual quality and character of the area, and from new sources of light and glare. Therefore, the project would not degrade the existing visual character and quality of the project area vicinity in a manner that would significantly contribute to cumulative impacts from other projects in other locations. Therefore, cumulative aesthetic impacts would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to aesthetics. This cumulative impact is considered **less than significant**.

Air Quality

Cumulative Impact AIR: Cumulative Impacts on Air Quality. (Less than significant)

Construction of the project would result in emissions of criteria air pollutants (e.g., particulate matter [PM10 and PM2.5]) and precursors (e.g., oxides of nitrogen [NOX] and sulfur, and reactive organic gases [ROG]) in Santa Clara County within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The County is currently in nonattainment for PM2.5 and ozone (California and national ambient air quality standard) and PM10 (California Ambient Air Quality Standards). The cumulative context and geographical setting were described previously in Section 3.3, “Air Quality,” which considers the emissions of those projects identified in Table 4.2 and others within the BAAQMD’s jurisdiction.

Construction Criteria Air Pollutants and Ozone Precursors

Ozone concentrations result from the cumulative emissions from numerous sources in the region and are transported in from outside the region. Ozone is formed in chemical reactions involving NOX, ROG, and sunlight. All but the largest individual sources emit NOX and ROG in amounts too small to have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they may result in severe ozone problems. Therefore, emissions of NOX, ROG, and PM from development are significant in the air basin, leading to the nonattainment status of the SFBAAB.

Air districts in California develop air quality attainment plans, which include a multitude of air pollution control strategies to attain the federal ozone standard by the earliest practicable date. In developing air quality attainment plans, air districts account for the emissions from all present and future development in the region by relying on city and county general plans and develop thresholds of significance which are intended to evaluate an individual project’s emissions in the cumulative emission context of the air quality planning region (i.e., the SFBAAB). Therefore, thresholds of significance used in the CEQA analysis are inherently cumulative and individual projects that do not exceed them would not have cumulatively considerable impacts.

As described in Impacts AIR-1 and AIR-2 in Section 3.3, “Air Quality,” estimated emissions of criteria air pollutants and ozone precursors associated with project construction would not exceed the BAAQMD-adopted average daily mass emission thresholds of significance. In addition, Valley Water would implement Best Management Practice (BMP) AQ-1 (Use Dust Control Measures), which would further reduce fugitive dust emissions during construction activities. Although other cumulative projects would also increase emissions of criteria air pollutants and ozone precursors, the project would not result in substantial construction-related emissions that would exceed cumulative mass emissions thresholds, which are inherently cumulative. Therefore, although cumulative impacts from criteria air pollutants and ozone precursors may be significant, the contribution of short-term construction emissions of criteria air pollutants would not result in a considerable contribution to a significant cumulative criteria air pollutants impact. This cumulative impact is considered **less than significant**.

Toxic Air Contaminants

As described in Impact AIR-3 in Section 3.3, “Air Quality,” project construction would result in short-term temporary TAC emissions, primarily from the use of diesel-powered equipment during construction activities. The BAAQMD has adopted both project-level and cumulative-level risk thresholds. As described in detail in Impact AIR-3, the project's short-term nature in combination with anticipated minimal emissions exposure at any single nearby receptor would not exceed adopted thresholds. Further, when evaluating impacts from TAC emissions, the distance from the source of the emission is a key contributing factor to risk exposure, as emissions concentrations substantially reduce with increasing distance from the source. Accordingly, TAC emissions from project construction are generally a localized issue. Because short-term TAC emissions from the project would not result in substantial emissions exceeding the BAAQMD's project-level thresholds and would not combine with other offsite major TAC source (e.g., roadways, major stationary sources), cumulative impacts from TAC emissions would not be significant, and the project would not result in a considerable contribution to a significant cumulative TAC impact. Therefore, this cumulative impact is considered **less than significant**.

Carbon Monoxide and Odors

Project-level emissions of CO and odors would be minimal, would not exceed the BAAQMD's adopted thresholds, and would be short-term, ceasing once construction activities are complete. Therefore, the project would not result in long-term increases in CO or odor emissions that could combine with emissions from other projects, leading to CO hotspots or increased potential for odor complaints. In addition, Valley Water would implement BMP AQ-2 (Avoid Stockpiling Odorous Materials) which would reduce odorous emissions from stockpiles during construction activities. Therefore, cumulative impacts from carbon monoxide and odors would not be significant, and the project's contribution to CO and odor conditions would not be cumulatively considerable. This cumulative impact is considered **less than significant**.

Biological Resources

Cumulative Impact BIO-1: Cumulative Impacts on Special-status Species. (Less than significant with Mitigation)

The geographic scope for potential cumulative impacts on special-status species includes the Valley Habitat Plan (VHP) Planning Area, Coyote Creek and Upper Penitencia Creek watersheds, and the South San Francisco Bay.

Cumulative impacts on special-status species could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW.

Most of the cumulative projects listed in Table 4.2 could result in cumulative impacts on special-status species, depending on the project location and timing, construction and operations and maintenance activities, use of best management practices, and compliance with and potential coverage under the VHP. Projects that are covered activities under the VHP, including many of those listed in Table 4.2, were or are required to comply with VHP Conditions, implement VHP Avoidance and Minimization Measures (AMMs), and pay VHP impact fees. Implementing AMMs would reduce impacts on special-status species and fee payment would contribute to implementation of the VHP Conservation Program (e.g., population or habitat restoration, acquisition, preservation, and management). Although the VHP focuses on covered species, the

AMMs and Conservation Program benefit many additional special-status species that occupy the same habitats as the VHP-covered species.

As described and analyzed in Section 3.4, "Biological Resources," the project would result in less-than-significant impacts (without mitigation) on all special-status species except special-status bats. The Biological Study Area (BSA) does not support suitable habitat for any special-status plant species and is not within the VHP rare plant survey area.

Special-status species that could occur in the BSA and be adversely affected by project implementation include monarch butterfly and Crotch's bumble bee, though potential for loss of individuals of either species during project construction and long-term vegetation maintenance activities is low. Both species are proposed to be added to the VHP under the upcoming amendment. If either is added, all relevant VHP Conditions and AMMs would be implemented by the proposed project and other VHP-covered cumulative projects. Unless and until either species is added to the VHP as a covered species, Valley Water would implement protocols established in the *FOCP Milkweed Survey Plan* and *FOCP Crotch's Bumble Bee Avoidance Plan* to minimize habitat impacts and avoid direct loss of individuals. In addition, implementing: Valley Water BMPs (e.g., BI-4 [Minimize Adverse Effects of Pesticides on Non-target Species], BI-8 [Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes], HM-1 [Comply with All Pesticide Application Restrictions], HM-2 [Minimize Use of Pesticides], HM-5 [Comply with Restrictions on Herbicide Use in Upland Areas], HM-6 [Comply with Restrictions on Herbicide Use in Aquatic Areas], [Conduct Work from Top of Bank]); implementing Valley Water's Stream Maintenance Program (SMP) BMPs REVEG-1 [Seeding], and REVEG-2 [Planting Material]; incorporating VHP conditions and AMMs (e.g., 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107); and paying VHP impact fees would minimize impacts on monarch butterfly and Crotch's bumble bee habitat and contribute to conservation of habitats suitable for these species.

Project construction could have ~~direct and~~ indirect impacts on various life stages of special-status fish known or with potential to occur in portions of Coyote Creek within the BSA. Species that could be adversely affected include chinook salmon, steelhead, Pacific lamprey, southern coastal roach, and Sacramento hitch. Construction-related Impacts on special-status fish habitats (including steelhead designated critical habitat and Chinook salmon essential fish habitat) would be temporary and primarily limited to Reach 7. ~~where the temporary creek crossing is required to provide access to the east side of the creek. Impacts would be minimized by limiting in-channel construction activities, including the period during which the Reach 7 crossing would be in place, from June 15 through October 15 and maintaining passage through the crossing. When the relevant flood improvements are complete, the crossing would be removed and conditions at the temporary creek crossing would be restored to pre-project contours. Therefore, there would be no long-term habitat loss.~~ Implementing Valley Water BMPs (e.g., ~~BI-2 [Minimize Impacts to Steelhead], BI-3 [Remove Temporary Fill], BI-9 [Restore Riffle/Pool Configuration of Channel Bottom],~~ GEN-20 [Erosion and Sediment Control Measures], 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 Operation and Maintenance], WQ-4 [Limit Impacts from

Staging and Stockpiling Materials], WQ-6 [Limit Impact of Concrete Near Waterways], WQ-11 [Maintain Clean Conditions at Work Sites], WQ-15 [Prevent Water Pollution], and WQ-16 [Prevent Stormwater Pollution]), SMP BMPs GEN-24 (On-Site Hazardous Materials Management) and GEN-25 (Existing Hazardous Materials), and compliance with applicable VHP conditions and AMMs (e.g., 1, 2, 6-8, 11, 12, 14, ~~15, 17, 20-25,~~ 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would reduce impacts on special-status fish and their habitat. Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change aquatic habitat conditions, these changes would occur very infrequently and only under conditions when habitat would already be subjected to changed circumstances resulting from flood conditions. These project-related changes would be relatively small compared to operational baseline conditions and would result in a minor risk of increased erosion and scour and associated habitat degradation. Therefore, operational changes in water surface elevations and flow velocities during flood events would not have a substantial adverse effect on special-status fish or their habitat.

California red-legged frog is very unlikely to occur in the BSA and be affected by project implementation. Northwestern pond turtle, however, is known to occur in Coyote Creek near the BSA and could be adversely affected by construction activities in and adjacent to the creek. The project would not result in long-term loss of a substantial amount of northwestern pond turtle habitat, as most impact areas would continue to provide habitat similar to, or of higher quality than, current conditions after project construction is complete and throughout the maintenance period. No permanent loss of aquatic habitat would occur and operations and maintenance activities, such as vegetation maintenance, would have minor impacts, if any, on northwestern pond turtles. Implementing Valley Water BMPs (e.g., ~~BI-3 [Remove Temporary Fill], BI-9 [Restore Riffle/Pool Configuration of Channel Bottom],~~ 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-4 [Limit Impacts from Staging and Stockpiling Materials], WQ-6 [Limit Impact of Concrete Near Waterways], WQ-11 [Maintain Clean Conditions at Work Sites], WQ-15 [Prevent Water Pollution], and WQ-16 [Prevent Stormwater Pollution]), SMP BMPs GEN-20 (Erosion and Sediment Control Measures), GEN-24 (On-Site Hazardous Materials Management), and GEN-25 (Existing Hazardous Materials), and compliance with applicable VHP conditions and AMMs (e.g., 1, 2, 6-8, 11, 12, 14 ~~15, 17, 20-25~~, 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would reduce impacts on northwestern pond turtle and their habitat. California red-legged frog and northwestern pond turtle are covered by the VHP. Therefore, Valley Water's payment of VHP impact fees for the project would contribute to a conservation program that would compensate for impacts the project may have on California red-legged frog and northwestern pond turtle and their habitats. Although post-project water surface elevation increases and flow velocity changes during flood conditions in Coyote Creek would change aquatic habitat conditions, these changes would occur very infrequently and only under conditions when habitat would already be subjected to changed circumstances resulting from flood conditions. These project-related changes would be relatively small compared to operational baseline conditions and would result in a minor risk of increased erosion and scour and associated habitat degradation. Therefore, project-related changes in flow conditions during project operations would not have a substantial adverse effect on northwestern pond turtle or California red-legged frog or their habitat.

Project construction would impact habitat for special-status birds known or with potential to occur in the BSA. Species that could be adversely affected include burrowing owl, golden eagle, bald eagle, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, purple martin, bank swallow, yellow-breasted chat, and yellow warbler. However, most of these species have low potential to occur in the BSA and use of the BSA is likely limited to itinerant individuals moving through or briefly stopping. Project-related effects on these species would be minimal, if any. Only white-tailed kite and yellow warbler have potential to nest in the BSA. The project would disturb potential special-status bird nesting and/or foraging habitat during construction and operations and maintenance activities, but habitat in temporarily disturbed areas would regenerate and not result in a long-term loss. Permanent vegetation removal and maintenance would result in a long-term loss of nesting and foraging habitat, but this loss would be small relative to the total amount of nesting and foraging habitat in the BSA. Implementing Valley Water BMPs (e.g., BI-4 [Minimize Adverse Effects of Pesticides on Non-target Species], BI-5 [Avoid Impacts to Nesting Migratory Birds], HM-1 [Comply with All Pesticide Application Restrictions], HM-2 [Minimize Use of Pesticides], HM-5 [Comply with Restrictions on Herbicide Use in Upland Areas], HM-12 [Incorporate Fire Prevention Measures], WQ-1 [Conduct Work from Top of Bank], and WQ-4 [Limit Impacts from Staging and Stockpiling Materials]), SMP BMPs GEN-28 (Fire Prevention), REVEG-1 (Seeding), and REVEG-2 (Planting Material), and compliance with applicable VHP conditions and AMMs (e.g., 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would reduce impacts on special-status birds and their habitat. Specifically, BMP BI-5 and VHP Condition 1 would require conducting pre-activity surveys and avoiding disturbance of active nests and killing protected birds, including common and special-status species.

For the reasons described above, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on special-status plants, insects, fish, amphibians, reptiles, or birds during project construction or operations and maintenance activities.

Project implementation would adversely affect suitable habitat for special-status mammals, including San Francisco dusky-footed woodrat, western red bat, pallid bat, and Townsend' big-eared bat. The BSA is likely to support a low number of individuals and nests of San Francisco dusky-footed woodrat and the number of individuals that could be affected by the project likely represents a very small proportion of the regional population. As a result, the project would not have a substantial adverse effect on the San Francisco dusky footed woodrat.

Pallid bat and Townsend's big-eared bat have not been documented in the BSA and western red bat likely occurs in low numbers in the BSA, migrating over Coyote Creek or as a short-term daytime rooster. Project implementation would not result in loss of foraging habitat and potential disruption of foraging patterns of these species, if present, would be minimal. However, removal of trees containing large cavities and crevices and modification of structures, such as the Charcot Avenue Bridge in Reach 4 would remove or disturb potential roosting habitat.

Implementing Valley Water BMPs (e.g., BI-4 [Minimize Adverse Effects of Pesticides on Non-target Species], HM-1 [Comply with All Pesticide Application Restrictions], HM-2 [Minimize Use of Pesticides], HM-5 [Comply with Restrictions on Herbicide Use in Upland Areas], HM-12

[Incorporate Fire Prevention Measures], WQ-1 [Conduct Work from Top of Bank], and WQ-4 [Limit Impacts from Staging and Stockpiling Materials]), SMP BMPs GEN-28 (Fire Prevention], REVEG-1 (Seeding), and REVEG-2 (Planting Material), and compliance with applicable VHP conditions and AMMs (e.g., 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would reduce impacts on special-status mammals and their habitat. These species are also likely to benefit from the VHP's conservation program and therefore Valley Water's contribution to that program through payment of impact fees for the project. However, Valley Water BMPs and VHP conditions and AMMs do not include measures to minimize direct impacts on roosting bats. While unlikely, if a roost(s) supporting a colony is removed, this could have a substantial adverse effect on local populations. Therefore, cumulative impacts on special-status species bats would be significant, and the project's contribution to cumulative impacts on special-status species bats would be cumulatively considerable. For all special status special species other than bats, the project would not have a cumulatively considerable contribution to a significant cumulative impact.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

> **Mitigation Measure BIO 8.1: Minimize Impacts on Special-Status Bats.**
>
> Please refer to Section 3.4, "Biological Resources," (Impact BIO-8) for the full text of this mitigation measure.

Significance After Mitigation: Implementing Mitigation Measure BIO 8.1 would reduce the significant impact associated with disturbance of special-status roosting bats by conducting a roosting habitat survey, confirming absence through occupancy surveys, or implementing tiered removal of trees or modification of structures known or suspected to support roosting bats. With implementation of this mitigation measure, the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact related to special-status bats. This cumulative impact would be **less than significant with mitigation**.

Cumulative Impact BIO-2: Cumulative Impacts on Sensitive Habitats and Wildlife Movement. (Less than significant)

The geographic scope for potential cumulative impacts on sensitive habitats includes the VHP Planning Area, Coyote Creek and Upper Penitencia Creek watersheds, and the South San Francisco Bay.

Cumulative impacts on sensitive habitats could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would: have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS; have a substantial adverse effect on state or federally protected aquatic resources (waters and wetlands) through direct removal, filling, hydrological interruption, or other means; or 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.

Most of the cumulative projects listed in Table 4.2 could result in cumulative impacts on sensitive habitats, depending on the project location, construction and operations and maintenance activities, use of best management practices, and compliance with and potential coverage under the VHP. Projects that are covered activities under the VHP, including many of those listed in Table 4.2, have been or would be required to comply with VHP Conditions, implement VHP AMMs, and pay VHP impact fees. Implementing AMMs would reduce impacts on sensitive habitats and fee payment would contribute to implementation of the VHP Conservation Program (e.g., habitat restoration, acquisition, preservation, and management). Although the VHP focuses on covered species, the AMMs and Conservation Program benefit riparian, aquatic, and other sensitive habitats. In addition, cumulative impacts to sensitive habitats would be minimized with adherence to requirements of federal, state, and local laws and regulations, including the Clean Water Act, Porter-Cologne Water Quality Control Act, and California Fish and Game Code.

As described and analyzed in Chapter 3.4, "Biological Resources," the project would result in less-than-significant impacts on riparian habitat, state and federally protected aquatic resources, and fish and wildlife movement corridors and nursery sites.

The project has been designed to minimize impacts on the riparian habitat of Coyote Creek by focusing flood protection elements outside of the channel and upslope of streambanks. As a result, the project would have a relatively minimal impact on the overall extent of riparian habitat in the BSA. However, some removal of trees and other woody vegetation in mixed riparian woodland and forest would occur and these habitats could be indirectly affected by project implementation. Implementing Valley Water BMPs (e.g., ~~BI-3 [Remove Temporary Fill],~~ BI-8 [Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes], 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], 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 from Staging and Stockpiling Materials], WQ-6 [Limit Impact of Concrete Near Waterways], WQ-11 [Maintain Clean Conditions at Work Sites], WQ-15 [Prevent Water Pollution], and WQ-16 [Prevent Stormwater Pollution]), SMP BMPs GEN-28 (Fire Prevention), REVEG-1 (Seeding), and REVEG-2 (Planting Material), and compliance with applicable VHP conditions and AMMs (e.g., 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would also reduce impacts on riparian vegetation. In addition, Valley Water will pay impact specialty fees for riparian cover types, thereby contributing to a conservation program that includes riparian habitat.

Project impacts on state and federally protected aquatic resources would also be relatively minor. No project work would occur below the ordinary high-water mark in either creek or within the forested wetlands. Therefore, construction, operations, and maintenance activities would not have permanent impacts on protected waters or wetlands. Impacts on state and federally protected waters in Coyote Creek would be limited to potential indirect, temporary impacts~~,~~ from erosion, runoff, and sedimentation associated with nearby construction activities. ~~Direct impacts would be temporary and limited to Reach 7 where the temporary creek crossing is required to provide access to the east side of the creek and~~ a seasonal wetland in an upland staging area in Reach 4. ~~The temporary crossing would only be in place for one construction season, between June 15 through October 15, and would be removed and conditions restored to pre-project contours when construction activities at that location are complete. The seasonal wetland is highly disturbed, providing little to no habitat value. Temporary impacts to this wetland may occur for the duration of construction (2 years), but placement of materials in this~~

~~feature would be avoided to the greatest extent feasible.~~ Therefore, there would be no long-term loss of aquatic resources. Implementing Valley Water BMPs (e.g., ~~BI-3 [Remove Temporary Fill]~~, ~~BI-9 [Restore Riffle/Pool Configuration of Channel Bottom]~~, 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-3 [Limit Impact of Pump and Generator Operation and Maintenance]~~, WQ-4 [Limit Impacts from Staging and Stockpiling Materials], WQ-6 [Limit Impact of Concrete Near Waterways], WQ-11 [Maintain Clean Conditions at Work Sites], WQ-15 [Prevent Water Pollution], and WQ-16 [Prevent Stormwater Pollution]) and compliance with applicable VHP conditions and AMMs (e.g., 1, 2, 6-8, 11, 12, ~~-~~14, ~~17, 20-25,~~ 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would also reduce impacts on state and federally protected aquatic resources. In addition, Valley Water would pay impact specialty fees for aquatic cover types, thereby contributing to a conservation program that includes aquatic habitats.

The BSA is not part of a formally identified wildlife corridor and is not known or likely to support a native wildlife nursery site. However, Coyote Creek provides an important migration corridor for anadromous fish and is used by resident wildlife for foraging, breeding, and dispersal. Project activities may temporarily affect fish and wildlife movement during construction, but animals would be able to continue to move through the BSA. In most of the project reaches, impacts would be relatively minor because work would occur on only one side of the creek and/or would occur in adjacent parks with work areas set back from the creek corridor. ~~The temporary crossing would only be in place for one construction season, between June 15 through October 15, and fish passage through the crossing would be provided.~~ Operations and maintenance activities would have minor impacts on wildlife movement because they would focus on project features outside the creek channel. Although permanent vegetation removal would occur, these long-term habitat effects would occur at the outer edge of the riparian corridor and are unlikely to adversely affect wildlife movement. ~~Conditions at the temporary creek crossing would be restored to pre-project conditions, and therefore would not affect post-project fish passage.~~ Floodwalls would not restrict movement through the Coyote Creek channel and would pose a minor obstacle for some wildlife moving between the creek corridor and adjacent areas outside the creek. Implementing Valley Water BMPs (e.g. ~~BI-3 [Remove Temporary Fill], BI-9 [Restore Riffle/Pool Configuration of Channel Bottom], WQ-1 [Conduct Work from Top of Bank], WQ-2 [Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms], and~~ WQ-4 [Limit Impacts from Staging and Stockpiling Materials]) and compliance with applicable VHP conditions and AMMs (e.g., 1, 2, 6-8, 11, 12, ~~-~~14, ~~17, 20-25,~~ 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103, and 107) would also reduce impacts on fish and wildlife movement.

For the reasons described above, cumulative impacts on sensitive habitats and wildlife movement would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on sensitive habitats and wildlife movement during project construction or operations and maintenance activities. This cumulative impact is considered **less than significant**.

Cumulative Impact BIO-3: Cumulative Impacts Related to Policies, Ordinances, or Habitat Conservation Plans Protecting Biological Resources. (Less than significant)

The geographic scope for potential cumulative impacts related to policies, ordinances, and conservation plans protecting biological resources includes the VHP Planning Area, Coyote Creek and Upper Penitencia Creek watersheds, and the South San Francisco Bay.

Cumulative impacts related to policies, ordinances, and conservation plans protecting biological resources could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

Many of the cumulative projects listed in Table 4.2 could result in cumulative impacts related to policies, ordinances, or habitat conservation plans protecting biological resources, depending on the project location, construction and operations and maintenance activities, use of best management practices, compliance with local policies and ordinances, and compliance with and potential coverage under the VHP. Projects that are covered activities under the VHP, including many of those listed in Table 4.2, have been or would be required to comply with VHP Conditions, implement VHP AMMs, and pay VHP impact fees. In addition, potential cumulative impacts related to conflict with local policies or ordinances would be minimized by adherence to requirements of policies and ordinances relevant to a given project and project proponent.

It is standard Valley Water practice, when feasible, to comply with applicable City of San José tree ordinance regulations. Therefore, Valley Water would comply with applicable tree replacement requirements, pay in-lieu fees, or implement alternative mutually acceptable compensatory measures for tree removal subject to City regulations. Operations and maintenance activities would not require additional tree removal.

Project implementation, including operations and maintenance activities, would affect habitats and species addressed by the City of San José General Plan. However, the project has been designed to minimize impacts on riparian and oak woodland vegetation and place project components away from the creek where possible. In addition, implementing Valley Water BMPs (e.g.2 [Minimize Impacts to Steelhead], BI-4 [Minimize Adverse Effects of Pesticides on Non-target Species], BI-5 [Avoid Impacts to Nesting Migratory Birds], BI-6 [Avoid Impacts to Nesting Migratory Birds from Pending Construction], BI-8 [Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes], HM-1 [Comply with All Pesticide Application Restrictions], HM-2 [Minimize Use of Pesticides], HM-5 [Comply with Restrictions on Herbicide Use in Upland 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], 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 Operation and Maintenance],~~ WQ-4 [Limit Impacts from Staging and Stockpiling Materials], WQ-6 [Limit Impact of Concrete Near Waterways], WQ-9 [Use Seeding for Erosion Control, Weed Suppression, and Site Improvement], WQ-15 [Prevent Water Pollution], and WQ-16 [Prevent Stormwater Pollution]), SMP BMP GEN-28 (Fire Prevention), and compliance with applicable VHP conditions and AMMs (e.g., 1, 2, 6-8, 11, 12, -14~~15~~,~~ 17, 20-25,~~ 29-32, 40, 49, 53, 58, 61, 62, 69-71, 80, 81, 85, 103) would reduce impacts on aquatic and terrestrial habitat, special-status species, and nesting birds, thereby ensuring consistency with the relevant General Plan policies.

The project is a covered activity under the VHP and Valley Water is a permittee legally obligated to implement all applicable VHP requirements for the project. Therefore, the project would not conflict with the VHP. No other adopted HCP, NCCP, or other approved local, regional, state, or federal habitat conservation plan applies to the project or BSA.

For the reasons described above, cumulative impacts related to policies, ordinances, or habitat conservation plans protecting biological resources would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to policies, ordinances, or conservation plans protecting biological resources. This cumulative impact is considered **less than significant**.

Cultural Resources and Tribal Cultural Resources

Cumulative Impact CUL: Cumulative Impacts to Cultural and Tribal Cultural Resources. (Less than significant with Mitigation)

The geographic scope of potential cumulative impacts on cultural resources and tribal cultural resources includes areas of ground disturbance within the City. The project would contribute to cumulative impacts on cultural resources, including historical, archeological, and tribal cultural resources, if the project and other cumulative projects listed in Table 4.2 were to adversely affect the same historical, archeological, or tribal cultural resources within the City.

Valley Water's SMP and Dam Maintenance Program (DMP), Santa Clara County Parks Planning Projects and Natural Resource Management, the City PRNS Capital Improvement Program, and other development projects in the City would be implemented within the geographic scope of potential cumulative cultural and tribal cultural resource impacts. All other cumulative projects identified in Table 4.2 would be located far enough away from the project area to not contribute to potential cumulative cultural and tribal cultural resource impacts associated with the project. All relevant cumulative projects within the City, regardless of known cultural and tribal cultural resources in the area, have the potential to encounter unknown cultural and tribal cultural resources if they include ground-disturbing activities. Therefore, cumulative projects could result in significant impacts on cultural and tribal cultural resources. Due to state, federal, and local regulations, including CEQA, cumulative projects would likely be required to implement mitigation measures similar to the project, which include measures such as worker awareness training, and the preparation of monitoring, treatment, and reporting plans.

As described and analyzed in Section 3.5, "Cultural Resources and Tribal Cultural Resources," a total of 32 built environment resources were identified within the project area or within 500 feet of the project area; however, these resources are not considered historical resources under CEQA. Therefore, the project would not result in a cumulatively considerable incremental contribution to significant impacts to historical resources.

The project area contains a recorded cultural resource site, and the likelihood of encountering cultural resources or human remains in or near the project is considered moderate to high. No tribal cultural resources were identified in the project area. However, the project has the potential to disturb and/or adversely impact unknown archeological or tribal cultural resources, in addition to human remains during project construction activities. Therefore, cumulative impacts related to disturbing and/or adversely impacting archeological or tribal cultural resources, in addition to human remains, during construction would be significant, and the project's contribution to cumulative cultural and tribal cultural resource impacts would be cumulatively considerable.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure CUL 2.1: Preconstruction Cultural Resources Awareness Training.

Please refer to Section 3.5, "Cultural Resources and Tribal Cultural Resources," (Impact CUL-2) for the full text of this mitigation measure.

Mitigation Measure CUL 2.2: Prepare a Monitoring and Unanticipated Discoveries Plan.

Please refer to Section 3.5, "Cultural Resources and Tribal Cultural Resources," (Impact CUL-2) for the full text of this mitigation measure.

Mitigation Measure CUL 2.3: Prepare a Data Recovery and Treatment Plan for Historical Resources that cannot be Avoided.

Please refer to Section 3.5, "Cultural Resources and Tribal Cultural Resources," (Impact CUL-2) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measures CUL 2.1 through CUL 2.3 would reduce significant construction-related impacts to archeological and tribal cultural resources, as well as human remains by requiring cultural resources awareness training for all construction personnel, preparing and implementing a Monitoring and Unanticipated Discoveries Plan, preparing and implementing a Data Recovery and Treatment Plan, and implementing consultation with Native American Tribes that have engaged in consultation with Valley Water regarding any identified tribal cultural resources. With the implementation of these mitigation measures, the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact related to cultural and tribal cultural resources. This cumulative impact would be **less than significant with mitigation**.

Geology, Soils, and Seismicity

Cumulative Impact GEO: Cumulative Impacts of Geology, Soils, and Seismicity. (Less than significant with Mitigation)

The geographic scope of cumulative impacts related to geology, soils, and seismicity is limited to areas within and adjacent to the project area. Geologic, soil, and seismic impacts are generally site-specific and depend on local geologic and soil conditions and the potential for a project to create an adverse effect that could result in impacts related to geology, soils, and seismicity.

Cumulative geology, soil, and seismicity impacts could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would: directly or indirectly cause substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides; result in substantial soil erosion or loss of topsoil; be located on an unstable geologic unit or soil, or that would become unstable as a result of a project, and potentially result in on-or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse; be located on expansive soil; have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems; or destroy a unique paleontological resource site or unique geologic feature.

The projects identified in Table 4.2 that exist within and adjacent to the project area could cause impacts that combine with the project impacts to result in significant cumulative geology, soils, and seismicity impacts. However, because California is seismically active, all projects in the entire project region could expose people and structures to adverse effects associated with earthquakes including seismic ground shaking and seismic-related ground failure. Cumulative projects also could be located on unstable soils and have soils incapable of adequately supporting alternative waste disposal systems. However, site-specific geotechnical studies required by state and local regulations would determine how cumulative projects could be designed to minimize exposure of people and structures to these potential impacts. Cumulative projects, as well as all projects in the region, would be required to adhere to current building standards with seismic design criteria that incorporates the most current understanding of geotechnical and seismic hazards such that loss, damage, injury, or death would be minimized.

As described and analyzed in Section 3.6, “Geology, Soils, and Seismicity,” the project would not result in impacts regarding soil suitability for septic systems or alternative wastewater disposal systems, would not be located on unique geologic features, and would not result in the destruction of unique paleontological resources during operation and maintenance. The project would result in less-than-significant impacts regarding adverse effects from rupture of known earthquake faults, seismic ground shaking, liquefaction, subsidence, soil instability, landslides, expansive soils, or substantial soil erosion or loss of topsoil. Therefore, the project’s contribution to these potential cumulative impacts would be less than cumulatively considerable.

However, the project area is located within the Holocene-age Coyote Creek channel, overbank deposits, alluvial terrace deposits, and natural levee deposits, and construction activities could result in impacts to these paleontological resources. Cumulative projects could cause similar impacts to paleontological resources. Therefore, cumulative impacts on paleontological resources would be significant, and the project’s contribution to potential cumulative impacts on paleontological resources would be cumulatively considerable.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

> **Mitigation Measure GEO 3.1: Prepare and Implement a Paleontological Mitigation and Monitoring Plan.**
>
> Please refer to Section 3.6, “Geology, Soils, and Seismicity,” (Impact GEO-3) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measure GEO 3.1 would reduce impacts on paleontological resources because it would require the preparation and implementation of a Paleontological Mitigation and Monitoring Plan that would include identification and mapping areas of high paleontological sensitivity, preparation and implementation of Worker Environmental Awareness Program training, monitoring of excavation during construction, and recovery and curation protocols should any paleontological resources be discovered during construction. These measures would prevent destruction of unique paleontological resources. With the implementation of mitigation measures, the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact on paleontological resources. This cumulative impact would be **less than significant with mitigation**.

Greenhouse Gas Emissions and Energy Use

Cumulative Impact GHG/EN: ***Cumulative Impacts on Greenhouse Gas Emissions and Energy.*** ***(Less than significant)***

Section 3.7, "Greenhouse Gas Emissions and Energy Use," provides estimates and analyzes the GHG emissions and energy demand associated with project-related construction activities. As discussed in Section 3.7, "Greenhouse Gas Emissions and Energy Use," the project's GHG emissions would be 421 metric tons of carbon dioxide equivalent (MTCO2e) per year of construction.

Greenhouse gas impacts are inherently cumulative. Because the project's GHG emissions would be below the applicable threshold of 1,100 MTCO2e per year that was applied to the project, and the project would include numerous construction-related BMPs that would further reduce construction-related GHG emissions and fuel consumption (as described in detail in Chapter 2.0, "Project Description"), cumulative GHG impacts would not be significant, and the project would not result in a considerable contribution to a cumulatively significant impact related to GHG emissions. This cumulative impact is considered **less than significant**.

Additionally, the project's estimated energy consumption, which equated 20,525 gallons of gasoline and 388,173 gallons of diesel fuel would be used during the construction of the project. The short-term, one-time expenditure of fuel use for construction activities and ongoing maintenance activities was determined to be necessary and not wasteful; and would not impede or conflict with an applicable renewable energy or energy efficiency plan. Therefore, the project would not significantly contribute to cumulative impacts to energy and would not be significant. The project would not result in a considerable contribution to a cumulative significant impact related to energy consumption. This cumulative impact is considered **less than significant**.

Hazards and Hazardous Materials

Cumulative Impact HAZ: ***Cumulative Impacts of Hazards and Hazardous Materials.*** ***(Less than significant with Mitigation)***

The geographic scope of analysis for cumulative hazardous materials impacts encompasses areas within the City or adjacent to the project area. This is because impacts relative to hazardous materials are generally site-specific and depend on the location, nature, and extent of the hazardous materials release, and existing and future soil and groundwater conditions. Cumulative hazards impacts could occur if cumulative projects involve concurrent activities that would: create a significant hazard to the public or environment through the transport, use, or disposal of hazardous materials; release hazardous materials into the environment; emit hazardous emissions or materials within one-quarter mile of a school; be located on a hazardous material site; be located within a two miles of a public airport and result in excessive noise; expose people or structures to loss, injury or death involving wildland fires; impair implementation of or physically interfere with an adopted emergency response or evacuation plan; or create a hazard to workers or the public through exposure to Valley Fever during construction.

None of the cumulative projects specifically detailed in Table 4.2 would be located in or directly adjacent to the project area or within the project vicinity, and therefore, would not combine with the project's impacts related to hazards and hazardous materials listed above. However, the project area is largely developed with a multitude of land uses, and hazardous material sites exist in the project area and vicinity. Other development projects in the project vicinity that are not listed in Table 4.2 could result in cumulative impacts related to hazards and hazardous materials impacts listed above. It is likely that those projects would be required to implement similar mitigation measures as the project, such as soil testing and the development of hazardous material business and/or management plans, pursuant to local, state, and federal regulations.

As described and analyzed in Section 3.8, "Hazards and Hazardous Materials," the project would result in no impacts from accidental release of asbestos, noise hazards due to public airports, or the exposure of people or structures to loss, injury or death from wildland fire. The project would result in less-than-significant impacts from: the routine transport, use, or disposal of hazardous materials; and the creation of a hazard to workers or the public through exposure to Valley Fever. Therefore, the project's contribution these potential cumulative impacts would be less than cumulatively considerable.

Although Valley Water BMPs AQ-1 (Use Dust Control Measures), 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), and HM-10 (Utilize Spill Prevention Measures), and SMP BMPs GEN-2 (Instream Herbicide Application Work Window), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Materials), GEN-26 (Spill Prevention and Response), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), and HM-4 (Posting and Notification for Pesticide Use) would be implemented with the project, the following impacts would remain: project could result in significant impacts from the accidental release of hazards and/or hazardous materials; emission of or handling of hazardous materials within one-quarter mile of a school; and, being located on a hazardous materials site. Other cumulative projects could contribute to this impact. Therefore, cumulative hazardous materials impacts would be significant, and the project's contribution to cumulative hazards impacts would be cumulatively considerable.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure HAZ 2.1: Soil Testing and Proper Disposal of Potentially Contaminated Soils

Please refer to Section 3.8, "Hazards and Hazardous Materials," (Impact HAZ-2) for the full text of this mitigation measure.

Mitigation Measure HAZ 2.2: Develop and Implement a Hazardous Materials Management Plan

Please refer to Section 3.8, "Hazards and Hazardous Materials," (Impact HAZ-2) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measures HAZ 2.1 and HAZ 2.2 would reduce significant impacts from accidental release of hazardous materials by requiring the use of personal protective equipment during construction activities in areas which are known to have high lead concentrations, by halting construction activities and testing of soil and/or groundwater in areas suspected of contamination, by implementing proper disposal of contaminated soil and/or groundwater, by contacting the DTSC and the City prior to conducting any ground disturbing activities, and by complying with all institutional controls. Therefore, the presence of a hazardous material site listed on the Cortese List within and directly adjacent to the project area would not create a significant hazard to the public or the environment. With the implementation of mitigation measures, the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact related to hazards and hazardous materials. Therefore, this cumulative impact would be **less than significant with mitigation**.

Hydrology and Water Quality

Cumulative hydrology and water quality impacts could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would: violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality; substantially decrease groundwater supplies or interfere substantially with groundwater recharge and impede sustainable groundwater management of the basin; 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 result in substantial erosion, siltation, or flooding on- or offsite; or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Cumulative Impact HWQ-1: Cumulative Impacts to Surface or Groundwater Quality. (Less than significant)

The geographic scope for potential cumulative impacts to water quality includes Coyote Creek and Upper Penitencia Creek watersheds, Santa Clara groundwater basin, and the South San Francisco Bay.

Most cumulative projects listed in Table 4.2 could result in cumulative impacts on water quality, depending on their location, proposed construction activities and use of best management practices, and proposed operational activities. However, many potential cumulative impacts to water quality would be minimized with adherence to requirements of federal, state, and local water quality regulations, including the NPDES Construction General Stormwater Permit and adherence to the NPDES requirements for urban runoff in the SCVURPPP. Conditions of the Construction General Permit would be tailored to each project to be sufficient to maintain water quality within the identified cumulative setting (e.g., watersheds), Santa Clara groundwater basin, and/or the South San Francisco Bay. Conditions of the SCVURPPP are implemented by each of the 15 co-permittees that discharge to the South San Francisco Bay, including through approvals of projects under the authority of each of the co-permittees.

As described and analyzed in Section 3.9, “Hydrology and Water Quality,” the project would result in less-than-significant impacts on water quality during construction with the required NPDES permits and with implementation of Valley Water BMPs AQ-1 (Use Dust Control Measures), ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), and WQ-5 (Stabilize Construction Entrances and Exits), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement). In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous AMMs, including 61-74, 83, 84, 96, 97, 102-104, and 114.

Furthermore, Valley Water SMP BMPs would be implemented during project maintenance activities, including GEN-2 (Instream Herbicide Application Work Window), GEN-4 (Minimize the Area of Disturbance), GEN-20 (Erosion and Sediment Control Measures), GEN-21 (Staging and Stockpiling of Materials), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), GEN-29 (Dust Management), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), HM-10 (Utilize Spill Prevention Measures), HM-11 (Ensure Worker Safety in Areas with High Mercury Levels), HM-12 (Incorporate Fire Prevention Measures), HM-13 (Avoid Impacts from Naturally Occurring AsbestosAsbestosWQ-18 (Maintain Clean Conditions at Work Sites), WQ-26 (Evaluate Use of Silt Fence Culvert Entrance Protection), WQ-29 (Evaluate Use of Discharge Storm Drain Curb & Drop Inlet Protection), WQ-40 (Prevent Water Pollution), WQ-41 (Prevent Stormwater Pollution), and REVEG-1 (Seeding) to reduce impacts on water quality from erosion and hazardous materials.

Based on the above analysis, cumulative impacts on surface or ground water quality would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to water quality during construction or maintenance activities. This cumulative impact is considered **less than significant**.

Cumulative Impact HWQ-2: Cumulative Impacts to Groundwater Supplies or Recharge. (Less than significant)

The geographic scope for potential cumulative impacts to hydrology and water quality includes the Santa Clara groundwater basin.

Cumulative impacts on groundwater supplies or recharge could occur if the project and cumulative projects identified in Table 4.2 would substantially decrease groundwater supplies or interfere substantially with groundwater recharge and impede sustainable groundwater management of the basin; or conflict with or obstruct implementation of a sustainable groundwater management plan. Projects listed in Table 4.2 would create impervious surfaces to varying degrees and in areas with variable groundwater recharge. Groundwater recharge in the Santa Clara Subbasin includes in-stream percolation from creeks within the basin, including in Coyote Creek and at the Coyote Percolation Pond just north of Metcalf Road. Valley Water manages aquifer recharge using local water supply and imported water releases to Coyote

Creek below Anderson Dam via the CDL and Cross Valley Pipeline (Valley Water 2023k). In addition, other areas within the undeveloped areas of the groundwater basin also provided recharge to groundwater levels in the underlying aquifers (Valley Water 2023k).

Approximately half of the water used in Santa Clara County is pumped from groundwater within the basin. Valley Water is the Groundwater Sustainability Agency in charge of monitoring and management of groundwater use and recharge in the basin. Valley Water actively recharges the groundwater basin with available resources of water from local runoff and from imported sources. The proposed project would not result in the use of groundwater and would not result in a substantial increase in impervious surfaces compared to the existing and future planned urbanized development in the groundwater basin. Therefore, cumulative impacts on groundwater supplies or recharge would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact on groundwater supplies or recharge, and this cumulative impact is considered **less than significant**.

Cumulative Impact HWQ-3: Cumulative Impacts to Hydrology and Water Quality from Increases in Surface Runoff. (Less than significant)

The geographic scope for potential cumulative impacts to hydrology and water quality includes Coyote Creek and Upper Penitencia Creek watersheds.

Cumulative hydrology and water quality impacts could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would: 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 create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems. The projects listed in Table 4.2 have varying degrees of impervious surfaces that create increases in runoff into local stormwater systems or creeks within the Coyote Creek and Upper Penitencia Creek watersheds. Projects within the City portion of the watersheds would be required to comply with local regulations to control post-project runoff flows into the City's stormwater system to not exceed the capacity and result in localized flooding or increased pollutants in runoff. The project would result in the addition of approximately 22,600 square feet of impervious surfaces and would not result in a substantial increase in runoff into the existing or planned stormwater systems within the City. The project would include drainage features in all passive barrier foundations and select floodwalls to allow stormwater collection and conveyance to continue to either the City stormwater system or to the creek. Further, the increase in impervious surfaces from the project would be less than 0.001 percent compared to the City's overall developed urban areas of approximately 97 square miles (City of San José, 2011). Maintenance of areas around floodwalls would include vegetation removal within areas on either side of floodwall. However, vegetation removal would not result in exposure bare soil.

Further, the project is subject to the source control, site design, and stormwater requirements pursuant to the Municipal Regional Stormwater Permit conditions and would be consistent with the policies contained in the Municipal Regional Stormwater Permit by minimizing runoff generation, promoting infiltration of storm water, implementing drainage features within all passive barrier foundations and select floodwalls meeting design and operation criteria of the Municipal Regional Stormwater Permit to convey stormwater flows to the existing City stormwater system or to the creek, and using vegetated areas to filter pollutants from stormwater before it enters the City storm drainage system or creek. The vegetated areas receiving stormwater would filter sediment and other pollutants from stormwater runoff entering the City's stormwater system and reduce the amount of pollutants reaching the creek channel. Valley Water BMPs ~~BI-3 (Remove Temporary Fill),~~ BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes), and WQ-9 (Use Seeding for Erosion Control, Weed Suppression, and Site Improvement). In addition, the project would adhere to requirements of VHP conditions 3 (Maintain Hydrologic Conditions and Protect Water Quality), 4 (Avoidance and Minimization for In-Stream Projects), and 5 (Avoidance and Minimization for In-Stream Operations and Maintenance) and numerous AMMs, including 61-74, 83, 84, 96, 97, 102-104, and 114. These AMMs would require measures to reduce the extent of exposed soil and erosion during and after construction activities. Furthermore, Valley Water SMP BMPs would be implemented during project maintenance activities, including GEN-2 (Instream Herbicide Application Work Window), GEN-4 (Minimize the Area of Disturbance), GEN-20 (Erosion and Sediment Control Measures), GEN-21 (Staging and Stockpiling of Materials), GEN-24 (On-Site Hazardous Materials Management), GEN-25 (Existing Hazardous Material), GEN-26 (Spill Prevention and Response), GEN-29 (Dust Management), GEN-30 (Vehicle and Equipment Maintenance), GEN-31 (Vehicle Cleaning), GEN-32 (Vehicle and Equipment Fueling), HM-10 (Utilize Spill Prevention Measures), HM-11 (Ensure Worker Safety in Areas with High Mercury Levels), HM-12 (Incorporate Fire Prevention Measures), HM-13 (Avoid Impacts from Naturally Occurring AsbestosAsbestosWQ-18 (Maintain Clean Conditions at Work Sites), WQ-26 (Evaluate Use of Silt Fence Culvert Entrance Protection), WQ-29 (Evaluate Use of Discharge Storm Drain Curb & Drop Inlet Protection), WQ-40 (Prevent Water Pollution), WQ-41 (Prevent Stormwater Pollution), and REVEG-1 (Seeding) to ensure runoff from project improvements would not exceed the capacity of existing stormwater systems or create substantial additional sources of polluted runoff.

Based on the above analysis, cumulative impacts on hydrology or water quality from increased surface runoff would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact from a substantial increase in the rate or amount of surface runoff and would not result in flooding on- or off-site or create a substantial increase in sources of polluted runoff. This impact would be **less than significant**.

Cumulative Impact HWQ-4: Cumulative Impacts to Hydrology from Redirecting Flood Flows. (Less than significant)

The geographic scope for potential cumulative impacts to hydrology from redirecting flood flows includes Coyote Creek and Upper Penitencia Creek watersheds.

Cumulative hydrology impacts from redirecting flood flows could occur if the project and the cumulative projects identified in Table 4.2 involve activities that would substantially alter the existing drainage pattern of Coyote Creek, including through the alteration of the course of the creek in a manner which would result in substantial flooding on- or offsite. As described previously in Chapter 3, Section 3.9, "Hydrology and Water Quality," flows in Coyote Creek are currently composed of runoff from within the natural portions of the watershed, including those from Upper Penitencia Creek, releases from the outlet of Anderson Dam, and from the City's stormwater drainage system. To the extent possible, quantitative methods are used to evaluate the potential for the project to change hydrology and flood flows. To analyze these changes, hydrologic and hydraulic modeling (also called H&H modeling) was conducted. The methodology and results of the H&H modeling conducted for a 100-year storm event within the Coyote Creek watershed are included in **Appendices H1 – H3**. The H&H model was developed using the parameters and approaches described in the two technical memoranda prepared by Valley Water: one memorandum (Appendix H1) identifies inputs to construct and run the hydraulic model, and the other memorandum (Appendix H2) describes several modeling scenarios and associated flows for Coyote Creek, including baseline conditions, consideration of the project, and cumulative scenarios. The results of the H&H modeling for both the cumulative baseline condition and future cumulative conditions are contained in the *Modeling Efforts in Support of Environmental Impact Report Technical Memorandum* prepared by AECOM (Appendix H3, AECOM, 2024). The analysis methodology and discussion of the memoranda and H&H modeling are described previously in more detail in Chapter 3, Section 3.9, "Hydrology and Water Quality" for the analysis of impacts of the project compared to the cumulative baseline condition. Further information on the modeling done for cumulative impact analysis is provided below.

Since the 2017 flood event overtopping the Coyote Creek banks into the urban areas of the City, the FOCP project was implemented and reduced flows from Anderson Dam compared to pre-FOCP historic levels. The H&H modeling analyzed effects of the project on flood flows based on cumulative baseline conditions, which includes 2023 ADTP flows and completion of the CCFMMP, in addition to the conditions within the watershed in the future after the construction of Anderson Dam is complete and operating under FAHCE requirements as one cumulative scenario. An additional cumulative scenario was conducted for the period of time (approximately 4 years) during construction of Anderson Dam when flows would be controlled at a different level. Specifically, a comparison of results of the floodplain extents and water surface elevations from the pre-FOCP condition and the cumulative scenario was conducted to determine if the project would contribute to a cumulative impact of redirecting or impeding flood flows and exacerbate existing flood conditions or introduce new areas of flooding. Redirecting and impeding flood flows compared to pre-FOCP conditions would occur with the project improvements because the improvements are specifically located in areas to prevent flood water from overtopping the creek banks or from flowing overland to areas that would normally be exposed to flood waters, as described previously in Chapter 3, Section 3.9, "Hydrology and Water Quality." Operation of Anderson Dam during construction and after completion would also change the control of flows within Coyote Creek.

The flow conditions, and designated H&H scenarios, that have occurred in the past or are anticipated to occur in the future in Coyote Creek, used for analysis of cumulative impacts, include:

- 2017 DSOD flows during a 72-hour storm event (flows in Coyote Creek before the FOCP with operational conditions that existed from 2009 to 2019 with seismic restrictions in place for both Anderson and Coyote Reservoirs as required by the DSOD and the existing outlet in place) designated as *Scenario 1*. Flow releases under this scenario under the 100-year storm event are modeled to be 10,211 cfs. The H&H results for maximum water depths under this scenario are shown in Appendix H3, Attachment 2;
- 2017 DSOD flows during a 24-hour storm event (flows in Coyote Creek before the FOCP with operational conditions that existed from 2009 to 2019 with seismic restrictions in place

for both Anderson and Coyote Reservoirs as required by the DSOD and the existing outlet in place) with the project, CCFMMP, and City Trails Project designated as *Scenario 1A*. Flow releases under this scenario under the 100-year storm event are modeled to be 0 cfs. The H&H results for maximum water depths under this scenario are shown in Appendix H3, Attachment 3;

- 2028 ADSRP flows during a 24-hour storm event (changes to post-ADTP flows in Coyote Creek during construction flows in Coyote Creek with operational conditions that are expected to exist during ADSRP construction of ADSRP while the emergency spillway is offline) with the project, CCFMMP, and City Trails Project designated as *Scenario 4*;
- post-ADSRP 2032 FAHCE flows during a 72-hour storm event (flows in Coyote Creek with operational conditions after ADSRP is complete, and the FAHCE rule curves for reservoir releases are in place) with the project, CCFMMP, and City Trails Project designated as *Scenario 5*; and
- post-ADSRP 2032 FAHCE flows during a 24-hour storm event (flows in Coyote Creek with operational conditions after ADSRP is complete, and the FAHCE rule curves for reservoir releases are in place) with the project, CCFMMP, and City Trails Project designated as *Scenario 5A*.

For this cumulative analysis, the following comparisons are made using the above scenarios:

1. Scenario 4 compared to Scenario 1 for the cumulative impact when the ADSRP is under construction.
2. Scenario 5 compared to Scenario 1 for f the cumulative impact when the ADSRP is operational, with the 72-hour storm event. This scenario was modeled based on the largest historical recorded flows on Coyote Creek for a 72-hour storm centered on Anderson and Coyote Reservoirs to estimate peak flows on Coyote Creek for a 100-year flood event to account for reservoir attenuation and travel time from the reservoirs to the lower reaches of Coyote Creek.
3. Scenario 5A compared to Scenario 1A for the cumulative impact when the ADSRP is operational, with the 24-hour storm event. This scenario was modeled based on a 24-hour storm centered below Anderson Dam and within the local watershed to observed flows during a 100-year event that would not require or result in spills from Anderson Dam.

Scenario 4 Compared to Scenario 1 Results

The H&H modeling results shown in Appendix H3 show the estimated range in maximum water depths during the 100-year flood event for cumulative baseline conditions under Scenario 1 described above. As shown in the figures, under the cumulative baseline conditions there are large areas of the City under flood waters greater than 1 ft. Comparison of Scenario 4, as described above, to Scenario 1 is shown in Appendix H3, Attachment 2. The figures show that under the Scenario 4 conditions all the areas previously shown to flood above 1 ft in depth under the cumulative baseline conditions would be eliminated with the project. While there are areas of increases in water depths, those increases are only within the Coyote Creek channel or on the channel side of the project and CCFMMP flood improvements.

The H&H modeling results shown in Appendix H3, Attachment 2 show the estimated areal extent of flooding under Scenario 4 compared to Scenario 1. As shown on the figures, flood flows during the 72-hour 100-year flood event would escape the creek channel and flood many areas of the City under the cumulative baseline condition in Scenario 1. However, as shown on the same figures, after implementation of the project improvements, the extent of flooding would be significantly reduced and restricted to within the channel of the creek and surrounding open space areas, as a result of the project improvements. Further, the extent of flooding downstream of project improvements would also be reduced. There are no areas outside of the Coyote Creek channel where the extent of flooding would exceed that shown under the cumulative baseline condition in Scenario 1 compared to Scenario 4 after implementation of the project.

The results show that flood conditions under the Scenario 4 conditions are significantly improved with the project. Therefore, during ADSRP construction cumulative impacts on hydrology from redirecting flow would not be significant, the project would not result in a cumulatively considerable contribution such cumulative impacts, and this impact is **less than significant**.

Scenario 5 Compared to Scenario 1 Results

As described previously, the H&H modeling results depicted in Appendix H3 show the estimated range in maximum water depths during the 100-year flood event for cumulative baseline conditions under Scenario 1. Comparison of Scenario 5, as described above, to Scenario 1 is shown in Appendix H3, Attachment 3. The figures show that under Scenario 5 cumulative conditions all the areas previously shown to flood under cumulative baseline conditions would be significantly reduced with the project, in addition to the other projects included in this scenario. While there are areas of increases in water depths, those increases are only within the Coyote Creek channel, on the channel side of the project and CCFMMP flood improvements, or within areas of flood conditions under the baseline Scenario 1 seen in Reaches 6, 7, and 8.

The H&H modeling results shown in Appendix H3, Attachment 3 show the estimated areal extent of flooding under Scenario 4 compared to Scenario 1. As shown in the figures, flood flows during the 72-hour 100-year flood event would escape the creek channel and flood many areas of the City under the cumulative baseline condition in Scenario 1. However, as shown on the same figures, after implementation of the project improvements, the extent of flooding would be significantly reduced and restricted to within the channel of the creek and surrounding open space areas, as a result of the project improvements. Further, the extent of flooding downstream of project improvements would also be reduced. There are no areas outside of the Coyote Creek channel where the extent of flooding would exceed that shown under the cumulative baseline condition in Scenario 1 compared to Scenario 5 after implementation of the project.

The results show that flood conditions under the cumulative Scenario 5 are significantly improved with the project despite some areas with minor increases in water depths. Therefore, during ADSRP operations with the 72-hour storm, cumulative impacts on hydrology from redirecting flow would not be significant, the project would not result in a cumulatively considerable contribution to such cumulative impacts, and this impact is **less than significant**.

Scenario 5A Compared to Scenario 1A Results

As described previously, the H&H modeling results depicted in Appendix H3 show the estimated range in maximum water depths during the 100-year flood event for the cumulative baseline condition under Scenario 1A. Comparison of Scenario 5, as described above, to Scenario 1 is shown in Appendix H3, Attachment 4. The figures show that under Scenario 5 cumulative conditions all the areas previously shown to flood under the cumulative baseline conditions would be significantly reduced with the project, in addition to the other projects included in this scenario. While there are areas of increases in water depths, those increases are only within the Coyote Creek channel, on the channel side of the project and CCFMMP flood improvements, or within areas of flood conditions under the baseline Scenario 1 seen in Reaches 6, 7, and 8.

The H&H modeling results shown in Appendix H3, Attachment 4show the estimated areal extent of flooding under Scenario 4 compared to Scenario 1. As shown on the figures, flood flows during the 24-hour 100-year flood event would escape the creek channel and flood many areas of the City under the cumulative baseline condition in Scenario 1A, but overall less than under Scenario 1 because of the operation of Anderson Dam releasing no flows during the 24-hour storm event. However, as shown on the same figures, after implementation of the project improvements, the extent of flooding would be significantly reduced and restricted to within the channel of the creek and surrounding open space areas, as a result of the project improvements. Further, the extent of flooding downstream of project improvements would also be reduced. There are no areas outside of the Coyote Creek channel where the extent of flooding would exceed that shown under the cumulative baseline condition in Scenario 1A compared to Scenario 5A after implementation of the project.

The results show that flood conditions under cumulative Scenario 5A conditions are significantly improved with the project despite some areas with minor increases in water depths. Therefore, during ADSRP operations with the 24-hour storm, cumulative impacts on hydrology from redirecting flow would not be significant, the project would not result in a cumulatively considerable contribution to such cumulative impacts, and this impact is **less than significant**.

Cumulative Impact HWQ-5: Cumulative Impacts to Hydrology that would result in Substantial Erosion or Siltation. (Less than significant)

The geographic scope for potential cumulative impacts to hydrology resulting in substantial erosion or siltation includes Coyote Creek and the South San Francisco Bay.

Cumulative hydrology impacts from redirecting flood flows resulting in increases in velocities could occur if the project and the cumulative projects identified in Table 4.2 involve activities that would substantially alter the existing drainage pattern of Coyote Creek, including through the alteration of the course of the creek in a manner which would result in substantial erosion or siltation. As described previously in Chapter 3, Section 3.9, “Hydrology and Water Quality,” flows in Coyote Creek are currently composed of runoff from within the natural portions of the watershed, including those from Upper Penitencia Creek, releases from the outlet of Anderson Dam, and from the City’s stormwater drainage system. To the extent possible, quantitative methods are used to evaluate the potential for the project to change velocities in Coyote Creek. To analyze these changes, H&H modeling was conducted. The methodology and results of the H&H modeling conducted for a 100-year storm event within the Coyote Creek watershed are included in Appendices H1 to H3. Please see previous Impact HWQ-4 for more information on modeling scenarios and other information related to modeling.

The evaluation of erosion and scour within Coyote Creek uses maximum velocities estimated by the H&H model for the 24-hour 100-year event. The maximum velocities from the cumulative l baseline scenarios are compared to those from the post-project cumulative scenarios described previously. Changes in post-project total cumulative maximum velocities were then used to assess whether shear stress[1] was increased to a level that could result in erosion and/or scour along the creek channel. The relationship between flow velocity and shear stress, which causes erosion, is often nonlinear. A small increase (0 to 10 percent) in velocity results in a proportionally smaller increase in shear stress, especially at lower velocities in a creek system like Coyote Creek. A 10-percent increase in velocity translates to a slightly higher shear stress, but not necessarily a proportionally higher erosion rate. Natural waterways often experience brief periods where permissible velocities are exceeded. Short durations of slightly higher velocities may not have a significant effect on erosion.

For this analysis, as with the project direct impact analysis, classifying a 0- to 10-percent increase above the permissible velocity or change in the maximum velocity as a minor risk of increased erosion is based on engineering design practices and the nonlinear response of erosion to velocity increases., The H&H modeling used a velocity of 7.5 fps as a threshold for velocities (i.e., permissible velocity), above which shear stress could result in erosion. The confining of water could also increase the velocity of water flowing down Coyote Creek in some areas while reducing velocities in other areas. The increases in velocity confined in the channel could potentially result in greater cumulative shear stress along the creek banks that could result in potential erosion effects on the bank and result in potential sedimentation within water flowing downstream. Sedimentation within water flowing downstream could degrade water quality within the creek and South San Francisco Bay.

Scenario 4 Compared to Scenario 1 Results

The H&H modeling results are shown in Appendix H3. Table 5 shows the estimated range in maximum velocities during the 100-year flood event for cumulative baseline conditions under Scenario 1 described above. Erosion risk for specific areas in Coyote Creek was determined by evaluating the post-project changes in maximum velocities with cumulative conditions in Scenario 4. The H&H modeling shows that there are both decreases and increases in maximum velocities within Reaches 4 through 8 after implementation of project improvements. As shown in the table, under t cumulative baseline conditions maximum velocities range from 0 to 13.5 fps along the modeled reaches of Coyote Creek including the project area and within the extended upstream and downstream areas in the model boundaries. Comparison of Scenario 4, as described above, to Scenario 1 is shown in Appendix H3, Table 5. As shown in the table, increases in velocities are estimated to occur throughout all modeled reaches of Coyote Creek. These velocity increases range between 0 and 4 fps. One isolated area within Reach 5 shows an increase of 4 fps along a short (approximately 200 feet) area of the creek channel.

In addition, there are many areas within all reaches that have no change in maximum velocities or a reduction of up to 2 fps in maximum velocity.

[1] Shear stress is defined as physical forces resulting in frictional forces in opposite directions, and sometimes also in diagonal directions, along the bed and bank of the creek.

Under Scenario 4, the cumulative maximum velocities range between approximately 0 and 11.11 fps. Increases primarily occur where the maximum velocity is maintained below the 7.5 fps permissible velocity. Additionally, increases occur where the maximum velocity already is close to or exceeds the 7.5 fps permissible channel velocity in the cumulative baseline condition, in a few short reaches of the channel in Reaches 4 and 5 and downstream of Reach 4, between Old Oakland Road and Highway 237. The increase in cumulative maximum velocity at these locations is less than 10 percent. As discussed above, an increase in maximum velocity of 0 to 10 percent above the 7.5 fps permissible velocity is considered to have a minor risk of increased erosion and scour. See Appendix H3 for more details on velocities within the creek channel at a variety of locations within each of the reaches. For areas with predicted reduced flows and velocities under cumulative conditions described above, erosion would not occur as a result of the project. Further, in areas where the maximum velocities under the cumulative condition are above the 7.5 fps permissible velocity threshold, the project would not result in a change in maximum velocities that would substantially increase erosion risk, cumulative impacts are less than significant, the project would not result in a cumulatively considerable contribution to such cumulative impacts, and this impact is **less than significant**.

Scenario 5 Compared to Scenario 1 Results

The H&H modeling results are depicted in Appendix H3H3.- Table 6 shows the estimated range in maximum velocities during the 100-year flood event for cumulative baseline conditions under Scenario 1 described above. Erosion risk for specific areas in Coyote Creek was determined by evaluating the post-project changes in maximum velocities with cumulative conditions in Scenario 5. The H&H modeling shows that there are both decreases and increases in maximum velocities within Reaches 4 through 8 after implementation of project improvements. As shown in the table, under cumulative baseline conditions, maximum velocities range from 0 to 13.5 fps along the modeled reaches of Coyote Creek including the project area and within the extended upstream and downstream areas in the model boundaries. Comparison of Scenario 5, as described above, to Scenario 1 is shown in Appendix H3, Table 6. As shown in the table, increases in velocities are estimated to occur throughout all modeled reaches of Coyote Creek. These velocity increases range between 0 and 4 fps.

In addition, there are many areas within all reaches that have no change in maximum velocities or a reduction of up to 2 fps in maximum velocity.

Under Scenario 5, the cumulative maximum velocities range between approximately 0 and 11.3 fps. Increases primarily occur where the maximum velocity is maintained below the 7.5 fps permissible velocity. Additionally, increases occur where the maximum velocity already is close to or exceeds the 7.5 fps permissible channel velocity in the cumulative baseline condition, in a few short reaches of the channel in Reaches 4 and 5 and downstream of Reach 4, between Old Oakland Road and Highway 237. The increase in cumulative maximum velocity at these locations is less than 10 percent. As discussed above, an increase in maximum velocity of 0 to 10 percent above the 7.5 fps permissible velocity is considered to have a minor risk of increased erosion and scour. See Appendix H3 for more details on velocities within the creek channel at a variety of locations within each of the reaches.

For areas with predicted reduced flows and velocities under cumulative conditions described above, erosion would not occur as a result of the project. Further, in areas where the maximum velocities under the cumulative baseline condition are above the 7.5 fps permissible velocity threshold, the project would not result in a change in maximum velocities that would substantially increase erosion risk, cumulative impacts are less than significant, and the project would not result in a cumulatively considerable contribution to such cumulative impacts, and this impact is **less than significant**.

Scenario 5A compared to Scenario 1A Results

The H&H modeling results ~~are~~ depicted in Appendix H3~~H3.~~, in Table 7, show the estimated range in maximum velocities during the 100-year flood event for cumulative baseline conditions under Scenario 1A described above. Erosion risk for specific areas in Coyote Creek was determined by evaluating the post-project changes in maximum velocities with cumulative conditions in Scenario 5A. The H&H modeling shows that there are both decreases and increases in maximum velocities within Reaches 4 through 8 after implementation of project improvements. As shown in the table, under cumulative baseline conditions, maximum velocities range from 0 to 11.5 fps along the modeled reaches of Coyote Creek including the project area and within the extended upstream and downstream areas in the model boundaries. Comparison of Scenario 5A, as described above, to Scenario 1A is shown in Appendix H3, Table 7. As shown in the table, increases in velocities are estimated to occur throughout all modeled reaches of Coyote Creek. These velocity increases range between 0 and 2 fps.

In addition, there are many areas within all reaches that have no change in maximum velocities or a reduction of up to 2 fps in maximum velocity.

Under Scenario 5A, the cumulative maximum velocities range between approximately 0 and 10.3 fps. Increases primarily occur where the maximum velocity is maintained below the 7.5 fps permissible velocity. Additionally, increases occur where the maximum velocity already is close to the 7.5 fps permissible channel velocity in the cumulative baseline condition, in a few short reaches of the channel in Reaches 4 and 5 and downstream of Reach 4, between Old Oakland Road and Highway 237 and in two locations in Reach 6. The increase in cumulative maximum velocity at these locations is less than 10 percent. As discussed above, an increase in maximum velocity of 0 to 10 percent above the 7.5 fps permissible velocity is considered to have a minor risk of increased erosion and scour. See Appendix H3 for more details on velocities within the creek channel at a variety of locations within each of the reaches. For areas with predicted reduced flows and velocities under cumulative conditions described above, erosion would not occur as a result of the project. Further, in areas where the maximum velocities under the cumulative condition are above the 7.5 fps permissible velocity threshold, the project would not result in a change in maximum velocities that would substantially increase erosion risk, cumulative impacts are less than significant, the project would not result in a cumulatively considerable contribution to such cumulative impacts, and this impact is **less than significant**.

Land Use and Planning

Cumulative Impact LUP: ***Cumulative Impacts to Land Use and Planning. (Less than significant)***

The geographic scope for cumulative impacts on land use and planning includes the project area within the City. Impacts involving adopted land use plans or policies and zoning are project-specific and generally would not combine with other projects to result in significant cumulative impacts.

Development projects in and around the project area could combine with the project's impacts related to land use, including conflicting with a land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Most projects within the City would be required to conform with local land use and zoning code designations, as well as intended uses of the project area, unless exempt from such development requirements.

As described and analyzed in Section 3.10, "Land Use and Planning," the project would result in no impact with respect to dividing an established community. Any inconsistency of the project or cumulative projects with land use and zoning code designations is an issue related to land use regulation rather than a physical impact of the project on the environment. Where the project could conflict with a land use plan or policy that was adopted specifically for the purposes of preventing or reducing an adverse environmental effect, such potential conflicts are evaluated as stand-alone environmental impacts within each topic area of this EIR. As described in Section 3.10, "Land Use and Planning," the project would not conflict with the City's policies, plans, and regulations in a manner that would cause a significant impact not evaluated elsewhere in this EIR. Further, the project is consistent with the City's policies, plans, and regulations meant to protect the City from flood risk.

Based on the above analysis, cumulative impacts on land use and planning would not be significant, and the project would have a less than cumulatively considerable incremental contribution to a significant cumulative land use or planning impact. This cumulative impact is considered **less than significant**.

Noise and Vibration

Cumulative Impact NOI-1 : Cumulative Impacts from Construction Noise. (Significant and Unavoidable)

Noise and vibration are localized issues in that noise/vibration levels attenuate (i.e., decrease) with increasing distance from the source. Therefore, only projects adjacent to the project area and generating noise or vibrations at the same time would have the potential to add to anticipated project-generated noise and vibration and result in a cumulative noise or vibration impact. Based on the cumulative projects identified in Table 4.2, all projects would either not overlap in time with the project (e.g., Singleton Road Fish Barrier, Stream Restoration, and Pedestrian Bridge, Guadalupe Dam Seismic Retrofit), occur well beyond the distance of noise and vibration attenuations from each other (e.g., Calero Dam Seismic Retrofit, Anderson Dam FERC Order Compliance, Dam Maintenance Program), or not result in substantial noise (e.g., Encampment Clean Up Program, Valley Water Additional Conservation and Stormwater Projects UWMP).

For the reasons listed above, project-generated noise levels during construction activities would not combine with the other projects discussed above to result in a cumulative impact from noise. However, other projects in the project vicinity that are not specifically listed in Table 4.2 (e.g., development projects in the City) may be within the range of attenuation that could result in cumulative impacts related to noise during construction if the cumulative projects are under construction at the same time as the project. It is likely that those projects would be required to implement similar mitigation measures based on local, state, and federal noise thresholds and regulations as the project. As discussed in Section 3.11, "Noise and Vibration," the project would result in significant noise impacts during construction. Based on the above analysis, cumulative impacts from construction noise would be significant, and the project's contribution to cumulative noise impacts would be cumulatively considerable.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure NOI 1.1: Develop and Implement a Construction Noise Control Plan.

Please refer to Section 3.11, "Noise and Vibration," (Impact NOI-1) for the full text of this mitigation measure.

Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-2~~ NOI-1) for the full text of this mitigation measure.

Mitigation Measure NOI 1.3: Use of Temporary Sound Barriers.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-~~3 NOI-1) for the full text of this mitigation measure.

Mitigation Measure NOI 1.4: Establish Construction Noise Coordinator.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-4~~ NOI-1) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measure NOI 1.1 through NOI 1.4 would reduce noise levels to the extent feasible. No other feasible mitigation measures are available to reduce significant impacts of construction noise, and therefore, even with the implementation of mitigation measures, the project would result a cumulatively considerable incremental contribution to significant cumulative impacts from noise during construction and this cumulative impact would remain **significant and unavoidable**.

Cumulative Impact NOI-2: Cumulative Impacts from Construction Vibration. (Less than significant with Mitigation)

For the reasons described previously, project-generated vibration levels during construction activities would not combine with other projects to result in a cumulative impact. However, other projects in the project vicinity that are not specifically listed in Table 4.2 (e.g., development projects in the City) may be within the range of attenuation of vibration that could result in cumulative impacts related to vibration during construction if the cumulative projects are under construction at the same time as the project. It is likely that those projects would be required to implement similar mitigation measures based on local, state, and federal noise thresholds and regulations as the project. As discussed in Section 3.11, "Noise and Vibration," the project would result in significant vibration impacts during construction. Based on the above analysis, cumulative impacts from construction vibration would be significant, and the project's contribution to cumulative vibration impacts would be cumulatively considerable.

Mitigation Measures: The following mitigation measures have been identified to address this impact.

Mitigation Measure NOI 1.2: Use Alternative Impact Equipment for Pile Driving.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-2~~ NOI-1) for the full text of this mitigation measure.

Mitigation Measure NOI 2.1: Implement Alternative Construction Methods to Reduce Vibration.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-5~~ NOI-2) for the full text of this mitigation measure.

Mitigation Measure NOI 2.2: Develop and Implement a Vibration Control Plan.

Please refer to Section 3.11, "Noise and Vibration," (Impact ~~NOI-6~~ NOI-2) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measure NOI 1.2, NOI 2.1 and NOI 2.2 would reduce vibration levels within attenuation distances from sensitive receptors and structures and reduce significant impacts of construction vibration, such that the project would result in a less than cumulatively considerable incremental contribution to significant cumulative vibration impacts, and this cumulative impact would be **less than significant with mitigation**.

Recreation

Cumulative Impact REC: Cumulative Impacts to Recreation. (Less than significant)

The geographic scope of cumulative impacts on recreation includes recreational resources within Santa Clara County. Cumulative recreation impacts could occur if the project and cumulative projects identified in Table 4.2 have activities that would occur at the same time and result in the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of facilities would occur or be accelerated, or if they include recreational facilities or require the construction or expansion of recreational facilities that might result in an impact on the environment.

The FOCP, ADSRP, Calero Dam Seismic Retrofit Project, FAHCE, SMP, Santa Clara County Parks Planning Projects and Natural Resource Management, City PRNS Capital Improvement Program, and other projects in the area would be implemented within the geographic scope of cumulative recreation impacts. Construction activities associated with the cumulative projects could affect access to recreational facilities during the same time as the project. However, even if closures to recreational facilities were to occur at the same time as the project, there are many other parks and recreational facilities in Santa Clara County that would remain open and unaffected.

As described and analyzed in Section 3.12, "Recreation," the project would not include recreational facilities or require the construction or expansion of recreational facilities, and therefore, the project would not result in an incremental cumulatively considerable impact in this regard. Further, project impacts from increased use of other nearby recreational facilities would not be substantial at any one location. For these reasons project construction activities would not result in the physical deterioration of other recreational facilities. Based on the above analysis, cumulative recreation impacts would not be significant, and the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact related to recreation. This cumulative impact is considered **less than significant**.

Transportation and Traffic

Cumulative Impact TR: ***Cumulative Impacts to Transportation and Traffic.***
(Less than significant with Mitigation)

The geographic scope of potential cumulative impacts related to transportation and traffic includes roadways in the project area and vicinity. Potential transportation and traffic-related impacts of the project would be restricted to the two-year construction phase of the project and the infrequent use of passive barriers during flood events that occur during operation of the project.

Cumulative transportation and traffic impacts could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would result in: conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; inconsistency with CEQA Guidelines Section 15064.3(b), substantially increase hazards due to a geometric design feature or incompatible use or inadequate emergency access.

Cumulative projects that could result in cumulative transportation and traffic impacts include the projects listed in Table 4.2 with construction activities during the same time as the project. Cumulative projects could result in significant impacts to transportation and traffic, depending on the magnitude and location of construction activities or increased use of local roadways during operation. The projects listed in Table 4.2 are likely to result in impacts to transportation and traffic due to the scale of construction work and increased vehicle usage along local roadways during operation. These cumulative projects are likely to result in greater long-term transportation impacts and similar significant impacts to emergency access as compared to the project (if they would include road closures or substantial delays).

As described and analyzed in Section 3.13, “Transportation and Traffic,” the project would result in less-than-significant impacts from: conflicts with a program, plan, ordinance or policy addressing the circulation system; conflict with CEQA Guidelines Section 15064.3(b); and the substantial increase of hazards due to a geometric design feature or incompatible use. Therefore, the project’s contribution to these cumulative impacts would be less than cumulatively considerable. However, due to temporary lane closures during construction of passive barriers on roads, the project would have a significant impact on emergency response times and emergency access. Therefore, cumulative impacts on emergency response times and emergency access would be significant, and the project’s contribution to potential cumulative transportation and traffic impacts be cumulatively considerable.

Mitigation Measures: The following mitigation measure has been identified to address this impact.

> **Mitigation Measure TR 4.1: Implement a Traffic Safety Plan and Coordinate with Local Emergency Service Providers.**
>
> Please refer to Section 3.13, “Transportation and Traffic,” (Impact TR-4) for the full text of this mitigation measure.

Significance After Mitigation: Implementation of Mitigation Measure TR 4.1 would reduce the impact related to inadequate emergency access at any of the improvement sites by requiring a

Traffic Safety Plan focused on minimizing construction-related traffic delays, and coordination with emergency service providers. With implementation of this mitigation measure, temporary delays for emergency responders would not result in inadequate emergency access. With the implementation of mitigation measures, the project would result in a less than cumulatively considerable incremental contribution to a significant cumulative impact related to transportation and traffic. This cumulative impact would be **less than significant with mitigation**.

Utilities and Service Systems

Cumulative Impact UTL: Cumulative Impacts to Utilities and Service Systems. (Less than significant)

The geographic scope of potential impacts on utilities and service systems is limited to those that supply the project area with water, solid waste disposal services, electric power, and wastewater.

Cumulative impacts on utilities and service systems could occur if the project and cumulative projects identified in Table 4.2 involve concurrent activities that would: 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; lack sufficient water supplies to serve the project; result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; result in a determination by the wastewater treatment provider that serves or may serve the project that it lacks adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; results in the generation of 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; or not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Most of the cumulative projects listed in Table 4.2 could result in impacts on utilities and service systems, depending on their water and wastewater use/need, solid waste quantities and disposal needs, and electricity requirements.

As described and analyzed in Section 3.14, "Utilities and Service Systems," the project would not require wastewater services with implementation of Valley Water's BMP WQ-17 (Manage Sanitary and Septic Waste). Therefore, the project would not: increase demand for wastewater services, require the construction of new or expanded wastewater treatment facilities, require the expansion of existing facilities, or result in a determination by the wastewater provider that there is inadequate capacity to serve the project. Similarly, the project would not require relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

There are electrical lines, natural gas pipelines, one electrical line, and many over-head and underground telecommunications lines and stormwater drainage features within the project area. The project is designed to protect existing utilities, where possible, however, utilities may need to be relocated within public roadways where excavation occurs. Valley Water would require the contractor to notify Underground Service Alert North prior to the start of construction activities and would coordinate with utility owners and operators to ensure that project construction does not damage lines or disrupt service. Further, implementation of SMP BMP

GEN-42 (Investigation of Utility Line Locations) would ensure that any maintenance activities would require prior identification of utilities and coordination with the utility provider to prevent disruption of service. Therefore, impacts caused by project relocation or construction of existing or new utilities are considered less than significant, as described throughout various chapters of this EIR.

The project would not require additional water or stormwater facilities (refer to Chapter 3.10, “Hydrology and Water Quality,” and Cumulative Impact HWQ-3, above, for a discussion on stormwater facilities) to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. However, installation of internal drainage systems in most passive barriers and select floodwalls (R6-FW19, R6-FW-20, R7-FW11, R8-FW13) would convey stormwater consistent with current stormwater collection and conveyance and Municipal Regional Stormwater Permit conditions. Furthermore, project construction and operational activities would not generate solid waste that would exceed federal, state, or local standards, or exceed the capacity of local infrastructure, or impair the attainment of any solid waste goals.

Based on the above analysis, cumulative impacts on utilities and service systems would not be significant, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to utilities and service systems. This cumulative impact is considered **less than significant**.

4.5 Significant and Unavoidable Impacts

State CEQA Guidelines Section 15126(b) requires an EIR to “describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons why the project is being proposed, notwithstanding their effect, should be described.”

Chapter 3, “Environmental Setting and Impact Analysis,” and this chapter describes the environmental impacts of the project and recommends mitigation measures to reduce potentially significant or significant impacts to a less than significant level, where feasible. After implementation of all feasible and available mitigation measures, the following impacts were determined to be significant and unavoidable for the project:

- **Impact NOI-1**: Temporary Construction-related Noise Levels in Excess of FTA and City of San José Standards.
- **Cumulative Impact NOI-1**: Cumulative Impacts from Noise (for construction noise only).

The rationale for this conclusion and lack of feasible mitigation measures is described in Chapter 3, “Environmental Setting and Impact Analysis,” Section 3.11, “Noise and Vibration.”

Chapter 5. Alternatives

5.1 Introduction

The purpose of the alternatives analysis in an EIR is to describe and evaluate the No Project Alternative and a reasonable range of alternatives to the project that can feasibly attain most of the identified project objectives but would reduce or avoid one or more of the project's significant impacts. This chapter first presents the project objectives, summarizes the significant effects of the project, including those that cannot be avoided or reduced to a less than significant level, and describes the process used to develop alternatives and analyze their impacts. Later sections in this chapter describe alternatives that were considered but dismissed from further evaluation, and the alternatives that were evaluated in detail. The chapter then evaluates the impacts of each of the alternatives considered relative to those of the project and evaluates the relationship of the alternatives to the project objectives. An environmentally superior alternative is identified at the end of this chapter.

The alternatives analysis is organized by alternative in Section 5.4, "Alternatives Analysis." For each alternative considered, a description of the alternative is provided, followed by an impact analysis organized by resource topic. Under each alternative, each resource topic area is evaluated in the same order using the same general methods as the analysis in Chapter 3, "Environmental Setting, Impact Analysis, and Mitigation Measures" for the project. The impacts of these alternatives are evaluated using the existing conditions baseline and future operating conditions baseline, as applicable. These impacts are then compared to those of the project for each resource topic. Consistent with the project analysis, BMPs and VHP implementation are considered as part of each alternative's impact analysis. Descriptions of the BMPs and VHP conditions are provided in Chapter 2, "Project Description." The analysis then compares the determination and magnitude of the impacts under each alternative to those of the project in Section 5.5.4, "Comparative Summary of Alternatives." The analysis focuses on those impacts that are significant before mitigation and for which the determination or magnitude of the impact differs between the project and alternative.

5.2 CEQA Requirements

Section 15126.6 of the CEQA Guidelines requires that an EIR "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." Additionally, the CEQA Guidelines state the following:

- The specific "no project" alternative shall be evaluated along with its impact. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives [CEQA Guidelines Section 15126.6(e)(1)(2)].

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives that are infeasible. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly discuss the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts [CEQA Guidelines Section 15126.6(a)(c)].
- The "range of alternatives" is governed by the "rule of reason," which requires the EIR to describe and consider only those alternatives necessary to permit informed public participation, and an informed and reasoned choice by the decision-making body [CEQA Guidelines Sections 15126.6(a) and (f)]. The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project [CEQA Guidelines Section 15126.6(d)].

Regarding the feasibility of alternatives, feasible means "capable of being accomplished in a reasonable period of time taking into account economic, environmental, legal, social and technological factors" (CEQA Guidelines Section 15364). The concept of feasibility also encompasses whether a particular alternative promotes the project's underlying goals and objectives, and whether an alternative is impractical or undesirable from a policy standpoint. (See City of Del Mar v. City of San Diego [1982] 133 Cal. App. 3d 410 and California Native Plant Society v. City of Santa Cruz [2009] 177 Cal. App. 4th 957).

Also, CEQA does not require EIRs to include multiple variations of the alternatives it considers in detail (Village Laguna of Laguna Beach v. Board of Supervisors [1982] 134 Cal. App. 3d 1022).

5.3 Alternatives Development Process

The development of alternatives is informed and directed by the project objectives and significant environmental impacts of the project, which are identified below.

5.3.1 Project Objectives

As described in Section 2.2, "Project Objectives", the underlying purpose of the project is to reduce the risk of flooding in urban areas along approximately 9 miles of Coyote Creek. The primary objective of the project is to reduce the risk of flooding to homes, schools, businesses, and transportation infrastructure along Coyote Creek between Montague Expressway and Tully Road (Reaches 4 through 8) from a flood event equivalent to that which occurred on February

21, 2017. This event was an approximately 20-year flood event (a flood with a 5 percent chance of occurring in any year). Additional project objectives are as follows:

- complete the project before the Anderson Dam Seismic Retrofit Project (ADSRP) Stage 2 Diversion is in operation (estimated in 2028);
- design the project to prevent increases in erosion and degradation of Coyote Creek;
- maintain access and minimize impacts to existing and planned recreation facilities; and,
- minimize the need for future operations and maintenance activities.

5.3.2 Significant Environmental Impacts of the Proposed Project

Resource topics found to have significant impacts resulting from the project, as analyzed in Chapter 3, "Environmental Setting, Impact Analysis, and Mitigation Measures," are summarized in **Table 5-1**. For a complete summary of all project impacts and mitigation measures, see Table ES-1 in the Executive Summary.

Table 5-1. Significant Project Impacts

Impact	Significance before Mitigation	Significance after Mitigation
Biological Resources		
Impact BIO-8: Substantial Adverse Effect on Special-status Bats	Significant	Less than significant with Mitigation
Cultural Resources and Tribal Cultural Resources		
CUL-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resource	Significant	Less than significant with Mitigation
CUL-3: Cause a Disturbance of Human Remains, including Remains Interred Outside of Dedicated Cemeteries	Significant	Less than significant with Mitigation
CUL-4: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, as Defined in PRC Section 21074	Significant	Less than significant with Mitigation
Geology, Soils, and Seismicity		
GEO-3: Destruction of Unique Paleontological Resources	Significant	Less than significant with Mitigation
Hazards and Hazardous Materials		
HAZ-2: 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	Significant	Less than significant with Mitigation
HAZ-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials within 0.25 mile of Existing or Proposed Schools	Significant	Less than significant with Mitigation

Impact	Significance before Mitigation	Significance after Mitigation
HAZ-4: Be Located on a Site Which is included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5	Significant	Less than significant with Mitigation
Noise and Vibration		
NOI-1: Substantial Temporary Construction-Related Increase in Noise Levels in Excess of FTA and City of San José Standards.	Significant	Significant and Unavoidable
NOI-2: Generate Excessive Ground Vibration or Groundborne Noise Levels from Construction Activities.	Significant	Less than significant with Mitigation
Transportation and Traffic		
TR-4: Result in Inadequate Emergency Access	Significant	Less than significant with Mitigation
Cumulative Impacts		
Cumulative Impact BIO-1: Cumulative Impacts on Special-status Species.	Significant	Less than significant with Mitigation
Cumulative Impact CUL: Cumulative Impacts to Cultural and Tribal Cultural Resources.	Significant	Less than significant with Mitigation
Cumulative Impact GEO: Cumulative Impacts of Geology, Soils, and Seismicity.	Significant	Less than significant with Mitigation
Cumulative Impact HAZ: Cumulative Impacts of Hazards and Hazardous Materials.	Significant	Less than significant with Mitigation
Cumulative Impact NOI-1: Cumulative Impacts from Construction Noise.	Significant	Significant and Unavoidable
Cumulative Impact NOI-2: Cumulative Impacts from Construction Vibration.	Significant	Less than significant with Mitigation
Cumulative Impact TR: Cumulative Impacts to Transportation and Traffic.	Significant	Less than significant with Mitigation

5.3.3 Alternatives Development and Screening

An alternatives development process was initiated by Valley Water prior to separating the original June 2017 Board-accelerated Coyote Creek Flood Protection Project into the CCFMMP and CCFPP. It continued for the CCFPP after the CCFMMP was separated from the project. In addition to the No Project Alternative, Valley Water considered other potential alternatives to the project, which were comprised of modifications to individual elements at targeted locations where the banks of Coyote Creek would overtop during a 20-year flood event. These alternatives were developed based on the project objectives, ability to meet the required construction completion date relative to operations of other Valley Water projects (e.g., CCFMMP, FOCP, etc.), feasibility, hydraulic modeling data, input from Valley Water staff, multiple public and stakeholder meetings, and public scoping comments. The initial planning and conceptual alternatives process for the project is documented in the 2022 *Valley Water Planning Study Report, Coyote Creek Flood Protection, Montague Expressway to Tully Road* (2022 PSR) (Valley Water 2022).

Alternatives were formulated based on the following planning rationales:

- Identify the project objectives and timeline;
- Identify conceptual alternatives that meet the objectives and timeline;
- Obtain public and stakeholder input on conceptual alternatives;
- Refine conceptual alternatives and identify assessment criteria for feasible alternatives;
- Identify feasible alternatives by applying assessment criteria and public input;
- Obtain public and stakeholder input on feasible alternatives;
- Apply Natural Flood Protection evaluation to feasible alternatives and public input;
- Identify recommended alternative; and
- Inform public and stakeholders on recommended alternative.

The initial alternatives considered for the project included those flood risk reduction options that could be planned, designed, and built within a short timeframe to achieve the basic project objectives as quickly as possible to provide flood risk reduction. As a result, conceptual alternatives initially considered during the early stages of planning did not include elements with extensive modifications to the channel, such as creek widening and excavation, which would result in many more years of extensive property acquisition, review, and permitting. For the most part, the initial conceptual alternatives considered included work outside of the creek, and following the historical Coyote Creek floodplain, whenever possible, while reducing the risk of flooding from an event similar to the 2017 flood event or approximately a 20-year flood event. The initially considered conceptual alternatives included combinations of the following flood risk reduction options:

- Set-back floodwalls, berms, and levees (including passive barriers)
- Dry proofing of repeatedly flooded properties (including structure elevation)
- Voluntary purchase of repeatedly flooded properties
- Off-stream flood detention
- Invasive vegetation removal

Following public and stakeholder input given during the Spring 2019 public meetings, the conceptual alternatives were further refined into a set of potentially feasible conceptual alternatives, which not only incorporated the obtained public input but also satisfied the assessment criteria developed by the project planning team. The process for identifying potentially feasible conceptual alternatives included the following assessment criteria:

- Reduce risk of flooding to homes, schools, businesses, and critical facilities from an approximate 20-year flood event;
- Avoid or minimize detrimental impacts to the environment;
- Enhance the riparian corridor;
- Provide for appropriate and equal public access;
- Technical feasibility;
- Logistical feasibility;
- Financial feasibility; and
- Support from the community.

Preliminary conceptual alternatives were then formed by combining various flood risk reduction options studied for each of the CCFPP reaches. Some of these preliminary conceptual alternatives included a combination of the following measures:

1. floodwalls,
2. passive barriers,
3. berms,
4. acquiring and elevating properties,
5. acquiring and demolishing properties, and
6. restoring riparian habitat.

Valley Water conducted public workshops to review many of these conceptual alternatives for public and stakeholder input on the design process. The calibrated hydraulic models used during this process computed 20-year water surface profiles and demonstrated that each alternative would provide flood risk reduction from a 20-year flow capacity equivalent to the February 2017 flood event.

Since that time, updated modeling has indicated that some of the flood risk reduction improvements identified in the formulation of alternatives would not be required to reduce the risk of flooding. Further, other locations of floodwalls, berms, and/or passive barriers previously identified for alternatives were found to be unnecessary where originally located after updated hydraulic modeling. Therefore, alternatives described in the 2022 PSR that included flood risk reduction improvements deemed unnecessary were dismissed from further consideration for this alternatives analysis because they would be financially burdensome to maintain and would result in an increase in impacts compared to the project (Valley Water 2022).

After screening various combinations involving the flood risk reduction options, alternatives were further conceptualized and evaluated for feasibility, the ability to meet project objectives, and the ability to reduce potential significant impacts resulting from carrying out such options.

Natural Flood Protection Evaluation

Based on the Valley Water Board's End Policy E-3, the main purpose of implementing projects is to achieve a balance between natural resource protection, property protection, community benefits, and cost (Valley Water, 2024). The Valley Water Board's End Policy describes natural flood protection (NFP) as "protect[ing] parcels from flooding by applying an integrated watershed approach that balances environmental quality and protection from flooding." Valley Water developed the NFP standard evaluation framework to rate the feasibility for each of alternatives (Valley Water, 2022). The NFP framework is used to balance environmental quality, community benefit and protection from creek flooding in a cost-effective manner, through integrated planning and management that considers the physical, hydrologic, and ecologic functions and processes of streams within the community setting. The following 10 NFP objectives were used to rate each alternative during the alternatives formulation and selection process (Valley Water 2022).

1. Homes, schools, businesses, and transportation networks are protected from flooding and erosion.
2. Integrate within the context of the watershed.

3. Support ecologic functions and processes.
4. Integrate physical geomorphic stream functions and processes.
5. Minimize maintenance requirements.
6. Protect the quality and availability of water.
7. Cooperate with other agencies to achieve mutually beneficial goals.
8. Maximize community benefits beyond flood protection.
9. Minimize life-cycle costs.
10. Impacts are avoided, minimized, or mitigated.

Each of these objectives was measured through the use of one or more criteria. Per NFP framework guidance, three relative scores are applied to each of the feasible alternatives, as follows.

- **Relative Objective Weight.** A specific weight for each of the 10 NFP objectives. These weights were identified by the Valley Water planning team and then refined through interactions with the community, stakeholders, Valley Water management staff, and Valley Water's Board.
- **Default Weight.** A weight for each criterion that was developed by a group of both internal and external technical advisors when the NFP framework was first developed.
- **Criteria Rating.** This rating is a customized qualitative or quantitative rating determined by the Valley Water multi-disciplinary project team. While qualitative values were initially calculated, these mainly assisted the team with the rating of the 36 distinct criteria for the feasible alternatives. However, the qualitative values helped to demonstrate how similar or dissimilar the final ratings were, and, as a result, be able to remove some of the feasible alternatives from further consideration.

Following the NFP evaluation rating, there were two alternatives that ranked the highest. These included the same improvements along Reaches 4, 5, 6, and 8, and differing designs within Reach 7 where properties would either be elevated above flood water surface elevations or properties would be acquired, demolished, and the creek bank would be restored. Although many of the improvements considered in these 2 alternatives are very similar or the same as those included in the project, some of the locations and types of improvements have changed after being updated in response to further hydrologic and hydraulic modeling, and the evaluation of new information that was not available at the time the 2022 PSR was published.

Additional Alternatives

Valley Water considered developing additional site-specific alternatives to reduce the significant impacts of the project. However, options for modifying the project were limited because of the need to maintain critical project objectives. For instance, while there are options to modify the type of improvement at a certain location (such as using a passive barrier instead of a floodwall or berm), there are no options to relocate the improvement because it is needed at the proposed location to satisfy the project objective of containing flood flows within Coyote Creek, and where needed, adjacent open space areas. Another critical project objective that limits options available for site-specific alternatives is the need to complete the project before the ADSRP Stage 2 Diversion is in operation (estimated in 2028). As such, options that delay construction at any improvement site would make it difficult to meet this objective.

5.4 Alternatives Considered and Dismissed

Various alternatives to the project were developed that could meet project objectives and/or reduce significant impacts of the project. Those alternatives carried forward for detailed evaluation are described in Section 5.5, “Alternatives Evaluated in the Draft EIR.” Alternatives to the project were eliminated because they:

- were not substantially different from one of the considered alternatives;
- failed to meet most of the basic project objectives;
- would be infeasible to implement or operate; and/or,
- would not avoid or lessen one or more significant environmental impacts.

Those alternatives that were considered and dismissed from further consideration are discussed below.

- **Alternative with Replacement of Charcot Avenue Bridge.** This alternative considered replacing the Charcot Avenue Bridge with a new bridge constructed at an elevation that would be well above the flood surface elevation of the 20-year storm, along with floodwalls north and south of the bridge, as is proposed by the project. However, the effort to construct a new bridge was deemed logistically and economically infeasible due to the length of environmental permitting required beyond schedule limitations required to meet project objectives, and cost to acquire and maintain the new footprint of the bridge structure and surrounding areas after construction. Further, this alternative would result in more significant environmental impacts than the project, including the extent of construction area impacts and disruption of traffic, and it would not reduce any of the project’s significant effects.

- **Alternative with Vegetative Berm at edge of William Street Park.** This alternative considered the construction of a 1,200-foot-long and 4-foot-high vegetated berm along the western edge of William Street Park. This alternative was originally included as part of the preferred alternative by Valley Water in 2022 (Valley Water 2022). However, since the time of the publication of the 2022 PSR, discussions with the City of San José and the public revealed that this alternative was undesirable because it would obscure the view of the park from the street and adjacent areas. This alternative would result in more significant environmental impacts than the project, including the extent of construction area impacts and greater visual impacts, and it would not reduce any of the project’s significant effects.

- **Alternative with Berms Around Large Parcels of Land Upstream to Create Storage and Reduce Anderson Dam Peak Flows.** This alternative considered using approximately 96 acres of land adjacent to Coyote Creek upstream of the project to create a detention basin to store peak flows released from Anderson Dam. However, due to high groundwater levels, excavation of a detention basin in order to function as a flood reduction facility is not technically feasible since the depth required would not be achievable. Further, areas identified for potential detention basin(s) typically flood days before peak flows would be released from Anderson Dam, resulting in no available storage for the released peak flows to reduce flood risk downstream in the project reaches (Valley Water 2022). Therefore, this alternative was considered technically infeasible.

- **Alternative with Floodwalls in Backyards of All Frequently Flooded Properties.** This alternative considered construction of floodwalls on the creek-side of all properties flooded in the 2017 flood event. This alternative was eliminated from further consideration because it was deemed logistically and economically infeasible due to the disruption to residents, length of construction permitting required beyond schedule limitations required to meet project objectives, and cost to acquire and maintain the new footprint of floodwalls in locations beyond those needed to reduce the flood risk for all residences affected by flooding in 2017. Further, this alternative would result in more significant environmental impacts than the project, including the extent of construction area impacts, and it would not reduce any of the project's significant effects.

5.5 Alternatives Description and Impact Analysis

5.5.1 No Project Alternative

Description

CEQA Guidelines Section 15126.5(e) requires an EIR to evaluate the No Project Alternative. The purpose of evaluating the No Project Alternative is "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The No Project Alternative does not necessarily correspond strictly to existing conditions. Instead, the No Project Alternative must describe reasonably foreseeable conditions if the project were not approved.

Under the No Project Alternative, the CCFPP would not proceed, existing environmental conditions and Valley Water operations would be maintained, and the CCFMMP construction would be completed. Under the No Project Alternative, Valley Water would not construct the flood risk reduction improvements described in Chapter 2, "Project Description," along the various reaches of Coyote Creek. As a result, while the CCFMMP would be in place, flooding within the areas along Coyote Creek would occur in the future to some extent when flows reach levels equivalent to those of the 2017 flood event – a 20-year flood event. The No Project Alternative would fail to achieve most of the project objectives related to flood risk reduction, and the community would continue to experience flooding in the future.

The No Project Alternative would avoid all construction-related significant impacts, including significant and unavoidable adverse impacts, of the project because no construction would occur, and the entirety of the project area would be unchanged. Although the No Project Alternative would result in fewer significant impacts, the No Project Alternative would not achieve the benefits of the project's reduction in flood risk or meet most of the project's objectives. Without the project and with the increasing threat of more frequent flooding from climate change, if a flood event occurred that would not have otherwise occurred with the project, there could be substantial indirect adverse environmental and other impacts to the local area flooded as follows:

- loss of life and property;

- extensive damage to residential, commercial, and industrial structures;
- extensive damage to utilities, roadways, and other infrastructure systems;
- disruptions to water supply, sewage, electrical, and natural gas facilities;
- contamination by chemicals released from inundated structures, facilities, and equipment;
- public health hazards from hazardous materials, mold, mosquitoes, and other disease vectors;
- emergency response disruptions;
- damage to natural and cultural resources from water quality and flooding effects; and,
- substantial clean-up activities that would require heavy construction equipment that would impact aesthetics, air quality, biological resources, cultural resources, noise, and water quality.

Impact Analysis

Aesthetics

Under the No Project Alternative, the visual character and quality of the project area would remain the same as under existing conditions. There would be no potential short-term impacts during construction activities or permanent impacts from new flood risk reduction improvements extending above the ground surface, as compared to the project (Impact AES-1 and AES-2 in Chapter 3.2, “Aesthetics”). Because no new flood risk reduction improvements would be constructed or operated within the project area, the No Project Alternative would not potentially conflict with applicable zoning or any other regulations governing scenic quality (Impact AES-3 in Chapter 3.2, “Aesthetics”). Furthermore, under the No Project Alternative, there would be no new introduction of light or glare into the project area and no new areas where maintenance activities would occur, as would occur for implementation of the project (Impacts AES-4 in Chapter 3.2, “Aesthetics”). There would be **no direct impact** to aesthetics.

Air Quality

Under the No Project Alternative, there would be no short-term, temporary use of heavy equipment during project construction and maintenance activities and no associated criteria air pollutant or odor emissions. In addition, there would be no new areas of maintenance activities. Therefore, the No Project Alternative would not conflict with applicable air quality plans, result in cumulatively considerable net increases of criteria pollutants, expose sensitive receptors to pollutant concentrations, or emit odorous emissions, as would occur for the proposed project (Impacts AIR-1 through AIR-4 in Chapter 3.3, “Air Quality”). Also, there would be no new areas of maintenance activities, where potential impacts could occur. There would be **no direct impact** to air quality.

Biological Resources

The No Project Alternative would not involve any construction activities or change future flood flows in Coyote Creek (after development of the CCFMMP), and therefore, would not alter existing site conditions within and around Coyote Creek. Because of this, the No Project

Alternative would avoid all potential impacts to special-status plants, fish, protected birds, bats, and other species including monarch butterfly, Crotch's bumble bee, California red-legged frog, northwestern pond turtle, western burrowing owl, and the San Francisco dusky footed woodrat (Impact BIO-1 through BIO-9 in Chapter 3.4, "Biological Resources"). Similarly, there would be no impact on critical and protected habitats, sensitive natural communities including riparian habitat, federally and state-protected waters, wildlife movement corridors, and native nursery sites, as would occur through implementation of the project (Impact BIO-10 through BIO-12 of Chapter 3.4, "Biological Resources"). The No Project Alternative would not conflict with the VHP or local policies and ordinances protecting biological resources (Impact BIO-13 and BIO-14 in Chapter 3.4, "Biological Resources"). Also, there would be no new areas of maintenance activities, where potential impacts could occur. There would be **no direct impact** to biological resources.

Cultural Resources and Tribal Cultural Resources

The No Project Alternative would avoid all potential impacts on cultural and tribal cultural resources of the project because no construction activities would occur. Therefore, there would be no potential for significant impacts on previously unidentified historical, archeological, or tribal resources or human remains (Impact CUL-1 though CUL-4 in Chapter 3.5, "Cultural Resources and Tribal Cultural Resources"). Also, there would be no new areas of maintenance activities, where potential impacts could occur. There would be **no direct impact** to cultural or tribal cultural resources.

Geology, Soils, and Seismicity

The No Project Alternative would not result in construction activities or change future flood flows in Coyote Creek (after development of the CCFMMP). As a result, potential geologic impacts related to fault rupture, ground shaking, soil hazards such as liquefaction, subsidence, landslides and expansive soils, and erosion would not occur, as would occur for the project (Impact GEO-1 and GEO-2 in Chapter 3.6, "Geology, Soils, and Seismicity"). Similarly, since the No Project Alternative would not result in ground-disturbing activities, there would be no potential to uncover paleontological resources, as would occur for the project (Impact GEO-3 in Chapter 3.6, "Geology, Soils, and Seismicity"). Also, there would be no new areas of maintenance activities, where potential impacts could occur. There would be **no direct impact** regarding geology, soils, and seismicity.

Greenhouse Gas Emissions and Energy

Under the No Project Alternative, there would be no short-term, temporary use of heavy equipment during project construction and maintenance activities and no associated GHG emissions, as would occur for construction of the project. Therefore, there would be no potential for the No Project Alternative to impact the environment with GHG emissions, or conflict with applicable GHG plans, policies or regulations (Impact GHG/EN-1 and GHG/EN-2 in Chapter 3.7, "Greenhouse Gas Emissions and Energy"). Similarly, because no construction or operation of flood risk reduction improvements would occur, no energy resources would be used; therefore, the No Project Alternative would not result in an unnecessary, wasteful or inefficient use of energy, or conflict with applicable energy plans (Impact GHG/EN-3 and GHG/EN-4 in Chapter 3.7, "Greenhouse Gas Emissions and Energy"). Also, there would be no new areas of maintenance activities, where potential impacts could occur. There would be **no direct impact** to greenhouse gas emissions and energy.

Hazards and Hazardous Materials

Since no flood risk reduction improvements would be constructed under the No Project Alternative, there would be no potential for routine or accidental release or spills of hazardous materials into the environment, as would occur for the project (Impact HAZ-1 and HAZ-2 in Chapter 3.8, “Hazards and Hazardous Materials”). Similarly, there would be no potential emissions or handling of hazards within 0.25 mile of a school (Impact HAZ-3 in Chapter 3.8, “Hazards and Hazardous Materials,”) or to create a hazard to construction workers or the public by implementing flood risk reduction improvements within or adjacent to a hazardous materials site (Impact HAZ-4 in Chapter 3.8, “Hazards and Hazardous Materials”). Additionally, because the project would not occur, there would be no potential to impair implementation of or physically interfere with an emergency or evacuation plan (Impact HAZ-5 in Chapter 3.8, “Hazards and Hazardous Materials,”) or create a hazard to construction workers or the public through exposure to Valley Fever as would occur for the project (Impact HAZ-6 in Chapter 3.8, “Hazards and Hazardous Materials”). Also, there would be no new areas of maintenance activities where potential impacts could occur. There would be **no direct impact** regarding hazards and hazardous materials.

Hydrology and Water Quality

The No Project Alternative would avoid all construction impacts of the project related to erosion and water quality. There would be no potential for significant construction-related impacts from ground disturbance and accidental discharge of wastes, or discharge of water encountered in excavations, and there would be no new areas of maintenance activities as would occur for construction and operation of the project (Impact HWQ-1 and HWQ-7 in Chapter 3.9, “Hydrology and Water Quality”). Additionally, because proposed flood risk reduction improvements would not occur, there would be no potential to impact groundwater supplies, recharge, or conflict with a water quality control plan or sustainable groundwater management plan (Impact HWQ-2 and HWQ-7 in Chapter 3.9, “Hydrology and Water Quality”).

The No Project Alternative would not change future flood flows in Coyote Creek (after development of the CCFMMP). Existing velocities in Coyote Creek would be greater in many areas compared to the project and could result in future erosion of creek banks resulting in sedimentation and degradation of water quality (Impacts HWQ-3 through HWQ-6 in Chapter 3.9, “Hydrology and Water Quality”).

Under the No Project Alternative, the benefits of the project would not be attained because the ongoing safety risk of flooding to homes, schools, businesses, and transportation infrastructure along Coyote Creek between Montague Expressway and Tully Road during an approximate 20-year flood event would not improve. Consequently, the No Project Alternative would eventually have greater impacts than the project related to flood flows (and flood-related impacts listed above and analyzed as Impact HWQ-3 through HWQ-6 in Chapter 3.9, “Hydrology and Water Quality”). Impacts on hydrology and water quality would be **significant and unavoidable**.

Land Use and Planning

Under the No Project Alternative, there would be no potential to conflict with a land use plan, policy, or regulation. Similarly, no easements for the construction, operation, or maintenance of flood risk reduction improvements would be required, as would be the case with the project (Impact LUP-1 in Chapter 3.10, “Land Use and Planning”). There would be **no direct impact** to land use or planning.

Noise and Vibration

Because no construction would occur under the No Project Alternative, there would be no day/night noise or vibration generation in exceedance of FTA and City of San José standards, as would occur for construction of the project (Impact NOI-1, NOI-2, and NOI-3 in Chapter 3.11, “Noise and Vibration”). Similarly, because no maintenance of new flood risk reduction improvements would occur, there would be no long-term substantial increases in noise (Impact NOI-3 in Chapter 3.11, “Noise and Vibration”). There would be **no direct impact** regarding noise and vibration.

Recreation

Recreational resources within the project area including Watson Park, William Street Park, Selma Olinder Park, Rock Springs Park, and the Coyote Creek Trail would not be temporarily closed during construction or interrupted during maintenance activities, and therefore, there would be no increased use of other recreational facilities within the project vicinity, as would occur for the project (Impact REC-1 in Chapter 3.12, “Recreation”). There would be **no direct impact** to recreation.

Transportation and Traffic

Under the No Project Alternative, because no construction or maintenance of flood risk reduction improvements would be constructed, there would be no temporary disruption of bicycle and pedestrian routes within the project area, no potential to increase hazards due to design or incompatible use, no increases in vehicle miles traveled, and no potential for inadequate emergency access along Jackson Street and other local roadways, as would occur for the project (Impact TR-1 through TR-4 in Chapter 3.13, “Transportation and Traffic”). There would be **no direct impact** to transportation or traffic.

Utilities and Service Systems

Under the No Project Alternative, there would be no need for relocation of existing utility infrastructure which could result in temporary service interruptions in the area that could occur throughout implementation of the project (Impact UTL-1 in Chapter 3.14, “Utilities and Services Systems”). Similarly, because no construction would occur, no water trucks would be required for dust suppression, and no water would be required for irrigation of re-vegetated areas; therefore, the No Project Alternative would not have the potential to lack water supplies as compared to the project (Impact UTL-2 in Chapter 3.14, “Utilities and Services Systems”). Furthermore, the No Project Alternative would not generate solid waste during construction or operation/maintenance (Impact UTL-3 in Chapter 3.14, “Utilities and Services Systems”). There would be **no direct impact** to utilities or service systems.

5.5.2 Alternative 1 – Elevating or Acquiring Three Residential Properties Along Brookwood Avenue Instead of Constructing Floodwalls

Description

Alternative 1 would include implementation of the project with the exception of the construction of a floodwall in Reach 7 (see R7-FW11 on Figure 2-21 in Chapter 2, “Project Description”). Floodwall R7-FW11 is designed as being approximately ~~359~~469 linear feet and 8 feet above ground. Instead of constructing this floodwall, Alternative 1 would consist of Valley Water elevating or acquiring three properties located along Brookwood Avenue along the east bank of Coyote Creek in Reach 7. These properties are listed below:

- 311 Brookwood Avenue - elevate by 8 feet or demolish and restore,
- 315 Brookwood Avenue - elevate by 8 feet or demolish and restore, and
- 321 Brookwood Avenue - elevate by 7 feet or demolish and restore.

Alternative 1 would include implementing one of two scenarios: 1) raising the 3 properties above the 20-year flood elevation by 7 or 8 feet (elevation scenario); or 2) acquiring the properties, demolishing the residences, and restoring riparian habitat on the sites (acquisition scenario).

~~This alternative would avoid the impacts of the project related to construction of the floodwalls on the three properties specified above, that would include accessing these properties via a temporary creek crossing that would require the construction of a cofferdam.~~ Under Alternative 1, the three properties would be accessed from Brookwood Avenue.~~; therefore, the creek crossing and cofferdam proposed for construction of the project would no longer be required.~~ Alternative 1 would reduce the amount of tree removal required along the~~ western~~ eastern bank of Coyote Creek because construction impacts would be limited to the residential properties, which have direct access from Brookwood Avenue. Although Alternative 1 would not require as much tree removal~~, and would not require creek crossing or use of a cofferdam~~, similar construction-related impacts would occur in the same general project area.

Alternative 1 would be logistically and economically challenging due to the disruption of current residents, length of construction, real estate acquisitions, regulatory permitting beyond schedule limitations required to meet project objectives, and cost to acquire and maintain the three properties in perpetuity. However, Alternative 1 is potentially feasible and would achieve most of the project’s objectives associated with reducing flood risk to homes, schools, businesses, and transportation. Alternative 1 would not meet the project’s objective of “project completion before the ADSRP Stage 2 Diversion is in operation.”

Impact Analysis

Aesthetics

~~Under Alternative 1, implementation of in-channel construction adjacent to Brookwood Avenue properties, including a temporary crossing and cofferdam, would not be required.~~ Alternative 1 would consist of Valley Water elevating or acquiring three properties located along Brookwood Avenue along the east bank of Coyote Creek in Reach 7, as discussed above. This part of the project area, in general, is less visible to local public views than other project areas as it is located within and adjacent to a densely vegetated area of the creek and contains three residences (private views) along the eastern bank. ~~While material import/export required for implementation of the creek crossing and cofferdam would no longer be required,~~ Alternative 1 would ~~still~~ require that soil and building materials be hauled on/offsite for the three properties under both Alternative 1 scenarios. Similar construction durations would occur, depending on what is done with the properties. Therefore, because construction in the general area would still occur, along with active construction in other project areas, temporary impacts of aesthetic/visual change to the natural environment would be similar under both Alternative 1 scenarios as compared to the project (Impact AES-1 in Chapter 3.2, "Aesthetics").

Alternative 1 would ~~not~~ require the removal of <u>a similar number of</u> trees in and along the creek within the northern portion of Reach 7<u>.</u> ~~because the temporary creek crossing and cofferdam would no longer be required.~~ Therefore, the existing trees in the general project area would remain the same, and no permanent changes to the natural visual character of the creek and adjacent areas would occur.

If the elevation scenario were to be implemented, the visual character of the project area would remain the same because the residences would not be removed. However, elevating the residences would be somewhat visually incompatible with the current existing character of the surrounding neighborhood when viewed from Brookwood Avenue due to their elevation. Nonetheless, long-term, operational impacts related to the permanent visual character and quality of the area would be lessened under this alternative because no trees would be removed, and no permanent concrete floodwalls would be introduced into the area (Impact AES-2 in Chapter 3.2, "Aesthetics").

If the acquisition scenario were to be implemented, long-term and permanent impacts of aesthetic/visual change to the natural environment would be beneficial because the areas would be restored to natural conditions rather than built with residences (Impact AES-2 in Chapter 3.2, "Aesthetics").

The elevation scenario would not have the potential to conflict with applicable zoning and other scenic regulations because no changes to land uses within the built environment would occur. Similarly, the acquisition scenario would enhance the scenic character and quality of the area and would therefore not conflict with zoning or regulations (Impact AES-3 in Chapter 3.2, "Aesthetics").

Potential impacts regarding light and glare would be similar under Alternative 1. No nighttime construction would occur in the area because of the distance to residences both for the project and Alternative 1 scenarios. While the project would implement floodwalls, Alternative 1 would either elevate existing residences with similar building materials, or restore the area to riparian habitat, which does not have the potential to result in glare (Impact AES-4 in Chapter 3.2, "Aesthetics").

Last, all impacts to the aesthetic/visual environment from maintenance activities for Alternative 1 would be the same as for the project (Impact AES-1 through AES-4 in Chapter 3.2, "Aesthetics").

Most impact conclusions would remain the same as the project under this alternative, including temporary visual changes to the environment, compliance with applicable zoning and other regulations governing scenic quality, and light and glare, which would continue to result in a

less-than-significant impact. Long-term permanent visual changes to the environment would be reduced to **no impact** under both Alternative 1 scenarios.

Air Quality

~~Overall construction durations associated with cofferdams and in-channel work for the project would be longer than those that would occur under both Alternative 1 scenarios.~~

Emissions of air pollutants including NO_x and PM_{10} from truck trips associated with the import of 1) soil and building materials required for elevating residences, and 2) plants for riparian habitat restoration of the three properties would be similar to the project's import needs required for the ~~in-channel crossing and cofferdam and~~ floodwall construction. Likewise, truck trips associated with the Alternative 1 acquisition scenario would not only require the import of plants, but additional export/disposal of building materials and construction debris associated with the demolition of the three residences. Therefore, Alternative 1 would have similar material hauling as the project (emissions associated with truck haul trips).

Additional air quality modeling would be needed to reach a definitive significance determination; however, it is likely that shorter construction durations associated with Alternative 1 could result in less impacts associated with air quality and emissions in the project area. Therefore, both Alternative 1 scenarios are not anticipated to conflict with applicable air quality plans, result in considerable net increases of criteria pollutants, or expose sensitive receptors to substantial emissions concentrations during construction (Impact AIR-1 through AIR-3 in Chapter 3.3, "Air Quality").

Additionally, impacts associated with odorous construction emissions, and emissions associated with maintenance activities of Alternative 1 scenarios would be the same as the project impacts (Impact AIR-1 through AIR-4 in Chapter 3.3, "Air Quality"). Impacts associated with air quality from both Alternative 1 scenarios would remain the same as the project; **less-than-significant**.

Biological Resources

The lack of floodwalls ~~and in-channel work~~ associated with both Alternative 1 scenarios is anticipated to result in a shortened construction duration compared to the project. Because of this, potential impacts to special-status species from the shorter duration of construction activities and associated noise would be less than the project (Impacts BIO-1 through ~~BIO-3, and BIO-5 through~~ BIO-9 in Chapter 3.4, "Biological Resources"). ~~Additionally, both Alternative 1 scenarios would not require in-channel work and would therefore avoid impacts to special-status fish from construction activities (Impact BIO-4 in Chapter 3.4, "Biological Resources").~~

However, Alternative 1 would still result in ~~the same~~ a significant impact to special-status bats as the project and would require implementation of Mitigation Measure BIO-8.1, "Minimize Impacts on Special-Status Bats," as identified in Chapter 3.4, "Biological Resources," (Impact BIO-8).

Under both Alternative 1 scenarios, "Urban and Suburban" landcover would be impacted, rather than riverine, mixed riparian woodland and forest, and ornamental woodland habitats~~. Although no more in-channel work would be required and no~~ , and trees removed within this area of Reach 7 would ~~be removed, Alternative 1 would~~ result in similar less-than-significant impacts to trees. Further, Alternative 1 would result in lesser impacts on riparian habitat, sensitive natural communities, Waters of the U.S. or wetlands, and wildlife movement or native nursery sites, as the project (Impact BIO-10 through BIO-12 in Chapter 3.4, “Biological Resources”).

Furthermore, under the Alternative 1 demolition scenario nonnative trees would be removed but the area where the homes would be demolished would result in the planting of more riparian native trees and vegetation. Because both Alternative 1 scenarios would no longer require tree removal beyond nonnatives and would result in the planting of more trees within this area of Reach 7, Alternative 1 would have less potential to conflict with the City of San José tree removal regulations, General Plan, or VHP than the project (Impact BIO-13 and BIO-14 in Chapter 3.4, “Biological Resources”).

All impacts on biological resources associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts would be **less than significant**, with the exception of **significant impacts** to bats. Mitigation measures for this significant impact and significance after mitigation would be the same for the project; **less than significant with mitigation**.

Cultural Resources and Tribal Cultural Resources

~~Under both Alternative 1 scenarios, the overall disturbance area would decrease because the temporary creek crossing and cofferdam would not be required. Therefore, impacts to cultural and tribal cultural resources during construction within this area of Reach 7 would be slightly decreased compared to the project.~~

The project’s APE included the three Alternative 1 properties, and included 32 identified resources, all of which lacked historical significance. Therefore, similar to the project, Alternative 1 would result in less-than-significant impacts to historical resources listed or eligible for listing in the NRHP, CRHR, or a local register (Impact CUL-1 in Chapter 3.5, “Cultural Resources and Tribal Cultural Resources”).

The three properties that would either be elevated or acquired under this alternative are already disturbed, and therefore, it is unlikely that unencountered cultural and tribal cultural resources would be encountered during construction activities. Nonetheless, implementation of Alternative 1 scenarios would require ground-disturbing activities, along with other construction activities as for the project. Therefore, similar to the project, impacts of construction on previously unidentified archeological and tribal resources, and/or human remains would be significant and would require implementation of Mitigation Measure CUL 2.1, “Preconstruction Cultural Resources Awareness Training,” Mitigation Measure CUL 2.2, “Prepare a Monitoring and Unanticipated Discoveries Plan,” Mitigation Measure CUL 2.3, “Prepare a Data Recovery and Treatment Plan for Historical Resources that Cannot be Avoided,” and Mitigation Measure CUL 3.1, “Avoid Disturbances of Human Remains, including Remains interred Outside of Dedicated Cemeteries,” as identified in Chapter 3.5, “Cultural Resources and Tribal Cultural Resources,” (Impact CUL-2 through CUL-4).

All impacts to cultural and tribal cultural resources associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts to listed built environment historical resources would be **less than significant**. Impacts on cultural and tribal cultural resources and human remains would remain **significant**. Mitigation measures for these significant impacts and significance after mitigation would be the same for the project; **less than significant with mitigation**.

Geology, Soils, and Seismicity

Although the type of construction in the northern portion of Reach 7 would change under Alternative 1 scenarios, ground/soil disturbing activities would continue to take place at the three properties along Brookwood Avenue. Adverse effects from earthquake fault rupture, seismic ground shaking, liquefaction, subsidence, soil instability, landslides, expansive soils and soil erosion/loss of topsoil would be the same as compared to the project (Impact GEO-1 and GEO-2 in Chapter 3.6, “Geology, Soils, and Seismicity”). Although the project area is located on unstable soil units, design would include engineering criteria to maintain stability on the properties and maintain existing soil conditions, whether or not residences are raised or acquired.

~~Under both Alternative 1 scenarios, the overall disturbance area would decrease because the temporary creek crossing and cofferdam would not be required. Therefore, impacts to paleontological resources during construction within this area of Reach 7 would be slightly decreased compared to the project. Nonetheless g~~Ground-disturbing activities associated with both Alternative 1 scenarios would have potential to uncover paleontological resources, as would occur for the project. This impact would be considered significant and would require implementation of Mitigation Measure GEO 3.1, “Prepare and Implement a Paleontological Mitigation and Monitoring Plan,” as identified in Chapter 3.6, “Geology, Soils, and Seismicity,” (Impact GEO-3).

All impacts related to geology, soils, and seismicity associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts associated with earthquake fault rupture, seismic ground shaking, liquefaction, subsidence, soil instability, landslides, expansive soils and soil erosion/loss of topsoil would be less-than-significant. Impacts to paleontological resources would remain **significant**. Mitigation measures for this significant impact and significance after mitigation would be the same for the project; **less than significant with mitigation**.

Greenhouse Gas Emissions and Energy

As discussed above under “Air Quality,” Alternative 1 (both scenarios) would include a shorter construction duration than the project, however the acquisition scenario would require more truck haul trips for disposal of demolition and construction material. It is likely that shorter construction durations associated with Alternative 1, paired with increased material hauling (Alternative 1 acquisition scenario), would balance out impacts associated with emissions in the project area. Nonetheless, with GHG emissions being generated over a shorter period of time, it is possible there would be an overall net decrease in maximum annual GHG emissions, depending on the final construction schedule for Alternative 1 (Impact GHG/EN-1 and GHG/EN-2 in Chapter 3.7, “Greenhouse Gas Emissions and Energy”). GHG emission impacts associated with implementation of Alternative 1 and maintenance activities would be the same as the project; **less-than-significant**.

Overall, both Alternative 1 scenarios would require similar amounts of energy resources compared to the project. Implementation of Alternative 1 would not result in the unnecessary, wasteful, or inefficient consumption of energy or conflict with energy plans (Impact GHG/EN-3 and GHG/EN-4 in Chapter 3.7, “Greenhouse Gas Emissions and Energy”). Impacts to energy associated with implementation of Alternative 1 and maintenance activities would be the same as the project; **less-than-significant**.

Hazards and Hazardous Materials

~~Although implementation of a temporary creek crossing and cofferdam would no longer be required,~~ C~~c~~onstruction activities would ~~still~~ occur throughout the project area and at the three properties along Brookwood Avenue. Therefore, potential impacts associated with the routine use, transport, or disposal of hazardous materials into the environment, interference with an emergency response or evacuation plan, and the exposure of construction workers or the public to Valley Fever would be the same as the project; less than significant (Impact HAZ-1, HAZ-5, and HAZ-6 in Chapter 3.8, “Hazards and Hazardous Materials”).

Similar to the project, impacts associated with accidental release of hazards and hazardous materials emissions within the project vicinity or within 0.25 miles of a school, and impacts associated with being located in or near a hazardous material site, would be significant and require the implementation of Mitigation Measure HAZ 2.1, “Ensure Worker Safety in Areas with Elevated Concentrations of Lead,” and Mitigation Measure HAZ 2.2, “ Develop and Implement a Hazardous Materials Management Plan,” as identified in Chapter 3.8, “Hazardous and Hazardous Materials,” (Impact HAZ-2 through HAZ-4).

All impacts related to hazards and hazardous materials associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts associated with routine use, transport, or disposal of hazardous materials into the environment, interference with emergency response or evacuation plan, and Valley Fever would be less-than-significant. Impacts regarding the accidental release of hazards and hazardous materials emissions within the project vicinity or within 0.25 miles of a school, and impacts associated with being located in or near a hazardous material site would remain **significant**. Mitigation measures for these significant impacts and significance after mitigation would be the same for the project, **less than significant with mitigation**.

Hydrology and Water Quality

~~Alternative 1 would not require the temporary creek crossing and cofferdam, and therefore, would reduce environmental impacts from construction activities in Coyote Creek related to water quality, as compared to the project.~~ Similar to the project, there would be potential for construction-related impacts from ground disturbance, and accidental discharges of construction-related hazardous materials (Impact HWQ-1 and HWQ-7 in Chapter 3.9, “Hydrology and Water Quality”) on water quality. Similarly, both scenarios of Alternative 1 have the potential to impact groundwater supplies, recharge, or conflict with a water quality control plan or sustainable groundwater management plan (Impact HWQ-2 and HWQ-7 in Chapter 3.9, “Hydrology and Water Quality”).

Future flood flows and associated velocities in Coyote Creek would be reduced with the project in many areas. Alternative 1 would have similar effects on velocities as the project and impacts from velocities would be less than significant (Impacts HWQ-3 through HWQ-6 in Chapter 3.9, “Hydrology and Water Quality”).

Both scenarios of Alternative 1 would be operated and maintained the same as the project and would result in beneficial effects by reducing downstream flood risk.

All impacts related to hydrology and water quality associated with Alternative 1 construction and maintenance activities would be the same as the project. Impacts associated with water and groundwater quality, groundwater supplies and management, and drainage alteration/impacts to hydrology would be **less-than-significant**.

Land Use and Planning

Alternative 1 would either elevate or acquire three properties along Brookwood Avenue. Impacts to land use and planning would be the same as the project as there would be no conflict with City land use plans, policies, and ordinances relative to the Coyote Creek corridor in a manner that would cause significant impacts not evaluated elsewhere in this EIR for the project (Impact LUP-1 in Chapter 3.10, "Land Use and Planning"). Therefore, Alternative 1 construction and maintenance activities would result in **less-than-significant** impacts; the same as for the project.

Noise and Vibration

Implementation of either Alternative 1 scenario would not significantly alter the amount and type of construction occurring at the three properties along Brookwood Avenue. Alternative 1 would avoid temporary noise generation from construction of the floodwall~~s~~ on the creek bank ~~and the temporary creek crossing and cofferdam in the creek channel~~. However, noise would also be generated from elevating or demolishing the three residences. The overall duration of noise generated would be reduced because no work would be required to construct the floodwall~~ or temporary creek crossing and coffer dam~~. Since the residents would be relocated from the three properties on Brookwood Avenue during construction under Alternative 1, fewer overall residents (sensitive receptors to noise) would be exposed to noise from construction activities when compared to the project. Furthermore, those residents remaining would be further away from construction activities compared to the nearest sensitive receptors for the project (i.e., the three residences on Brookwood Avenue). ~~and residents would be exposed to a reduced duration of construction noise because the temporary creek crossing would not be constructed, and extensive tree removal would not be required under Alternative 1.~~

Impacts associated with ambient noise and vibration levels during construction would remain significant and would require Mitigation Measure NOI 1.1, "Develop and Implement a Construction Noise Control Plan," Mitigation Measure NOI 1.2, "Use Alternative Impact Equipment for Pile Driving," Mitigation Measure NOI 1.3, "Use of Temporary Sound Barriers," Mitigation Measure NOI 1.4, "Establish Construction Noise Coordinator," Mitigation Measure NOI 2.1, "Implement Alternative construction Methods to Reduce Vibration," and Mitigation Measure NOI 2.2, "Develop and Implement a Vibration Control Plan," as identified in Chapter 3.11, "Noise and Vibration," (Impact NOI-1 and NOI-2).

All impacts related to noise and vibration associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts associated with long-term substantial noise that exceeds FTA noise standards would be **less than significant** (Impact NOI-3 in Chapter 3.11, "Noise and Vibration"). Impacts associated with construction noise and vibration levels (temporary/during construction) would remain **significant**. Mitigation measures for these significant impacts and significance after mitigation would be the same for the project; **significant and unavoidable**.

Recreation

There are no recreational facilities located near the three properties on Brookwood Avenue. Therefore, impacts to recreational resources from implementation of Alternative 1 and associated maintenance activities would be the same as described for the project (Impact REC-1 in Chapter 3.12, "Recreation"). Impacts to recreation associated with implementation of Alternative 1 and maintenance activities would be the same as the project; **less-than-significant**.

Transportation and Traffic

Use of haul routes and site access under both Alternative 1 scenarios would be the same as for the project.~~, except the temporary creek crossing and cofferdam would not be needed to provide access to the properties on Brookwood Avenue.~~ ~~Instead,~~ as these properties would be accessed directly from Brookwood Avenue. Alternative 1 scenarios would not result in significantly different impacts on circulation systems in the area, increased vehicles miles traveled, or traffic hazards, as compared to the project (Impact TR-1 through TR-3 in Chapter 3.13, "Transportation and Traffic").

In addition, Alternative 1 would not eliminate or reduce significant impacts associated with interference with emergency access, response, or evacuation, similar to the project. Mitigation Measure TR 4.1, "Implement a Traffic Safety Plan and Coordinate with Local Emergency Service Providers," as identified in Chapter 3.13, "Transportation and Traffic," (Impact TR-4).

All impacts to transportation and traffic associated with Alternative 1 construction and maintenance activities would remain the same as the project. Impacts associated with the local circulation system, vehicles miles traveled, and traffic hazards would be less-than-significant. Impacts associated with inadequate emergency access would remain **significant**. Mitigation for this significant impact and significance after mitigation would be the same for the project; **less than significant with mitigation**.

Utilities and Service Systems

Alternative 1 would either elevate or acquire the three properties on Brookwood Avenue. Alternative 1 would not result in greater impacts associated with the relocation of or need for new construction or expansion of existing utilities. Elevating the residences would likely require repair but not relocation of existing utilities, and demolishing and restoring the parcels would not result in the need to construct new utility infrastructure or expand existing infrastructure. For this reason, Alternative 1 would result in similar impacts as the project (Impact UTL-1 and UTL-2 in Chapter 3.14, "Utilities and Service Systems").

If the acquisition scenario were to occur, then it is likely that more construction waste/debris would need to be hauled offsite and disposed of at a landfill. However, the amount of construction waste/debris would not result in a significant impact on solid waste facilities because of the ample capacity at the same landfills described for the project (Impact UTL-3 in Chapter 3.14, "Utilities and Service Systems"). Impacts to utilities and service systems associated with implementation of Alternative 1 and maintenance activities would be the same as the project; **less-than-significant**.

5.5.3 Comparative Summary of Alternatives

Table 5-2 summarizes impacts of the alternatives and compares project impacts with the impacts of each of the alternatives evaluated in the EIR. Project impacts fall into the following categories:

- No impact (NI),
- Less-than-significant impact (LTS),
- Less-than-significant impact with mitigation (LTSM), and
- Significant and unavoidable impact (SU) because no feasible mitigation measures are available to reduce impacts to a less than significant level.

Table 5-2 compares the magnitude of impacts of the alternatives to those of the proposed project, with a "+" indicating that the alternative would have a greater adverse impact than the proposed project; a "-" indicating that the alternative would have a less adverse impact than the proposed project; or an "=" indicating that the alternative would have the same level of impact as the project.

In addition to the project impacts compared in Table 5-2, the project would have significant cumulative impacts from noise and vibration (significant and unavoidable). The No Project Alternative would avoid these impacts. Alternative 1 would reduce some cumulative impacts related to ~~water quality,~~ biological resources, and noise and vibration, but they would remain significant (significant and unavoidable for noise and vibration).

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Table 5-2. Comparative Summary of Impact Determinations for the Project and Alternatives

Impact	Level of Impacts with Mitigation		
	Project	No Project	Alternative 1
Aesthetics			
Impact AES-1: Substantially degrade the existing visual character or quality of public views of the site and its surroundings temporarily during construction.	LTS	NI (-)	LTS (=)
Impact AES-2: Substantially permanently degrade the existing visual character or quality of public views of the site and its surroundings from development of project elements.	LTS	NI (-)	LTS (-)
Impact AES-3: Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality.	LTS	NI (-)	LTS (=)
Impact AES-4: Introduce New Sources of Light and Glare.	LTS	NI (-)	LTS (=)
Air Quality			
Impact AIR-1: Conflict with Applicable Air Quality Plan from Construction Activities.	LTS	NI (-)	LTS (=)
Impact AIR-2: Result in Cumulatively Considerable Net Increase of Any Criteria Pollutant from Construction Activities.	LTS	NI (-)	LTS (=)
Impact AIR-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations.	LTS	NI (-)	LTS (=)
Impact AIR-4: Other Construction Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People.	LTS	NI (-)	LTS (=)
Biological Resources			
Impact BIO-1: Substantial Adverse Effect on Special-status Plants.	LTS	NI (-)	LTS (-)
Impact BIO-2: Substantial Adverse Effect on Monarch Butterfly.	LTS	NI (-)	LTS (-)
Impact BIO-3: Substantial Adverse Effect on Crotch's Bumble Bee.	LTS	NI (-)	LTS (-)
Impact BIO-4: Substantial Adverse Effect on Special-Status Fish, Critical Habitat, and Essential Fish Habitat.	LTS	NI (-)	LTS ~~(=)~~ (-)
Impact BIO-5: Substantial Adverse Effect on California Red-Legged Frog and Northwestern Pond Turtle.	LTS	NI (-)	LTS (-)
Impact BIO-6: Substantial Adverse Effect on Western Burrowing Owl.	LTS	NI (-)	LTS (-)
Impact BIO-7: Substantial Adverse Effect on Other Protected Birds.	LTS	NI (-)	LTS (-)
Impact BIO-8: Substantial Adverse Effect on Special-status Bats.	LTSM	NI (-)	LTSM (-)

Impact	Level of Impacts with Mitigation		
	Project	No Project	Alternative 1
Impact BIO-9: Substantial Adverse Effect on San Francisco Dusky-footed Woodrat.	LTS	NI (-)	LTS (-)
Impact BIO-10: Substantial Adverse Effects on Riparian Habitat or Other Sensitive Natural Community.	LTS	NI (-)	LTS (=)
Impact BIO-11: Substantial Adverse Effect on State or Federally Protected Aquatic Resources (Waters or Wetlands).	LTS	NI (-)	LTS (=)
Impact BIO-12: Substantial Interference with Fish or Wildlife Movement or Native Nursery Sites.	LTS	NI (-)	LTS (=)
Impact BIO-13: Conflict with Local Policies and Ordinances Protecting Biological Resources.	LTS	NI (-)	LTS (-)
Impact BIO-14: Conflict with an Adopted Habitat Conservation Plan.	LTS	NI (-)	LTS ~~(-)~~ (=)
Cultural Resources and Tribal Cultural Resources			
Impact CUL-1: Cause a Substantial Adverse Change in the Significance of a Built Environment Historical Resource listed or eligible for listing in the NRHP, CRHR or a local register.	LTS	NI (-)	LTS (=)
Impact CUL-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resource.	LTSM	NI (-)	LTSM (=)
Impact CUL-3: Cause a Disturbance of Human Remains, including Remains Interred Outside of Dedicated Cemeteries.	LTSM	NI (-)	LTSM (=)
Impact CUL-4: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, as Defined in PRC Section 21074.	LTSM	NI (-)	LTSM (=)
Geology, Soils, and Seismicity			
Impact GEO-1: Adverse Effects from Rupture of a Known Earthquake Fault, Seismic Ground Shaking, Liquefaction, Subsidence, Soil, Instability, Landslides, or Expansive Soils.	LTS	NI (-)	LTS (=)
Impact GEO-2: Result in Substantial Soil Erosion or Loss of Topsoil.	LTS	NI (-)	LTS (=)
Impact GEO-3: Destruction of Unique Paleontological Resources during Construction.	LTSM	NI (-)	LTSM (=)
Greenhouse Gas Emissions and Energy			
Impact GHG/EN-1: Direct or Indirect Construction-Generated GHG Emissions that may have a Significant Effect on the Environment.	LTS	NI (-)	LTS (=)

Impact	Level of Impacts with Mitigation		
	Project	No Project	Alternative 1
Impact GHG/EN-2: Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing GHG Emissions.	LTS	NI (-)	LTS (=)
Impact GHG/EN-3: Unnecessary, Wasteful, or Inefficient Consumption of Energy.	LTS	NI (-)	LTS (=)
Impact GHG/EN-4: Conflict with an Applicable Plan to Improve Energy Efficiency or Promote Renewable Energy.	LTS	NI (-)	LTS (=)
Hazards and Hazardous Materials			
Impact HAZ-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials.	LTS	NI (-)	LTS (=)
Impact HAZ-2: 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.	LTSM	NI (-)	LTSM (=)
Impact HAZ-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials within 0.25 mile of Existing or Proposed Schools.	LTSM	NI (-)	LTSM (=)
Impact HAZ-4: Be Located on a Site Which is included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5.	LTSM	NI (-)	LTSM (=)
Impact HAZ-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	NI	NI (=)	NI (=)
Impact HAZ-6: Create a significant hazard to construction workers or the public through exposure to Valley Fever during Construction Activities.	LTS	NI (-)	LTS (=)
Hydrology and Water Quality			
Impact HWQ-1: Violate any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality.	LTS	SU (+)	LTS (=)
Impact HWQ-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such that the Project May Impede Sustainable Groundwater Management of the Basin.	LTS	SU (+)	LTS (=)
Impact HWQ-3: 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 Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Offsite.	LTS	SU (+)	LTS (=)

Impact	Level of Impacts with Mitigation		
	Project	No Project	Alternative 1
Impact HWQ-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Creates or Contributes Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff.	LTS	SU (+)	LTS (=)
Impact HWQ-5: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River in a Manner that Impedes or Redirects Flood Flows.	LTS	SU (+)	LTS (=)
Impact HWQ-6: 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 Result in Substantial Erosion or Siltation On- or Offsite.	LTS	SU (+)	LTS (=)
Impact HWQ-7: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan.	LTS	SU (+)	LTS (=)
Land Use and Planning			
Impact LUP-1: Cause a Significant Environmental Impact Not Analyzed Elsewhere in this EIR Due to a Conflict with any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect.	LTS	NI (-)	LTS (=)
Noise and Vibration			
Impact NOI-1: Substantial Temporary Construction-Related Increase in Noise Levels in Excess of FTA and City of San José Standards.	SU	NI (-)	SU (-)
Impact NOI-2: Generate Excessive Ground Vibration or Groundborne Noise Levels from Construction Activities.	LTSM	NI (-)	LTSM (=)
Impact NOI-3: Result in Long-Term Substantial Increases in Noise that Exceed FTA Noise Standards.	LTSM	NI (-)	LTSM (=)
Recreation			
Impact REC-1: Increase in Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such that Substantial Physical Deterioration of the Facilities Would Occur or be Accelerated.	LTS	NI (-)	LTS (=)

Impact	Level of Impacts with Mitigation		
	Project	No Project	Alternative 1
Transportation and Traffic			
Impact TR-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities.	LTS	NI (-)	LTS (=)
Impact TR-2: Conflict with CEQA Guidelines Section 15064.3(b) during Construction.	LTS	NI (-)	LTS (=)
Impact TR-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Use.	LTS	NI (-)	LTS (=)
Impact TR-4: Result in Inadequate Emergency Access.	LTSM	NI (-)	LTSM (=)
Utilities and Service Systems			
Impact UTL-1: Require or Result in the Relocation or Construction of Existing or New Utility Infrastructure Which Could Cause Significant Environmental Effects.	LTS	NI (-)	LTS (=)
Impact UTL-2: Lack Sufficient Water Supplies to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years.	LTS	NI (-)	LTS (=)
Impact UTL-3: Generate Solid Waste Potentially Exceeding Permitted Capacity of Local Landfills or Fail to Comply with Statutes and Regulations Related to Reducing Solid Waste.	LTS	NI (-)	LTS (=)

Notes:

- No impact (NI)
- Less-than-significant impact (LTS)
- Less than significant impact with mitigation (LTSM)
- Significant and unavoidable impact (SU)

Table 5-3 compares the magnitude of impacts of the alternatives to those of the proposed project, with a "+" indicating that the alternative would have a greater adverse impact than the proposed project; a "-" indicating that the alternative would have a less adverse impact than the proposed project; or an "=" indicating that the alternative would have the same level of impact as the project.

5.6 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires identification of an "environmentally superior alternative." If the environmentally superior alternative is the "no project" alternative, CEQA Guidelines Section 15126.6(e)(2) requires identification of an environmentally superior alternative among other feasible alternatives.

Based on the comparison of relevant impacts of the alternatives, as described in Section 5.5, "Alternatives Description and Impact Analysis," and summarized in Table 5-3, the No Project Alternative is not considered the environmentally superior alternative, and the project is considered the environmentally superior alternative among the alternatives.

The No Project Alternative would result in no direct significant impacts associated with biological resources, cultural resources, geology, soils, and seismicity, hazardous materials, noise and vibration, and transportation and traffic as does the project, although under the project these impacts would be reduced to less than significant levels with mitigation incorporated. Additionally, the No Project Alternative would result in no significant and unavoidable impacts compared to the project-related impacts on noise and vibration levels during construction. However, the No Project Alternative would not improve flood protection or provide public safety benefits to homes, schools, businesses, and transportation infrastructure along Coyote Creek between Montague Expressway and Tully Road (Reaches 4 through 8 of Coyote Creek). Consequently, the potential risk of an approximate 20-year flood event remains higher than desired, would result in significant and unavoidable environmental impacts as identified in Section 5.5.1, "No Project Alternative," and would meet none of the basic project objectives. These long-term significant impacts from maintaining existing levels of flood risk are considered greater than the less than significant with mitigation and significant and unavoidable impacts discussed previously for the project. Also, continued flooding would cause indirect adverse impacts to other resources such as utilities and service systems that would be avoided or reduced by the project.

Compared to the project, Alternative 1 would have one of two scenarios: either elevating the three residences above flood elevations or acquiring the three residences along the east bank of the creek within the northern area of Reach 7 and restoring the parcels to riparian habitat. Unlike the project, Alternative 1 would not construct floodwalls at this location~~, which would eliminate the need for the temporary creek crossing and cofferdam to access the bank adjacent to the three properties~~.

The construction duration for work under either scenario under Alternative 1 on the three properties at Brookwood Avenue is anticipated to be shortened; however, it is likely that Alternative 1 would result in the same amount of haul trips associated with transporting materials to and from the acquired residential properties. ~~Alternative 1 would reduce impacts on water quality because no in-channel work would occur.~~ In general, many of the impacts described for the project would be the same under Alternative 1. However, Alternative 1 would lessen the amount of construction noise on sensitive noise receptors in the vicinity of either scenario and would reduce the amount of impacts on removal of trees and sensitive riparian habitat in ~~the channel and~~ creek banks compared to the project's significant impacts related to biological resources~~, water quality,~~ and noise and vibration. However, Alternative 1 would result in increased cost for acquisition and maintenance of the properties and inability to meet the project's schedule objective due to additional time needed to acquire and permit either elevating the residences or demolishing and restoring riparian habitat on the parcels.

Overall, Alternative 1 would lessen ~~some project~~ impacts related to ~~water quality,~~ biological resources, and noise and vibration, although it would not avoid or substantially lessen any significant impacts compared to the project. Nevertheless, Alternative 1 is considered the environmentally superior alternative because it would reduce some project impacts related to ~~water quality,~~ biological resources, and noise and vibration. Alternative 1 does, however, have the disadvantages noted above of increased costs and inability to meet the project's schedule objective.

Chapter 6. Report Preparation

As required by CEQA, this chapter identifies the preparers of this EIR.

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