RESOLUTION NO. ____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING AND ADOPTING ENVIRONMENTAL ASSESSMENT NO. EA16-0006, INITIAL STUDY / MITIGATED NEGATIVE DECLARATION FOR IMPLEMENTATION OF THE MILPITAS RECYCLED WATER PIPELINE EXTENSION PROJECT

WHEREAS, in May of 2015, the City of Milpitas ("City") completed a Water Supply Augmentation Study that identified multiple potential programs to increase Milpitas water supply, including expanding recycled water use; and

WHEREAS, in an effort to increase water supply, the City included a Recycled Water Pipeline Extension Project ("Project") in its 5 year 2016-2021 Capital Improvement Program to expand the City's existing recycled water system east of Interstate 680 to meet recycled water demands and reduce potable water and raw water use. As proposed, the Project would consist of 50,560 linear feet (approximately 9.5 miles) of pipeline installation, a new storage tank, and four new pump stations, and would serve users within the City and in some adjacent areas of unincorporated Santa Clara County northeast of the City; and

WHEREAS, pursuant to the California Environmental Quality Act ("CEQA") (Pub. Res. Code, § 21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs, tit. 14 § 15000 et seq.), the City is the lead agency and the City Council is the decision-making body for the Project; and

WHEREAS, the City, through its contracted environmental consultant firm, RMC Water and Environment, completed an environmental assessment and prepared an Initial Study of the Project pursuant to State CEQA Guidelines section 15070.

WHEREAS, based upon the findings of the Initial Study, the City prepared a Draft Mitigated Negative Declaration pursuant to CEQA and the State CEQA Guidelines. The Initial Study and Mitigated Negative Declaration (IS/MND), a copy of which is attached as **Exhibit A** hereto, concluded that implementation of the Project could result in a number of significant effects on the environment associated with aesthetics, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, recreation, and transportation/traffic; and

WHEREAS, in accordance with CEQA, the preparation of an IS/MND that identifies one or more significant environmental effects requires the decision-making body of the lead agency to incorporate feasible mitigation measures that would reduce those significant environmental effects to a less-than-significant level; and

WHEREAS, the City identified mitigation measures that would reduce the aforementioned significant effects to a less-than-significant level and a Mitigation Monitoring and Reporting Program ("MMRP") was prepared to ensure implementation, monitoring, and reporting of the mitigation measures, a copy of which is attached as **Exhibit B** hereto; and;

WHEREAS, pursuant to CEQA, a Notice of Intent ("NOI") dated September 12, 2016 was circulated (also identified as State Clearing House No. 2016092026) for review by public agencies and interested parties; and

WHEREAS, pursuant to CEQA, the NOI to adopt an IS/MND was circulated for the required 30-day public review and comment period, from September 13, 2016, through October 17, 2016; and

WHEREAS, the City received seven (7) comment letters on the IS/MND and has drafted written responses to those comment letters in a memorandum, which is included in the Final IS/MND; and

WHEREAS, the MMRP will be incorporated into the project plans and specifications by reference and the City shall be responsible for implementation of all mitigation measures; and

WHEREAS, all of the findings and conclusions made by the City pursuant to this Resolution are based upon the oral and written evidence before it as a whole; and

WHEREAS, the City Council has reviewed and considered the IS/MND, MMRP, and all other relevant information contained in the record and intends to take action on the Environmental Assessment of the Project in compliance with CEQA and State and local guidelines implementing CEQA; and

WHEREAS, on November 15, 2016, the City Council held a duly-noticed public hearing to consider adoption of the IS/MND identified as Environmental Assessment No. EA16-0006, at which time all those in attendance were given the opportunity to speak on this Environmental Assessment; and

WHEREAS, the City Council has considered all of the written and oral testimony presented at the public hearing in making its decision; and

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The following further findings are made:

A. Compliance with the California Environmental Quality Act. As the decision-making body for the Project, the City Council has reviewed and considered the information contained in the IS/MND and administrative record, on file with the City and available for review at City Hall, 455 East Calaveras Boulevard, Milpitas, California 95035. The City Council finds that the IS/MND has been completed in compliance with the California Environmental Quality Act (Pub. Res. Code § 21000 et seq.: "CEQA") and the State CEQA Guidelines (Cal. Code Regs, tit. 14 § 15000 et seq.).

B. Findings on Environmental Impacts. In the City's role as the lead agency under CEQA, the City Council finds that the IS/ MND contains a complete and accurate reporting of the environmental impacts associated with the Project. The City Council further finds that the documents have been completed in compliance with CEQA and the State CEQA Guidelines. The City further finds that all environmental impacts of the Project are either insignificant or can be mitigated to a less than significant level pursuant to the mitigation measures outlined in the IS/MND and the Mitigation Monitoring and Reporting Program. The City Council further finds that there is no substantial evidence in the record supporting a fair argument that the Project may result in significant environmental impacts, and that any comments received regarding the Project have been examined and determined to not modify the conclusions of the MND or the City Council. Furthermore, the City Council finds that the MND has not been substantially revised after public notice of its availability and recirculation is not required. (State CEQA Guidelines, § 15073.5.) The City Council finds that the MND contains a complete, objective, and accurate reporting of the environmental impacts associated with the Project and reflects the independent judgment of the City Council.

C. Approval of IS/MND. The City Council hereby approves and adopts theEnvironmental Assessment No. EA16-0006, adopting the Initial Study / Mitigated Negative Declaration for the implementation of the Milpitas Recycled Water Project Extension Project, attached hereto as Exhibit “A".

D. Adoption of Mitigation Monitoring and Reporting Program. The City Council hereby approves and adopts the Mitigation Monitoring and Reporting Program ("MMRP") prepared for the Project and attached hereto as Exhibit "B".

E. Approval of Project and Filing of Notice of Determination. The City Council approves the Project and hereby directs staff to file a Notice of Determination with the Santa Clara County Clerk within five (5) days of approval of the Initial Study/Mitigated Negative Declaration.

F. Custodian of the Records. The custodian of the documents and other materials which constitute record of the proceedings for the Environmental Assessment of the Project is the City’s Planning Department, located at Milpitas City Hall, 455 East Calaveras Boulevard, Milpitas, California 95035

PASSED AND ADOPTED this _____ day of_____, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Mary Lavelle, City Clerk

APPROVED:

_____
Jose S. Esteves, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

EXHIBIT A

Initial Study/Mitigated Negative Declaration

EXHIBIT B

Mitigated Monitoring and Reporting Program

Exhibit A

City of Milpitas
Recycled Water Pipeline Extension Project

Final Initial Study and
Mitigated Negative Declaration

Prepared for:
City of Milpitas
455 East Calaveras Boulevard
Milpitas, CA 95035

October 2016

Prepared by:
RMC
water and environment

City of Milpitas
Recycled Water Pipeline Extension Project

Final

Initial Study and
Mitigated Negative Declaration

Prepared for:
City of Milpitas
455 East Calaveras Boulevard
Milpitas, CA 95035

Prepared by:

October 2016

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Acronyms and Abbreviations

ABAG	Association of Bay Area Governments
ACS	American Community Survey
AF	Acre-foot
AFY	Acre-feet per year
APE	Area of potential effect
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
BMPs	Best Management Practices
BO	Biological Opinion
BRA	Biological Resource Assessment
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CFGC	California Fish & Game Code
CHRIS	California Historical Resources Information System
City	City of Milpitas
CO2e	Carbon dioxide equivalency
CMA	Congestion Management Agency
CMP	Congestion Management Program
CMUTCD	California Manual of Uniform Traffic Control Devices
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRA	Cultural Resources Assessment
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CTS	California tiger salamander
CUPA	Certified Unified Program Agency
CY	Cubic yards
CZMA	Coastal Zone Management Act
DAC	Disadvantaged Community
dBA	A-weighted decibel

DDW	Division of Drinking Water
DTSC	(California) Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FYLF	Foothill yellow-legged frog
GHG	Greenhouse gas
gpm	Gallons per minute
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HDD	Horizontal directional drill
HMCD	Santa Clara County Department of Environmental Health, Hazardous Materials Compliance Division
HMMP	Hazardous Materials Management Plan
hp	Horsepower
Hz	Hertz
IS/MND	Initial Study/Mitigated Negative Declaration
ISA	International Society of Arboriculture
Ldn	Day-night noise level
LF	Linear feet
LID	Low impact development
LRA	Local Responsibility Area
LTS	Less than significant impact
LTSM	Less than significant impact with mitigation incorporation
LUST	Leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MG	Million gallons
mgd	Million gallons per day
MHI	Median household income
MLD	Most likely descendant
MMI	Modified Mercalli Intensity
MND	Mitigated Negative Declaration

MS4	Municipal Separate Storm Sewer System
MT	Metric tons
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NI	No impact
NIC	Northwest Information Center at Sonoma State University
NOAA	National Oceanic and Atmospheric Administration
NOx	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwestern Information Center
O&M	Operations and maintenance
OSC	Open Space and Conservation District
OSHA	(California) Occupational Safety and Health Administration
PG&E	Pacific Gas & Electric Company
PM	Particulate Matter
PMP	Paleontological Mitigation Program
POS	Parks and Open Space Zoning
PPV	Peak particle velocity
PRA	Paleontological Resources Assessment
PSI	Potential Significant Impact
RWQCB	Regional Water Quality Control Board
RMC	RMC Water and Environment
ROG	Reactive organic gases
ROW	Right-of-way
SBWR	South Bay Water Recycling
SCVWD	Santa Clara Valley Water District
SF	Square feet
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission
SHPO	State Historic Preservation Officer
SMARA	Surface Mining and Reclamation Act
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
USACE	United States Army Corps of Engineers

USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VTA	Santa Clara Valley Transportation Authority
WDR	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Program
WGCEP	Working Group for California Earthquake Probabilities
WPCP	Santa Clara/San Jose Water Pollution Control Plant
WPT	Western pond turtle
WQO	Water Quality Objective
WWTP	Wastewater treatment plant

Environmental Determination

1. **Project Title:** Milpitas Recycled Water Pipeline Extension Project
2. **Lead Agency Name and Address:** City of Milpitas
3. **Contact Person and Phone Number:** Michael Fossati
   City of Milpitas
   455 East Calaveras Boulevard
   Milpitas, CA 95035
   (408) 586-3274
4. **Project Location:** City of Milpitas
5. **Project Sponsor's Name:** City of Milpitas
6. **General Plan Designation:**
   - The storage tank and associated pump station would be constructed in an area designated as parks and open space.
   - The pipelines and three pump stations would be constructed in public right-of-way (ROW) within manufacturing and warehousing (MW), single family low density (SFL), single family medium density (SMD), general commercial, hillside very low density (HVL), multi-family residential high density (MFH), highway services (HWS), retail subcenter (RSC), and public facilities (PF) designated areas.
7. **Zoning:**
   - The storage tank and associated pump station would be constructed in an area located in the Parks and Open Space (POS) zoning district.
   - The pipelines and three pump stations would be constructed in public ROW or City property in areas zoned highway services (HS), commercial (C1), commercial (CO), park open space (POS), single family residential (R1-H), single family residential (R1-3), single family residential (R1-4), single family residential (R1-6), single family residential (R1-10), multi-family residential (R2), multi-family residential (R3), institutional (I), industrial (M2).
8. **Description of Project:** The proposed project would include construction of new recycled water infrastructure to expand the City's existing recycled water system east of Interstate 680. The new recycled water infrastructure would include approximately 50,560 linear feet of pipelines, a storage tank, and four pump stations to serve new recycled water users who are currently only served by potable or raw water.
9. **Surrounding Land Uses and Setting:** Land uses in and around the proposed project area include residential, commercial, public/institutional, industrial uses, and undeveloped areas. A figure showing the project location is provided in *Chapter 2, Project Description.*
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.).** Multiple federal, state, and local agencies as listed in *Chapter 2, Project Description.*

Environmental Factors Potentially Affected

The proposed project could potentially affect ("Potentially Significant Impact" or "Less than Significant Impact with Mitigation Incorporated") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identify where mitigation measures would be necessary to reduce all impacts to less than significant.

X	Aesthetics		Greenhouse Gas Emissions		Population and Housing
	Agricultural and Forestry Resources	X	Hazards and Hazardous Materials		Public Services
X	Air Quality	X	Hydrology and Water Quality	X	Recreation
X	Biological Resources		Land Use and Planning	X	Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities and Service Systems
	Geology and Soils	X	Noise	X	Mandatory Findings of Significance

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Signature

10/28/2016
Date

Michael Fossati, Senior Planner
Printed Name

City of Milpitas Planning Department
For

Chapter 1 Introduction

This document is a Mitigated Negative Declaration (MND) that addresses the potential environmental impacts of construction and operation of the Milpitas Recycled Water Pipeline Extension Project. This MND has been prepared by the City of Milpitas (City) as lead agency under the California Environmental Quality Act (CEQA).

1.1 Project Background and Purpose

The Milpitas Recycled Water Pipeline Extension Project (proposed project) consists of expanding the City's existing recycled water system east of Interstate 680 (I-680) to meet recycled water demands and reduce potable and raw water use. Currently, recycled water is only accessible to the western portion of the City. The City also has customers with high irrigation usage that are not on the recycled water system and use potable water for irrigation purposes.

The proposed project would consist of 50,560 linear feet (approximately 9.5 miles) of pipeline installation, a new storage tank, and four new pump stations consisting of the following components:

- Five segments of new recycled water pipeline totaling 50,560 linear feet;
- Up to 1.5-million gallon (MG) storage tank at Cardoza Park
- Storage tank and pump station-related appurtenances; and
- Potentially up to 40 new customer meters.

A detailed Project Description, including figures and a list of potential permits and approval requirements, is provided in *Chapter 2, Project Description*.

1.2 Scope and Use of this Document

This MND provides an assessment of the potential impacts to environmental resources that would result from implementing the proposed project. The discussion and level of analysis are commensurate with the expected magnitude and severity of each impact to environmental resources. This document primarily addresses the environmental effects of constructing and operating recycled water infrastructure and the effects of using the water supplies under consideration.

The analyses in *Chapter 3, Environmental Checklist* are based on technical reports and studies prepared for the proposed project, supplemented with other public information sources as provided in the list of references (*Chapter 5, Report Preparation*). The background materials are available for public review at the City of Milpitas Planning Department or on the City's Environmental Documents website at http://www.ci.milpitas.ca.gov/milpitas/departments/38397-2/.

This document evaluates the potential for impacts to resources areas identified in Appendix G of the CEQA Guidelines. These resources areas include:

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

1.2.1 Impact Terminology

The anticipated environmental impacts are identified for each of the resource areas listed above. The level of significance for each resource area uses CEQA terminology as specified below:

- **Potentially Significant.** Adverse environmental consequences that have the potential to be significant according to the threshold criteria identified for the resource, even after mitigation strategies are applied and/or an adverse effect that could be significant and for which no mitigation has been identified. If any potentially significant impacts are identified, an Environmental Impact Report (EIR) must be prepared to meet the requirements of CEQA.
- **Potentially Significant Unless Mitigation is Incorporated.** Adverse environmental consequences that have the potential to be significant, but can be reduced to less than significant levels through the application of identified mitigation strategies that have not already been incorporated into the proposed project.
- **Less than Significant.** Potential adverse environmental consequences have been identified. However, they are not so adverse as to meet the significance threshold criteria for that resource. Therefore, no mitigation measures are required.
- **No Impact.** No adverse environmental consequences have been identified for the resource or the consequences are negligible or undetectable. Therefore, no mitigation measures are required.

1.2.2 Recommended Level of Environmental Documentation

Based on the analysis presented herein, an MND is the appropriate level of environmental documentation for the proposed project.

Chapter 2 Project Description

2.1 Project Overview

The Milpitas Recycled Water Pipeline Extension Project (proposed project) consists of expanding the City's existing recycled water system east of Interstate 680 (I-680) to meet recycled water demands and reduce potable water and raw water use. The proposed project would consist of 50,560 linear feet (approximately 9.5 miles) of pipeline installation, a new storage tank, and four new pump stations, and would serve users within the City and in some adjacent areas of unincorporated Santa Clara County northeast of the City.

2.2 Project Location

The majority of the project would be located east of I-680 in the City of Milpitas, California, with a small portion west of I-680 (**Figure 2-1**). The City is surrounded by the cities of San Jose to the south and west, Fremont to the north, and unincorporated Santa Clara County to the east. The City limits and existing recycled pipelines are shown in **Figure 2-1**Error! Reference source not found.. The proposed project would be located mostly within existing paved roads in residential and commercial areas.

2.3 Project Objectives

The objective of the proposed project is to supply an additional 750 acre-feet per year (AFY) of recycled water in the City. The proposed project would:

- **Improve Water Supply Reliability.** Recycled water availability is less influenced by climatic or year-to year changes in hydrologic conditions than is surface water, and therefore provides additional dry-year reliability for users.
- **Preserve Potable and Raw Water Supplies.** Using recycled water to serve non-potable demands such as irrigation could preserve drinking water supplies for potable needs. This project would offset potable and raw water usage by 750 AFY and allow local water resources to be used for their highest and best use.
- **Expand System in Milpitas.** Currently, the recycled water service area is west of I-680. The proposed project would expand the service area to the east of I-680.

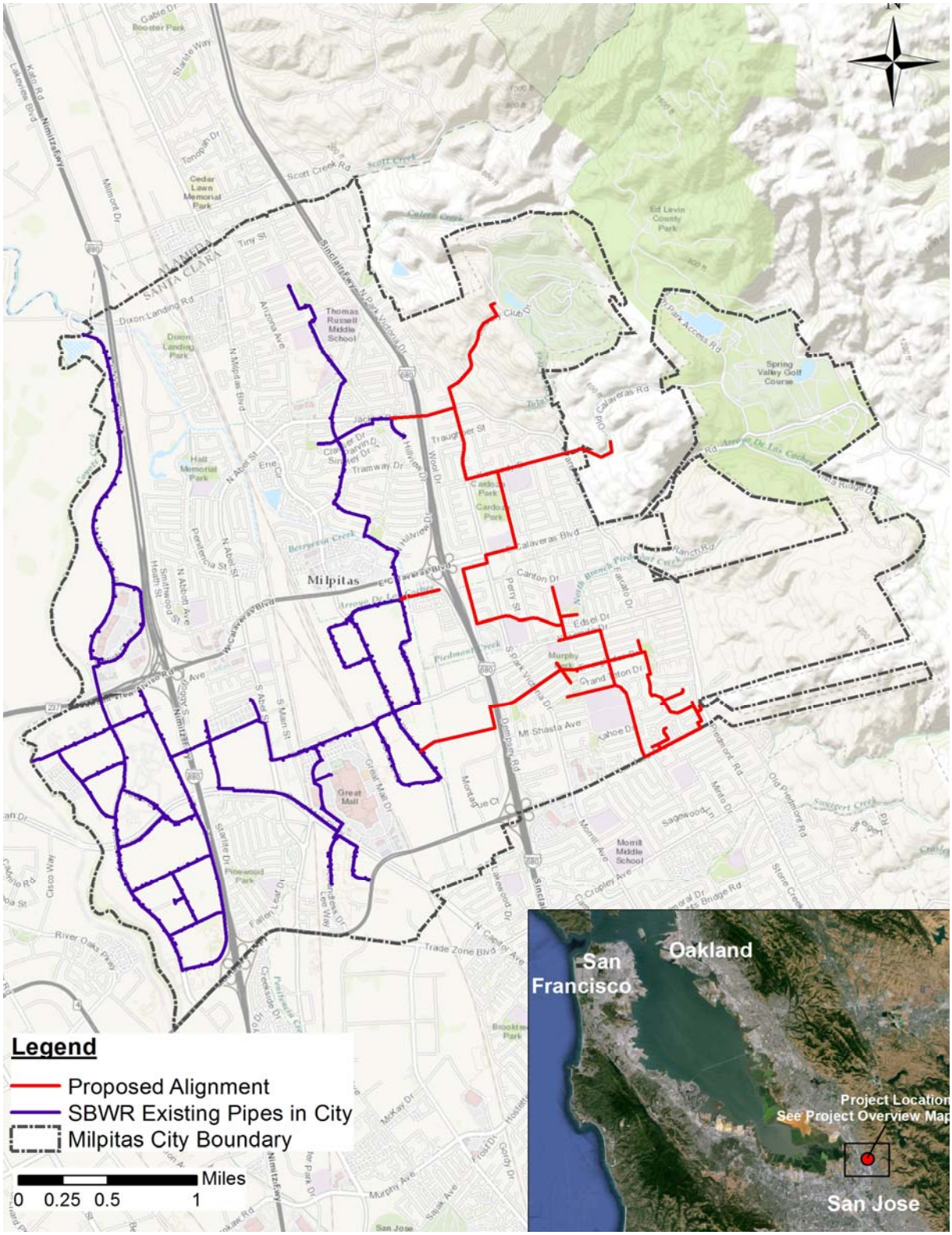
2.4 Existing Recycled Water Supply Facilities

2.4.1 South Bay Water Recycling (SBWR) Program

South Bay Water Recycling (SBWR) is a program operated by the City of San Jose. SBWR facilities were originally built as a wastewater diversion program in response to a directive by the United States Environmental Protection Agency and the Regional Water Quality Control Board to reduce San Jose/Santa Clara Regional Wastewater Facility discharges to San Francisco Bay to protect salt marsh habitat. The SBWR system comprises a north-south artery across San Jose. This main artery feeds extension pipelines to various customers. The SBWR system currently consists of 140 miles of pipeline, 5 pump stations, and 3 above-ground storage reservoirs for a total storage capacity of 9.5 million gallons and serves approximately 750 customers (City of San Jose 2014). The recycled water is treated to meet Title 22 unrestricted water quality standards (i.e., virtually any use except drinking water) and distributed through the SBWR system. In 2014 the SBWR delivered an average of 14 million gallons per day (mgd) to those customers (City of San Jose 2014).

The City of San Jose in partnership with the Santa Clara Valley Water District (SCVWD) recently completed a Strategic and Master Plan to plan for the future of SBWR. The Strategic Plan has a 20-year planning horizon that identifies the purpose and future of recycled water produced from the regional wastewater facility in terms of meeting regulatory needs as well as contributing to regional water supplies.

Figure 2-1: Project Location Map



Source: RMC 2016

The Strategic Plan set a near-term goal of increasing recycled water use within the SBWR service area by 25,000 AFY by 2025; to meet this target a combination of non-potable reuse and potable reuse is envisioned. Expansion of the non-potable reuse system is expected to be driven by recycled water retailers while the development of a potable reuse program would proceed as a wholesaler-driven program.

SBWR's recycled water retailers are the City of Milpitas, City of Santa Clara, City of San Jose Municipal Water System and San Jose Water Company.

2.4.2 City of Milpitas

The City purchases recycled water from the SBWR program for irrigating public and private areas such as parks, medians, and industrial uses to supplement potable water use. The City's existing recycled water pipeline system connects to the SBWR system near Technology Drive and Coyote Creek, southeast of the State Route 237/Interstate-880 interchange. Recycled water provided by the SBWR is delivered through an existing transmission line. It is then distributed through a series of mains that provide landscape irrigation to business/retail areas surrounding McCarthy Ranch and Oak Creek Industrial Park, and to central Milpitas. The City maintains and operates approximately 22.4 miles of recycled water lines (**Figure 2-1)**. The City has approximately 190 recycled water service connections, the majority of which are for irrigation use. Recycled water use in the City was 860 acre-feet (AF) in 2015 and is expected to rise to 1,100 AFY by 2020. The long-term potential for recycled water use in the City is estimated at 2,200 AFY (RMC and CDM Smith 2014).

2.5 Background and Need for Project

In January 2014, both of the City's water suppliers[1] (SFPUC and SCVWD) declared water supply shortages and requested 10 percent conservation. Due to ongoing drought conditions, SCVWD increased its conservation request to 20 percent a month later and eventually required a mandatory 30 percent conservation in 2015. In 2015, SCVWD also adopted a wholesale water rate structure that includes a 10 percent penalty for water volume purchased above the contract amount.

In light of its potable water supply conditions, the City adopted ordinances restricting the use of potable water to supplement existing water conservation regulations. Additionally, the City has been evaluating implementing measures to increase the use of recycled water to offset its potable demand. The City has constructed recycled water fill stations to meet construction needs, is working to convert raw or potable water irrigators in the vicinity of the existing recycled water pipeline to recycled water use, and planning to expand its recycled water distribution system.

Currently, recycled water is only accessible to the western portion of the City. The City also has customers with high irrigation usage that are not on the recycled water system and use potable water for irrigation purposes. The proposed project would extend the recycled water infrastructure east of I-680 to areas that currently are only served by potable or raw water. The proposed project would allow existing City customers on the eastern edge of the valley floor to offset potable water or raw water use with recycled water. Additionally, the proposed project would make recycled water available to hillside water users who have historically relied on raw water supplies imported by SCVWD.

An alignment, storage, and pump station siting study was prepared for the proposed project in 2015/2016. The study evaluated options for five pipeline segments, two storage tank locations, and six pump station locations. For each of the segments, alignment options were identified and labeled with a letter. For example, two alignment options were evaluated for Segment 2, and thus named Segment 2a and 2b.

[1] The City purchases treated potable water supplies from two wholesalers – the San Francisco Public Utilities Commission (SFPUC) and SCVWD. Approximately two-thirds of the City's potable water is from SFPUC and the remaining one-third is from SCVWD.

Ultimately, the proposed project was selected, consisting of Segments 1, 2a, 3a, 4a, 5c, a new storage tank at Cardoza Park, and four pump stations. For purposes of this document, Segments 1, 2a, 3a, 4a, and 5c will be referred to as Segments 1, 2, 3, 4, and 5.

2.6 Proposed Project

The proposed project would include construction of new recycled water infrastructure. The new recycled water infrastructure would include pipelines, a storage tank, and four pump stations to serve new recycled water users who are currently only served by potable or raw water (**Figure 2-2**). The new storage tank is required to maintain pressure in the system and serve users during peak demand periods. The proposed project would consist of the following components:

- Five segments of new recycled water pipeline totaling 50,560 linear feet;
- Up to 1.5-MG storage tank at Cardoza Park
- Storage tank and pump station-related appurtenances; and
- Potentially up to 40 new customer meters.

Each of these components is described below. The new users or existing users switching to recycled water that would be served by the proposed project are listed in **Table 2-1**.

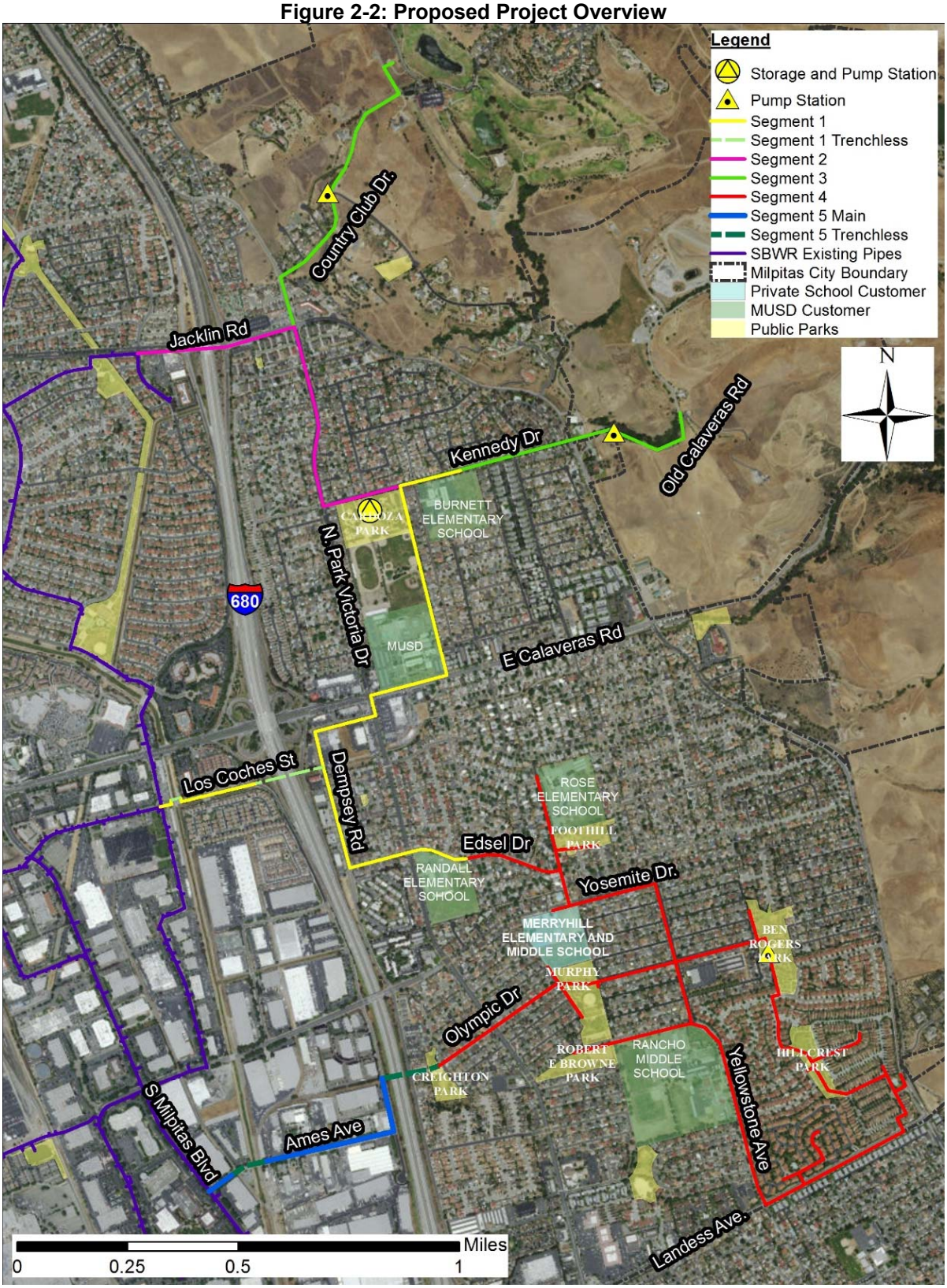
Table 2-1: New Recycled Water User Demand Summary

User	Annual Demand (AFY)	Peak Day Demand (mgd)
City of Milpitas Irrigation	97	0.3
Milpitas Unified School District Irrigation	33	0.1
Summitpointe Golf Club Irrigation	243	0.3
County of Santa Clara Parks Irrigation	337	0.5
Home Owners Associations Irrigation	41	0.1
Total	**751**	**1.3**

2.6.1 Conveyance Pipelines

The proposed project would install five new recycled water pipeline segments, shown with the corresponding length, diameter, and locations in **Table 2-2** and illustrated in **Figure 2-2.** Most of the proposed pipeline would be installed within roadways in residential and commercial areas. The construction zone for all segments would be approximately 20 feet in width on either side for a total construction corridor of up to 45 feet. Construction methods are presented in Section 1.7. **Figure 2-3** and **Figure 2-4** show a closer view of each of the segments and pump stations. Each of the segments is described in **Table 2-2**.

Figure 2-2: Proposed Project Overview



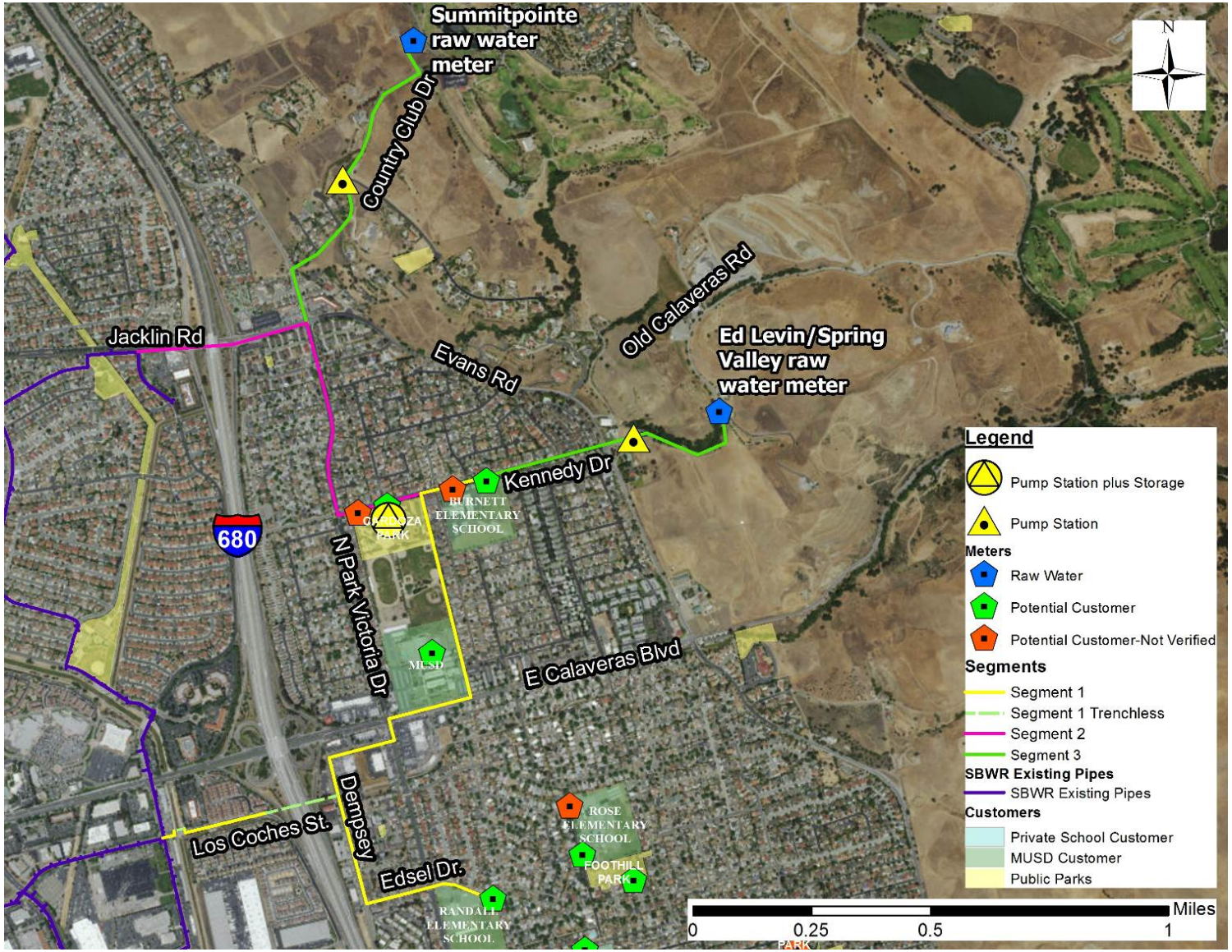
Source: RMC 2016

Table 2-2: Project Pipeline Segment Locations, Diameter and Approximate Length

#	Users	Diameter (in)	Length (ft)	Location
1	Milpitas Unified School District, Milpitas Sports Center	12	10,260	Los Coches St., Dempsey Road, N. Park Victoria Dr., E. Calaveras Boulevard, Kennedy Dr. Edsel Dr.
2	Cardoza Park	8	5,200	Jacklin Rd., N. Park Victoria Dr.
3	Summitpointe Golf Club	8	7,700	Country Club Dr., Kennedy Dr., Old Calaveras Road
4	Murphy Park, Yellowstone Park, Foothill Par, Rancho Milpitas Unified School District, Hillcrest Terrace HOA	8	23,600	Edsel Dr., Roswell Dr., Yellowstone Ave., Sequoia Dr., Everglades Dr., Landess Ave., Olympic Dr., Cascade St.
5	Creighton Park	8	3,800	Ames Ave., Sinclair Frontage Rd., Olympic Dr.
TOTAL			**50,560**	

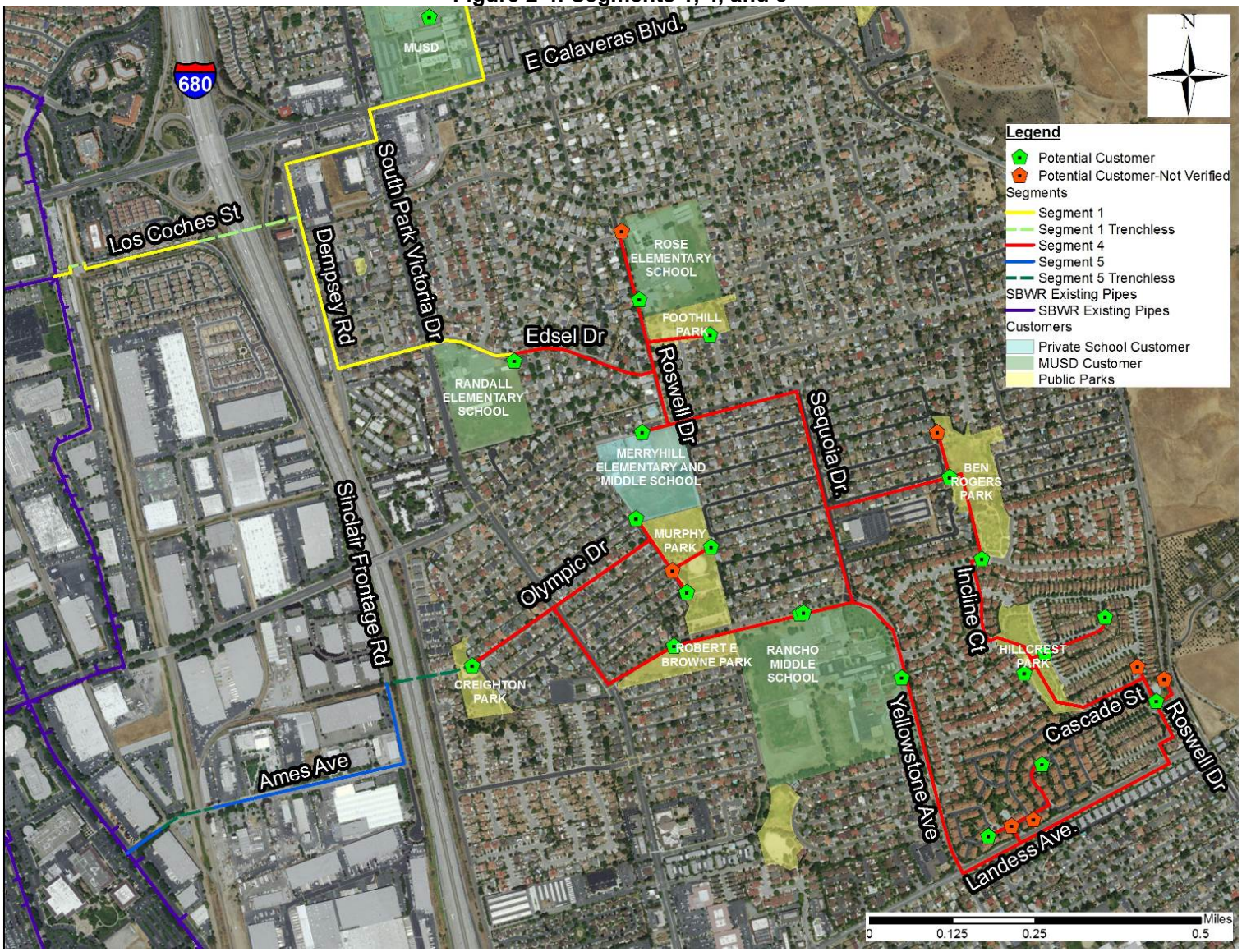
Note: The segment numbers in the table correspond to the numbers identified in **Figures 2-2, 2-3,** and **2-4**.

Figure 2-3: Segments 1, 2, and 3



Source: RMC 2016

Figure 2-4: Segments 1, 4, and 5



Source: RMC 2016

Segment 1

Segment 1 would consist of 10,260 linear feet (LF) of 12-inch recycled water main and would provide a recycled water distribution network to the east side of I-680 (see **Figure 2-3** and **Figure 2-4**). Segment 1 would connect to the existing SBWR pipeline at the intersection of South Hillview Drive and Los Coches Street. The pipeline would cross under I-680, then split into a northern and southern branch at Dempsey Road. The northern branch would be within the roadway along Dempsey Road, North Park Victoria Drive and East Calaveras Boulevard, then would follow the eastern edge of the Milpitas Sports Complex and Cardoza Park, and end within the roadway on Kennedy Drive near Burnett Elementary School. The southern branch would follow Dempsey Road and then turn east on Edsel Drive, ending by Randall Elementary School.

Segment 2

Segment 2 would consist of approximately 5,200 LF of 8-inch recycled water main (see **Figure 2-3**). This segment would connect to the existing SBWR system at the intersection of Kennedy Drive and Jacklin Road. From Jacklin Road, Segment 2 would cross under I-680, continue along Jacklin Road, south on North Park Victoria Drive, and east on Kennedy Drive, ending by Cardoza Park.

Segment 3

Segment 3 would serve hillside customers, and would consist of approximately 7,700 LF of 8-inch recycled water main (see **Figure 2-3**). Segment 3 would have two distinct sections of pipeline. One pipeline would connect to Segment 2 at the intersection of Jacklin Road and Country Club Drive; this pipeline would continue northeast along Country Club Drive to serve Summitpointe Golf Club. The other pipeline would connect to Segment 1 at its terminus by Burnett Elementary School and continue easterly along Kennedy Drive and Old Calaveras Road and terminate at, but not connect into the existing SCVWD's Ed Levin/Spring Valley raw water meter. Both sections of pipeline would require a pump station to convey the recycled water to customers.

In the future, the SCVWD could connect to the recycled water system and extend the pipeline further up Old Calaveras Road to serve Ed Levin Park and Spring Valley Golf Course. The timing and details of this are unknown at this time. Any future approval and implementation of SCVWD's potential future connection would be subject to separate environmental documentation.

Segment 4

Segment 4 would serve numerous customers located to the south and east of Segment 1 and would consist of approximately 23,600 LF of 8-inch recycled water main (see **Figure 2-4**). This segment would connect to Segment 1 where it ends by Randall Elementary School on Edsel Drive, and connect to Segment 5 off of Olympic Drive at Creighton Park.

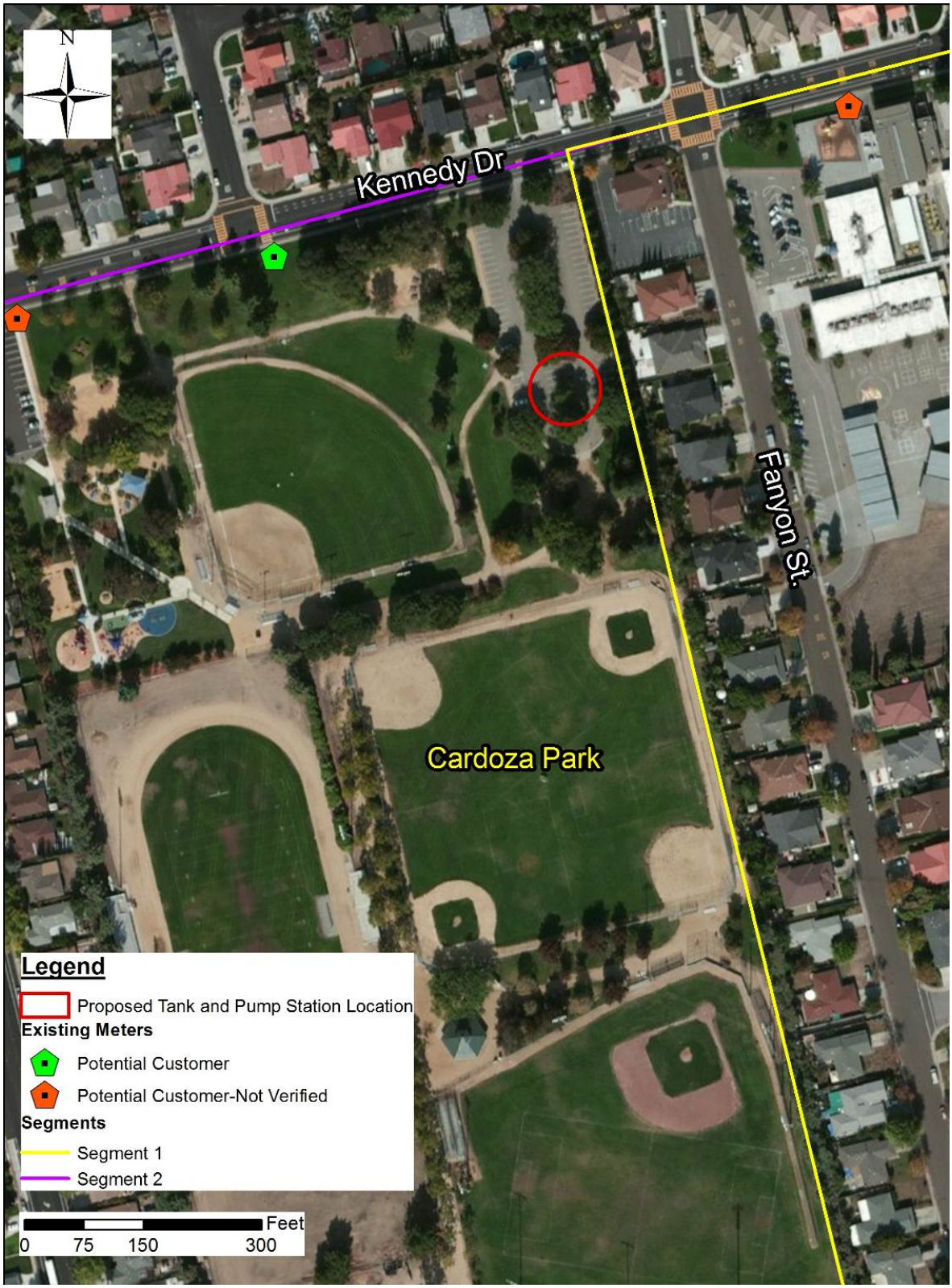
Segment 5

Segment 5 would connect to Segment 4 and would provide another path across I-680 connecting to the SBWR system (see **Figure 2-4**). This segment would consist of approximately 3,800 LF of 8-inch recycled water main. This segment would connect to the existing SBWR system on South Milpitas Boulevard, extend east along Ames Avenue, north along Sinclair Frontage Road, east under I-680, and connect to Segment 4 off of Olympic Drive at Creighton Park.

2.6.2 Storage Tank

The proposed project would include the construction of a new recycled water storage tank with an estimated capacity of up to 1.5 MG. The storage tank would be located at Cardoza Park within the existing parking lot (see **Figure 2-5**) and accessed from Kennedy Drive.

Figure 2-5: Proposed Storage Tank Location



Source: RMC 2016

Construction would include new piping, connections to the new recycled water system (either Segment 1 or 2), and a tank flow control valve. The proposed tank may be located above or below ground. If above ground, the tank would be approximately 100 feet in diameter and 26 feet tall. If completely below ground, the site would be excavated and the tank would be approximately31 feet below grade. Due to the flat nature of the parking lot, in the above ground tank scenario, it is assumed that minimal grading would be required (up to 0.5 acres) during construction to accommodate staging and the proposed tank.

The tank would be painted the City's standard tank color (beige or brown). The tank would include an emergency overflow that would be configured to release recycled water to a storm drain in the event of a major system failure. The tank would also include a potable water backup supply connected through an air gap into the top of tank. The potable water connection would be used only in emergency or shut-down situations where recycled water supply is not available to meet demand.

Additional facilities to be constructed on the tank site would include:

- Exterior site lighting, which would be on only when maintenance personnel are on the site.
- An asphalt access road, which would wrap around a portion of or the entire tank. The access road would be up to approximately 16 feet wide.
- Yard piping, which would include storm drainage pipes and buried concrete structures such as drainage inlets, and recycled water piping to and from the tank.
- Electrical and controls facilities, including electrical control panels, conduit, and cables.

The City would own and maintain the new recycled water storage tank. Telemetry would transmit the tank levels to the pump stations and control center. Electrical service would be required and is available at the site. The tank flow control valve would be located in a below grade vault on or adjacent to the tank pad. Electrical service and telemetry components of the new recycled water tank would also require construction of a radio tower that would be used to transmit data. The radio tower would be up to 30 feet in height (about the same height as the tank).

2.6.3 Pump Stations

Four pump stations are proposed as part of the project. One would be located with the new storage tank at Cardoza Park, two would be located along Country Club Drive, and one would be located in Ben Rodgers Park. **Figure 2-3** and **Figure 2-4** show the pump stations relative to the new recycled water pipelines. The pump stations would be located above grade in enclosed structures. **Table 2-3** provides a summary of the four pump stations.

Table 2-3: Recycled Water Pump Station Summary

Pump Station	Pipeline Segment	No. of Duty Pumps	No. of Standby Pumps	Flow per Pump (gpm)	Approximate Motor Size per Pump (hp)	Approximate Pump Station Footprint (SF)	Approximate Height of Pump Station Enclosure (feet)
Cardoza Park Pump Station	1	1	1	1,100	115	600	18
Country Club Drive Pump Station	3	1	1	250	35	400	12
Old Calaveras Road Pump Station	3	1	1	225	35	400	12
Ben Rodgers Park	4	1	1	75	10	200	12

Note: gpm = gallons per minute, hp = horsepower, SF = square feet

2.6.4 Other Facilities

Other facilities, including customer meters and isolation valves, would be installed as part of the proposed project. Customer meters to monitor usage levels would be located at the new user hook-ups, which are required at new user turnouts. Both meters and valves vary in size based on the customer demand and pipe

sizing, and would be located below grade in standard-sized vaults and valve boxes. Maximum footprint of the meter and valve vaults would be approximately 10 feet by 6 feet.

2.7 Construction Methods

2.7.1 New Pipeline Installation

Most of the proposed pipeline would be installed within City right-of-way (ROW) or public parks owned by the City. For all work activities, prior to the start of construction, the construction boundary and the locations of underground utilities would be identified through field survey (potholing) and the use of Underground Service Alert. Standard open cut trenching would be the primary method of installing the new pipeline, with trenchless construction for portions of Segments 1 and 5. Each of these construction methods are described below.

Open Trench Excavation/Shoring

Segments 2, 3, and 4 of the proposed project and portions of Segments 1 and 5 would be installed through standard open-cut trenching. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. Once at the required depth, the bottom of the trench would be compacted. In general, trenches would have vertical side walls to minimize the amount of soil excavated, and the area needed for construction easements if required. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. A crushed rock layer would be placed at the base of the trench after the compaction process has been completed. After placement of the crushed rock layer, the new pipeline would be installed and the pipe segments connected, and the trench would be backfilled with native soil or other suitable imported material. The backfill would be compacted, and the disturbed surface over the trench would be restored to pre-construction conditions.

For open-cut trenching, the maximum trench width (for a 12-inch pipeline) would be approximately 3 feet for average trench depths, and average trench depth would be approximately 5.5 feet. Where needed, the walls of trenches and pits would be sloped outwards or shored to prevent cave-ins, as required by federal Occupational Safety and Health Administration Title 8 regulations pertaining to excavations. The sides would most likely be shored using trench boxes.

The active work areas would be about 20 feet on either side of the trench, which would provide access for trucks and loaders for a total work area of about 45 feet. For the purpose of this analysis, a construction easement of 20 feet on either side is assumed for areas not within City ROW. Standard installation of the pipeline would proceed at the rate of approximately 150 feet per day per work crew with an overall work zone length of about 200-300 feet. Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily “closed” at the end of each work day, by covering with steel plates or backfilled.

If excavated soil is not reusable, the soil would be hauled off site for disposal at an approved facility, such as a sanitary landfill where it could be used as daily cover. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compactability and stability.

Surface Restoration

For all trenches and pits, once filled and compacted, the area would be resurfaced to match the surrounding material. When the pipe is installed in a paved roadway, repaving would occur after pipeline installation and testing. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after pipeline construction. A repaving crew would follow the pipe installation crew and

prepare the road surface for repaving. Final repaving would be done after pipeline installation and testing is completed for a whole street width, lane width, or trench width.

Damage to unpaved areas and parks would be repaired. Unpaved areas would be revegetated with native grasses indigenous to the disturbed area. Any pathways and recreational equipment removed or damaged during construction would be restored or replaced by the City. Revegetation would occur after construction and prior to winter rains to stabilize disturbed areas against erosion.

Trenchless Construction Methods

Trenchless construction methods would be needed where open cuts are not acceptable or practical, such as across highways, flood control facilities, or creeks. Portions of Segments 1 and 5 of the proposed project would be installed using trenchless construction methods to avoid construction through Berryessa Creek (**Figure 2-4**). Trenchless methods include jack-and-bore or horizontal directional drilling (HDD).

Jack and Bore

Jack-and-bore involves use of a horizontal boring machine or auger to drill a hole, and a hydraulic jack to push a casing through the hole; the pipeline is then installed in the casing. The casing is jacked using a large hydraulic jack in a pit located at one end of the crossing. For this construction method, pits would be dug on either side of the surface feature to be avoided (e. g. flood control facility or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 10 to 20 feet long for the receiving pit and up to 50 feet long for the jacking pit. The depth would depend on the feature to be avoided. An additional area of 2,000 square feet would be needed around the pit for temporary storage of pipe sections and for loading material removed from the bore. The construction area around the receiving pit at the other end of the trenchless crossing is smaller, encompassing approximately 1,000 square feet.

Horizontal Directional Drilling

HDD involves the use of a drill rig tilted at the top at an angle of up to ten degrees from horizontal. The bore entry holes are drilled from the starting point to the destination point. In preparing the hole, a small diameter (3-inch wide) pilot hole is first drilled from the entry pit in a gentle arc from the drill rig to the completion hole on the other side of the area to be crossed. Alternatively, the pilot hole is drilled along a pre-determined horizontal and vertical alignment from the entry site to the exit site. This pilot hole can be guided using magnetic readings transmitted from the drill bit back to the drill rig.

After the initial hole is drilled, the final bore entry pit, approximately 10 feet square by approximately 8 feet deep, is constructed, and is used as the collection point for Bentonite drilling mud and drill spoil. The pilot hole is then enlarged by pulling larger reamers, or reaming heads, from the pilot exit pit back towards the drilling rig. The pipeline is then pulled into place behind the last reamer head.

During the directional drill procedure, drilling mud is injected into the drill and recovered from the entry hole until the drill bit surfaces at the exit pit. Once the drill bit surfaces, the drilling mud is recovered at both the entry and exit hole, pumped into tanks and transported back to the rig location for cleaning and eventual reuse. The drilling equipment and materials require a work area of approximately 2,500 square feet. An additional area of approximately 2,000 square feet is needed for loading materials removed from the bore. Pits and work areas would be located within existing ROW and along streets, where appropriate.

Pipes would be installed at a depth of approximately 8 to 10 feet, dependent on existing underlying utilities, soil types, environmental constraints, entry and exit constraints, and bend radius of the installed product and drill pipe.

Construction of Structures

Construction of the storage tank and pump stations involves site grading and excavation, shoring of excavations, placement of compacted base rock, forming and pouring of concrete structures, installation of mechanical equipment, trenching for installation of connecting pipelines, connection of electrical supplies and controls, and backfill and restoration. Shallow excavations would be shored by sloping the sides of the

excavation or by using driven or vibrated steel sheet piles. Deep excavations may require use of soldier piles and lagging[2].

General Construction Activities

If groundwater or runoff were to enter the trench during excavation, the water would be pumped from the excavated area and contained and treated in accordance with all applicable State and Federal regulations, before being discharged to the existing sewer system. The contractor would provide all temporary holding tanks required for sedimentation of soil particles and treatment of other contaminants, and would conduct chemical testing of groundwater pumped into the temporary holding tanks. Where groundwater is encountered, the excavation would be dewatered as needed to place pipes and compact the soil. Other measures would be implemented, such as the installation of water impermeable shoring walls, localized sump pumps, and working pads made of crushed rock, to prevent water infiltration into the excavated areas.

Spoil (soil and rock) that is excavated during construction activities would be hauled off site and disposed. The excavated material would be stored temporarily at the construction staging area until characterized and then hauled away to a permitted disposal site. Backfill that is imported would be delivered to stockpiles near the open trench.

For construction that would occur in parks, a safety buffer zone would be established and a remaining portion of the park would be kept open during construction.

The amount of spoil generated would depend on the construction methods selected and the amount of material reused on site. Approximately 70 cubic yards[3] of spoil would be generated from excavation activities per day. Assuming a dump truck capacity of 10 cubic yards per truckload, and that all material would be hauled off site for disposal, approximately 7 round trips (14 one-way truck trips) would be generated per day over the course of the construction period that includes pipe installation. It is assumed that an additional 20 one-way truck trips per segment would occur to deliver equipment and other materials.

2.7.2 Equipment / Staging / Workers

Installation of the proposed project components would require equipment including, but not limited to: crane, excavators, backhoes, front-end loaders, dump trucks, diesel generator, water tank, flat-bed trucks, compactors, double transfer trucks for soil hauling, concrete trucks, paving equipment, dewatering pumps (as needed), and baker tanks (as needed). Equipment and vehicle staging would be located along the construction route and would be established where space is available and no potentially sensitive resources are present, such as vacant lots, roadway turnouts, and parking lots. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of convenient access and lack of sensitive receptors. As pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods of time. The City of Milpitas would need to review the Construction Staging and Traffic Management Plan and approve lane closures to street segments and intersections. The City or its contractor would make arrangements for the use of staging areas.

The typical crew size for construction of the proposed facilities is 15 to 25 people, plus inspectors. An additional crew may be working at the proposed storage tank and pump station sites during pipeline

[2] Soldier piles and lagging is an earth retention technique that retains soil, using vertical steel piles with horizontal lagging. Typically, H-piles are drilled or driven at regular intervals along the planned excavation perimeter. Lagging consisting of wood, steel or precast concrete panels, is inserted behind the front pile flanges as the excavation proceeds. The lagging effectively resists the load of the retained soil and transfers it to the piles. The walls can be designed as cantilever walls, or receive additional lateral support from anchors or bracing. The technique has been used to provide support for many excavations in environments similar to that present in the Project area.

[3] 70 cubic yards (CY) is a realistic assumption based on daily activities involving construction of a 150-foot segment of pipeline assuming that one half of the material is reusable.

installation and rehabilitation. All construction activities within residential areas, including work hours, would be subject to City of Milpitas regulations, but generally would be limited to weekdays from 7 a.m. to 7 p.m. However, nighttime construction and weekend construction may be necessary for certain pipeline connections; nighttime construction would be restricted to non-residential areas only.

During construction the recycled water pipeline would normally be inspected daily by observing trenching, shoring, compaction techniques, traffic control, pipe quality, construction methods, and installation methods for adherence to federal, state, and city codes, spoil storage and hauling, functional testing, and other construction activities. The surface over the completely installed pipeline would also be inspected to detect any leaks or settlement.

2.7.3 Schedule

Construction of the pipelines, storage tank, and pump stations is planned to start in 2017 (refer to **Table 2-4**). At a pace of 150 feet per day, the approximately 50,560 feet of pipeline installation and rehabilitation would take approximately 17 months. However, due to the large size of the project that would result from combining of all of the segments, the City is likely to design and construct the segments individually at the approximate pace of one segment per year. The construction of the storage tank would occur concurrently with pipeline construction, most likely during the construction of Segment 2.

Table 2-4: Anticipated Construction Schedule

Project Component	Timeline
Segment 1	March 2017 – March 2018
Segment 2 (including new storage tank and pump station)	September 2017 – June 2018
Segment 3 (including Country Club Drive pump station and Old Calaveras Road pump station)	June 2018 – March 2019
Segment 4 (including Ben Rogers Park pump station)	March 2019 – March 2020
Segment 5	March 2020 – December 2020

2.7.4 Proposed Project Operation and Maintenance

Maintenance of proposed facilities would consist of existing City staff making inspections and would not require new employees. The recycled water pipeline would normally be inspected weekly by observing the surface over the pipe to detect any leaks or settlement. Recycled water pipes are designed for a lifetime measured in decades; therefore, very little maintenance of the pipe itself is anticipated. Isolation valves on the system would be exercised and logged on an annual basis. Meters would be inspected on a regular basis and replaced or refurbished according to the manufacturer's recommendations. Reading of meters provides an opportunity to observe the integrity of the valves, connections, and the meter. The storage tank would be periodically inspected and routine maintenance of valves and equipment would be performed. Typical pump station operational and maintenance activities would be conducted as specified by the design engineer or pump manufacturer. Annual performance testing would also be required to verify meter calibration, and calibrate pressure gauges. Preventive maintenance for mechanical and electrical equipment would be scheduled annually. Completed work would be recorded using daily logs.

2.8 Right-of-Way Issues / Permits Required

The proposed facilities would be sited within City and county lands (primarily streets). It is anticipated that permits would potentially be required from the following agencies:

- City of Milpitas: Encroachment and Excavation Permit, Street Work Permit
- County of Santa Clara: Encroachment and Excavation Permit, Street Work Permit
- California Department of Transportation (Caltrans): Encroachment Permit
- RWQCB Notice of Intent for Coverage Under:
  - National Pollutant Discharge Elimination System (NPDES), Construction General Permit (Order Nos. 2009-0009-DWQ and 2010-0014-DWQ);
  - Landscape Irrigation Uses of Municipal Recycled Water (Order No. 2009-0006-DWQ).
- California Department of Fish and Wildlife (CDFW) 1601 Streambed Alteration Agreement

In addition, the permits listed above, if the City applies for State Revolving Fund financing from the State Water Resources Control Board (SWRCB), additional federal consultation requirements would have to be met. SWRCB would be required to complete Section 106 Consultation with the State Historic Preservation Officer to ensure compliance with the National Historic Preservation Act. SWRCB would also complete Section 7 Endangered Species Act consultation with U.S. Fish and Wildlife Service.

Chapter 3 Environmental Checklist

3.1 Aesthetics

Would the Project:	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

Environmental Setting

The proposed project is located within the City of Milpitas and a small portion of unincorporated County of Santa Clara. The visual quality of the proposed project area is defined by an urban setting consisting of residential, commercial, and industrial uses. There are no designated scenic highways located within the project area (Caltrans 2016). The City's General Plan identifies hillsides, ridges, and visually significant vegetation as scenic resources. The City's General Plan also identifies two types of scenic routes. Scenic corridors are located along designated streets that pass through areas of scenic value. Scenic corridors include street rights-of-way and extend 200 feet from the center line of the streets along which they are located. Scenic connectors are designated streets that connect or provide access to Scenic Corridors or distant views. Within the proposed project area, I-680, East Calaveras Boulevard, and Evans Road are Scenic Connectors. A portion of the hillside on Country Club Drive between Calaveras Ridge Drive and Calera Creek Heights Drive is considered a Visually Significant Hilltop or Ridge (City of Milpitas 2010a). General Plan Guiding Principal 4.g-G-7 exempts lands within the Valley Floor Planning area from the General Plan scenic corridor policies. The majority of the proposed project area lies within the Valley Floor Planning area.

Segment 3 on Country Club Drive would extend through an area identified as a Visually Significant Hilltop or Ridge. The Country Club Drive pump station would be located adjacent to an existing raw water pump station at the intersection of Country Club Drive and Calaveras Ridge Drive, surrounded by undeveloped hillside. The existing raw water pumps station is enclosed in an approximately 8-foot tall-white structure, and surrounded by screened chain link fencing.

The County of Santa Clara's General Plan identifies local designated scenic highways, however the portion of Segment 3 within the County does not fall within any of these areas (County of Santa Clara 2008).

The proposed storage tank and a pump station would be located at the south end of the Cardoza Park parking lot. The parking lot is paved and bordered by tall trees around its perimeter. A row of tall trees are also planted down the center of the parking lot. The visual quality is defined by the residential and recreational uses in the vicinity of the site.

Impacts

a, b) The proposed pipelines, Old Calaveras Road and Ben Rodgers Park pump stations would be located in areas that include residential, public facilities, commercial, and parks and open space uses. Once constructed, the pipelines would not be visible. Segments 1, 2, 4, and 5 and a portion of Segment 3 are located within the Valley Floor Planning area and therefore would have no impact on scenic corridors, scenic connectors, or scenic resources. The Old Calaveras Road and Ben Rodgers Park pump stations would be visible, however because there are no scenic resources or scenic roadways in the vicinity of these project elements, they would have no impact on scenic vistas or scenic resources.

Segment 3 along Country Club Drive would extend through an area identified as a Visually Significant Hilltop or Ridge. However, construction activities associated with Segment 3 would be temporary in nature and the pipeline would be located below grade. Once construction activities are complete, Country Club Drive would be restored to pre-construction conditions. Therefore, construction of the Segment 3 pipeline would have a less than significant impact on a scenic resource. The Old Country Club Drive pump station would not be located within the Visually Significant Hilltop or Ridge area, but may be visible from that area. The Old Country Club Drive pump station would be located next to an existing raw water pump at Old Country Club Drive and Calaveras Ridge Drive, and is thus in an already disturbed area. With implementation of **Mitigation Measure AES-1**, the Country Club Drive pump station would be screened to blend into the existing view and to be compatible with existing aesthetics. Implementation of **Mitigation Measure AES-1** would ensure that the proposed Country Club Drive pump station is screened and that it visually integrates with surrounding land uses. Thus, with mitigation, the construction of the Old Country Club Drive pump station would have a less than significant impact on scenic vistas or scenic resources. The proposed storage tank and pump station at Cardoza Park would be visible once constructed. The tank would be approximately 100 feet in diameter and 26 feet tall, and the pump station would be approximately 600 square feet and 18 feet tall. Because there are no scenic resources or scenic roadways in the vicinity of the proposed storage tank, it would have no impact on scenic vistas or scenic resources.

Mitigation Measure AES-1: Design, Vegetation, and Screening of Above-Ground Storage Tank, Cardoza Park Pump Station, Country Club Drive Pump Station, Old Calaveras Boulevard Pump Station, and Ben Rodgers Park Pump Station

Vegetation and/or fencing shall be placed around the storage tank and pump station structures to provide screening if existing vegetation is deemed insufficient. Landscaping shall include re-vegetation of disturbed areas in the parking lot at Cardoza Park to minimize contrasts with the existing vegetation and to screen the storage tank and pump station from surrounding areas. The tank and pump stations shall be painted with low-glare earth-tone colors that blend with the surrounding terrain.

c) Construction of the proposed project would be visible from surrounding land uses and would temporarily alter the existing visual character and quality of the project area and vicinity, particularly where the proposed facilities are located within residential and commercial land uses. Specifically, the visual character in and around the proposed pipeline alignment, storage tank, and pump stations would be temporarily modified due to the presence of construction equipment and material, stockpiles of soil, and construction-related vehicles. The underground components (pipelines) would not be visible to the public once they have been installed. As such, the alteration of visual quality would be short term. The pipeline installation could occur at a rate of approximately 150 feet per day. As described in *Chapter 2, Project Description*, trenches would be open at any one location for two to three days on average, and thus the visual character would be affected for short durations when trenching activities occur in residential and commercial areas. Once the pipelines are installed, the roadways and parks would be restored to pre-

construction conditions. Due to the temporary nature of construction, pipeline installation would not substantially degrade the existing visual character or quality of the sites and their surroundings.

The proposed storage tank and pump station would be constructed on a developed site on the south side of the Cardoza Park parking lot. If the tank is constructed below ground, it would have temporary visual impacts, similar to the pipelines described above. Infrastructure associated with the storage tank such as electrical and controls facilities and radio tower would be visible to the public once complete, however due to the small footprint of these ancillary facilities, this would not result in a significant long-term visual impact.

The Cardoza Park pump station would be approximately 600 square feet and 18 feet high. If the proposed storage tank is constructed above ground, it would be approximately 100 feet in diameter and 26 feet tall, with a radio tower immediately adjacent to it that would be up to 30 feet in height. These aboveground structures would permanently alter the visual character of the area. The parking lot is currently bordered by tall trees. Most of the proposed storage tank and pump station is not anticipated to be visible from Kennedy Drive or adjacent residential areas due to the screening that the existing trees currently provide. The tank and pump station would be painted beige or brown, which would make them less noticeable from a distance, however because they are new structures, they may be noticeable from adjacent recreational areas in Cardoza Park. With implementation of **Mitigation Measure AES-1**, the storage tank and pump station would be screened to further blend into the existing view and be compatible with existing aesthetics. Implementation of **Mitigation Measure AES-1** would ensure that the proposed storage tank and pump station are screened and that they visually integrates with surrounding land uses. Thus, the construction of the above-ground facilities would not substantially degrade the existing visual character or quality of the sites and their surroundings.

Limited tree removal at the south end of the parking lot would be required for the construction of the storage tank and pump station. Other tree removal could occur in the parks where the proposed pipeline would cut through. Any trees removed as part of the proposed project would be replaced in accordance with the City's Tree Maintenance and Protection Ordinance (see *Section 3.4 Biological* Resources for further discussion of trees).

Although the visual quality of Cardoza Park parking lot site would change with the proposed above-ground storage tank and pump station, and it could be visible to views from certain points, the proposed structure would be screened to integrate with the existing landscape. The facility would be surrounded by vegetation, fencing, or walls to screen views of the site and to integrate it with the existing landscape. **Mitigation Measure AES-1** would reduce potential impacts from the proposed storage tank and pump station to a less-than-significant level.

The Ben Rodgers Park pump station would be approximately 200 square feet and 12 feet high and located within a park. The Country Club Drive and Old Calaveras Boulevard pump stations would be approximately 400 square feet and 12 feet high. The Country Club Drive pump station would be adjacent to an existing sewer/raw water pump station, surrounded by undeveloped hillside. The Old Calaveras Boulevard pump station would be located in an undeveloped area and over 100 feet away from the nearest residence. These pump stations would change the visual quality of the sites and would be visible from immediately surrounding areas (i.e. within the park and from roadways). Implementation of **Mitigation Measure AES-1** would ensure that the proposed pump stations are screened and that they visually integrate with surrounding areas. Thus, the construction of the above-ground facilities would not substantially degrade the existing visual character or quality of the sites and their surroundings. Impacts would be less than significant with mitigation.

d) Construction of the proposed project components may create a new source of light and glare, but the impact would be temporary. The proposed pipelines would not create any new source of light or glare following construction, because these facilities would be located underground. Construction would occur primarily during the daytime hours, although nighttime construction may be necessary for certain pipeline connections. The presence of exterior lights would create a new temporary light source that would otherwise not be present. This light may be visible from surrounding roadways and residential land uses, however, as described in the Project Description, nighttime construction would be restricted to areas where residences would not be affected. Construction-related light and glare would be less than significant.

The proposed storage tank (if above ground) and pump stations would require the installation of outdoor, permanent lighting for security purposes. The exterior lights would only be on when maintenance personnel are at the site. These lights would be directed downward and oriented in a manner that would not be directly visible from neighboring residences, or located on the sides of the storage tank and pump stations away from neighboring residents, to minimize light and glare effects. Given the design features, potential impacts related to light and glare are expected to be less than significant.

3.2 Agriculture and Forestry Resources

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

Discussion

Environmental Setting

According to the Farmland Mapping and Monitoring Program (FMMP) map for Santa Clara County, the project area is mostly within "Urban and Built Up Land" designations (California Department of Conservation 2012). Small portions adjacent to Segment 3 along Country Club Road and Old Calaveras Road are designated "Grazing Land".

Impacts

a-e) The proposed project would be constructed mostly within the public right of way, including existing roadways. The project area is not zoned for agricultural or forestry purposes, nor is there any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed project therefore would not convert farmland, conflict with existing zoning for agricultural use/forest land, result in the loss/conversion of forest land, or involve other changes in the existing environment that could result in the conversion of Farmland or forest land. No impacts would occur.

3.3 Air Quality

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

Environmental Setting

The proposed project area lies within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the local agency responsible for developing and implementing the clean air plan (CAP) for attaining and maintaining air quality in the San Francisco Bay Area Air Basin (SFBAAB) within federal and state air quality standards. The BAAQMD regulates most air pollutant sources, except for motor vehicles, marine vessels, aircraft, and construction equipment, which are regulated by the California Air Resources Board (CARB) or the United States Environmental Protection Agency (USEPA). State and local government projects are subject to BAAQMD requirements if the sources are regulated by the BAAQMD.

The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required USEPA to establish National Ambient Air Quality Standards (NAAQS) for criteria pollutants, and CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) through the California CAA of 1988. Areas that do not meet the CAAQS for a particular pollutant are considered to be "non-attainment areas" (i.e., failing to meet standards) for that pollutant. The SFBAAB is designated as either in attainment[1] or unclassified for most criteria pollutants,

[1] "Attainment" status refers to those regions that meet federal and/or state standards for a specified criteria pollutant. "Non- attainment" refers to regions that do not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" refers to regions where not enough data exist to determine the region's attainment status for a specified criteria air pollutant.

with the exception of ozone[2], particulate matter equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$), and particulate matter equal to or less than 10 micrometers in diameter (PM_{10}); the SFBAAB is designated as non-attainment for either the state or federal standards for these pollutants.

The BAAQMD has adopted State and Federal attainment plans for the proposed project area in the 2010 Clean Air Plan (BAAQMD 2010). The BAAQMD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under the CAA for areas that are out of attainment of air quality standards. CARB implements SIPs for criteria air quality pollutants within the SFBAAB and other air basins throughout California. These implementation plans are based on local General Plan buildout projections. The most current SIP, the 2005 Ozone Strategy, is a comprehensive document that describes how the SFBAAB will achieve compliance with the state one-hour air quality standards for ozone and how the region will reduce transport of ozone and ozone precursors to neighboring air basins.

The Bay Area CAP is prepared pursuant to the California CAA. The 2010 Clean Air Plan defines a control strategy that BAAQMD and its partners will implement to reduce emissions and decrease ambient concentrations of harmful pollutants and reduce greenhouse gas (GHG) emissions to protect the climate.

Impacts

The BAAQMD 2010 Thresholds have been used in this analysis for a conservative determination of impact analysis. These thresholds include the following:

- During project construction result in average daily emissions of 54 pounds per day of reactive organic gases (ROG), oxides of nitrogen (NOx), or $PM_{2.5}$ or 82 pounds per day of PM_{10}.
- During project operation result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or $PM_{2.5}$ or 15 tons per year of PM_{10}.
- If a project exceeds the identified project-level significance thresholds, its emissions would also be cumulatively considerable.

The proposed project's emissions have been quantified using the CalEEMod version 2013.2.2 and the Road Construction Emissions Model version 7.1.5.1. Emissions calculated for the proposed project were compared to BAAQMD's mass daily thresholds for construction and operational activities for ROGs, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$. **Table 3.3-1** provides a summary of the maximum daily construction emissions for the proposed project, along with a summary of the BAAQMD thresholds. **Table 3.3-2** shows overall annual construction emissions for the proposed project, along with the Federal General Conformity thresholds. **Appendix A** includes a General Conformity Air Quality Analysis for the proposed project, and the summary output tables from the air emissions model.

[2] Ozone is a secondary air pollutant that is produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NOx).

Table 3.3-1: Maximum Daily Construction and Operational Emissions

Maximum Daily Construction Emissions (lbs/day)						
	ROG	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions from Phase Overlap						
Pipeline Segment 1 and 2, Storage Tank, and Pump Station	6.06	60.18	43.09	0.03	10.25	4.30
Pipeline Segment 2 and 3[1], and Pump Station	5.70	52.48	39.69	0.03	7.74	3.50
Pipeline Segment 3 and 4[1], and Pump Station	5.72	52.50	39.88	0.03	7.75	3.5
Pipeline Segment 4 and 5[1], and Pump Station	5.73	52.52	40.07	0.03	7.75	3.51
Pipeline Single Segment Maximum	2.28	23.71	15.22	0.00	4.39	1.72
Maximum Daily Emissions (Pipeline Segment 1 and 2, Storage Tank, and Pump Station)	6.06	60.18	43.09	0.03	10.25	4.30
BAAQMD Thresholds[2]	54	54	-	-	82	54.00
Significant Construction Emissions	NO	YES	-	-	NO	NO
Mitigated Pipeline Segment 1 and 2, Storage Tank, and Pump Station (Phased Maximum)	5.73	52.52	41.06	0.03	7.76	3.51
BAAQMD Thresholds[2]	54	54	-	-	82	54
Significant Construction Emissions	NO	NO	-	-	NO	NO
Maximum Daily Operation Emissions (lbs/day)						
	ROG	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Pipeline	-	-	-	-	-	-
Milpitas Storage Tank and Pump Station	0.37	0.00	0.00	0.00	0.00	0.00
Milpitas Pump Stations (Sum for 3 Pump Stations)	0.14	0.00	0.00	0.00	0.00	0.00
Power Generation Emissions	NA	2.20	NA	0.12	NA	NA
Total	0.51	2.20	0.00	0.12	0.00	0.00
BAAQMD Thresholds[1]	54	54	-	-	82	54
Significant Operation Emissions	NO	NO	-	-	NO	NO

[1] Represents one month overlap of segments when maximum emissions would occur.
[2] CEQA Guidelines (BAAQMD 2010)

Table 3.3-2: Annual Construction and Operational Emissions

Overall Annual Construction Emission (tons/year)						
	ROG	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Pipeline Segment 1 (Mar 2017-Mar 2018)	0.23	2.23	1.54	0.00	0.33	0.15
Pipeline Segment 2 (Sep 2017-Jun 2018)	0.20	1.90	1.31	0.00	0.26	0.12
Pipeline Segment 3 (Jun 2018-Mar 2019)	0.20	1.91	1.33	0.00	0.26	0.12
Pipeline Segment 4 (Mar 2019-Mar 2020)	0.19	1.70	1.56	0.00	0.30	0.12
Pipeline Segment 5 (Mar 2020-Dec 2020)	0.15	1.39	1.26	0.00	0.23	0.10
Storage Tank and Pump Station (2018)	0.06	0.54	0.41	0.00	0.04	0.03
Storage Tank and Pump Station (2019)	0.02	0.16	0.15	0.00	0.02	0.01
Pump Stations (Sum for 3 Pump Stations)	0.10	1.00	0.76	0.00	0.09	0.05
Worst-Case Year	0.49	4.67	3.25	0.00	0.63	0.30
Federal General Conformity Thresholds[2]	100	100	100	100	100	100
Significant Construction Emissions	NO	NO	NO	NO	NO	NO
Annual Operation Emission (tons/year)						
	ROG	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Pipeline	-	-	-	-	-	-
Storage Tank and Pump Station	0.07	0.00	0.00	0.00	0.00	0.00
Pump Stations (Sum for 3 Pump Stations)	0.01	0.00	0.00	0.00	0.00	0.00
Power Generation Emissions	NA	0.40	NA	0.02	NA	NA
Total	0.08	0.40	0.00	0.02	0.00	0.00
BAAQMD Thresholds[1]	10	10	-	-	15	10
Federal General Conformity Thresholds[2]	100	100	100	100	100	100
Significant Construction Emissions	NO	NO	NO	NO	NO	NO

[1] CEQA Guidelines (BAAQMD 2010)
[2] USEPA 40 CFR § 93.153(b)

a) The BAAQMD recognizes that construction equipment emits ozone precursors, but indicates that such emissions are included in the emission inventory that serves as the basis for regional air quality plans. Therefore, the proposed project's construction equipment exhaust emissions are not expected to prevent attainment or maintenance of the ozone, $PM_{2.5}$ and PM_{10} standards within the Bay Area.

The emissions reduction strategies in the *2010 Clean Air Plan* and the *2005 Bay Area Ozone Strategy* were developed, in part, based on regional population, housing, and employment projections prepared by the Association of Bay Area Governments (ABAG). The proposed project would not facilitate growth in the SFBAAB as it would not generate housing or substantial employment opportunities leading to increased population. The proposed project would not require additional full time staff. As such, the proposed project would be consistent with the assumptions contained within the *2010 Clean Air Plan* and the *2005 Bay Area Ozone Strategy* and would not conflict with or obstruct implementation of those plans. Impacts would be less than significant, and no mitigation would be required.

With respect to conformity with the Federal CAA, as shown in **Table 3.3-2,** the proposed project's potential emissions are below the General Conformity thresholds and are well below 10

percent of the area's inventory specified for each criteria pollutant designated non-attainment or maintenance for the Bay Area. As such, further general conformity analysis is not required.

b) *Construction*

The proposed project's construction activities would generate dust and criteria pollutant emissions that could, but are not expected to, exceed BAAQMD standards. Construction of the proposed pipeline, storage tank and four pump stations would generate approximately 44,600 cubic yards of excavated soils, and would require approximately 32,000 cubic yards of backfill to be imported. Assuming a truck capacity of 10 cubic yards per truckload, this would total approximately 4,460 truck round trips (truck trips) over the three years and nine months of construction. Pipeline construction would proceed at a rate of approximately 150 feet per day. The pipeline would be installed primarily by open cut trenching, with up to four trenchless portions in Segments 1 and 5. For emissions modeling purposes, the trenchless portion was considered to be open cut trenching.

The air quality modeling assumed that excavation activities would require an average of 7 truck trips per day, 5 days per week, over portions of the 4-month schedule. Additional incidental truck trips would be necessary for delivery of materials and workers. The 2010 BAAQMD thresholds shown in **Table 3.3-1** were used in this analysis for determination of impact significance.

Construction of the proposed project based on the timeline presented in **Table 2-4** would result in simultaneous construction of some of the project components. **Table 3.3-1** shows anticipated criteria pollutant emissions that would be generated from implementation of the proposed project. Construction activities would generate dust on a temporary and intermittent basis. Because residential uses occur along the proposed pipeline alignment, unmitigated fine particulate matter (PM_{10}) emissions could result in significant local effects. The 2010 BAAQMD guidelines recommended quantitative construction thresholds, and although those thresholds were withdrawn by BAAQMD, quantitative construction thresholds are consistent with guidance provided by other air districts in California and have been adopted by the City of Milpitas. Thus, to reduce potentially significant local effects from fine particulate matter to less-than-significant levels, **Mitigation Measure AIR-1**, which includes the BAAQMD basic control measures would be required.

As shown in **Table 3.3-1**, construction of the proposed project would not exceed the thresholds for any criteria air pollutants with the exception of NOx. Construction would result in over 60 pounds per day of NOx emissions, which exceeds the threshold of 54 pounds per day. Implementation of **Mitigation Measure AIR-2** would reduce potentially significant NOx effects to less-than-significant levels by requiring the construction of Segment 1 and Segment 2 of the pipelines to overlap no more than 3 months to ensure the grading and excavation phases do not overlap.

Implementation of **Mitigation Measures AIR-1** and **AIR-2** would ensure that the proposed project's construction emissions would not violate air quality standards and would not significantly contribute to an existing or projected air quality violation. Construction impacts would be less-than-significant with mitigation.

Mitigation Measure AIR-1: Dust Abatement Program

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments.

The City shall require the construction contractor(s) to implement a dust abatement program that includes, but is not necessarily limited to, the following BAAQMD-recommended measures as needed to control dust:

- Water[3] all active construction areas at least twice a day.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, exposed stockpiles, and staging areas at construction sites.
- Sweep daily (with water or vacuum sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep streets daily (with water or vacuum sweepers) if visible soil material is carried onto adjacent public streets.

Mitigation Measure AIR-2: Construction Schedule Phasing

The City shall include provisions in the bid specifications to phase the construction activities to comply with the following scheduling restrictions:

Project Component	Construction Restriction
Pump Station	Construct one at a time
Segment 1 and 2	No more than 3 months of overlap

Operation

Operational activities would include routine inspection and maintenance of the proposed storage tank, pump stations, and pipelines. Pumping recycled water from the existing SBWR program to new recycled water customers would require energy and generate indirect emissions from off-site Pacific Gas and Electric (PG&E) power generation facilities. Mobile operational emissions are not anticipated as no new employees are anticipated. As shown in **Table 3.3-1** and **Table 3.3-2**, daily and annual operational emissions would be minimal. Operation of the proposed project facilities would not result in the violation of any air quality standard or contribute substantially to an existing or projected air quality violation. Operational impacts would be less than significant, and no mitigation is required.

c) The 2010 BAAQMD CEQA Guidelines have set forth significance thresholds for four criteria pollutants to determine whether emissions of that pollutant would have a cumulative impact on air quality. If a project exceeds the identified project-level significance thresholds, its emissions would also be cumulatively considerable.

As demonstrated above, the proposed project's construction emissions of NOx, ROG, PM_{10}, and $PM_{2.5}$ would be less than significant with mitigation and less than significant for operations. The project emissions of SO_2 are negligible. The proposed project's emissions of CO are relatively minor and primarily limited to construction activities and thus would be local and temporal in impact and duration. CO is a less significant contributor to ozone formation than NOx and ROG. Given that operational emissions are below the threshold for NOx and ROG, impacts would be less than significant. The proposed project therefore would not result in a cumulatively considerable net increase of any criteria air pollutants.

[3] The City of Milpitas Municipal Code Title VIII, Chapter 6, Section 5 prohibits the use of potable water for construction purposes including dust control and compaction. The City requires pre-approval for construction water customers, which includes a recycled water meter for use with the City's fill station sites.

d) The storage tank and pump station site would be located in the Cardoza Park parking lot in the eastern half of the City of Milpitas just east of I-680, and the recycled water pipelines would be constructed in the same area primarily within the bounds of I-680, Evans Road, Jacklin Road, Piedmont Road, and Landess Avenue. Three other pump stations would be located at: Old Calaveras Road approximately 450 feet before turning into Kennedy Drive, at the intersection of Calaveras Ridge Drive and Country Club Drive, and on the west side of Ben Rogers Park.

Sensitive receptors are those locations where sensitive populations are commonly found. Sensitive populations include children, seniors, people with health conditions, and other members of the general public that are at increased risk of negative health effects. Common sensitive receptors include homes, schools, hospitals, retirement and nursing facilities, and child care centers

The proposed pipeline alignment is located within 0.25 miles of Alexander Rose Elementary School, Robert Randall Elementary School, Day Star Montessori School, Jacklin Commons KinderCare, William Burnett Elementary School, John Sinnott Elementary School, Foothill SDA Elementary School, Milpitas Christian Preschool Milpitas Montessori School, Merryhill Elementary and Middle School, Rancho Milpitas Middle School, Calveras Hills High School, Calaveras Montessori School, Milpitas Unified School District, a number of parks, and residences. The exhaust of large, heavy-duty diesel-powered equipment, which would be used during construction, is known to contain PM_{10}, which is a reference pollutant used to correlate with carcinogenic risk. Because the proposed project includes installation of pipelines near residences and other sensitive receptors, the proposed project could potentially expose sensitive receptors to PM_{10} and NO_x emissions. However, as construction would be limited in duration and scale, sensitive receptors would not be exposed to diesel emissions for a prolonged period. In addition, implementation of standard dust control measures and construction phasing would be required (see **Mitigation Measure AIR-1** and **AIR-2**), so that criteria pollutant emissions and associated impacts to sensitive receptors would be reduced. Thus, the proposed project is not anticipated to emit carcinogenic or toxic air contaminants (TACs) that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million. Therefore, impacts would be less than significant.

e) Sources that may emit construction-related odors generally include architectural coatings, solvents, and diesel powered on- and off-road equipment. Odors may be emitted during operational activities if diesel-powered equipment is used. Further, ROG, while diverse in nature, are known to include odorous compounds.

Due to the nature of construction activities and the relatively small footprint of the various construction sites for the proposed project, there would be few pieces of diesel-powered equipment operating simultaneously during construction. Further, operations would not be anticipated to require the use of diesel-powered equipment.

There are no potential new sources of odor from the proposed project operations. As shown in **Table 3.3-1** and **3.3-2**, ROG emissions associated with operation and construction of the proposed project would be minimal. The proposed project would not create objectionable odors and would have a less than significant impact.

3.4 Biological Resources

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Discussion

Environmental Setting

The proposed project would be located mostly within existing paved roads in developed areas of Milpitas and is surrounded by residential, commercial, and recreational uses. The proposed pipelines would also be located adjacent to or cross parks that include Cardoza Park, Foothill Park, Murphy Park, Creighton Park, Robert E. Brown Park/Yellowstone Park, Ben Rogers Park, and Hillcrest Park.

A Biological Resources Assessment (BRA) was prepared for the proposed project area and is provided in **Appendix B**. A field survey of the project area and associated biological resources was conducted in December 2015; the complete Biological Resources Assessment, prepared by Rincon Consultants for the proposed project is available for public review online or at the City of Milpitas Planning Department (Rincon Consultants 2016a). The following discussion and analyses is based on the BRA prepared for the proposed project.

Developed lands include areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Segments 1, 2, 4, and 5 were identified as being located in developed lands. Developed lands within the project area include paved roads(s) and associated landscaping. The vegetation in these areas is typical of urban areas and includes ornamental trees, shrubs, and turf adjacent to existing roadways, sidewalks, and buildings.

Vegetation Communities

Most of the proposed project area is located in or adjacent to existing paved roads. However, some portions of the project area support vegetation. Non-native grasslands occur along portions of Segment 3, specifically between Calaveras Ridge Drive and Calera Creek Heights Road on Country Club Drive, and between Fanyon Street and the end of Segment 3 on Kennedy Drive. One special-status vegetation alliance has been mapped along Segment 3 between Evans Road and its terminus on Old Calaveras Road. This includes Coast Live Oak Woodland (*Quercus agrifolia* Alliance) which primarily occurs on north-facing slopes and in drainages along the roadside, and is surrounded by non-native grasslands. Stands can be dominated by coast live oak with few understory species, or in mixed woodlands with western sycamore (*Platanus occidentalis*) and California sagebrush (*Artemisia californica*), and/or ornamental species.

Special Status Plant Species

No rare or sensitive plants were identified along the proposed project alignment. However, two California Natural Diversity Database (CNDDB) records of special status plant species within 5 miles of the project area were identified. One CNDDB record of fragrant fritillary (*Fritillaria liliacea*) is located at Alum Rock Park in the City of San Jose and is approximately 2.9 miles southeast of the proposed project area. This occurrence is presumed extant but is based on a 1941 herbarium specimen and was not relocated in a 1994 survey. Fragrant fritillary could potentially occur on the project area in oak woodlands and grasslands. One CNDDB record of arcuate bush mallow (*Malacothamnus arcuatus*) is located approximately 4.6 miles west of the proposed project area. It was recorded along Alviso Slough in 1955 and is presumed extant; it potentially occurs in the project area in oak woodlands.

Special Status Animal Species

A CNDDB database search documents 52 special status plants, animals, and vegetation communities within a five-mile radius of the proposed project area. Based on review of the BRA and the selected alignments for the proposed project there would be a potential for 11 special status animal species to occur in the project area. Three of the following species are listed under the Federal Endangered Species Act and/or California Endangered Species Act and have the potential to occur in the project area:

- California tiger salamander – a federally and state listed threatened species
- California red-legged frog – a federally listed threatened species, a state species of special concern
- Foothill yellow-legged frog – a state species of special concern
- Western pond turtle – a state species of special concern
- Alameda whipsnake – a federally and state listed threatened species
- Golden eagle – a federally protected species

- Burrowing owl – a state species of special concern
- White-tailed kit – a federally protected species
- Northern harrier – a state species of special concern
- Tricolored blackbird – a federal candidate endangered species, a state species of special concern
- Pallid bat – a state species of special concern
- Nesting birds – in addition to above, nesting birds are afforded protection under the California Fish and Game Code and Migratory Bird Treaty Act (MBTA).

The proposed project area does not fall within critical habitat for California red-legged frog or western pond turtle as designated by the United States Fish and Wildlife Service (USFWS). Each of the special status species and potential to occur in the proposed project area a described below.

California tiger salamander (CTS)

Suitable breeding habitat for this species does not occur within the project area, but is documented within 1.2 miles of the project area. CTS have been documented migrating up to 1.0 mile from breeding sites to refugia sites, and California ground squirrels and small mammal burrows adjacent to the project area could provide refugia for dispersing CTS during the non-breeding migration periods.

California red-legged frog (CRLF)

Creeks adjacent to the project area could provide suitable breeding habitat and migration corridors for CRLF. CRLF have been documented migrating up to 2 miles from breeding sites to refugia sites and may cross the proposed alignment while dispersing to breeding or foraging habitat.

Foothill yellow-legged frog (FYLF)

The project area does not provide breeding habitat for this species, but creeks adjacent to the area could provide breeding habitat and foothill yellow-legged frogs could be distributed throughout upland grasslands on the project area.

Western pond turtle (WPT)

It is unlikely that the species would be found in the project area due to lack of observation records within 3 miles of the project. However, creeks in the vicinity of the project can provide suitable habitat for this species, depending on water levels throughout the year.

Golden eagle

Large undeveloped grasslands are present adjacent to the northern portions of the project area that are suitable foraging habitat for this species.

Burrowing owl

Mammal burrows that were the appropriate size for burrowing owls were observed in the project area during the December reconnaissance surveys. Though a formal survey was not conducted, the burrows were evaluated for the presence of burrowing owl sign (e.g. pellets, white wash) but no sign was observed. A complex of burrows is located at the Summitpointe Golf Course on a slope with non-native grasses that is adjacent to a small coast live oak stand and in other non-native grassland locations throughout the project area.

White-tailed kite

Mature trees in the project area could potentially provide nesting habitat for this species. The remnant coast live oak and valley oak woodlands, and mixed riparian habitats in the project area provide nesting habitat and grasslands in the project area provide foraging habitat. A total of three white-tailed kites were observed during the December reconnaissance surveys. White-tailed kites are fairly adapted to urban

environments and could be present either nesting or foraging in and immediately adjacent to the project area.

Northern harrier

Northern harriers occur in open areas, particularly in grasslands, wet meadows and marshes, and require larger areas for foraging. Nesting and foraging habitat occur in the vicinity of Segment 3.

Tricolored blackbird

Even though the nearest occurrence of tricolored blackbird documented in the CNDDB is approximately 3.5 miles northwest of the project area, suitable foraging habitat for this species occurs adjacent to areas of Segment 3.

Pallid bat

Pallid bats may potentially roost in rock outcrops or trees on the project area. Non-native grasslands on the project area potentially provide limited foraging habitat.

Nesting birds

Nesting birds, in addition to those mentioned above, are afforded protection under the California Fish and Game Code (CFGC) and/or MBTA and have the potential to occur within the project area. Landscaped areas with mature trees and shrubs, ruderal areas with grassland vegetation or cleared areas, and oak woodland and grassland immediately adjacent to the project area all provide suitable nesting habitat for a wide variety of birds.

Wildlife Movement

Segment 3 follows existing roads, some of which are within undeveloped areas, the entirety of which is within a mapped California Essential Habitat Connectivity (CEHC) area. Woodlands and riparian corridors along creeks are also expected to be used as migration corridors by local wildlife.

Potentially Jurisdictional Areas

The project area is located within the Coyote Watershed. The pipeline alignment for the proposed project would cross drainages at Berryessa Creek at Los Coches Street and Ames Avenue. At both of these locations, the creek is channelized, and is approximately 20 feet wide at the Los Coches Street crossing and 6 feet wide at the Ames Avenue crossing. Horsetail (*Equisetum* sp.) and potentially other hydrophytic vegetation were observed along the channel during the field survey (Rincon 2016).

Habitat Conservation Plans

A portion of Segment 3 between Evans Road and its terminus at the existing Ed Levin/Spring Valley raw water meter on Old Calaveras Road is within the area covered by the Santa Clara Valley Habitat Conservation Plan (HCP). The HCP is intended to streamline state and federal permitting for public and private projects, while offering a comprehensive and effective way to address impacts of those projects on endangered and threatened species and their habitats. Segment 3 within the HCP area includes areas defined in the Santa Clara Valley HCP as tri-colored blackbird survey areas, and falls within Fee Zone B. For impacts within unincorporated Santa Clara County, the City of Milpitas, as a Participating Special Entity, would be required to go through the Santa Clara Valley HCP review process, meet HCP conditions for surveys and reporting, pay required fees, and comply with pertinent HCP impact avoidance measures. The City would proceed as if they were a typical private developer, and submit the Private Application Form to the Habitat agency for review.

Impacts

a) Based on a search of the CNDDB records of special status species within five miles of the project area, 11 special status animal species and two special status plant species have the potential to occur in the project area. Most of the proposed project would be constructed within developed

areas, however portions of the project would be in the vicinity of habitat that could support listed species. The BRA determined that the project area lacks breeding habitat for most of these special status species except for California tiger salamander and western pond turtle, and five special status birds.

Special Status Animal Species

No suitable habitat for special status animal species were identified for Segments 1, 2, 4 and 5 (excluding migratory birds which are discussed under Impact (c), therefore no impacts to special status wildlife are expected to occur in these segments as a result of the proposed project. Proposed project activities associated with Segment 3 could impact federal and/or state listed species such as CRLF, Alameda Whipsnake, CTS, Western burrowing owl, FYLF, and WPT. Roosting pallid bats could also be potentially impacted, specifically in areas where grading of rocky outcrops or removal of trees would be required. This would be a potentially significant impact. Implementation of **Mitigation Measure BIO-1** would require mandatory Worker Environmental Awareness Program training and avoidance measures, and **Mitigation Measures BIO-2** through **BIO-5,** requiring specific additional measures for each special status animal, would reduce Segment 3 impacts to special-status animals to a less-than significant level.

Special Status Plants

No suitable habitat for special status plants was identified for Segments 1, 2, 4 and 5, therefore no impacts to special status plant species are expected to occur in these segments as a result of the proposed project. The proposed project construction activities for Segment 3 could have potential direct impacts on two special status (but non-listed) plant species through direct removal or as a result of other construction activity, resulting in a potentially significant impact. Implementation of **Mitigation Measure BIO-6,** requiring special status plant surveys prior to ground-disturbing activities, would reduce potential impacts to special-status plants to a less-than significant level.

Mitigation Measure BIO-1: General Requirements for Special Status Species

The following measures shall be implemented for the construction of Segment 3:

- Prior to start of project construction activities, a qualified biologist shall conduct mandatory Worker Environmental Awareness Program (WEAP) training to familiarize all personnel conducting project activities with the identification and life-history of special status wildlife and plants.
- A qualified biologist shall conduct a survey within 7 days of initial ground disturbing activities within suitable habitat for special status species. The survey area shall include the project area and a 150-foot buffer.
- All work areas within 150 feet of suitable aquatic habitat shall be flagged for monitoring during construction.
- Off-road travel of project-related vehicles and construction equipment shall be restricted to designated construction areas.
- All trash shall be removed from the site daily and disposed of properly to avoid attracting potential predators to the site.
- No pets shall be permitted on site during project activities.
- All vehicles and equipment shall be in good working condition and free of leaks. All leaks shall be contained and cleaned up immediately to reduce the potential or soil/vegetation contamination.
- All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from riparian habitat or water bodies and in a location from which

a spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water).

- The number of access routes, size of staging areas, and the total construction area shall be limited to the minimum necessary to achieve the project goals.
- The biologist(s) shall maintain sufficiently detailed records of any individual observed, captured, or relocated, including size, coloration, any distinguishing features and photographs (preferably digital) to assist in determining whether translocated animals are returning to the project area.
- No herbicide shall be used within 50 feet of water ways.

Mitigation Measure BIO-2: California Red-legged Frog, Alameda Whipsnake, and California Tiger Salamander Protection Measures

In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3:

- If feasible, initial ground disturbing activities adjacent to suitable habitat for these species shall be conducted between May 1 and October 31 during dry weather conditions to minimize the potential for encountering CRLF, Alameda whipsnake, and CTS. Work shall be restricted to daylight hours.
- A focused habitat assessment to determine the potential for CRLF, Alameda whipsnake, and CTS shall be conducted by a qualified biologist for all areas within 150 feet of the Segment 3 alignment that may contain suitable habitat for the species. If suitable habitat is present and would be directly impacted by the project, protocol-level surveys to determine presence or absence of CRLF, Alameda whipsnake, and CTS are recommended. According to the CTS survey protocol (USFWS, 2003), a drift fence study conducted during each of two fall/winter rainy seasons with aquatic sampling in spring between the two fall/winter is the primary method used to study CTS in upland habitats.
- A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that contain suitable habitat for Alameda whipsnake, suitable upland habitat for CRLF or CTS or within 150 feet of potential CRLF or CTS aquatic habitat.
- If CRLF, Alameda whipsnake, and CTS are found to be present, the USFWS (for CRLF and CTS) and CDFW (for CTS and Alameda whipsnake) shall be consulted to determine the appropriate course of action.
- To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times.

Mitigation Measure BIO-3: Western Burrowing Owl Protection Measures

In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3:

- Prior to the commencement of construction activities within suitable habitat for western burrowing owl, a qualified biologist shall conduct protocol surveys in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation within all areas of the project area that contain suitable habitat for the species. The survey methodology shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any

potential burrows with fresh burrowing owl sign or presence of burrowing owls. Copies of the survey results shall be submitted to CDFW.

- If burrowing owls are detected on site, no ground-disturbing activities, such as vegetation clearance or grading, shall be permitted within a buffer of no fewer than 100 meters (330 feet) from an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the non-breeding (winter) season (September 1 to January 31), ground-disturbing work can proceed as long as the work occurs no closer than 50 meters (165 feet) from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.
- If burrow avoidance is infeasible during the non-breeding season or during the breeding season (February 1 through August 31), where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, a qualified biologist shall implement a passive relocation program in accordance with Appendix E1 (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation.
- If passive relocation is required, a qualified biologist shall prepare a Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation and for review by CDFW prior to passive relocation activities. The Burrowing Owl Exclusion and Mitigation Plan shall include all necessary measures to minimize impacts to burrowing owls during passive relocation, including all necessary monitoring of owls and burrows during passive relocation efforts. The Mitigation Land Management Plan shall include a requirement for the permanent conservation of off-site Burrowing Owl Passive Relocation Compensatory Mitigation.
- If passive relocation is required, the City shall implement the Mitigation Land Management Plan and permanently conserve off-site habitat suitable for burrowing owl at a ratio of 15 acres per passively relocated burrowing owl pair, not to exceed the size of the final project footprint. Land identified to mitigate for passive relocation of burrowing owl may be combined with other off-site mitigation requirements of the project if the compensatory habitat is deemed suitable to support the species. The Passive Relocation Compensatory Mitigation plan shall be approved by CDFW. If the project is located within the service area of a CDFW-approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits in lieu of placing off-site habitat into a conservation easement, if acceptable to the CDFW.
- The City shall mitigate for the loss of acres of burrowing owl foraging habitat by providing habitat management lands at a ratio of ten acres per burrow identified within the final project footprint. These lands must be on suitable habitat for burrowing owl within the Santa Clara County HCP prior to completion of the project. Land identified to mitigate for foraging habitat may be combined with other offsite mitigation requirements of the proposed project if the compensatory habitat is deemed suitable. A Foraging Habitat Compensatory Mitigation Plan describing the proposed mitigation, including suitability for meeting the objectives of the mitigation, and methods for preserving the mitigation values of the habitat shall be provided to the City of Milpitas and CDFW for approval.

Mitigation Measure BIO-4: Foothill Yellow-legged Frog Protection Measures

In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3 only:

- A focused habitat assessment to determine the potential for FYLF shall be conducted by a qualified biologist for all areas within 150 feet of the project alignment that may contain suitable habitat for the species.
- If the focused habitat assessment finds no suitable aquatic habitat for this species occurs within 150 feet of the proposed project, no further action is necessary
- If suitable aquatic habitat is for this species is identified within 150 feet of the proposed project a qualified biologist shall conduct a survey within 48 hours of initial ground disturbing activities within FYLF habitat. The survey area should include all potential suitable habitat in the project area and suitable habitat located within a 100 feet of the project area.
    - If an FYLF is encountered, all activities within 100 feet of the species shall cease until the species leaves the site. If the species has because entrapped in the project area, it will be safely relocated by a qualified biologist 100 feet from the project area.
    - To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force should be followed at all times.
- A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that are suitable upland habitat for FYLF and within 150 feet of potential aquatic habitat.

Mitigation Measure BIO-5: Roosting Pallid Bats Protection Measures

In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3:

- A qualified biologist shall conduct a pre-construction survey for roosting pallid bats. The survey shall be conducted within 50 feet of project activities within 15 days prior to any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities).
- If active maternity roosts or non-breeding bat hibernacula are found in trees scheduled to be removed, relocation or other measures shall be determined in consultation with the County and/or CDFW, as appropriate, and a qualified biologist.

Mitigation Measure BIO-6: Special Status Plant Surveys

The following measures shall be implemented for the construction of Segment 3:

- Prior to the commencement of any ground-disturbing activities, surveys for special status plants (fragrant fritillary [*Fritillaria liliacea]* and arcuate bush mallow [*Malacothamnus arcuatus])* shall be conducted in suitable habitats within the proposed project impact area. The surveys shall be conducted in general accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009), California Native Plant Society *Inventory of Rare and Endangered Plants of*

California (sixth edition, 2001), and U.S. Fish and Wildlife Service *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (2000) protocols for special status plant surveys. The survey area shall be traversed on foot by walking meandering transects to ensure thorough coverage of the area; surveys shall be timed to ensure adequate coverage of the spring and summer bloom periods; and the surveys shall be floristic in nature (meaning all plant species observed shall be identified to a sufficient level to determine rarity). If no special status plant species are observed during the focused surveys, no further action shall be required.

- If special status plants are observed, all special status plant species identified on site shall be mapped onto a site-specific aerial photograph and their location shall be recorded with a Global Positioning System (GPS). Field data shall be recorded on the population size, cover, and associated species. The results shall be evaluated in the context of known local populations (the definition of local population should be determined by a qualified botanist on a species by species basis) for any non-listed special status plant species to determine the extent of impacts to the local population. If impacts are determined to affect less than 10% of the local population of any non-listed special status plant species, no further measures are necessary. If impacts are determined to affect more than 10% of the local population of any non-listed special status plant species the following measure should be implemented.
- If feasible, measures shall be implemented to avoid special status plants within the limits of disturbance. If special status plants cannot be avoided, a qualified biologist shall prepare a mitigation and monitoring plan in consultation with wildlife agencies. If a state-listed plant species would be impacted, the restoration plan shall be submitted to CDFW for review and approval. If a federally listed plant species would be impacted, the restoration plan shall be submitted to USFWS for review and approval. The Special Status Plant Mitigation and Monitoring Plan (Plan) shall be developed by a qualified biologist. The Plan shall include at a minimum the following: the species and number of individuals to be relocated; a map depicting the relocation planting area; replanting site preparation methods; irrigation and weed control methods; schedule of replanting and monitoring activities; success criteria; reporting requirements; and a list of suitable contingency measures in the event of relocation failure.

b, c) One special-status vegetation community has been mapped in the project area – which includes coast live oak woodland along Segment 3 between Evans Road and its terminus on the north-facing slopes and in drainages along Old Calaveras Road. The proposed pipeline alignment and construction activities would be located within the existing roadway and would not result in removal or impact to the coast live oak woodland. Construction activities could result in impacts to the drainages and slopes if soil or other materials are sidecast or not contained within the construction site and fall into the drainage area. These potential impacts would be avoided by implementing sediment and contaminant best management practices (BMPs) as required under the Storm Water Pollution Prevention Plan (SWPPP) and implementation of **Mitigation Measure BIO-1** for general construction management practices would reduce impacts to a less-than-significant level.

Segment 1 of the proposed project would cross a drainage at Berryessa Creek at Los Coches Street and Segment 5 would cross a drainage at Berryessa Creek at Ames Avenue. Berryessa

Creek drains directly to the San Francisco Bay and is expected to be subject to the jurisdiction of the San Francisco Regional Water Quality Control Board (RWQCB) and United States Army Corps of Engineers (USACE). Based on the BRA, Berryessa Creek contains areas with dense riparian woodlands. As described in *Chapter 2, Project Description*, construction at these locations would use trenchless methods. No work would occur within the creek; thus there would be no loss of riparian habitat or waters of the U.S. from installation of the pipeline at Berryessa Creek. However, CDFW does consider trenchless crossings to be within their jurisdiction and would require a Streambed Alteration Agreement because of the slight potential for indirect impacts as a result of "frac-out" (uncontrolled release of drilling fluids into the environment). The areas adjacent to the Berryessa Creek crossings are developed with roadways and contain no habitat. Construction activities could result in impacts to the creek if soil or other materials are sidecast or not properly contained within the trenchless construction sites and fall into the creek. These potential impacts would be avoided by implementing sediment and contaminant BMPs as required under the SWPPP, implementation of **Mitigation Measure BIO-1** for general construction management practices, and implementation of **Mitigation Measure HYD-1** to contain risk of frac-out, which would reduce impacts to a less-than-significant level.

d) Segments 1, 2, 4, and 5 do not fall within a mapped CEHC. A portion of Segment 3 falls within a mapped CEHC east of Evans Road. Woodlands along creeks are also expected to be used as migration corridors by local wildlife. Project activities may temporarily displace wildlife during construction; however, the proposed project would involve the installation of pump stations and underground pipelines along existing roads, and would not change the function of the area to serve as wildlife movement corridors. Given the disturbed nature of the site, the predominantly urban setting of the project area, and the placement of the proposed project components within existing roadways, implementation of the proposed project is not expected to interfere with wildlife movement.

Landscaped areas with mature trees and shrubs, ruderal areas with grassland vegetation or cleared areas, and oak woodland and grassland immediately adjacent to the project area all provide suitable nesting habitat for a variety of birds. All alignments of the proposed project have potential to result in direct impacts to nesting birds, including raptors such as white-tailed kite, passerine species such as tri-colored blackbird, and other species. Construction of the proposed project could require removal of trees where the pipeline crosses parks, and removal of several trees in the Cardoza Park parking lot for the proposed storage tank. Birds habituated to urban disturbance are capable of occupying the habitats that these trees provide, and there is the potential for nesting birds to be present in these trees and in landscaped areas adjacent to the project area. Removal of the trees or disturbance of nests during the nesting season could result in nest abandonment, destruction, injury or mortality of nestlings, and disruption of reproductive behavior. Birds and active nests are protected under the federal Migratory Bird Treaty Act, and disturbance to nesting birds would be considered a potentially significant impact. To avoid impacts to nesting migratory birds, **Mitigation Measure BIO-7** would reduce potential impacts to a less-than-significant level. If construction occurs outside of the bird breeding season September 1 and January 31, preconstruction surveys are not required.

Mitigation Measure BIO-7: Preconstruction Nesting Bird Surveys

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments.

- If construction occurs within the bird breeding season (February 1 through August 31), then no more than seven days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird and raptor pre-construction survey shall be conducted by a qualified biologist within the disturbance

footprint plus a 300-foot buffer, where feasible. If the project is phased, a subsequent pre-construction nesting bird and raptor survey may be required prior to each phase of construction within the project area.

- Pre-construction nesting bird and raptor surveys shall be conducted during the time of day when birds are active and should be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors on site and within the designated vicinity. A report of the nesting bird and raptor survey results, if applicable, shall be submitted to the lead agency for review and approval prior to land use clearance for grading.
- If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for song birds, and up to 250 feet for raptors depending upon the species and the proposed work activity shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No ground disturbance shall occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed and all the young have fledged.

e) For all segments located within the City of Milpitas, potential impacts to trees would be subject to the City of Milpitas Tree Maintenance and Protection Ordinance. In the portion of Segment 3 that extends into the County of Santa Clara to its terminus, potential impacts would be subject to the County's Tree Preservation Ordinance. Segment 3 within the County of Santa Clara would be constructed within the existing roadway and would not require removal of trees. Therefore, the County of Santa Clara's ordinance is not applicable and not discussed further.

The City regulates the removing and pruning trees in or adjacent to streets and within easements, in rights-of-way and other public places within the City and on private property. The City's Municipal Code (Title X, Chapter 2) defines protected trees as:

- Trees with a 56 inch diameter or more, measured 54 inches from the ground located on residential property;
- Trees with a 37 inch diameter or more, measured 54 inches from the ground located on developed commercial or industrial, vacant, undeveloped, or underdeveloped property;
- All heritage trees or groves. A heritage tree or grove has historical significance, special character or community benefit, and is specifically designated by resolution of the City Council.

A permit is required from the City Public Works Department for the removal or pruning of a protected tree. A permit is not required for removing less than 10 percent of the tree canopy, sucker growth, watersprouts, and low hanging branches less than 4 inches in diameter causing obstructions.

The proposed pipelines within roadways would not require the removal of trees. Other components of the proposed project could result in impacts to protected trees. Three of the proposed pump stations would be located outside of the roadway, but within the right-of-way, where trees may be present. The proposed storage tank and pump station would require removal of several trees within the Cardoza Park parking lot. Additional areas of tree removal would include areas in City parks crossed by pipelines. **Mitigation Measure BIO-8** would require pre-construction assessment for protected trees, preparation of a tree preservation plan, and tree removal permitting and replacement plan, if applicable. Implementing this mitigation measure would reduce conflicts with local policies or ordinances to a less-than-significant level.

Mitigation Measure BIO-8: Protected Trees

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments where trees are to be removed.

- Prior to obtaining a permit from the City Public Works Department, a tree survey shall be conducted by an International Society of Arboriculture (ISA) Certified Arborist/City Qualified Arborist for protected trees that occur within 25 feet of the impact area. The tree survey shall identify protected trees, including protected oak trees and woodlands.
- Removal of protected trees shall be compensated by the following, in accordance with the City's Tree Maintenance and Protection Ordinance:
    - Reimbursement to the City Public Works Department for the full costs of time and materials to prune, remove and/or replace trees within the public right-of-way or tree planting easements;
    - Reimbursement to the City Public Works Department for the value of the removed or damaged tree as determined by an arborist certified by the International Society of Arboriculture utilizing the current edition of the "Guide for Plant Appraisal, International Society of Arboriculture"; or
    - A combination of the above terms as determined by the Public Works Director.

f) Segments 1, 2, 4, and 5 do not fall within an HCP area. A portion of Segment 3 that is located within Santa Clara County and terminating at the existing Ed Levin/Spring Valley raw water meter on Old Calaveras Road is within the Santa Clara Valley HCP. Segment 3 within the HCP area includes areas defined in the Santa Clara Valley HCP as tri-colored blackbird survey areas, and falls within Fee Zone A. There are no other adopted habitat or natural community conservation plans within the proposed project area.

Due to the nature and extent of proposed construction activities, it is possible that construction of Segment 3 could conflict with the provisions of the adopted Santa Clara County HCP. However, prior to commencement of construction activities, the City of Milpitas would initiate the Santa Clara Valley HCP process, including submittal of an application, payment of required fees for the disturbance of habitat within Fee Zone A, and completion of necessary surveys for tri-colored blackbird, which may result in avoidance and impact minimization requirements. Items required of the City of Milpitas for the Santa Clara Valley HCP would be completed in accordance with the extent and nature of potential impacts associated with the proposed project. Required fees would be used to further conservation efforts via habitat acquisition, creation, or enhancement, and may also be used to preserve and manage local habitat. Required surveys, avoidance, and minimization requirements for the tri-colored blackbird would also be completed in accordance with potential project-related impacts. Through payment of fees and other measures, the City of Milpitas would ensure that construction and operation of the proposed project would be completed in accordance with provisions of the Santa Clara Valley HCP, and therefore would not conflict with the plan. Impacts are considered less than significant, and no mitigation is required.

3.5 Cultural Resources

Would the Project:	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

Environmental Setting

A Cultural Resources Assessment (CRA) and a Paleontological Resources Assessment (PRA) were prepared for the proposed project area by Rincon Consultants in March 2016, and are available for public review at the City of Milpitas Planning Department (Rincon Consultants 2016b, 2016c). The CRA and PRA involved field surveys of the proposed project area, which were conducted in December 2015 to determine potential impacts to archaeological, historical, and paleontological resources within the Area of Potential Effects (APE) for the proposed project. The APE includes all areas where direct or indirect impacts may occur, including a 20-foot buffer on each side of all potential pipeline segments and an additional 75-foot buffer around the potential storage tank and pump station sites.

The CRA and PRA also involved records searches of the APE and an additional 0.5-mile buffer, including searching the cultural resource records housed at the California Historical Resources Information System (CHRIS), Northwestern Information Center (NWIC) located at Sonoma State University. The CHRIS search included a review of the National Register of Historic Places (NRHP), the California Register of Historic Places (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

Historical and Cultural Resources

The NWIC identified two historic addresses within the search radius; however, neither of the historic features are located within the proposed project alignment or within the potential storage tank and pump station sites. The NWIC also identified six previously recorded cultural resources within a 0.5-mile radius of the APE for the proposed project. Of the recorded cultural resources, none are located within a segment associated with the proposed project alignment. The CRA identifies potential concerns with a resource, identified as P-43-000167 or the Jose Maria Alviso Adobe; however, this resource is not located within the proposed project alignment as described in *Chapter 2, Project Description.*

The CRA notes that given the amount of disturbance from previous land development activities, the potential to encounter intact subsurface archaeological deposits within the APE varies from low in developed areas to moderate/high in undeveloped areas located in proximity to Segment 3. The developed area associated with the majority of the APE was noted as being heavily impacted from prior development, which has included grading and subsurface utility installations that would likely have impacted surficial archaeological deposits.

The Native American Heritage Commission (NAHC) was contacted on August 6, 2015 to request a review of the Sacred Lands File. The NAHC responded via facsimile on August 14, 2015, stating that the search of the SLF "did not indicate the presence of any sites within the APE". The NAHC provided a contact list of 11 Native American individuals or tribal organizations that may have knowledge of cultural resources in or near the proposed project APE. Rincon Consultants prepared and mailed letters to each of the NAHC-listed contacts on August 19, 2015 requesting information regarding any Native American cultural resources within or immediately adjacent to the proposed project APE. Follow-up emails were sent to each contact on November 11, 2015. Follow-up phone calls were made to each group or individual on February 4, 2016.Two Tribal representatives recommended that Native American and archaeological monitoring take place during ground disturbing activities to address concerns regarding the potential for previously undocumented resources to be unearthed during construction activities for the proposed project. No additional previously undocumented cultural resources were identified as a result of the Native American consultation. The City has not received any requests for formal consultation pursuant to Assembly Bill 52 as of the preparation of this document.

Paleontological Resources

The PRA demonstrates that the proposed project area contains four mapped units that have a high paleontological sensitivity, and could yield scientifically significant paleontological resources; Pleistocene older alluvium (Qoa) Pliocene to Pleistocene Santa Clara Formation (Tsm), middle to late Miocene Orinda Formation (Tor), and middle to late Miocene Briones Formation (TBr). Therefore, ground disturbance activities associated with construction of the proposed project have a high potential to directly disturb geologic units with high paleontological sensitivity. The paleontologically-sensitive soils are located within Segment 3 along Country Club Drive and along a small segment of Old Calaveras Road.

a, b) No known NRHP and/or CRHR listed, determined eligible, or pending properties have been identified within the various pipeline crossings or proposed sites to locate storage tanks, pump stations, and other appurtenances. It is, therefore, unlikely that unexpected discoveries of unique archaeological discoveries would occur during construction of the proposed project based on the archaeological data, as well as the disturbed nature of the proposed project area. However, a sensitive resource and historic addresses have been recorded in proximity to the APE, and concerns about potentially undiscovered cultural resources were raised by Native American tribes. **Mitigation Measures CUL-1 and CUL-2** would be implemented to address concerns raised in the Native American consultation process, as well as ensure that ground disturbing activities associated with the proposed project would not affect cultural resources. Potential impacts to historical resources and unique archaeological resources are considered less than significant with implementation of these mitigation measures.

Mitigation Measure CUL-1: Workers Environmental Awareness Program

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments.

Prior to construction of the proposed project, the City or the City's construction contractor shall retain a qualified archaeologist meeting the Secretary of the Interior's Standards for archaeology to conduct a WEAP for all construction personnel working on

the proposed project. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and notification to a qualified archaeologist in the event of unanticipated discoveries.

Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments.

In the event that archaeological resources are unearthed during construction for the proposed project, all earth disturbing work within 50 feet of the find shall be temporarily suspended or redirected until a qualified archaeologist meeting the Secretary of the Interior's Standards for archaeology has evaluated the nature and significance of the find. Evaluation of significance for the find may include the determination of whether or not the find qualifies as an archaeological site. Isolated finds do not qualify as historic properties under the National Historic Preservation Act (NHPA) or historical resources under CEQA and require no management consideration under either regulation. Should any resource(s) be identified, an evaluation of eligibility for the NRHP and CRHR may be required through the development of a treatment plan including a research design and subsurface testing through the excavation of test units and shovel test pits. After effects on the find have been appropriately mitigated, work in the area may resume. Mitigation of effects on the find may include a damage assessment of the find, archival research, and/or data recovery to remove any identified archaeological deposits, as determined by a qualified archaeologist.

If prehistoric or Native American cultural resources are identified during project construction, a Native American consultant shall also be contacted to provide input regarding the treatment and disposition of the find.

c) The proposed project area contains four mapped units that have a high paleontological sensitivity, and could yield scientifically significant paleontological resources. The mapped units are located within two portions of the Segment 3 alignment. The first portion is located on Country Club Drive from the intersection of North Park Victoria Drive and Country Club Drive to just past the intersection of Calaveras Ridge Drive and Country Club Drive. The second portion is located on a small stretch of Old Calaveras Road just past the intersection of Old Calaveras Road and Evans Road.

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically important, or are common but have the potential to provide valuable scientific information. The proposed project is likely to impact geologic units with high paleontological sensitivity, both at the surface and at depth. Impacts to paleontological resources could occur during ground disturbing activities associated with construction, and could include the destruction of fossils. To reduce potential impacts to paleontological resources, **Mitigation Measure CUL-3** would be implemented, which would require development and implementation of a Paleontological Mitigation Program. Potential impacts to paleontological resources and unique geologic features would be reduced to less than significant levels with implementation of proposed mitigation.

Mitigation Measure CUL-3: Develop and Implement Paleontological Mitigation Program

This mitigation applies to the proposed project as a whole, and therefore is required for all five segments.

A qualified paleontologist approved by the City of Milpitas shall be retained to develop and implement a Paleontological Mitigation Program (PMP) following final design and prior to project construction. The PMP shall include the following components:

- Prior to the start of construction, construction personnel shall be informed of the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.
- Any excavations or other ground disturbing activity in areas mapped as high paleontological sensitivity (refer to details in the PRA) shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of excavations, paleontological monitoring could be reduced to weekly spot-checking under the discretion of the qualified paleontologist.
- If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist without disrupting construction activity. In some cases larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
- Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data, and maps.
- Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

d) The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code §7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code §5097.98. In the event of an unanticipated discovery of human remains, the Santa Clara County coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Impacts would be less than significant through compliance with applicable State codes in the event of discovery of human remains.

3.6 Geology and Soils

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Place new structures in or otherwise adversely affect areas requiring special management due to hazards, including: unstable soil areas including fault zones, liquefaction zones, areas subject to landslides and expansive soil areas.	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒

Discussion

Environmental Setting

The City of Milpitas is located in the San Francisco Bay Area, which is a seismically active region. The proposed project is located within the Hillside and Valley Areas of the City. Elevations in the City range from sea level near Coyote Creek to approximately 2,400 feet in the northeastern corner (City of Milpitas 2010). There are three faults in proximity to the project area, which are considered active. These faults include the Hayward fault, which trends northwestward and runs through the western part of the Milpitas Hillside Area, Calaveras fault (approximately 1½ miles northeast of the eastern edge of the City), and San Andreas fault (13 miles southwest) (City of Milpitas 2010).

The Alquist-Priolo Earthquake Fault Zoning Act and Seismic Hazards Mapping Act directs the State Geologist to delineate regulatory zones (known as Zones of Required Investigation) to reduce the threat to public health and safety and to minimize risk of loss of life and property posed by earthquake-triggered ground failures, which include surface fault rupture, strong ground shaking, liquefaction, and landslides. Local agencies must regulate most development within these zones, and require a geotechnical investigation of the site. A review of the State of California's Alquist-Priolo Earthquake Fault Zone Maps shows that portions of the project area east of I-680 are located within the Milpitas and Calaveras Reservoir 7.5 minute quadrangles, which contain an Earthquake Fault Zone for the Hayward Fault delineated by the California Geological Survey (CGS) (CGS 1982a, 1982b, 2016).

A review of Seismic Hazards Maps for the Milpitas and Calaveras Reservoir 7.5 minute quadrangles indicates that portions of the project area also traverse areas susceptible to earthquake induced landslides and liquefaction (CGS 2001, 2004). The Valley Floor of Milpitas is underlain by alluvial soil, most of which is expansive and susceptible to liquefaction, and alluvial areas along creeks may be susceptible to lateral spreading (City of Milpitas 2010). The Hillside Area is generally underlain by relatively hard, shallow, fractured bedrock with softer bedrock underlying the western margin of the Hillside Area. The General Plan also notes that the soils found in Monterey Shale, Briones Sandstone, Orinda Formation, and the Santa Clara Formations in the Hillside Area and foothills west of Spring Valley are considered

expansive to highly expansive (City of Milpitas 2010). Potential landslide hazard areas generally occur on unstable hillsides and are located in the Hillside Area of the City (City of Milpitas 2010, CGS 2001).

The Working Group for California Earthquake Probabilities (WGCEP) estimates that there is a 72 percent probability that a magnitude 6.7 or greater earthquake will occur in the San Francisco Bay Area within 30 years (USGS 2013). ABAG has prepared a regional shaking hazard map and indicates that all of Milpitas is susceptible to very strong to severe shaking (ABAG 2016). ABAG has classified the Modified Mercalli Intensity[4] Shaking Severity Level of the project area due to an earthquake on the Hayward fault as "VIII-Very Strong" (ABAG 2016). The project area could therefore experience strong groundshaking from an earthquake. The intensity of ground shaking in the project area depends on a number of factors such as earthquake magnitude, distance to fault, depth of earthquake, physical characteristics of underlying soil and bedrock, and local topography. Earthquake hazards produced by ground shaking include damage to structures, and secondary ground failures.

Impacts

a) A project that places development in an existing or future hazard area is not considered under CEQA to have a significant impact on the environment, unless the project would exacerbate the environmental hazard or condition. This analysis therefore focuses on whether seismic impacts could cause the proposed project's facility to fail, and if that failure would cause a secondary impact that could exacerbate an environmental hazard. As described above, the proposed project area is within a region of high seismic activity and other related geologic hazards. Seismic events could result in secondary seismic impacts associated with unstable soils such as lateral spreading, liquefaction, and subsidence. If not designed correctly, a seismic event could result in structural failure of the storage tank, misalignment of the pipelines, failure of joints, and recycled water leakage underground from the pipelines. Leakage from the pipelines could saturate the soils, such that it contributes to conditions for liquefaction, lateral spreading, and subsidence. The structural failures could thus result in increased risk to safety. However, geotechnical analysis required as part of the California Building Standards Code during the design phase would incorporate appropriate standard engineering practices and specifications in the facility design to minimize risk of structural failure in a seismic event, and would reduce secondary impacts that may occur as a result. Therefore, impacts would be less than significant.

b) Construction activities involving soil disturbance, such as excavation, stockpiling, and grading could result in increased erosion and sedimentation to surface waters. As described in *Chapter 2, Project Description*, construction activities associated with the proposed project would disturb a large amount of soil, as the majority of the pipeline would be installed via open cut methods. Construction of the proposed project would be required to comply with Construction General Permit (Order Nos. 2009-0009-DWQ and 2010-0014-DWQ), which is issued by the SWRCB. The Construction General Permit requires the development of a SWPPP, which outlines BMPs the City would use to reduce erosion and topsoil loss from storm water runoff. Compliance with the Construction General Permit would ensure that BMPs are implemented during construction, and preventing substantial soil erosion or the loss of topsoil. Impacts are considered less than significant, and no mitigation is needed.

c) The proposed project would not include septic-related waste. Therefore, there would be no impact related to septic tanks or alternative wastewater disposal methods.

[4] The Modified Mercalli Intensity (MMI) estimates the intensity of shaking from an earthquake at a specific location or over a specific area by considering its effects on people, objects, and buildings. At high intensities (MMI ≥ 6), earthquake shaking damages buildings.

3.7 Greenhouse Gas Emissions

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

Discussion

Environmental Setting

As described in *Section 3.3 Air Quality*, BAAQMD is the agency principally responsible for comprehensive air pollution control in the SFBAAB. Climate change and GHG emissions have been addressed through a series of state legislation and executive orders, including the following:

- California Global Warming Solution Act (AB 32) – Requires that the state reduce emissions of GHG to 1990 levels by 2020.
- Executive Order S-3-05 – Sets emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.
- Executive Order S-01-07 – Mandates a statewide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020.
- Executive Order B-30-15 – Sets emissions reduction targets to 40 percent below 1990 levels by 2030, in order to ensure California meets its 80 percent below 1990 levels by 2050.
- Title 24 – Established standards to allow consideration and possible incorporation of new energy efficiency technologies and methods.
- AB 1493 – Requires CARB to develop and adopt regulations that reduce GHG emitted by passenger vehicles and light duty trucks.
- The Western Regional Climate Action Initiative – Signed by five states, including California, to collaborate to identify, evaluate, and implement ways to reduced GHG emissions in the states collectively and to achieve related co-benefits.

The City of Milpitas adopted its Climate Action Plan in 2013 (City of Milpitas 2013). This document includes a GHG inventory for the City's municipal operations. The City's GHG emissions reduction goal is equivalent to that established in AB 32, to reduce GHG emissions to 15% below baseline 2005 levels by the year 2020, and the plan outlines strategies that can be taken to reduce GHG emissions.

To provide GHG emission guidance to local jurisdictions within the SFBAAB, BAAQMD developed CEQA GHG significance thresholds in 2010. BAAQMD identified screening levels of 1,100 metric tons of CO_2e[5] emissions per year (BAAQMD 2010) for operational emissions for projects other than stationary

[5] CO_2e is the concentration of carbon dioxide that would cause the same amount of radiative forcing as a given mixture of carbon dioxide and other greenhouse gases.

sources, and a significance threshold of 10,000 metric tons of CO_2e per year ($MTCO_2e$/year) from stationary GHG sources. BAAQMD has not established GHG significance thresholds for construction, but construction-related GHG emissions can be compared to BAAQMD's operational threshold for non-stationary sources.

Quantification of GHG emissions for the proposed project was based on the carbon dioxide equivalent (CO_2e) outputs generated during construction and operations using the Road Construction Emissions Model, CalEEMod, and PG&E electricity emissions based calculations.

Impacts

a, b) Applicable plans, policies, and regulations associated with reducing the emissions of GHGs include BAAQMD's proposed thresholds of significance for GHG as described above. The total GHG emissions for construction of the proposed project are estimated to be 853 $MTCO_2e$/year, which is below the interim operational threshold of 1,100 $MTCO_2e$/year set by BAAQMD (BAAQMD 2009) for operation of non-stationary sources. The annual GHG emissions for operating the proposed project are estimated to be 193 $MTCO_2e$/year, far below the threshold of 1,100 $MTCO_2e$/year established by BAAQMD[6]. Given that the BAAQMD threshold is established based upon implementation of AB 32, the proposed project would meet GHG reductions goals established in AB 32. As such, the proposed project would not generate GHG emissions that would have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts would be less than significant and no mitigation is required.

[6] As described in *Section 3.3 Air Quality*, the Alameda County Superior Court issued a writ of mandate ordering the BAAQMD to set aside the criteria pollutant thresholds in its most recent CEQA Guidelines. Thus, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts and is relying on individual lead agencies to determine the appropriate air quality thresholds of significance to use in its CEQA analysis. For the purposes of this analysis, because the BAAQMD 1999 CEQA Guidelines do not contain thresholds for GHGs, the current thresholds have been used here.

3.8 Hazards and Hazardous Materials

Would the Project:	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

Discussion

Environmental Setting

Hazardous Materials

The proposed project area is predominantly residential with areas of commercial, parks and open space, and institutional uses (City of Milpitas 2015). Hazardous materials presently used in the proposed project area in association with the aforementioned land uses may include household hazardous materials that are common to residential areas.

An online regulatory agency database search was conducted in June 2016 to identify reported hazardous materials spills and releases. Environmental databases reviewed include the SWRCB GeoTracker and the California Department of Toxic Substances Control (DTSC) EnviroStor. Properties on which previous or ongoing activities have resulted in a reported release of hazardous materials into soil or groundwater, as identified by SWRCB and DTSC, are located within one-quarter mile of the proposed project area. Listed properties do not necessarily represent a potential risk to the proposed project area, as many of the identified sites have been remediated and their cases have been closed. A summary report of the database search is included as **Appendix C**.

The EnviroStor database identifies sites that have known contamination or sites for which there may be reason to investigate further. Specifically, the database lists the following types of sites: Federal Superfund sites (National Priority List); State Response (including Military Facilities and State Superfund); Voluntary Cleanup; Evaluation; School Investigation; Non-operating; Post-closure; Tiered Permit; and Corrective Action. Based on the EnviroStor database search, six cleanup sites are located within one-quarter mile of the proposed project area.

The Geotracker database provides regulatory data regarding sites with leaking underground storage tanks (LUSTs), fuel pipelines, and public drinking water supplies; these sites also meet the Cortese List requirements. The SWRCB GeoTracker identified 17 sites within one-quarter mile of the proposed project area. Thirteen of the sites were listed as closed, and therefore do not present any potential impacts. The remaining four sites are cleanup sites.

The Santa Clara County Department of Environmental Health, Hazardous Materials Compliance Division (HMCD) is the Certified Unified Program Agency (CUPA) for the majority of cities within Santa Clara County, including Milpitas. The Department regulates the use, storage, and disposal of hazardous materials in Santa Clara County under the Hazardous Materials Program by issuing permits, inspecting facilities, investigating complaints, and consulting with both the business community and the public. As a part of the program, businesses that handle hazardous materials over 55 gallons, 500 pounds, or 200 cubic feet of gas are required to prepare a Hazardous Materials Management Plan (HMMP) to address emergency response to incidents. The Milpitas Fire Department is a Participating Agency and coordinates their activities with the County CUPA (County of Santa Clara 2016).

Fire Hazards

Fires have the potential to cause significant losses to life, property, and the environment. According to CalFire, the City of Milpitas is located in a Local Responsibility Area (LRA) (CalFire 2007). The Milpitas General Plan acknowledges the potential for fire hazards within the City boundaries, particularly during the summer months and during prolonged periods without precipitation (City of Milpitas 2010). ABAG designates the majority of the edges of the City boundary as a “Wildland Urban Interface Fire Threat” area, which includes the majority of the proposed project area (ABAG 2016).

Emergency Response and Access

The Milpitas Fire Department is responsible for hazardous and toxic materials emergency response and the Department’s Office of Emergency Services provides emergency planning for the City. The City maintains an emergency plan to deal with natural or man-made disasters. The Plan specifies actions for

the coordination of operations, management and resources, and responsibilities of the different departments and governmental agencies during emergency events (City of Milpitas 2010). Evacuation routes are to be determined as appropriate depending on the nature of the emergency.

Impacts

a,b) Construction of the proposed project would not require long-term routine transport, use, or disposal of hazardous materials. However, the proposed project's construction activities could temporarily increase the transport of materials generally regarded as hazardous that are used in construction activities. It is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similar materials would be brought onto work sites, used, and stored during construction. The risks associated with the transport, use, and storage of these materials are anticipated to be relatively small. However, there is potential for an accidental release of hazardous materials during construction, which could result in exposure of worker and the public to health hazards. In addition, inadvertent release of large quantities of these materials could adversely impact soil, surface waters, or groundwater quality, leading to a potentially significant impact. Implementation of **Mitigation Measure HAZ-1** requiring a Hazardous Materials Management and Spill Prevention and Control Plan would reduce any risk associated with hazardous materials used during construction to less than significant.

Project construction would require excavation and trenching of subsurface materials along the proposed pipeline alignments and at the storage tank site. Subsurface soils excavated during construction could potentially be contaminated with hazardous substances from releases in the area, which could be a significant impact. In the event contaminated soil or groundwater is encountered during excavation activities, implementation of **Mitigation Measure HAZ-2** would reduce the impact to a less-than-significant level.

Operation of the proposed project would not create a significant hazard to the public or the environment involving the release of hazardous materials, as it would consist of operating pump stations, underground recycled water pipelines and a storage tank. No operational impacts would occur.

Mitigation Measure HAZ-1: Hazardous Materials Management and Spill Prevention and Control Plan

This mitigation applies to the proposed project as a whole, and therefore is required for all 5 segments.

Before construction begins, the City shall require its construction contractor to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project-specific contingency plan for hazardous materials and waste operations. The Plan shall be applicable to construction activities, and shall establish policies and procedures according to applicable codes and regulations, including but not limited to the California Building and Fire Codes, and federal and California Occupational Safety and Health Administration (OSHA) regulations. Elements of the Plan shall include, but not be limited to the following:

- A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
- Notification and documentation of procedures; and
- Spill control and countermeasures, including employee spill prevention/response training.

Mitigation Measure HAZ-2: Contingency Plan for Contaminated Soil or Groundwater

This mitigation applies to the proposed project as a whole, and therefore is required for all 5 segments.

While there are no known areas of contaminated soil within the project site, the City of Milpitas shall require its construction contractors to follow the procedures below in the event contaminated soil or groundwater is encountered (either visually or through odor detection) during excavation activities:

- Stop work in areas of contact;
- Notify the San Francisco Bay Regional Water Quality Control Board and the California Department of Toxic Substances Control;
- Contain the areas of contamination;
- Perform appropriate clean up procedures; and
- Segregate, profile, and dispose of all contaminated soil. Required disposal method shall depend on the type and concentration of contamination identified. Any site investigation or remediation shall be performed in accordance with applicable regulations.

c) Eleven school sites are located within one-quarter mile of the proposed project. **Table 3.8-1** provides the schools and the approximate distances to the nearest proposed construction sites.

Table 3.8-1: Schools within One-Quarter Mile of Proposed Project

School	Approximate Distance
Calaveras Hills High School/ Calaveras Montessori School/ Milpitas Unified School District	50 feet
William Burnett Elementary School	50 feet
Day Star Montessori School	50 feet
Robert Randall Elementary School	50 feet
Jacklin Commons KinderCare	450 feet
Alexander Rose Elementary School	50 feet
Milpitas Montessori School/ Merryhill Elementary and Middle School	50 feet
Rancho Milpitas Middle School	100 feet
Milpitas Christian Preschool	0.25 mile
John Sinnott Elementary School	75 feet
Foothill SDA Elementary School	125 feet

As described above under item (a,b), construction activities would require the use of hazardous materials, which could result in accidental releases during their handling and storage. In addition, hazardous materials could be encountered during construction and excavation that could pose a threat to workers, the public, or the environment. Because of the possibility of accidental release, and the proximity to schools and other sensitive receptors, potential impacts would be considered significant. However, with implementation of **Mitigation Measures HAZ-1** and **HAZ-2**, potential impacts would be reduced to a less-than-significant level.

d) A search of available environmental records for the proposed project area, including records from the State Water Resources Control Board SWRCB GeoTracker database and the California Department of Toxic Substances Control (DTSC) EnviroStor database found 23 hazardous materials sites within one-quarter mile of the proposed project. Within the proposed project area,

there are no properties that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 ("Cortese List").

As explained above, eight of the hazardous materials sites are listed as open (three of which are located at the same site), including the following:

1. Victorian Square Cleaners, located at 1285 East Calaveras Boulevard (approximately 200 feet from the Segment 1 alignment; open and in site assessment)
2. Fox Hollow – Park Victoria site, located at the intersection of North Park Victoria Drive and Fox Hollow Court (at the location of Segment 3; open and in site assessment)
3. Prudential Properties site, located at 1051 South Milpitas Boulevard (approximately 250 feet from the Segment 5 alignment; open but inactive)
4. Great Western Stinnes-Western Chem (four cases located at the same property, one case closed and three remain open and in remediation), located at 945 Ames Avenue (north of the Segment 5 alignment)
5. Sipex Corporation, located at 233 South Hillview Drive (approximately 250 feet south of the Segment 1 alignment; inactive, tiered permit)
6. Sherwin Williams Company, located at 805 Sinclair Frontage Road (approximately 300 feet south of the Segment 5 alignment; needs corrective action)

Due to the proximity of these open hazardous materials sites, there is potential to expose construction workers to contaminated soils during excavation activities. Implementation of **Mitigation Measure HAZ-3** would reduce potential impacts from listed hazardous materials sites to less than significant.

Mitigation Measure HAZ-3: Phase I Environmental Site Assessment

During the design phase, the City or its contractor shall conduct a Phase I Environmental Site Assessment (ESA) to clarify the potential for soil contamination due to the adjacent open hazardous materials sites. The recommendations set forth in the Phase I ESA shall be implemented before construction begins. Follow-up sampling may be conducted, if necessary, to characterize soil and groundwater quality. Prior to construction, contractors shall be informed of the locations of potential areas of hazardous materials that may be encountered during construction, and shall ensure that safety precautions are in place to avoid or minimize exposure to potentially contaminated soils, and to reduce the potential for accidental damage to underground storage tanks that could cause accidental release of hazardous materials into the environment.

e, f) The proposed project area does not include any airports or airstrips. The nearest airport to the project area is in the City of San Jose, five miles southwest of the proposed project area. As such, the proposed project would not expose people residing or working in the area to safety hazards. No impacts would occur.

g) Construction of the proposed pipeline may require temporary lane or road closures that could impede emergency response. The Traffic Management Plan required in **Mitigation Measure TRA-1** (see *Section 3.16 Transportation/Traffic*) would address any potential interference with emergency response and/or evacuation plans, and would reduce these impacts to less than significant.

h) The hillside area of the City is covered in grasses, trees, and other vegetation, which can be potential fuel for fires during the summer and dry periods (City of Milpitas 2010). Segments 1, 2, 3 and 4 fall within an area designated as "Wildland Urban Interface Fire Threat" by the Association of Bay Area Governments (ABAG 2016). These areas primarily run along the eastern edge of the City, which is composed of hillsides, open space, and low density residential areas.

Use of spark producing construction machinery within or adjacent to areas within fire threatened areas could potentially create hazardous fire conditions and expose people to wildlife risks. As such, the proposed project has the potential to generate wildland fire-related hazards. Implementation of **Mitigation Measure HAZ-4** would ensure that fire safety measures are employed during construction of the proposed project components that are within proximity to areas within or adjacent to fire threatened areas. With implementation of **Mitigation Measure HAZ-4** requiring fire safety practices during construction, wildland fire impacts are considered less than significant.

Mitigation Measure HAZ-4: Implement Fire Safety Construction Practices

The City shall require its construction contractor to implement fire safety practices, including but not limited to: clearing dried vegetation or other material that could ignite during construction from staging areas, welding areas, or other areas slated for construction. Construction equipment that includes a spark arrestor shall be equipped in good working order. Additionally, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, such as accidental sparks. Other construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction zones. During construction of the proposed project, the construction contractors shall require vehicles and crews working at the project site to have access to functional fire extinguishers.

3.9 Hydrology and Water Quality

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) 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 which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation of seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion

Environmental Setting

Hydrology and Drainage

The City of Milpitas is located in the Coyote Creek watershed and generally drains to the west and northwest. The project area is drained by several intermittent creeks, all tributary to Coyote Creek including Berryessa Creek, Piedmont Creek, Arroyo de los Coches Creek, and Tularcitos Creek (RMC 2009). Extensive urban development has largely modified these waterways into straight, trapezoidal channels. The structurally channelized watercourses and culverts retain few natural attributes of the original meandering creeks.

Storm Water

The City collects and disposes of its storm water via a storm drainage network consisting of catch basins, conveyance piping, pump stations, and outfalls to creeks. The City has 18 miles of storm pipe, 3,750 catch basins, approximately 4 miles of drainage ditches and creeks, and 13 storm water pump stations (RMC 2009). Storm water collection efforts are guided by the City's Storm Drain Master Plan which identifies capital improvements needed to maintain recommended levels of protection against storm water runoff (Shaaf & Wheeler 2013).

Flooding

The creeks and channels within the project area are subject to periodic flooding. The City owns and maintains the local storm drain and gutter system, while the SCVWD has jurisdiction over Berryessa Creek, Calera Creek, Coyote Creek, Arroyo de los Coches Creek, Lower Penitencia Creek, Piedmont Creek, and Tularcitos Creek (Shaaf & Wheeler 2013).

The National Flood Insurance Program branch of the Federal Emergency Management Agency (FEMA) maintains maps of floodways and floodplains for the United States. FEMA maps these areas on Flood Insurance Rate Maps or FIRMs. A typical FIRM will show specific flood hazard areas, flood risk zones, and floodplains at a local level of detail. In some identified flood hazard zones, certain types of construction and/or uses are prohibited or are required to carry flood insurance. Cities and other jurisdictions use FIRMs to establish zoning districts, buffers, or other regulatory requirements intended to protect people and property from flood damage and minimize the cost of physical flood control mechanisms. Flood hazards related to storm events are typically expressed as a "100-year-flood," which describes a flooding event that has a one in one hundred probability of occurring or being exceeded in any given year. In accordance with flood mapping from FEMA, a portion of Segment 1 between I-680 and S. Park Victoria Drive and Segment 2 between Grayson Way and I-680 along Jacklin Road fall within a 100-year flood zone (FEMA 2014a, 2014b). All of the land west of I-680, where portions of Segments 1, 2, and 5 are located, is within a 500-year flood zone (a flooding event that has a one in five hundred probability of occurring or being exceeded in any given year) (City of Milpitas 2010).

Water Quality

Urbanized areas can contribute non-point source pollution to surface waters. Examples of common contaminants include sediment, nutrients, trace metals, oil and grease, pesticides and herbicides, organic matter, and soil debris/litter. Runoff is carried into the storm drains, discharged into creeks and channels, and eventually discharged into the San Francisco Bay.

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) establishes water quality objectives (WQOs) for surface waters within the basin, and also establishes specific WQOs for selected water bodies. In 2011, the USEPA approved a revised list of impaired water bodies prepared by the State of California pursuant to provisions of Section 303(d) of the Clean Water Act. No waterways within the project area are listed on the 2010 303(d) list of impaired water bodies. However, South San Francisco

Bay and Coyote Creek are listed on the 2010 303(d) list for trash, chlordane, DDT, dieldrin, dioxin compounds, furan compounds, invasive species, mercury, PCBs, and selenium (USEPA 2010).

The Basin Plan for the San Francisco Bay Region lists beneficial uses for each relevant surface water body in the project area. The Basin Plan identifies beneficial uses for Berryessa Creek, Arroyo de los Coches Creek and Tularcitos Creek, as shown in **Table 3.9-1.**

Table 3.9-1: Beneficial Uses in the Proposed Project/Action Area

Beneficial Uses	Surface Waters		
	Berryessa Creek	Arroyo de los Coches[1]	Tularcitos Creek[1]
Agricultural Supply (AGR)			
Municipal and Domestic Supply (MUN)			
Freshwater Replenishment (FRSH)			
Groundwater Recharge (GWR)			
Industrial Service Supply (IND)			
Industrial Process Supply (PROC)			
Commercial and Sport Fishing (COMM)			
Shellfish Harvesting (SHELL)			
Cold Freshwater Habitat (COLD)			
Estuarine Habitat (EST)			
Marine Habitat (MAR)			
Fish Migration (MIGR)			
Preservation of Rare and Endangered Species (RARE)		E	
Fish Spawning (SPWN)			
Warm Freshwater Habitat (WARM)	E	E	E
Wildlife Habitat (WILD)	E	E	E
Water Contact Recreation (REC-1)	E	E	E
Non-contact Water Recreation (REC-2)	E	E	E
Navigation (NAV)			

Source: [1]San Francisco Bay Regional Water Quality Control Board 2010.
Notes: E: Existing beneficial use

Groundwater

The project area is located within the Santa Clara Valley Groundwater Basin. From the early 1900s through the mid-1960s, water levels declined from groundwater pumpage, causing subsidence in the Santa Clara subbasin and degradation of the aquifer from saltwater intrusion. Recently, however, groundwater levels have generally increased as a result of increases in imported water supplies and groundwater recharge efforts. SCVWD conducts an artificial recharge program by releasing locally conserved or imported water to in-stream and off-stream recharge facilities (DWR 2004). The City operates one well (Pinewood Well) in the southwestern part of the City that is designated as an emergency water supply source and has a second well near the Great Mall under construction; however groundwater is typically not used as a domestic water supply in the area (City of Milpitas 2010).

Recycled Water

The San Francisco Bay RWQCB has a region-wide general permit for municipal wastewater and water agencies (General Order 96-011); the City as a distributor is required to comply with the prohibitions, water quality requirements and limitations, and other provisions.

In addition, the City is required to comply with the Statewide General Permit for Landscape Irrigation Uses of Municipal Recycled Water (Order No. 2009-0006-DWQ). This General Permit provides a list of potential BMPs that depend on the specific project. In addition to the BMPs, the General Permit contains Waste Discharge Requirements (WDRs) that the recycled water producer or distributor must meet. Compliance with this General Permit requires that the recycled water meets quality standards, that recycled water be applied at agronomic rates for the vegetation being irrigated, that degradation of groundwater be minimized, and that the nutritive loading to the landscape not be exceeded, when considering the nutrient loading from the recycled water and any additional fertilizers. The permit stipulates that discharge to surface waters, unless otherwise authorized by an NPDES permit, is prohibited. The General Permit also requires that recycled water by applied by trained personnel (*e.g.,* a recycled water supervisor).

Discussion

a, f) *Construction*

Excavation, grading, and construction activities associated with construction of the proposed project could result in water quality violations from soil disturbance and potential sedimentation and erosion. These violations could result from the potential increase in erosion and sedimentation into storm drain systems and nearby creeks downstream of the project area. The construction activities could also cause water quality violations in the event of an accidental fuel or hazardous materials leak or spill. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of surface water quality.

Construction activities of one acre or more are subject to the permitting requirements of the NPDES General Permit for Stormwater Discharges associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ). The project sponsor must submit a Notice of Intent to the San Francisco RWQCB prior to construction. The Construction General Permit requires the preparation and implementation of a formal SWPPP, which must be prepared before construction begins. The SWPPP includes specifications for BMPs implemented during project construction to control sedimentation or pollution concentration in stormwater runoff, and defines conditions for complying with the SWRCB NPDES permit requirements. Implementation of the SWPPP starts with the commencement of construction and continues through project completion. Upon completion of the project, the sponsor must submit a Notice of Termination to the RWQCB to indicate that construction is complete.

Project construction would follow the requirements of the Construction General Permit and the contractor would be required to implement the BMPs in the SWPPP to prevent construction pollution via stormwater and minimize erosion and sedimentation into waterways as a result of construction. Trenchless construction would be used to cross Berryessa Creek at two locations: in Segment 1 where it crosses Los Coches Street and in Segment 5 where it crosses Ames Avenue. If Horizontal Directional Drilling (HDD) is selected as the trenchless construction method, it could result in water quality impacts to Berryessa Creek from frac-out, which is the inadvertent return of drilling fluid or lubricant. Regardless of the construction method at the creek crossings, a SWPPP, compliance with applicable permits and BMPs, and implementation of **Mitigation Measure HYD-1** would reduce potential water quality impacts from the risk of frac-out to a less-than-significant level.

Mitigation Measure HYD-1: Development and Implementation of Frac-Out Contingency Plan

If HDD is employed for trenchless installation at creek crossings in Segment 1 and 5, a Frac-Out Contingency Plan shall be developed by the contractor. The Frac-Out

Contingency Plan shall include a description of potential short-term and long-term impacts of frac-out in terrestrial and aquatic systems; design and construction criteria to minimize the potential for frac-out, including but not limited to minimum depth and drilling fluid requirements; identification of equipment such as a vacuum truck, absorbent pads, or straw logs, and actions to minimize and contain frac-out, including halting directional boring, relieving pressure, inspecting equipment, and using a standing pipe to contain mud; identification of appropriate follow-up measures, including notification of appropriate entities and environmental compliance documentation. Construction personnel shall be trained to recognize frac-out and briefed on the use of any safety equipment and actions included in the Frac-Out Contingency Plan.

Compliance with the requirements of the Construction General Permit for all construction and implementation of **Mitigation Measure HYD-1** would reduce potential water quality impacts to a less-than-significant level.

Operation

The RWQCB issued the Municipal Separate Storm Sewer System (MS4) Phase I San Francisco Bay Region Municipal Regional Stormwater NPDES Permit No. CAS612008 (Order No. R2-2015-0049-DWQ) (San Francisco Bay MS4 Permit) on November 19, 2015. Under the MS4 provisions, all projects are responsible for implementing low impact development (LID) techniques to address stormwater runoff through source control, site design, and stormwater treatment measures. The proposed storage tank site would be designed to result in no net new runoff, in accordance with MS4 requirements.

The proposed project would convey recycled water to the east side of Milpitas and expand provision of recycled water to customers for irrigation purposes. Recycled water delivered by the proposed project would meet applicable Title 22 standards for water quality, and uses would be compliant with Title 22 regulations and applicable recycled water permits. Title 22, Division 4, of the California Code of Regulations (Title 22) regulates wastewater reclamation and recycling, and helps to protect public health associated with the use of recycled water. As described above, the Statewide General Permit for Landscape Irrigation establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water (SWRCB 2009).

Potential impacts from incidental runoff of recycled water[7] would be reduced to less than significant through compliance with the SWRCB's Recycled Water Policy for control of incidental runoff, and implementation of the required BMPs in the General Permit for Landscape Irrigation. Compliance with the general permits would ensure occasional runoff of recycled water does not negatively impact water quality. Should the proposed project generate substantial incidental runoff that produces a water quality concern, discharges would then be regulated under an individual NPDES permit from the San Francisco Bay RWQCB. Operational impacts to water quality would be less than significant through compliance with the San Francisco Bay MS4 Permit requirements, Title 22, and the General Permit for Landscape Irrigation.

b) The proposed project would not require any groundwater withdrawals for water supply. However, it is recognized that limited dewatering operations may be required at certain locations during construction (e.g., during grading and excavation near Berryessa Creek). These operations would be minimal and would not deplete groundwater supplies or interfere with groundwater recharge. Dewatering discharges would be released to the local sewer system to protect downstream water

[7] Incidental runoff of recycled water refers to small amounts of runoff from intended recycled water use areas, overspray from sprinklers that escapes the recycled water use area (SWRCB 2004).

quality. Because these operations would be minimal, the potential to deplete groundwater is considered less than significant.

c, d, e) The proposed pipelines would generally be located within existing roadway right-of-way. Construction of the pipelines, storage tank, and pump stations would disturb existing developed lands. Due to the relatively small footprint of the proposed facilities and their locations (pipelines would be buried underground and aboveground storage tank and pump stations would be located away from water courses), the proposed facilities would not substantially alter the project area drainage or the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. Because the pipelines would be constructed underground within developed areas, they would not increase the rate or amount of surface runoff. Construction would be conducted in compliance with the State's Construction General Permit (Order No. 2009-0009-DWQ). Preparation of the SWPPP in accordance with the Construction General Permit would require erosion-control BMPs at the construction areas, which would reduce potential water quality impacts to less than significant levels.

Construction of the proposed storage tank, whether it is below grade or above ground, would not create additional runoff during operation because the area is already developed as an impermeable surface area (parking lot). The storage tank would be designed to connect to the existing stormwater drainage system. The proposed storage tank and pump stations would be designed to result in no net new runoff, in accordance with the MS4 requirements.

g) The proposed project would not construct housing; therefore it would have no impact related to placing housing within a 100-year flood zone.

h) A portion of Segment 1 between I-680 and S. Park Victoria Drive and Segment 2 between Grayson Way and I-680 along Jacklin Road fall within a 100-year flood zone (FEMA 2014a, 2014b). In addition, the portions of Segment 1, 3, and 5 west of I-680 fall within a 500-year flood zone. Because the proposed pipelines would be located underground, they would not impede or redirect flows, nor expose people or structures to a significant risk of loss, injury or death involving flooding.

i) Parts of the City along the Calaveras Road area east of I-680 could be inundated by failure of the Sandy Wool Lake Dam, located to the east (City of Milpitas 2010). Portions of Segment 1 and 2 fall within this dam inundation area; however the proposed project would not construct housing; therefore it would not expose people to risks of flooding, dam, or levee failure. There would be no impact.

j) Earthquakes can cause tsunamis ("tidal waves") and seiches (oscillating waves in enclosed water bodies). The project area is located approximately 2 miles from portions of the South San Francisco Bay that could be affected by a tsunami (ABAG 2016). There are relatively small bodies of inland water in Milpitas, but not within the project area. Due to distance from the Bay and lack of large water bodies within the project area, the project area is not subject to tsunamis or seiche. No impacts would occur.

3.10 Land Use and Planning

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Physically divide an established community?	☐	☐	☒	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐
c) Conflict with any applicable HCP or NCCP?	☐	☐	☐	☒

Discussion

Environmental Setting

The proposed project is located within the City of Milpitas with a small portion in the County of Santa Clara. Land uses in and around the proposed project area, including nearby parks and schools, and undeveloped areas are shown in **Figure 3.10-1.** Existing land uses in and around the project area include residential, commercial, public/institutional, industrial uses, and undeveloped areas.

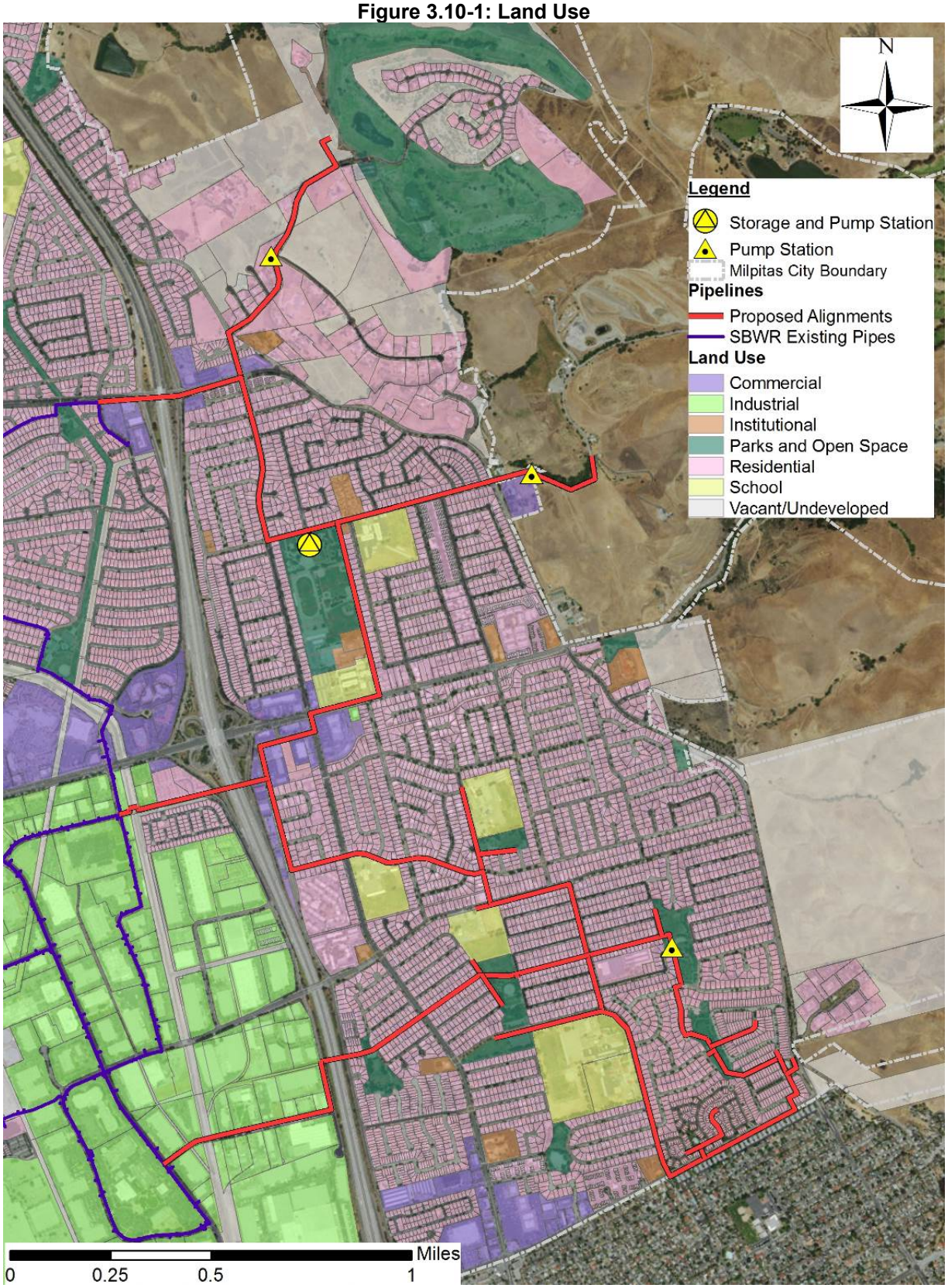
The proposed project consists of pipelines and pump stations located within and adjacent to existing roadways, and a storage tank within City-owned property adjacent to Cardoza Park. In some cases, the proposed pipelines would terminate at parks and schools because these would be the potential customers receiving recycled water for use in landscape irrigation. Specifically, the parks/recreation areas and schools located within the proposed project area include the following:

> ***Parks/Recreation Areas:*** Cardoza Park, Foothill Park, Murphy Park, Creighton Park, Sinnott Park, Yellowstone Park/Robert E. Browne Park, Ben Rogers Park, and Hillcrest Park.
>
> ***Schools:*** Calaveras Hills High School, William Burnett Elementary School, Alexander Rose Elementary School, Robert Randall Elementary School, Merryhill Elementary and Middle School, Rancho Milpitas Middle School, and John Sinnott Elementary School.

The proposed facilities would be located in and around areas designated as Town Center, General Commercial, Retail Subcenter, Public Facilities, Parks and Open Space, Hillside Low Density, Single Family Low Density, and Multi-Family Residential High Density (City of Milpitas 2014).

A small portion of Segment 3 would be within the County of Santa Clara in an area designated as Hillsides (County of Santa Clara 2013).

Figure 3.10-1: Land Use



Source: RMC 2016

Plans, Policies, and Regulations

The policies contained in the City' General Plan, Land Use Element, as amended through 2010, provide the physical framework for development in the Study Area. It is a comprehensive, long-range plan for the physical development of the City. The General Plan contains the following policies related to land use and planning applicable to the proposed project.

The City of Milpitas General Plan identifies goals and policies to guide the use of private and public lands within their respective boundaries. The City recognizes and values the need for infrastructure and improvements to existing infrastructure to meet the needs of residents.

> *Policy 2.a I-2.1* Maintain an Urban Growth Boundary in the hillside area, as shown on the General Plan Land Use Map, that shall be effective until December 31, 2018 and, except as otherwise provided below, shall not be moved until that time. A. City Services Prohibited in Area Outside the Urban Growth Boundary and Outside the City Limits: The City shall not process, approve or authorize construction or provision of any City service or City service extension to any property or people in that area located both outside of the Urban Growth Boundary and outside of the city limits of the City of Milpitas, except as expressly provided in this Policy 2.a I-2.1A. "City service" means any water, sanitary sewer, storm drain, flood control, road maintenance, sidewalk maintenance, police, fire or emergency medical service, including construction of related infrastructure that the City, its agents, its departments, or its contractors, provides to any property or people within the City limits...
>
> *Guiding Principal 2.d-G-1* Provide all possible community facilities and utilities of the highest standards commensurate with the present and anticipated needs of Milpitas, as well as any special needs of the region.
>
> *Policy 2.d-I-1* Coordinate capital improvement planning for all municipal service infrastructure with the location and timing of growth.
>
> *Policy 2.d-I-2* Periodically update the City's water and sewer master plans.
>
> *Guiding Principle 4.d-G-6* Promote conservation and efficiency in the use of water.

The policies contained in the County's General Plan Resource Conservation Element, as amended through 2010, provide the physical framework for development in unincorporated areas of the County. The General Plan contains the following policies related to land use and planning applicable to the proposed project.

> *Policy C-RC 5* An adequate, high quality water supply for Santa Clara County should be considered essential to the needs of households, business and industry.
>
> *Policy C-RC 6* A comprehensive strategy for meeting long term projected demand for water should at a minimum include the following: a. Continued conservation and increased reclamation; b. Securing additional sources as supplemental supply; c. System and local storage capacity improvements; and d. Drought contingency planning and groundwater basin management programs.
>
> *Policy C-RC 7* Countywide land use and growth management planning should be coordinated with overall water supply planning by the SCVWD in order to maximize dependability of long term water supply resources.
>
> *Policy C-RC 8* Environmental impacts of all state and local water supply planning and decision-making should be taken into full consideration.
>
> *Policy C-RC 12* More efficient use of water for agricultural irrigation and industrial processes should be promoted through improved technology and practices.

Policy C-RC 23 Use of reclaimed wastewater for landscaping and other uses, including groundwater recharge if adequately treated, should be encouraged and developed to the maximum extent possible.

Environmental Impacts

a) The proposed project facilities would be installed within public roadways or public parks owned by the City with the exception of a portion of Segment 3 within the County of Santa Clara. Construction of the proposed project would generate temporary, intermittent construction-related impacts in the areas surrounding the proposed facilities as well as staging areas (located along the pipeline alignments and at the storage tank site). The presence of construction-related equipment and workers would temporarily change the existing character of the vicinity to that of a construction zone but would not physically divide the existing community because local access would be maintained for residents and businesses along the proposed alignment throughout construction of the proposed project.

After the proposed project is completed, all pipelines would be below ground, and there would be no changes to land uses in the project area; as such, they would not serve as barriers within the community and existing neighborhoods would not be divided. The pump stations would be above ground and the proposed storage tank may be located below grade or above ground at the Cardoza Park parking lot. For purposes of this analysis, it is assumed that the storage tank would be located above ground. Construction of the pump stations and storage tank would result in temporary land use disturbance similar to those identified for the proposed pipeline, and operation would result in new aboveground structures. The proposed storage tank would be located on the south side of the existing parking lot, however it would not create barriers that would separate the existing surrounding neighborhood community, nor would it block access to the adjacent fields or impede access to the park. Access to the park would still be available from Kennedy Drive during and after construction. Given the storage tank's location at the south end of the parking lot, it would not create barriers that would separate the nearby neighborhoods or communities. As the existing character of the affected area where construction of proposed facilities would occur would not change, potential impacts related to physically dividing an established community would be less than significant. Pump stations would be small structures located along the pipeline alignment and would thus not divide an established community.

In addition, construction and operation of the proposed project would not permanently interfere with the pedestrian, bicycle, or vehicle circulation of the neighborhood or community, as they would either be located underground below existing roadways or within areas away from pedestrian, bicycle, or vehicle circulation.

b) The proposed pipeline would be located underground and would not result in any significant, long-term, land use and planning impacts. The proposed storage tank, pump station, and associated equipment at Cardoza Park, and Ben Rodgers Park pump station would be constructed in Parks and Open Space (POS) zoning, and the Country Club Drive and Old Calaveras Road pump stations would be constructed in Single-Family Residential Hillside (R1-H) zoning. Public utility facilities and radio transmitters can be located in POS and residential zones with approval of a Conditional Use Permit (Milpitas Municipal Code, Section 39, XI-10-30.03 and Section 4, XI-10-4.02). The maximum allowable height of structures in the POS and R1 Districts is 30 feet, and does not include light standards, public utility facilities, and radio or television transmitters. Compliance with the development regulations and acquisition of a Conditional Use Permit would ensure that the project would not conflict with the City's land use policies.

As described in the Project Description, the proposed storage tank would be up to 26 feet tall, when constructed above ground. It would be located on the south end of the existing Cardoza Park parking lot. The tank would be located approximately 80 feet west from an existing fence between the parking lot and adjacent residential uses. There are residential uses adjacent to the

parking lot, however they are separated by a wooden fence, and trees that extend beyond the height of the homes line the wall.

The proposed project would not conflict with the policies of the City of Milpitas and would not result in substantial alterations to the built character of the proposed project area. There would not be any significant, long-term, land use and planning impacts associated with implementation of the proposed project. Due to the necessity of infrastructure improvements within the City, and the fact that proposed infrastructure for the proposed project would be largely constructed within roadways and City property, this project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. Recycled water would be available to existing users who currently use potable or raw water supplies, so extension of the recycled water infrastructure to the eastern portion of the City would not be inconsistent with City policies regarding provision of services.

c) Refer to *Section 3.4 Biological Resources* for a discussion of consistency with the HCP.

3.11 Mineral Resources

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

Discussion

Environmental Setting

According to the Milpitas General Plan, there are four areas identified by the State Geologist as containing Regionally Significant Construction Aggregate Resources (City of Milpitas 2010). These areas are located in the foothills in the City's sphere of influence, but outside of City limits. There are no significant mineral deposits or active mining operations within the City limits.

Impacts

a, b) The proposed project facilities are located within existing roadways and City owned property within Milpitas, and within an existing roadway of the County that are considered built-up and disturbed. They are not located in areas identified as containing state, regional, or locally important mineral resources. As such, the proposed project would not result in the loss of availability of known mineral resources and no direct or indirect impacts to mineral resources would occur.

3.12 Noise

Would the Project:	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

Discussion

Environmental Setting

Traffic and railroad-related noises are the primary sources of noise within the project area. As described in *Section 3.16 Traffic and Transportation*, nearby major roadways include I-680, which traverses the project area in the eastern portion of the City in a north-south direction and I-880, which crosses the western side of the City in a north-south direction to the west of the project area. Other major roadways include East Calaveras Boulevard.

Construction Noise

Construction noises primarily arise from the use of equipment such as excavators, jackhammers, compactors, pile drivers, trucks, and other machinery. In addition, trenchless construction methods utilize additional equipment such as a boring machine, hydraulic jack, and/or drill rig, which generate additional noise and vibration above that produced by open trench methods. Trenchless pipeline installation utilizes

equipment that also adds to noise and vibration associated with construction activities for the proposed project.

The potential for an impact is determined by the proximity of sensitive receptors[8] to construction activities, estimated noise levels associated with construction equipment, the potential for construction noise to interfere with daytime and nighttime activities, and whether construction noise at nearby receptors would exceed local noise ordinance standards. Typical construction activities (e.g. jackhammering and use of earthmoving equipment) generate maximum noise levels (without noise controls) ranging from 70 dBA[9] to 89 dBA at 50 feet from the source, with slightly higher levels of about 81 to 96 dBA at 50 feet for pile-driving activities (FHWA 2006). **Table 3.12-1** provides the typical noise levels for common construction equipment. The rate of attenuation (i.e., reduction) is about 6 dBA for every doubling of distance from a point source. Similarly, vibration impacts are a function of the associated activity and equipment and the distance to the nearest receptor.

Table 3.12-1: Construction Equipment Noise Levels

Equipment	Typical Noise Levels (dBA, at 50 feet)	Typical Noise Levels (dBA, at 100 feet)[1]
Front loaders	85	80
Backhoes, excavators	80-85	75-80
Tractors, dozers	83-89	78-84
Graders, scrapers	85-89	80-84
Concrete pumps, mixers	82-85	77-80
Cranes (movable)	83	78
Cranes (derrick)	88	83
Pipe-layers	83-88	78-83
Forklifts	76-82	71-77
Pumps	76	71
Generators	81	76
Compressors	83	78
Pneumatic tools	85	80
Pavers	89	84
Compactors	82	77
Drill rigs	70-85	65-80
Pile drivers	81-96	76-91

[8] Noise-sensitive land uses and/or receptors include: residences of all types, schools, hospitals, convalescent facilities, rest homes, hotels, motels, and places of worship. Sensitive uses from a noise perspective include places where there is a reasonable expectation that individuals could be sleeping, learning, worshipping, or recuperating.

[9] The decibel scale is used to quantify sound intensity. Because sound can vary in intensity by more than 1 million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Because the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," expressed as "dBA." The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness.

For this analysis, a peak particle velocity (PPV) descriptor is used to evaluate construction-generated vibration for building damage and human complaints. PPV is the vibratory ground motion in inches per second adjusted for distance. Specific criteria used in the analysis of groundborne vibration and noise are as follows:

- Vibratory equipment and impact pile drivers (pertains to cosmetic or structural damage of buildings): 0.2 in/sec PPV
- Activities causing annoyance (pertains to nighttime construction only): 0.012 in/sec PPV

Local Noise Standards

City of Milpitas. According to the Milpitas Municipal Code Section V-213-3-3.05, Site Construction Regulations:

"No person shall engage or permit others to engage in construction of any building or related road or walkway, pool, or landscape improvement or in the construction operations related thereto, including, delivery of construction materials, supplies, or improvements on or to a construction site except within the hours of 7:00 a.m. to 7:00 p.m. on weekdays and weekends. No construction work shall be constructed or permitted on the holidays indicated in Section V-213-2-2.05 of this Chapter." The City's General Plan establishes land use compatibility guidelines in relation to land uses and noise. **Table 3.12-2** shows the levels of noise that are acceptable and unacceptable within the various land use categories. The General Plan policies applicable to the proposed project include:

Policy 6-I-2 - Require an acoustical analysis for projects located within a "conditionally acceptable" or "normally unacceptable" exterior noise exposure area. Require mitigation measures to reduce noise to acceptable levels.

Policy 6-I-7 - Avoid residential DNL (Ldn)[10] exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.

Table 3.12-2: Acceptable Noise Levels in the City of Milpitas

Land Use	Normally Acceptable (Ldn or CNEL, dBA)	Conditionally Acceptable (Ldn or CNEL, dBA)	Normally Unacceptable (Ldn or CNEL, dBA)	Clearly Unacceptable (Ldn or CNEL, dBA)
Residential – low density single family, duplex, mobile homes	<60	55-70	70-75	75-85
Residential – multi-family	<65	60-70	70-75	75-85
Transient lodging	<65	60-70	70-80	80-85
Schools, libraries, churches, hospitals, nursing homes	<70	60-70	70-80	80-85
Auditoriums, concert halls, amphitheaters	-	<70	65-85	-
Sports arena, outdoor, spectator sports	-	<75	70-85	-
Playgrounds, neighborhood parks	<70	-	68-75	73-85
Golf courses, riding stables, water recreation, cemeteries	<75	-	70-80	80-85
Office buildings, business commercial and professional	<70	68-78	75-85	-
Industrial, manufacturing, utilities, agriculture	<75	70-80	80-85	-

[10] Day-Night Noise Level - The Ldn used in the General Plan Noise Element represents a sound level that is equivalent to the total varying sound levels that occur over a 24 -hour period plus a 10 (dB) penalty for nighttime noise (i.e. between 10 p.m. and 7 a.m.).

County of Santa Clara. According to the County of Santa Clara Municipal Code Division B11, Chapter VIII – Control of Noise and Vibration, Section B11-152, Table B11-152 establishes maximum permissible sound levels by receiving land use as shown below in **Table 3.12-3**:

Table 3.12-3: Exterior Noise Limits in the County of Santa Clara

Receiving Land Use	Time Period	Noise Level (dBA)
One- and Two- Family Residential	10:00 p.m. – 7:00 a.m. 7:00 a.m. – 10:00 p.m.	45 55
Multiple-Family Dwelling	10:00 p.m. – 7:00 a.m.	50
Residential Public Space	7:00 a.m. – 10:00 p.m.	55
Commercial	10:00 p.m. – 7:00 a.m. 7:00 a.m. – 10:00 p.m.	60 65
Light Industrial	Any Time	70
Heavy Industrial	Any Time	75

Municipal Code Division B11, Chapter VIII – Control of Noise and Vibration, Section B11-154, lists the following specific prohibitions:

"Subsection 6, Construction/demolition:

(a) Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekdays and Saturday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance. This section will not apply to the use of domestic power tools as specified in Subsection 11.

(b) Where technically and economically feasible, construction activities will be conducted in a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule:

i. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than ten days) of mobile equipment:

	Single- and Two-Family Dwelling Residential Area	Multifamily Dwelling Residential Area	Commercial Area
Daily, except Sundays and legal holidays 7:00 a.m. – 7:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

ii. Stationary equipment. Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of ten days or more) of stationary equipment are as follows:

	Single- and Two-Family Dwelling Residential Area	Multifamily Dwelling Residential Area	Commercial Area
Daily, except Sundays and legal holidays 7:00 a.m. – 7:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

Subsection 8, Powered model vehicles. Operating or permitting the operation of powered model vehicles:

(a) Between the hours of 7:00 p.m. and 7:00 a.m. the following day so as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Section B11-152.

(b) In a manner as to exceed the levels set forth for public space land use in Table B11-152, measured at a distance of not less than 100 feet (30 meters) from any point on the path of a vehicle operating on public space or public right-of-way.

Subsection 11, Domestic power tools.

(a) Operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between 10:00 p.m. and 7:00 a.m. the following day so as to create a noise disturbance across a residential or commercial real property line.

(b) Any motor, machinery or pump will be sufficiently enclosed or muffled and maintained so as not to create a noise disturbance in accordance with Section B11-152."

Impacts

a, c, d) *Construction*

Construction activities associated with the proposed project would result in temporary and intermittent noise increases at sensitive receptors near construction activities. Construction of the proposed project would involve the use of heavy equipment that could create noise substantially above existing ambient noise levels. Typical construction activities (e.g. jackhammering and use of earthmoving equipment) generate maximum noise levels (without noise controls) ranging from 70 to 89 dBA Lmax at 50 feet from the source, with slightly higher levels of about 81 to 96 dBA Lmax at 50 feet for pile-driving activities associated with trenchless construction. The rate of attenuation (i.e., reduction) is about 6 dBA for every doubling of distance from a point source.

As described in *Chapter 2, Project Description,* construction activities would generally be limited to weekdays from 7 a.m. to 7 p.m. However, nighttime construction and weekend construction may be necessary for certain pipeline connections; nighttime construction would be restricted to non-residential areas only.

Construction noise has the potential to temporarily generate noise that results in Ldn exposure increases of 3 dB or more than 65 dB at the property line in residential areas in the City of Milpitas. The proposed project would be located within and adjacent to various land uses and may produce noise levels above the acceptable levels as established by the Milpitas General Plan. The pipeline installation would occur within 50 feet of residential areas. As shown in **Table 3.12-1**, the use of any construction equipment within 50 feet of residential uses would exceed the level of significance threshold by increasing noise levels for residential zones by 3 dB or more.

The majority of the portion of Segment 3 within the County of Santa Clara would not be in the vicinity of any sensitive receptors with the exception of a residence at the northeast corner of Old Calaveras Road and Evans Road. Construction would occur approximately 75 feet from the residence and could exceed the 75 dBA maximum noise level for short term operation of mobile equipment as established in Section B11-154, Subsection 6 of the County of Santa Clara Municipal Code.

Pipeline installation is anticipated to occur at a rate of approximately 150 feet a day, such that pipeline construction would not be in one location for long durations of time. Longer durations of time are needed for the trenchless construction activities and construction of the new storage tank and pump stations. Because of the range of equipment noise levels, the duration of construction at discrete locations, and the proximity to sensitive receptors, the proposed project would expose sensitive receptors to elevated daytime noise levels and has the potential to generate substantial temporary or periodic increase in ambient noise levels; thus noise impacts are considered potentially significant.

In accordance with the City's General Plan, the preferred method of mitigating noise impacts is controlling noise at the source. Implementation of **Mitigation Measure NOI-1** would require noise control practices to reduce construction noise impacts to a less-than-significant level.

Mitigation Measure NOI-1: Implement Noise Control Measures during Construction

To reduce noise during construction, the City shall require its construction contractor implement the following noise control measures:

- **Locate Staging Areas away from Sensitive Receptors.** The City shall require the contractor to select staging areas as far as feasibly possible from sensitive receptors.
- **Idling Prohibition and Enforcement.** The City shall prohibit unnecessary idling of internal combustion engines. In practice, this would mean turning off equipment if it would not be used for five or more minutes.
- **Equipment Location, Mufflers, and Shielding.** The City shall require its contractors to locate stationary noise-generating construction equipment such as air compressors and generators as far as possible from homes and businesses. Mufflers and/or temporary noise barriers shall be used as necessary to meet the City's applicable sound level limits (unless a variance has been obtained in advance from the City). Use of temporary walls, stockpiles of excavated materials, or moveable sound barrier curtains would be appropriate for construction at the pump station and storage tank sites and can provide a 10 to 15 dBA reduction in noise levels.
- **Pre-Construction Notification.** Prior to construction, written notification to residents within 100 feet of the proposed project segment(s) undergoing construction shall be provided, identifying the type, duration, and frequency of construction activities. Notification materials shall also identify a mechanism for residents to register complaints with the City if construction related noise impacts should occur.

Operation

Operation of the recycled water pipelines and storage tank would not produce additional noise above ambient levels. Noise-generating operations would result from the use of the pump stations. The pump stations would produce permanent noise, but would be in fully enclosed

structures that would be designed to attenuate noise from the mechanical components. The Cardoza Park and Ben Rodgers Park pump stations would be in locations zoned for parks and open space. The two pump stations associated with Segment 3 would be located in or near residential areas, but more than 100 feet from the nearest residence; one at the intersection of Country Club Drive and Calaveras Ridge Drive and the other just east of the Old Calaveras Road and Evans Road intersection. The pump stations would be in an enclosed building housing small pumps ranging between 10 to 115 hp. Operation of the pump stations is not expected to increase ambient noise levels by 3 dB or more within the City of Milpitas, or result in residential land use exterior noise levels exceeding 45 dBA (nighttime) or 55 dBA (daytime). Implementation of **Mitigation Measure NOI-2** would require noise reduction features and would ensure that operational noise impacts are less than significant.

Mitigation Measure NOI-2: Noise Reduction Features

The City shall include noise reduction features as part of the proposed project to ensure that noise levels associated with proposed pump stations would be in conformance with applicable City performance standards (General Plan Policy 6-I-7) avoiding Day-Night Noise Level (Ldn) exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.

b) Construction activities that could generate vibration include excavation, soil transport, pile driving, shoring of trenches and the storage tank and pump station sites, and trenchless construction. Construction would occur in close proximity to residential, commercial, and school buildings that could be affected by construction activities along the proposed pipeline.

Based on anticipated equipment proposed for use and the vibration level data provided **in Table 3.12-4**, vibration levels generated by the majority of proposed equipment would be equal to or below the 0.2 in/sec PPV criterion applied to assess the potential for cosmetic or structural damage, and would not result in significant impacts.

Table 3.12-4: Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 feet (in/sec)
Pile Driver (Vibratory)	upper range	0.734
	Typical	0.170
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

Typical vibratory pile-driving vibration levels would also be below the 0.2 in/sec PPV criterion but may at times exceed the 0.2 in/sec PPV criterion when levels reach the uppermost range of measured vibration levels (0.734 in/sec PPV). In general, cosmetic or threshold damage to residential buildings can occur at vibrations greater than 0.5 in/sec PPV. As described in *Chapter 2, Project Description*, construction of the proposed project could require driven or vibratory sheet piles to shore the excavation area.

Continuous vibration caused by vibratory pile drivers and large vibratory rollers/compactors could cause structural damage if the continuous vibration is greater than 0.2 in/sec PPV.

Because groundborne vibration levels could exceed the established thresholds for short periods of time, impacts would be considered potentially significant. However, implementation of **Mitigation Measure NOI-3**, which includes vibration monitoring, would reduce potential construction-related impacts to less than significant levels.

The operation of the pipeline, storage tank, pump stations and appurtenances would not result in groundborne vibrations. Therefore, there would be no operational vibration impacts.

Mitigation Measure NOI-3: Vibration Monitoring

The City shall require its contractors to conduct vibration monitoring at any residences or buildings located less than 50-feet from construction activities. Ground vibration level at the nearest residential structure to the construction site will be monitored using vibration sensor(s) or velocity transducer with adequate sensitivity capable of measuring peak particle velocity level in the frequency range of 1 hertz (Hz) to 100 Hz. If the vibration level due to construction activities exceeds 0.2 inch/second, the contractor shall make modifications/revisions to construction methods for approval by the City.

e, f) There are no airports or airstrips within the City. Thus, the proposed project would not expose people residing or working in the project area to excessive noise levels. No impacts would occur.

3.13 Population and Housing

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

Discussion

Environmental Setting

As of January 2015, the population of the City of Milpitas was estimated at 72,606 (DOF 2015). The City's 2010 Urban Water Management Plan (UWMP) estimates an increase in population over a 20-year span, resulting in an estimated 2030 population of 98,100 (City of Milpitas 2011).

According to the UWMP, the existing and planned source of recycled water would continue to be SBWR. In 2010, recycled water use was approximately 806 AF[11] and projected to be 1,983 AF in 2035 (City of Milpitas 2011). The actual recycled water use in 2010 was 792 AF[12], compared to the 1,210 AF that was projected for 2010 in 2005. The difference in the actual use compared to projected use partly reflects the impact of a down economy on the infrastructure additions that had been planned. The projected recycled water future use by five year increments is shown below.

Table 3.13-1: Recycled Water Projected Supply (afy)

	2015	2020	2025	2030	2035
Recycled Water Future Supply	1,109	1,333	1,546	1,759	1,983

Source: City of Milpitas, 2011

The City of Milpitas has prepared land use maps and established land use policies that define the city's future land use pattern and maximum development intensities throughout their planning area. In addition, the City has established growth management policies that ensure balanced growth and adequate public services are available to accommodate the growth.

One of the City's General Plan growth management policies relevant to the proposed project is that "the City shall not process, approve or authorize construction or provision of any City service or City service

[11] The UWMP provided existing and planned water supplies in hundred cubic feet (hcf). These numbers have been converted to AF.

[12] The UWMP provided actual and planned recycled water use in million gallons. These numbers have been converted to AF.

extension to any property or people in that area located both outside of the Urban Growth Boundary and outside of the city limits of the City of Milpitas, except as expressly provided in this policy. "City service" means any water, sanitary sewer, storm drain, flood control, road maintenance, sidewalk maintenance, police, fire or emergency medical service, including construction of related infrastructure that the City, its agents, its departments, or its contractors, provides to any property or people within the City limits….". The City also has a policy to "coordinate capital improvement planning for all municipal service infrastructure with the location and timing of growth."

Impact

a) The proposed project is a recycled water system expansion project, and is intended to provide recycled water to serve non-potable demands such as irrigation that are currently served by raw or potable water. Provision of recycled water would not directly induce population growth because it would not produce additional water supply, but instead replace the current imported supply (purchased water) with a more desirable (locally-produced) water. In addition, the proposed project would not directly induce population growth in the service area by proposing new homes and businesses. Environmental impacts associated with population growth include secondary, or indirect, physical effects such as increased traffic, degradation of air and/or water quality, loss of sensitive biological resources and habitats, increased demand on public services and infrastructure, and changes in land use. Projects are considered to have growth-inducing implications when economic, housing, or population growth would be stimulated, either directly or indirectly. Local land use plans (e.g., general plans and specific plans) provide for development patterns and growth policies that allow for the planned and orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce unplanned growth (i.e., conflict with local land use plans) could indirectly cause adverse environmental impacts not previously envisioned. Thus, to assess whether a project has the potential to induce growth and result in adverse secondary effects beyond what is anticipated by local jurisdictions, it is important to assess the degree to which the growth associated with a project would or would not be consistent with applicable land use plans.

   Growth inducement may constitute an adverse impact if the growth is inconsistent with the land use and growth management policies for the affected area. There is potential that the resulting increase of supply availability (750 AFY of potable and raw water replaced by recycled water) from the reduced demand for purchased water could indirectly support population growth to meet the increasing demands of the City as it reaches its planned, buildout growth. However, this growth would be within the growth framework of the City's General Plan and the potential impact would be less than significant. Because the proposed project would provide recycled water to offset raw and potable water use and meet existing demand, it would not increase the capacity of or otherwise expand the recycled water system in direct support of new population or economic expansion. In addition, the volume of recycled water provided by the proposed project is considered in the 2035 projections of the UWMP. Thus, impacts would be less than significant.

b, c) The proposed recycled water pipelines, pump stations, and storage tank would be constructed within existing roadways and City-owned land and would not displace any existing housing. The proposed project would not displace existing housing or people; therefore it would have no displacement impacts. No impacts would occur.

3.14 Public Services

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

Discussion

Environmental Setting

The Milpitas Fire Department provides fire and emergency services within City limits. Law enforcement services are provided by the Milpitas Police Department within City limits. The City of Milpitas Recreation Services Department maintains parks and recreational facilities within City limits. Milpitas Unified School District administers the public school system within the City.

Impacts

a) Schools are located in and around the project area, as described in *Section 3.10 Land Use and Planning*. *Section 3.15 Recreation* identifies the bike paths/trails and parks located adjacent to the proposed facilities.

The proposed project would not change existing demand for public services (e.g., fire and police protection, schools, parks, or libraries) because population growth would not result from construction of the proposed project (see *Section 3.13 Population and Housing)*. In addition, operation and maintenance of the proposed project facilities are not anticipated to require new employees and therefore would not substantially increase the need for new staff from any of public protection services entities (e.g., police and fire). Because implementation of the proposed project would not change the demand for any public services, it would not require additional equipment or resources for those public service providers. The proposed project would have no impact, and no mitigation is required.

3.15 Recreation

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
b) Does the Project affect recreational facilities?	☐	☐	☒	☐

Discussion

Environmental Setting

The City of Milpitas Recreation Services Department owns and maintains over 30 parks. **Figure 2-2** shows the location of existing parks and other recreational areas. There are no park or recreational areas operated by the County of Santa Clara adjacent to the proposed project area.

Parks and recreational facilities that are located adjacent to or near the proposed project components are listed below (City of Milpitas 2016a). Play yards and fields located within existing schools are also located adjacent to the proposed pipeline alignments.

Parks/Recreation Areas:

- Cardoza Park is located on Kennedy Drive at North Park Victoria Drive. It is a 10-acre park with a lighted ball diamond, two horse-shoe units, volleyball poles, and an outdoor amphitheater. It also includes 8 barbeque units, 19 tables, restrooms, play equipment, and parking.
- Foothill Park is a 4-acre park located at Roswell Drive and Roswell Court, with barbeque units, tables, play equipment, and parking.
- Murphy Park/Yellowstone Park is an 8.7-acre park on Yellowstone Avenue east of South Park Victoria Drive with restrooms, play equipment, picnic area, barbeque units, tables, and parking.
- Creighton Park is a 5-acre park located on Olympic Drive, west of South Park Victoria Drive. It has barbeque units, tables, play equipment, and parking.
- Sinnott Park is a 4.7-acre park located between Clear Lake Avenue and Tahoe Drive. It has horse-shoe units, play equipment, barbeque units, and tables.
- Yellowstone Park/Robert E Browne Park is located at Yellowstone Avenue and South Park Victoria Drive. It has four lighted tennis courts and a large grassy area and par course.
- Ben Rodgers Park is a 9.5-acre park located at Skyline Drive and Glenview Drive. It has barbeque units, tables, backstop, play equipment, and parking.
- Hillcrest Park is a 5.2-acre park located between Fieldcrest Drive and Chipman Drive. It has barbeque units, tables, and a tot lot.

Recreational Facilities:

- Milpitas Sports Center is located immediately south of Cardoza Park and located on East Calaveras Boulevard. It is a fitness center that includes a gym, pools, and aerobic studios.

Trails:

- Neighborhood trails connect homes with schools and parks and provide pedestrian and bicycle access to local shops and markets. Neighborhood trails within the project area include the Hillcrest Park/Ben Rogers Park Trail and Yellowstone Park Trail.

Impacts

a, b) The proposed project would provide recycled water to public, commercial, industrial, and private customers to offset potable and raw water use. Although this project may indirectly induce population growth (see *Section 3.13 Population and Housing*) consistent with approved General Plan, because of the nature of this project, it would not 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. Thus, impacts would be less than significant. In addition, the proposed project does not propose recreational facilities and would not require the construction or expansion of any recreational facilities. As such, no impacts would occur.

c) Construction of the pipelines would occur primarily within existing roadway, but at some locations they would be adjacent to or cross parks and other recreational facilities (including school play yards and turf areas). **Table 3.15-1** shows the recreational areas that could be affected along the proposed pipeline alignments, either directly or indirectly. Although the precise duration of construction activities along these segments has not yet been determined, during construction activities, parts of the parks outside of a safety buffer zone would remain open for use by the public. For most locations, impacts to recreational facilities are indirect, associated with noise and dust generated from temporary and intermittent construction activities in the vicinity of the sites. Because construction of the pipeline would progress continuously along the pipeline route and would not remain at any one location for a long duration of time (pipeline trenches would be open for two to three days on average), and due to the temporary nature of overall construction, impacts would generally be considered less than significant.

Lane closures may be required along the pipeline alignments, which could affect bike routes and lanes, and access to parks and during construction. Along North Park Victoria Drive, South Park Victoria Drive, East Calaveras Boulevard, and Yosemite Drive. Construction lane closures may require bicyclists and pedestrians to take alternative routes along City streets, thus affecting the overall experience. Because of the continuous progression of pipeline construction, this impact would be temporary and short term. As construction is completed, the City would restore all disturbed areas (park equipment, pathways, and turf) to their original condition. To minimize disruption of schools, **Improvement Measure REC-1** could be implemented to coordinate with school officials to identify the appropriate timing of construction adjacent to school properties. To minimize temporary impacts on neighborhood trails, **Improvement Measure REC-2** could be implemented by informing the public of anticipated construction activities and schedule.

Operation of the proposed project would not affect recreational facilities as the pipelines would be located entirely underground.

Improvement Measure REC-1: Effects on Rose Elementary, Randall Elementary, Merryhill Elementary and Middle, and Rancho Middle Schools.

The City shall coordinate with school officials to identify the appropriate timing of construction adjacent to school property.

Improvement Measure REC-2: Effects on Neighborhood Trails.

Prior to construction, the City or its contractors shall post signage along the Hillcrest Park and Ben Rogers Neighborhood Park Trails informing the public of anticipated construction activities and schedule.

Table 3.15-1: Impacts to Recreational Facilities

Segment No./Name	Location	Nearest Recreational Facility and Potential Impact
1 and 2 - Cardoza Park	Along Kennedy Drive and Fanyon Street	One baseball field and an outdoor amphitheater are located approximately 125 feet south of the pipeline alignment along Kennedy Drive. The baseball field and amphitheater are located 200 feet and 540 feet respectively to the west of the proposed storage tank. The two baseball fields along the east side of the park would be temporarily closed while Segment 1 is installed. The park would not be closed during construction activities. The northwest and northeast entrances/exits to the parking lots would be temporarily closed at separate times while the pipeline along this area is constructed. The temporary reduction in parking would not directly affect the recreational experience and thus is not considered an impact to recreation. Because there are multiple accesses to the park (access is available through two parking lots and through the MUSD parking lot along East Calaveras Boulevard), this is considered a less than significant impact. Indirect impacts are expected to be less than significant due to the temporary and intermittent nature of construction activities.
1 – Milpitas Sports Center	Along East Calaveras Boulevard and Fanyon Street	Pipeline installation would occur within the roadway. The Milpitas Sports Center is an indoor facility, therefore no indirect or indirect impacts are anticipated as construction activities would be outside.
4 - Foothill Park/Rose Elementary School	Along Roswell Drive and into the park, through the play area.	The pipeline would be constructed within the roadway along Roswell Drive, and through the park in an area that currently contains a play area and turf, and would extend towards Lomer Way. Rose Elementary School's play area is immediately adjacent to Foothill Park. The northern and eastern portion of the park would remain open during construction and would be accessible from a pathway from South Temple Drive to the east. Construction would have a direct impact on the play area, however the recreation equipment would be replaced and the disturbed areas restored after the pipeline is installed. As described in *Chapter 2, Project Description, a* safety buffer zone would be established around the construction area. Although not a significant impact, construction activities could indirectly impact school yard uses (i.e. noise and dust in the immediate vicinity) during the school season. The City could implement **Improvement Measure REC-1** would further reduce temporary impacts between school recreational uses and construction activities.
4 - Murphy Park	Along the western boundary pathway of the park and cut across through the turf area to a connection point near Everglades Drive.	The pipeline would be constructed along the park pathway and through the turf area. The play area would remain open for recreational purposes. Construction activities may have a direct impact on the turf/soccer area. Due to the temporary and intermittent nature of construction activities, impacts would be less than significant.

Segment No./Name	Location	Nearest Recreational Facility and Potential Impact
4 - Creighton Park	Cut across the park through the open gravel access area between Creighton Court and Olympic Drive	Pipeline installation would occur within a gravel area. The park would remain accessible from Olympic Drive and Big Bear Court. Other areas of the park would remain open. Because construction would not affect access into the park, turf/playground areas would remain open for recreational purposes, and due to the temporary and intermittent nature of construction activities, impacts would be less than significant.
4 - Ben Rodgers Park	Cuts across the park along the west side through the turf between Skyline Drive and Big Bend Drive	Pipeline installation and connection would occur through the park along the western edge where the turf is located. The other areas of the park would remain open and would remain accessible from multiple access points (from Mesa Verde Drive, Shiloh Avenue, Skyline Drive, and Glenview Drive). Construction would have a direct impact on the Ben Rodgers Park Trail pathway. Due to the temporary and intermittent nature of construction activities, this impact would be less than significant. However, the City could implement **Improvement Measure REC-2** to further reduce temporary impacts to the neighborhood trail through the park.
4 – Yellowstone Park/Robert E. Browne Park	Along Yellowstone Avenue	Pipeline installation would occur in the roadway adjacent to the park where the turf area and tennis courts are located, and thus would have no direct impact to the park or to the Yellowstone Park Trail pathway. The park would remain open and accessible during construction. Due to the temporary and intermittent nature of construction activities, impacts would be less than significant.
4 – Hillcrest Park	Cut across Hillcrest Park between Whitcomb Court and Chipman Drive, and between Whitcomb Court and Cascade Street	The pipeline would be constructed through the park in an area that currently contains a tot lot and turf. The park would remain open and would be accessible from a pathway from Incline Court, Chipman Drive, and Cuesta Drive. The construction would have a direct impact on the tot lot area, and the Hillcrest Park Trail pathway. The park equipment would be replaced and the disturbed areas restored after the pipeline is installed. Due to the temporary and intermittent nature of construction activities, this impact would be less than significant. However, the City could implement **Improvement Measure REC-2** to further reduce temporary impacts to the neighborhood trail through the park.
1 – Burnett Elementary School	Along Kennedy Drive	Pipeline installation would occur adjacent to Burnett Elementary School. Although construction would occur within the roadway, it would be adjacent to the turf area. As described in *Chapter 2, Project Description, a* safety buffer zone would be established around the construction area. Although not a significant impact, construction activities could indirectly impact school yard uses (i.e. noise and dust in the immediate vicinity) during the school season. The City could implement **Improvement Measure REC-1** would further reduce temporary impacts between school recreational uses and construction activities.

Segment No./Name	Location	Nearest Recreational Facility and Potential Impact
4 - Randall Elementary School	Along Edsel Drive	Pipeline installation would occur adjacent to Randall Elementary School. Although construction would not occur within or adjacent to the turf or marked school yard play area, construction activities during the school season could indirectly impact school yard uses (i.e. noise and dust in the immediate vicinity) during the school season. The City could implement **Improvement Measure REC-1** would further reduce temporary impacts between school recreational uses and construction activities.
4 – Rancho Middle School	Along Yellowstone Avenue	Pipeline installation would occur adjacent to Rancho Middle School. Although construction would occur within the roadway, it would be adjacent to the turf area. Construction activities during the school season could indirectly impact school yard uses (i.e. noise and dust in the immediate vicinity) during the school season. The City could implement **Improvement Measure REC-1** would further reduce temporary impacts between school recreational uses and construction activities.
4 – Merryhill Elementary and Middle School	Along Yosemite Drive	Pipeline installation would occur adjacent to Merryhill Elementary and Middle School. Although construction would not occur within or adjacent to the turf or school yard play area, construction activities during the school season could indirectly impact school yard uses (i.e. noise and dust in the immediate vicinity) during the school season. The City could implement **Improvement Measure REC-1** would further reduce temporary impacts between school recreational uses and construction activities.

3.16 Transportation/Traffic

Would the Project:	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	☐	☒	☐	☐
b) Conflict with applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☒	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

Discussion

Environmental Setting

The proposed project is located within the City of Milpitas and a small portion of unincorporated Santa Clara County. The Santa Clara Valley Transportation Authority (VTA) is the Congestion Management Agency (CMA) for Santa Clara County. VTA is responsible for developing the Valley Transportation Plan, which is a long-term regional transportation planning document. VTA is also responsible for administering the Congestion Management Program (CMP), which is an integrated process for transportation planning decision-making that establishes traffic and transit standards, trip-reduction and travel-demand requirements, and incorporates transportation implications of land use planning. Local

cities, including the City of Milpitas, are responsible for maintaining service level standards defined by the CMP, and conforming to transit standards (City of Milpitas 2010).

Local Circulation System

Within the City of Milpitas there are three freeways (I-680, I-880, and State Route 237/Calaveras Boulevard), one expressway (Montague Expressway), and multiple principal arterial roads (Jacklin Road, Abel Street, South Main Street, Milpitas Boulevard, and Great Mall Parkway). None of the identified CMP roadways extend east of I-680 within the City of Milpitas (VTA 2013). Within the proposed project area, the portion of Segment 2 that runs along Jacklin Road west of I-680, is the only component located along one of these identified major roadways. Segment 5 would connect to the existing recycled water system at South Milpitas Boulevard, which is identified in the CMP as a principal arterial.

Public Transit

Although the region includes multiple transit networks, including rail, light rail, regional bus service, and local bus services, only local buses run through the proposed project area. **Table 3.16-1** indicates the bus routes and associated roadways within the proposed project area.

Table 3.16-1: Local Bus Routes within the Proposed Project Area

Local Bus Route	Route within Proposed Project Area	Proposed Project Segment
Route 46	Jacklin Road North Park Victoria Drive Yellowstone	Segment 2 Segment 4
Route 47	East Calaveras Boulevard Dempsy Road	Segment 1
Route 71	Landess	Segment 4

Source: VTA 2016

Bicycle Facilities

The CMP identifies cross county bicycle corridors, though only one corridor is identified within the proposed project area (Corridor 21). Within the proposed project area, Corridor 21 runs along North Park Victoria Drive north of Jacklin Road, and along Evans Road to East Calaveras where it turns into Piedmont Road, and south past the City of Milpitas boundary (VTA 2013). Segment 3 runs alongside Corridor 21 on North Park Victoria Drive from Jacklin Road to Country Club Drive, and crosses Corridor 21 at the intersection of Kennedy Drive and Evans Road. A small portion of Segment 4 runs along Corridor 21 for approximately 150 feet on Piedmont Road just north of the intersection of Cresthaven Street and Piedmont Road.

The City of Milpitas' Bikeway Master Plan Update identifies the following bicycle facilities in the proposed project area (Alta Planning + Design 2009):

- Class III Bike Routes:
  - East Calaveras Boulevard between I-680 and Piedmont Road;
  - Yosemite Drive between South Victoria Drive and Piedmont Road;
  - North Park Victoria Drive between Jacklin Road/Evans Road and East Calaveras Boulevard;
  - South Park Victoria Drive between Yosemite Drive and Montague Expressway;
  - Jacklin Road between I-680 and transition to Evans Road

- Class II Bike Lanes:
  - North Park Victoria Drive between Jacklin Road/Evans Road and Scott Creek
  - Evans Road/Piedmont Road between North Park Victoria Road and Landess Avenue
  - South Park Victoria Drive between East Calaveras Boulevard and Yosemite Drive.

Discussion

a, b) *Construction*

The proposed project would be constructed primarily within roadways and City property. Open trench construction would be employed for the majority of the pipeline alignments, with trenchless crossings of I-680 at Los Coches Street in Segment 1, and I-680 from Olympic Drive to Sinclair Frontage Road in Segment 5 (see *Chapter 2, Project Description*). The active construction area for all segments would be approximately 20 feet in width on either side for a total construction corridor of up to 45 feet, which would require limiting on-street parking and temporarily reducing traffic lane widths. Roadway closures and/or one-way traffic control limitations are expected to occur but would be minimal and temporary in nature.

Traffic impacts during project construction would be associated primarily with worker vehicles and haul trucks, and with lane reductions caused by construction activity in the roadways. The increased traffic could result in a reduction of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles. In addition, lane closures associated with pipeline construction would occur along streets and intersections during construction. Lane reductions could further reduce the roadway capacities, especially during peak hours. For most pipeline segments, construction would use the open-trench method, and thus only a small segment would be closed at one time during construction activities (construction of pipelines would proceed at a rate of 150 feet per day).

Anticipated construction-related vehicle trips include construction workers traveling to and from the proposed project work areas, haul trucks, and other trucks associated with equipment and material deliveries. For one crew, the number of construction worker trips would average up to 25 round trips per day, and 7 construction truck trips per day. During limited times, two crews may be working concurrently but in different areas when segment construction timeframes overlap. The traffic generated by construction workers would be spread out within the project area and would vary depending on which segment is under construction. The trips associated with hauling of material off site for disposal and delivery of equipment/material would occur throughout the day. Any construction-related traffic occurring between 7:00 a.m. and 9:00 a.m. or between 4:00 p.m. and 6:00 p.m. would coincide with peak hour traffic and could temporarily impede traffic and transit flow. Travel during these time frames would primarily consist of workers traveling to and from the proposed project area, because deliveries would likely occur throughout the day.

Access to the construction area would vary depending on where the installation is occurring. The proposed pipeline would traverse residential and commercial areas, and may require temporary roadway closures (generally no greater than one day in duration). Given the short-term nature of construction and because impacts would move as work progresses (rather than one area being shut down for an extensive period), construction-related traffic impacts are not expected to be substantial. However, to ensure appropriate traffic controls are implemented and impacts are less than significant, preparation and implementation of a Traffic Management Plan would be necessary. The Traffic Management and Construction Staging Plan would require the City and its construction contractor to address and mitigate impacts associated with the temporary closures of traffic lanes, parking lanes, or other public ROW. Implementation of **Mitigation Measure TRA-1** would ensure construction-related traffic impacts are reduced to a less-than-significant level.

Mitigation Measure TRA-1: Develop and Implement Construction Staging and Traffic Management Plan

Prior to construction or the issuance of applicable permits, the contractor shall submit a Traffic Management and Construction Staging Plan to the City of Milpitas for review and approval. The contractor shall work with the City of Milpitas to ensure that the City concurs with the provisions and requirements of the Traffic Management and Construction Staging Plan. This plan shall:

- Show the impact of various construction stages, including proposed lane closures, detours, staging areas, and routes of construction vehicles.
- Describe traffic control measures that will be implemented to manage traffic and reduce potential traffic impacts in accordance with stipulations of the most recent version of the California Manual of Uniform Traffic Control Devices (CMUTCD). Traffic control measures may include, but are not limited to, flag persons, warning signs, lights, barricades and cones to provide safe passage of vehicular (including cars and buses), bicycle and pedestrian traffic, and access by emergency responders.
- Demonstrate the location of transit stops and transit and bicycle routes that would be temporarily impacted by construction activities, and shall recommend places to temporarily relocate transit stops and transit and bicycle routes, if necessary.
- Require written notification of the timing, location, and duration of construction activities, and the location of lane closures or detours (if any) to all emergency service providers (fire, police, and ambulance) prior to road closure. Emergency service vehicles shall be given priority for access.

Operation

Operation and maintenance of the proposed project would involve regular inspections of the pipelines, pump stations, and storage tank. Existing City operations and maintenance staff would conduct the maintenance activities, which would require one to two additional trips per week for the proposed facilities. The additional trips would be negligible and have a less than significant impact on overall traffic in the area.

c) There are no airports within the City of Milpitas. The nearest airports are the Norman Y. Mineta San Jose International Airport and the Reid-Hillview Airport, located approximately 5 and 7 miles, respectively, from the proposed project. The proposed project would not affect air traffic patterns, and would be located sufficiently far from an airport or airstrip to avoid creating a substantial air traffic safety risk. There would be no impact.

d) The proposed project would not create or substantially increase a traffic hazard due to a design feature. The proposed project would temporarily change the configuration of intersections and roadways within the proposed project area, in particular when lane closures would be required during pipeline installation within the roadways. Construction along any one segment of roadway would occur at a rate of approximately 150 feet per d ay, thereby limiting lane closures to the affected segment. Because lane closures could increase conflicts between vehicles, bicyclists, and pedestrians, potential impacts are considered significant and would require mitigation. With the implementation of the Traffic Management and Construction Staging Plan (**Mitigation Measure TRA-1**), such hazards caused by the changed configurations would be reduced to a less-than-significant level.

As described in *Chapter 2, Project Description,* upon completion of construction activities, disturbed areas would be restored to pre-construction conditions and roadways would be repaved.

All intersections and roadways would be restored to pre-construction conditions and impacts associated with increased hazards would be less than significant.

e) Lane closures and other potential traffic impacts caused by construction activities associated with the proposed project would have potential to impede emergency response to those areas, or to areas accessed via those routes. Station Number 2 is the only fire station located less than one half mile from the proposed project. No proposed project components would be constructed along the roadways that border Station Number 2, which would not be directly affected by the proposed project's construction activities. Implementation of **Mitigation Measure TRA-1**, which requires development and implementation of a Traffic Management and Construction Staging Plan, would include specific traffic control measures to address emergency access routes and notify emergency service providers of road closures and detours.

With implementation of this mitigation measure, potential impacts to emergency access during construction would be reduced to less-than-significant levels. Upon completion of construction activities, all intersections and roadways would be restored to pre-construction conditions, and no impact to emergency access would occur during project operation.

f) The proposed project involves construction and operation of recycled water infrastructure that would not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities. As described above, construction could disrupt traffic, bicycles, and pedestrians, however impacts would be temporary. Implementation of **Mitigation Measure TRA-1** would include provisions for detours to be provided for the alternative modes of travel, reducing impacts to a less-than-significant level. Roadways would be restored to match the surrounding road type once construction is complete.

The pipeline would be located primarily within roadways and below grade. The storage tank, pump stations, and appurtenant facilities would be located within City property or within roadways. The proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. There is no impact from project operations and no mitigation is required.

3.17 Utilities and Service Systems

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☒

Discussion

Environmental Setting

The City owns, operates, and maintains a potable water distribution system. The City purchases treated potable water from two wholesalers: SFPUC and SCVWD. Approximately two-thirds of the City's potable water is from SFPUC with the remaining one-third from SCVWD (City of Milpitas 2011). SFPUC water is the source of supply to residents and businesses. SCVWD water primarily serves commercial and industrial areas west of Highway 880 and south of Calaveras Boulevard west of I-680 (City of Milpitas 2011).

As described in *Chapter 2, Project Description,* the City purchases recycled water from the SBWR program (through a contract with the City of San Jose) for irrigating public and private areas such as

parks, medians, and industrial uses to supplement potable water use. The City maintains and operates approximately 22.4 miles of recycled water lines and helps to comply with recycled water permit requirements within the City boundaries. Recycled water comprises about 7 percent of the City's water supply (City of Milpitas 2011).

The City owns and maintains its sanitary sewer collection system, however it does not treat wastewater. The wastewater, consisting primarily of industrial and sanitary discharge, is pumped through a force main to the Santa Clara/San Jose Water Pollution Control Plant (WPCP) for treatment to be either discharged into the San Francisco Bay, or turned into recycled water and redistributed (City of Milpitas 2011). The wastewater treatment is provided by agreement with the cities of San Jose and Santa Clara and its terms include paying a capital share and operating cost share based on discharge volumes to the WPCP.

Solid waste and recycling pickup and disposal is provided by Republic Services. The solid waste is disposed of at the Newby Island Landfill and recycling facility which is located west of I-880 on Dixon Landing Road. This facility processes recycled materials, operates a construction and demolition material processing facility, and a landfill that accepts industrial wastes, grit, screenings, wastewater treatment sludge, contaminated soils, clean soils, and municipal solid waste (Republic Services 2016).

Impacts

a, b, c) The proposed project would provide recycled water for landscape irrigation purposes east of I-680. Use of recycled water would comply with SWRCB's adopted General WDRs for Landscape Irrigation Uses of Municipal Recycled Water (Recycled Water General Permit) (Order No. 2009-0006-DWQ). Compliance with WDRs set forth in the Recycled Water General Permit would ensure the reasonable protection of surface water and groundwater within the project area (refer to *Section 3.9 Hydrology and Water Quality*). With implementation of the required WDRs, the proposed project would not exceed wastewater treatment requirements of the SWRCB. Impacts to surface water or groundwater quality would be less than significant.

The project itself entails expansion of existing recycled water facilities to offset the use of potable and raw water use. The environmental effects of the proposed facilities are evaluated throughout this document; collectively, this analysis demonstrates that construction of new recycled water pipelines, pump stations, and storage tank would not significantly impact the environment so long as identified mitigation measures are implemented. The proposed project would not require or result in the construction of new water or wastewater treatment facilities beyond those being analyzed within this environmental document. Impacts are considered less than significant.

As discussed in *Section 3.13 Population and Housing*, the proposed project would increase total deliveries of recycled water east of I-680 in the City. Given that the proposed project is designed to serve non-potable demands such as irrigation with currently available recycled water, and the proposed project itself includes expansion of infrastructure to meet those demands, it is not anticipated that there would be inadequate capacity to serve the demands of the project area. Impacts are considered less than significant, and no mitigation is required.

During construction, the City would implement the requirements set forth within the Construction General Permit (refer to *Section 3.9 Hydrology and Water Quality*) to reduce stormwater runoff. Through compliance with the Construction General Permit, construction of the proposed project is not anticipated to generate surface runoff in quantities that would require construction of new off-site storm drains or expansion of existing off-site storm drains. The majority of the project area is already paved and developed, and would be restored to pre-construction conditions after construction is complete. With the exception of the pump stations and proposed storage tank (if constructed above grade) and associated electrical control facilities and radio tower, the proposed pipelines would be located underground. No new on or off-site storm drains or expansion of existing on- or off-site storm drains would be required for these project components.

The proposed storage tank and pump stations would require additional on-site drainage facilities. As described in *Section 3.9 Hydrology and Water Quality*, the proposed storage tank would not increase the amount of impervious surface area at the site, and therefore would not result in increased stormwater runoff. The storage tank and pump stations would be constructed in compliance with the San Francisco Bay MS4 Permit and would implement the required low impact development (LID) techniques to address stormwater runoff through source control, site design, and stormwater treatment measures. Thus, impacts are expected to be less than significant.

d) The proposed project is a recycled water system expansion project. No potable water supplies would be delivered to customers as part of the proposed project. The provision of recycled water would offset existing potable and raw water usage. As such, the proposed project would not require new or expanded entitlements and no impact would occur.

e) The proposed project would not increase the concentration of wastewater produced by the SBWR, but could decrease the quantity of wastewater discharged into the Bay by the WPCP. Reducing the WPCP discharges to the Bay would be consistent with the City of San Jose's action plan for the WPCP to reduce the volume of wastewater discharged into the Bay. Wastewater from the City would continue to be pumped to the WPCP for treatment and either discharged into the Bay or turned into recycled water and redistributed in the recycled water system. The WPCP can generate excess recycled water beyond that which is being used (City of Milpitas 2011). Thus there would be sufficient capacity to serve the proposed project area's demand for recycled water. Impacts are expected to be less than significant.

f, g) The main contributor of solid waste generated by the proposed project would be from construction activities. The solid waste (soil) generated by the excavation and trenching for the pipelines would be hauled off-site and disposed of in accordance with solid waste disposal regulations. Approximately 33,600 cubic yards of excavated soil and roadway (asphalt and concrete) material would be generated for construction of all segments. As described in *Section 2.7 Construction Methods* of *Chapter 2, Project Description*, approximately 70 cubic yards of spoil would be generated from excavation activities per day. The construction spoil would likely be hauled to Newby Island for recycling and disposal. This landfill has a capacity of 57.5 million cubic yards, a remaining capacity of 21.2 million cubic yards, and can accept 4,000 tons of throughput per day (CalRecycle 2016). The rate of daily disposal from the proposed project would not exceed the permitted daily acceptance levels at Newby Island. The landfill would have sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs.

Solid waste would be disposed of in accordance with all applicable federal, state, and local statutes and regulations. Once constructed, operation and maintenance activities would generate minimal solid waste. For this reason, implementation of the Proposed Project would not exceed permitted capacity at local landfills. The impact would be less than significant and no mitigation is required.

3.18 Mandatory Findings of Significance

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

Discussion

Impacts

a) The potential biological impacts of the proposed project are discussed in *Section 3.4 Biological Resources*. The potential impacts to cultural resources from the proposed project are addressed in *Section 3.5 Cultural Resources*. As described in these sections, the proposed project could potentially impact special status species including the California red-legged frog, Alameda whipsnake, California tiger salamander, western burrowing owl, foothill yellow-legged frog, and roosting pallid bats, special status plant species, nesting birds, protected trees, and previously undiscovered cultural resources. With implementation of the mitigation measures identified in this document, the proposed project would not have the potential to adversely affect the environmental resources in the vicinity of the proposed project area. Thus, the proposed project would not degrade the quality of the environment, or affect any habitat, wildlife population or plant community, and would not eliminate important examples of California's history or prehistory. Implementation of mitigation measures included herein would reduce the potential biological and cultural resources impacts to less-than-significant levels.

b) The CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or increase in environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (Guidelines, Section 15355(a)(b)).

A number of projects in the City are pending or approved, with all of them located west of I-680. The majority are outside of the proposed project's vicinity and consist of development of hotels, office space, and residential units. The pending projects in the vicinity of the proposed project (within 1 mile) include the following (City of Milpitas 2016b):

- Hanson Self Storage: This project would construct a new self storage facility at 1100 Cadillac Court.
- Public Storage Remodel: Public Storage proposes to remodel an existing facility to provide 1.2 million square feet of floor area at 1600 Watson Court.
- 450 Montague: Lennar proposes the development of 489 dwelling units on 10.5 acres near Montague Expressway and Great Mall Parkway.
- Centre Pointe Mixed Use: Integral Communities proposes the development of 362 dwelling units, 55,400 square feet of commercial space, and 241 townhouse units on 15.68 acres at 1463 Centre Pointe Drive.

Cumulative projects would result in a variety of construction-related impacts, including increase in dust, noise, traffic, potential for erosion and hazardous material contamination, and degradation of nearby waterways. The geographical context of these environmental resource issues is localized, but would expand to the region if appropriate mitigation measures are not implemented to contain site-specific impacts (*e.g.,* localized erosion could cause downstream water quality degradation). The cumulative projects would not overlap geographically with the proposed project. However, it is possible that cumulative projects, without mitigation measures, would result in significant, cumulative impacts to the environment.

As described in *Sections 3.1 – 3.17* of this document, implementation of the proposed project could potentially result in significant impacts; however those impacts would be reduced to less-than-significant levels with implementation of mitigation measures. The implementation of mitigation measures identified throughout this report would ensure that the proposed project's contribution to cumulative impacts would not be cumulatively considerable. The proposed project's contribution to construction-related cumulative impacts would be further reduced by the short-term duration of the proposed construction activities. Thus, implementation of the proposed project in combination with other past, current or reasonably foreseeable projects within the proposed project vicinity is not expected to result in cumulatively considerable impacts. None of the environmental impacts identified in this document are significant, and the proposed project would not cause any incremental impacts to become substantial. Therefore, the proposed project would not contribute to cumulatively considerable impacts.

Operation of the proposed project would not result in any long-term effects, and as such it would not contribute to any cumulative impacts that are common for development projects. As such, no cumulative impacts would occur.

c) As discussed in *Sections 3.1 – 3.17*, construction activities associated with the proposed project have the potential to result in impacts on aesthetics, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, recreation, and transportation and traffic that could affect human beings. However, with implementation of mitigation measures in the individual resource sections, all potentially significant project-related impacts would be less than significant.

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Chapter 4 Federal Cross-Cutting Environmental Regulations Evaluation

This section describes the status of compliance with relevant federal laws, executive orders, and policies, and the consultation that has occurred to date or will occur in the near future. The topics are based in part on the SWRCB's Clean Water State Revolving Fund Program Federal Cross-cutting Environmental Regulations Evaluation Form for Environmental Review and Federal Coordination.

4.1 Federal Endangered Species Act

Section 7 of the Federal Endangered Species Act (FESA) requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. Under Section 7, a project that could result in incidental take of a listed threatened or endangered species must consult with the USFWS to obtain a Biological Opinion (BO). If the BO finds that the project could jeopardize the existence of a listed species ("jeopardy opinion"), the agency cannot authorize the project until it is modified to obtain a "nonjeopardy" opinion. *Section 3.4 Biological Resources* describes the 11 sensitive species that have the potential to occur in the area, three of which are federally listed: California red-legged frog (federally threatened), California tiger salamander (3 populations federally threatened), and Alameda whipsnake (federally threatened). No impacts are anticipated to occur for any of these sensitive wildlife species because there is limited habitat available within the potential area of impact. Where there is a potential for sensitive species to occur within the project area, **Mitigation Measure BIO-1** through **Mitigation Measure BIO-6** would reduce potential impacts to a less-than-significant level. Thus, the proposed project would not jeopardize any listed species and the lead agency would be in compliance with the FESA.

4.2 National Historic Preservation Act (NHPA), Section 106

The purpose of the NHPA is to protect, preserve, rehabilitate, or restore significant historical, archeological, and cultural resources. Section 106 requires Federal agencies to take into account effects on historic properties. Section 106 review involves a step-by-step procedure described in detail in the implementing regulations (36 CFR Part 800). As described in *Section 3.5 Cultural Resources*, a cultural resource assessment for the proposed project was conducted. The analysis includes a Section 106 evaluation for the proposed project and can be submitted as part of the consultation process with the State Historic Preservation Officer (SHPO). Concurrence by SHPO would ensure compliance with the NHPA.

No cultural resources were identified within the project site during this study. Therefore, no impacts to historical resources under CEQA and no effects to historic properties under the NHPA for the proposed project are expected. However, based on the high level of prehistoric sites located adjacent to and surrounding the project APE, the APE is sensitive for buried archaeological resources. Based on this sensitivity, archaeological and Native American monitoring for all ground-disturbance activities, as described in **Mitigation Measure CUL-1** and **CUL-2,** would be implemented to reduce any potential impacts to less than significant.

4.3 Clean Air Act

U.S. Congress adopted general conformity requirements as part of the Clean Air Act (CAA) Amendments in 1990 and the USEPA implemented those requirements in 1993 (Sec. 176 of the CAA (42 U.S.C. § 7506) and 40 CFR Part 93, Subpart B). General conformity requires that all federal actions "conform" with the State Implementation Plan as approved or promulgated by USEPA. The purpose of the general conformity program is to ensure that actions taken by the federal government do not undermine state or local efforts to achieve and maintain the national ambient air quality standards. Before a federal action is

taken, it must be evaluated for conformity with the State Implementation Plan. All "reasonably foreseeable" emissions predicted to result from the action are taken into consideration. These include direct and indirect emissions, and must be identified as to location and quantity. If it is found that the action would create emissions above de minimis threshold levels specified in USEPA regulations (40 CFR § 93.153(b)), or if the activity is considered "regionally significant" because its emissions exceed 10 percent of an area's total emissions, the action cannot proceed unless mitigation measures are specified that would bring the proposed project into conformance. As described in *Section 3.3 Air Quality*, the project area lies within the San Francisco Bay Area Air Basin. The results of the air quality modeling showed that pollutant emissions would not exceed Federal General Conformity significance thresholds (**Appendix A**). Accordingly, the lead agency would be in compliance with the CAA.

4.4 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed by Congress in 1972 and managed by the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management, is designed to balance completing land and water issues in coastal zones. It also aims to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Within California, the CZMA is administered by the Bay Conservation and Development Commission, the California Coastal Conservancy, and the California Coastal Commission. No portion of the proposed project is within the coastal zone, as the project area is located nearly 30 miles from the Pacific Coast and almost 3 miles from the margins of San Francisco Bay. Therefore, the Coastal Zone Management Act does not apply to the proposed project.

4.5 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires a federal agency to consider the effects of its actions and programs on the nation's farmlands. The FPPA is intended to minimize the impact of federal programs with respect to the conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state, local, and private programs and policies to protect farmland. As described in *Section 3.2 Agriculture and Forestry Resources*, the proposed project would be located primarily within Urban and Built-Up Land, with small portions designated as Grazing Land and would not occur within any designated important farmlands. As such, the lead agency would be in compliance with the FPPA.

4.6 Executive Order (EO) 11988 – Floodplain Management

EO 11988 requires federal agencies to recognize the values of floodplains and to consider the public benefits from restoring and preserving floodplains. As described in *Section 3.9 Hydrology and Water Quality*, a portion of Segment 1 and a portion of Segment 2 of the proposed project lie within the 100-year floodplain as designated by the FEMA. Although there are project facilities that would be within the floodplain, these are underground pipelines that would be buried and would not increase flood hazards or interfere with floodplain management. As such, the lead agency would be in compliance with this EO.

4.7 Federal Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Executive Order 13168

The Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act prohibit the take of migratory birds (or any part, nest, or eggs of any such bird) and the take and commerce of eagles. EO 13168 requires that any project with federal involvement address impacts of federal actions on migratory birds. As described in *Section 3.4 Biological Resources*, the proposed project would have less than significant impact on nesting birds with implementation of **Mitigation Measure BIO-7** if construction cannot be avoided during nesting season. Thus, the lead agency would be in compliance with this EO.

4.8 Executive Order 11990 – Protection of Wetlands

Under EO 11990, federal agencies must avoid affecting wetlands unless it is determined that no practicable alternative is available. As described in *Section 3.4 Biological Resources*, the project area does not support federally protected wetlands as defined by CWA Section 404 and therefore no impacts are anticipated. Berryessa Creek is considered a jurisdictional feature and two drainages would be crossed at Los Coches Street and Ames Avenue. Horsetail and other potentially hydrophytic vegetation were observed along the channel. Berryessa Creek drains directly into San Francisco Bay and is subject to the jurisdiction of the San Francisco RWQCB and U.S. Army Corps of Engineers. Due to the trenchless construction methods used at the locations crossing Berryessa Creek, BMPs required under the SWPPP, and implementation of **Mitigation Measures BIO-1** and **HYD-1**, there would be no fill of jurisdictional wetlands or waters of the U.S. impacts are considered less than significant. Thus, the lead agency would be in compliance with EO 11990.

4.9 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act was passed in 1968 to preserve and protect designated rivers for their natural, cultural, and recreational value. There are no designated Wild and Scenic Rivers within the project area, nor will any designated rivers be adversely affected by the proposed project. As a result, the Wild and Scenic Rivers Act does not apply to the proposed project.

4.10 Safe Drinking Water Act – Source Water Protection

Section 1424(e) of the Safe Drinking Water Act established the USEPA's Sole Source Aquifer Program. This program protects communities from groundwater contamination from federally-funded projects. Within USEPA's Region 9, which includes California, there are nine sole source aquifers. None of these sole source aquifers are located within the project area. Therefore, the Sole Source Aquifer Program does not apply to the proposed project, and the lead agency would be in compliance with Section 1424(e) of the Safe Drinking Water Act.

4.11 Executive Order on Trails for America in the 21st Century

The EO on Trails for America requires federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. The proposed project would not result in any impacts on trails. Thus, no adverse effects on trails would occur and the lead agency would be in compliance with this EO.

4.12 Executive Order 13007 – Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." The proposed project would not be located on or impact any Federal lands and therefore would not affect any Indian sacred sites under this EO.

4.13 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976 as amended (16 U.S.C. § 1801 et seq.), is the primary act governing federal management of fisheries in federal waters, from the 3-nautical-mile state territorial sea limit to the outer limit of the U.S. Exclusive Economic Zone. It establishes exclusive U.S. management authority over all fishing within the Exclusive Economic Zone, all anadromous fish throughout their migratory range except when in a foreign nation's waters, and all fish on the continental shelf. The Act also requires federal agencies to consult with NMFS

on actions that could damage Essential Fish Habitat (EFH), as defined in the 1996 Sustainable Fisheries Act (Public Law 104-297). The proposed project would not be located in or impact any U.S. Federal waters regulated under the Magnuson-Stevens Act. EFH includes those habitats that support the different life stages of each managed species. A single species may use many different habitats throughout its life to support breeding, spawning, nursery, feeding, and protection functions. EFH can consist of both the water column and the underlying surface (e.g., streambed) of a particular area. The project area is located primarily within existing roadways. Trenchless construction methods would be used at the Berryessa Creek crossings to minimize impacts. As described in *Section 3.4 Biological Resources*, the project is not expected to have adverse effect on resident or migratory fish, wildlife species, or fish habitat in the project area.

4.14 Environmental Justice

This section describes the existing socioeconomic resources in the proposed project area and the regulatory setting pertaining to environmental justice-related issues. This section also evaluates the potential for the proposed project to disproportionately affect minority or low-income groups.

The USEPA defines environmental justice as: "The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people, including racial, ethnic, or economic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies." (USEPA 2016).

Economic conditions in the proposed project area are generally better than national averages. According to 2010-2014 American Community Survey (ACS) estimates, the median household income (MHI) of the City of Milpitas from 2010-2014 was $99,072. The unemployment rate of the City is 8.7%. (US Census Bureau 2016).

Minority and Low Income Communities

According to CEQA and USEPA guidelines, a minority population is present in a Study Area if the minority population of the affected area exceeds 50 percent, or if the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

USEPA guidelines recommend that analysis of low-income communities consider U.S. Census Bureau's poverty level definitions, as well as applicable state and regional definitions of low-income and poverty communities. U.S. Census data define the poverty level based on income, household size, and number of minors. 2015 poverty levels range from $11,367 (one person household) to $52,747 (nine or more person household with one related minor). The most recent ACS data available indicates that 7.5% of the City of Milpitas as a whole is at or below the poverty level (U.S. Census Bureau 2016)

According to the U.S. Census Bureau, the median household income (MHI) for Santa Clara County was $124,513 in 2014 (U.S. Census Bureau 2014). Communities with MHIs less than 80 percent of the California MHI are considered disadvantaged communities (DACs), according to the California Department of Water Resources (DWR) Integrated Regional Water Management Program. Detailed demographic information was analyzed using data from the U.S. Census Bureau's American Community Survey (ACS), which provides estimates of demographics based on annual surveys. Data from ACS is available on a Census block group level, and this finer scale is more accurate for project analyses. The statewide 2014 MHI was $61,489. A DAC would therefore be a community with an MHI of $49,191 or less. DWR's definition was used to define low income/disadvantaged communities for this analysis.

Minority Communities

A review of demographic data for the proposed project area produced as part of the 2010-2014 ACS, shows that the City of Milpitas has a predominately minority population, with only 20.1% of the population identifying as "White" only. Over 63% of the population of the City identifies as Asian, and just over 8% identifying as more than one race. Other minority groups were identified as comprising less than 5% of the total population. As shown in **Figure 4-1**, the proposed facilities are located within or adjacent to census tracts that contain greater than 50% minority populations. ACS mapping found that construction of all project components would occur within Census block groups whose minority population comprise more than 50% of the block group's total population. Additional evaluation of ACS demographic data found that the larger area, beyond just the proposed project's area of disturbance, was also composed of areas with a substantial (greater than 50%) minority population.

Low Income Communities

ACS mapping of median household incomes in the proposed project area shows limited presence of Census block groups with an MHI meeting the DAC threshold defined above. As shown in **Figure 4-1**, the only DAC area within the proposed project area is located in a block group bounded by East Calaveras Boulevard to the north, South Park Victoria Drive to the east, Yosemite Drive to the South, and I-680 to the west. Segment 1 is the only proposed project component that would be constructed within this DAC area.

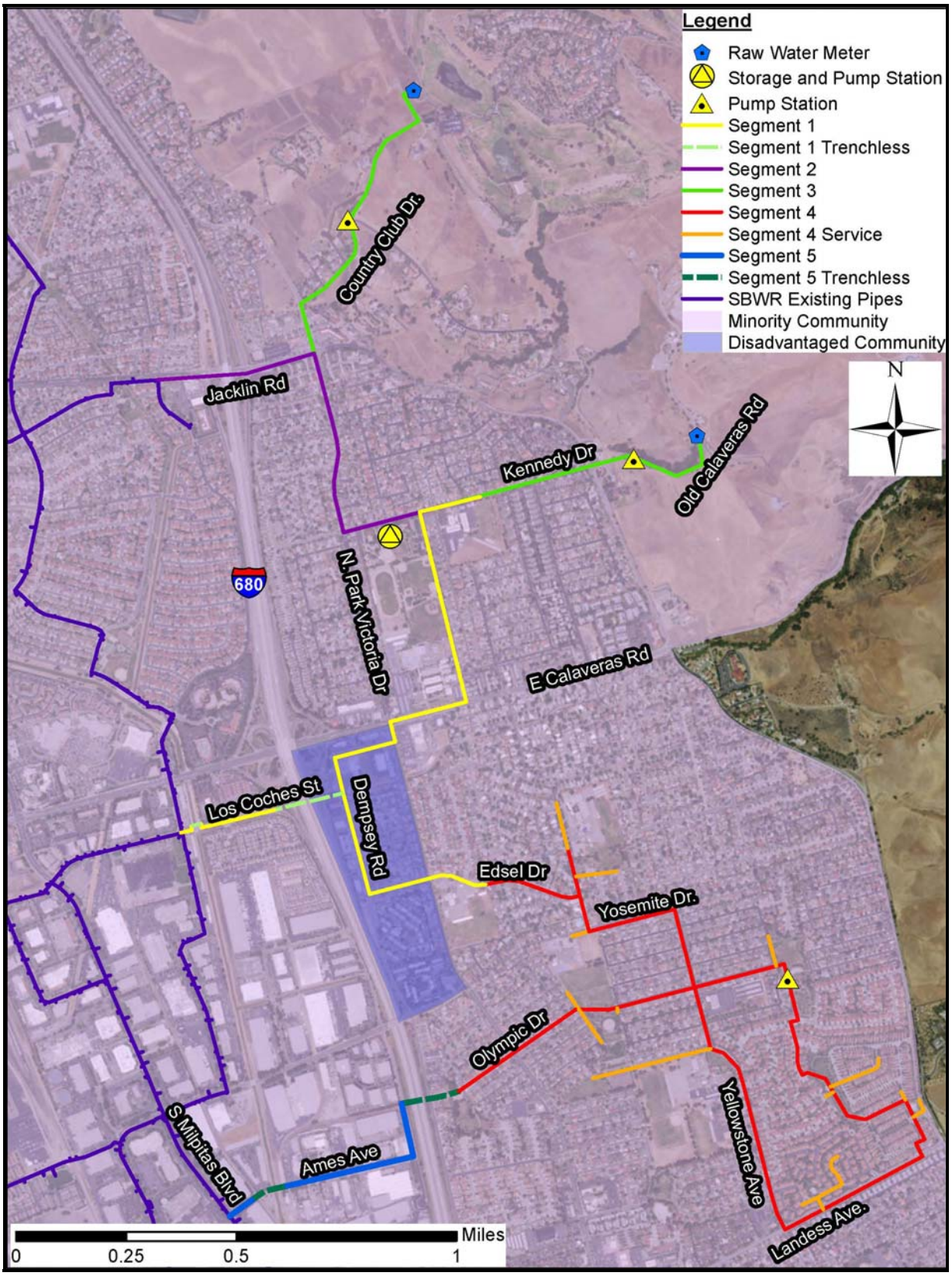
Conclusion

For the purposes of this analysis, an impact related to environmental justice would be significant if the proposed project would cause impacts to minority or low-income populations that are disproportionately high and adverse, either directly, indirectly, or cumulatively.

The placement of the proposed facilities are strategic, intentionally located to provide recycled water to existing and future landscape irrigation customers, including schools, parks, and residential areas. Thus, although the construction of pipelines has the potential for short-term effects, the provision of recycled water to existing and future users would have the long-term benefit of providing a reliable water supply to maintain turf and landscaping in the project area.

Although construction would generate impacts (e.g., dust, traffic, and noise), such activities would be intermittent and temporary, and would cease upon completion of work activities. Where potential impacts could occur, mitigation measures have been identified to reduce such effects to less-than-significant levels. In addition, construction-related effects would be similar regardless of their locations within or outside census tracts that contain minority/low-income communities. With the exception of a portion of Segment 1, the proposed project would be constructed within areas whose populations are relatively similar in regards to income level and presence of minority populations. Potential impacts from construction of the proposed project pipelines would be realized consistently along all portions of the alignments, including Segment 1. The proposed project would therefore not result in any disproportionately high impacts on minority or low income communities. Thus, no adverse environmental justice impacts would occur.

Figure 4-1: Environmental Justice Communities



Source: RMC 2016

Chapter 5 Report Preparation

5.1 Report Authors

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APPENDICES

City of Milpitas
Recycled Water Pipeline Extension Project

Final

Initial Study/Mitigated Negative Declaration

Prepared for:
City of Milpitas
455 East Calaveras Boulevard
Milpitas, CA 95035

Prepared by:

October 2016

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Appendix A - Air Quality Emissions Model Results and General Conformity Report

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Technical Memorandum

Subject:	General Conformity Air Quality Analysis
Prepared for:	Jeffrey Leung, City of Milpitas
Prepared by:	Simon Kobayashi
Reviewed by:	Susan Yogi
Date:	June 9, 2016
Reference:	Milpitas Recycled Water Pipeline Extension Project

A. Overview of the General Conformity Rule

The United States (U.S.) Congress adopted general conformity requirements as part of the Clean Air Act (CAA) Amendments in 1990 and the U.S. Environmental Protection Agency (USEPA) implemented those requirements in 1993 (Sec. 176 of the CAA (42 U.S.C. § 7506) and 40 CFR Part 93, Subpart B). The general conformity requirements are formally referred to as the General Conformity Rule, which requires that all federal actions "conform" with the State Implementation Plan (SIP) as approved or promulgated by USEPA. The purpose of the General Conformity Rule is to ensure that actions taken by the federal government do not undermine state or local efforts to achieve and maintain the National Ambient Air Quality Standards (NAAQS). Before a federal action is taken, the action must be evaluated for conformity with the SIP. All "reasonably foreseeable" emissions predicted to result from the action are taken into consideration; reasonably foreseeable emissions include direct and indirect emissions, and must be evaluated for their location and quantity. If it is found that the action would create emissions above de minimis threshold levels specified in USEPA regulations (40 CFR § 93.153(b)), or if the action is considered "regionally significant" because its emissions exceed 10% of an area's total emissions, the action cannot proceed unless mitigation measures are specified that would bring the project into conformance.

General conformity applies in both federal nonattainment and federal air quality maintenance areas, including the Study Area for the city of Milpitas's Recycled Water Pipeline Extension Project (proposed project). Within these federally designated areas, the General Conformity Rule applies to any "federal action" not specifically exempted by the CAA or USEPA regulations, i.e., any non-exempt activity by a federal governmental department, agency or instrumentality, or any activity that such an entity supports in any way, provides financial assistance for, or licenses, permits, or approves. This definition is broad enough to capture local agency approvals involving the receipt of federal funding. Emissions from construction activities are also included.

Methods Used for Determining Conformity

An action cannot be in compliance with the General Conformity Rule unless the total direct and indirect emissions from the action for criteria pollutants are in compliance with all relevant requirements contained in the applicable SIP. The USEPA provides several methods to determine if an action conforms to a SIP including a statewide emission budget, emission offsets, and/or air quality modeling. This Technical Memorandum uses a modeling approach to determine if the proposed project would cause or contribute to new air quality violations, or increase the frequency or severity of existing violations.

In addition to the use of modeling, USEPA has identified other methods of determining conformance with a SIP. One of these methods includes actions involving regional water and/or wastewater projects, as long as the projects are sized to meet only the needs of population projections that are in the applicable SIP.

All SIPs are based on local build-out projections from general planning documents; for the Study Area, the relevant SIP includes projections from local General Plans of applicable jurisdictions (City of Milpitas and the County of Santa Clara). Based on this factor, in conjunction with the low number of operational vehicle trips generated by the proposed project (e.g. less than 1 per day) over its long-term operational life, this assessment focuses on construction-related air quality effects that could result from the proposed project.

B. Project Description

The Study Area is located primarily in Milpitas, California, along the San Francisco Bay, with a small portion in unincorporated Santa Clara County. The Study Area is within the service area of the City of Milpitas with most construction occurring in a portion of the east half of the city generally bounded by I-680, Evans Road, Jacklin Road, Piedmont Road, and Landess Avenue; it will serve customers in that region, including the city of Milpitas, Milpitas Unified School District, Private School, Summit Pointe Golf Club, County of Santa Clara Parks, and Home Owners Associations.

The proposed project would expand on existing recycled water conveyance infrastructure. It will involve constructing and operating recycled water pipelines, pump stations, and a storage tank necessary to maximize delivery of recycled water within the Study Area, and to supply up to 750 acre-feet per year (AFY) of additional demands by 2021. The proposed project is exclusively recycled water.

This TM evaluates the proposed project at the project-level, complying with the California Environmental Quality Act (CEQA) and addressing National Environmental Policy Act (NEPA) components that would allow applicable federal agencies to make NEPA-related findings.

For the purposes of this TM, recycled water supplies would be utilized as non-potable water for irrigation and industrial use within the Study Area. The proposed project would connect customers in the area east of I-680 to recycled water through 5 distribution pipeline segments and laterals, one storage tank, and additional pumping capacity provided through four pump stations.

The proposed project will be fully operational in 2021.

Storage Tank Construction

The proposed project includes the construction of one new storage tank on the Cardoza Park parking lot. The new storage tank would have a pump station built adjacent to it and would be built with a capacity up to 1.5 million gallons to be completed by early 2018.

Pipelines

The proposed project proposes construction of approximately 50,560 linear feet (LF) of distribution pipelines to convey recycled water to end users. The proposed recycled water pipeline segments are listed below in **Table 1**.

Table 1: Proposed Project Recycled Water Pipelines

Segment #	Users	Pipe Diameter (inches)	Pipe Length (Linear Feet)	Related Road Names
1	Milpitas Unified School District, Milpitas Sports Center	12	10,260	Los Coches Street, Dempsey Road, North Park Victoria Drive and East Calaveras Boulevard, Kennedy Drive Edsel Drive
2	Cardoza Park	8	5,200	Jacklin Road, North Park Victoria Drive
3	Summitpointe Golf Club	8	7,700	Country Club Drive, Kennedy Drive, Old Calaveras Boulevard
4	Murphy Park Yellowstone Park Foothill Park Rancho Milpitas Unified School District, Hillcrest Terrace HOA	8	23,600	Edsel Drive, Roswell Drive, Yellowstone Avenue, Sequoia Drive, Everglades Drive, Landess Avenue, Olympic Drive, Cascade Street
5	Creighton Park	8	3,800	Ames Avenue, Sinclair Frontage Road, Olympic Drive
TOTALS			**50,560**	

Pump Stations

The proposed project includes the addition of four new pump stations necessary to convey recycled water to end users, which are listed below in **Table 2**. Three of these pump stations are stand-alone and identical in footprint. The air emissions resulting from the construction of these standalone pump stations were estimated using a disturbed area of 0.005 acres. The Cardoza Park pump station emissions were calculated along with the storage tank and fall under the same construction footprint. This is a conservative approximation given the overlap of pipe construction and storage tank construction. The pumps would be electrically driven, and no emergency standby power is currently planned for the sites.

Table 2: Proposed Project Pump Station Installations

Component	Pipeline Segment	Size (HP)	Number of Pumps[1]
Cardoza Park Pump Station	1	115	2
Country Club Drive Pump Station	3	35	2
Old Calaveras Boulevard Pump Station	3	35	2
Ben Rodgers Park	4	10	2
TOTAL		**195**	8

[1]All pump stations have one duty pump and one standby pump.

Proposed Construction

Construction of the pipelines would generally be located within publicly -owned lands and roadway rights-of-way (ROWs) within the city of Milpitas, and a small portion in the County of Santa Clara. Pipeline installation for all portions of the proposed project would use standard open-cut trenching techniques or trenchless technology such as jack-and-bore to go avoid Berryessa Creek and other features as applicable.

Construction Equipment and Staging. Standard installation of the pipelines would proceed at the rate of approximately 150 feet per day. The disturbed area for each pipeline segment was calculated assuming a total of 45-feet of disturbed land perpendicular to the pipeline. Excavated trench materials would be redistributed over the completed pipeline area and/or transported off-site.

Construction of the advanced treatment plant and pump stations with adjacent chlorination/storage components would also require grading, site preparation, and facility installation.

Installation of the facilities for the proposed project would require, but is not limited to, the following equipment:

- Air Compressors
- Asphalt/Paver Truck
- Boom Truck/Small Crane
- Concrete/Industrial Saws
- Crane
- Excavator
- Forklifts
- Generator Set
- Pile Driver
- Plate Compactor
- Pumps
- Roller
- Skid Steer Loader
- Sweepers/Scrubbers
- Tractor/Loader/Backhoe
- Water Truck
- Welders

When feasible, equipment and vehicle staging would be accommodated either at each construction site (pipeline, storage tank and pump station site), or at a centralized staging area, such as the lot at the proposed tank and pump station site.

Surface Restoration. Where the pipelines are installed in a paved roadway, new asphalt or concrete pavement would be placed to match the surrounding road type. Temporary asphalt material may be installed to allow traffic to use the roadway immediately after construction. Final repaving would be done after pipeline installations and testing are complete. For unpaved surfaces, restoration would generally involve replanting with annual grasses or native vegetation.

Construction Schedule

Construction of the proposed project's pipeline Segments 1 and 2 and paired storage tank and pump station are scheduled to begin in 2017. The remaining three pump stations would be completed early 2020. Pipeline construction would be completed at the end of 2020.

C. Existing Air Quality Conditions

The Study Area is located in the County of Santa Clara, California. This area lies within the San Francisco Bay Area Air Basin (SFBAAB), a 5,340-square-mile area bounded including the 400-square-mile San Francisco Bay. It is bordered by the Pacific Ocean on the west, and the Coast Range Mountains from the northwest to the southeast. The SFBAAB includes all of Santa Clara County. The climate of the SFBAAB is determined primarily by the temperature interactions between the bay and the surrounding land, where temperature gradients between coastal and inland locations arise during the days in the summer and the nights in the winter. Due to the heavy industry, shipping, two large airports and a large population in the Basin, ozone (O_3) and $PM_{2.5}$ levels are expected to continue to violate federal and State ambient air quality standards in spite of vigorous control measures. High levels of respirable particulate matter 10 microns or smaller (PM_{10}) also continue to violate State standards.

Criteria Air Pollutants

Criteria air pollutants of concern in the Study Area include ozone and particulate matter (PM). As required by the federal CAA, the USEPA has established National Ambient Air Quality Standards (NAAQS or national standards) to protect public health and welfare from these criteria pollutants. USEPA established standards for ozone[1], carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and particulate matter equal to or less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$). PM_{10} is also commonly referred to as respirable particulate and $PM_{2.5}$ is also known as fine particulate.

Local Air Attainment Status

The USEPA designates all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. A nonattainment designation generally means that a primary NAAQS has been exceeded more than once per year in a given area. The San Francisco Bay Area Air Basin is presently in "marginal" nonattainment for the 1997 and 2008 eight-hour ozone standards and "moderate" nonattainment for the 2006 $PM_{2.5}$ standard.

Generally, concentrations of photochemical smog, or ozone, are highest during the summer months and coincide with the season of maximum solar radiation. Inert pollutant concentrations tend to be the greatest during the winter months and are a product of light wind conditions and surface-based temperature inversions that are more frequent during that time of year. These conditions limit atmospheric dispersion, trapping pollutants close to the ground. However, in the case of PM_{10} impacts from fugitive dust sources, maximum dust impacts may occur during high wind events and/or in proximity to man-made ground-disturbing activities, such as vehicular activities on roads and earth moving during construction activities.

The Bay Area Air Quality Management District (BAAQMD) maintains 32 monitoring stations within the SFBAAB that monitor air quality compliance with ambient standards (BAAQMD 2015). Many of the stations are around the urban centers. Pollutants monitored include nitrogen oxides, carbon monoxide, sulfur dioxide, lead, black carbon, hydrogen sulfide, ultrafine particulate less than or equal to 0.1 microns and most importantly: O_3, PM_{10}, $PM_{2.5}$, and a number of toxic compounds.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are pollutants that are associated with acute, chronic, or carcinogenic effects but for which no ambient air quality standard has been established or, in the case of carcinogens, is appropriate. TAC impacts are evaluated by determining if a particular chemical poses a significant risk to human health and, if so, under what circumstances. The ambient background of TACs is the combined result of many diverse human activities, including gasoline stations, refineries, automobiles, industrial operations, and painting operations. In general, mobile sources contribute more significantly to health risks than stationary sources. Diesel PM is responsible for approximately 70 percent of the total toxic risk to Californians from air pollution.

In addition to diesel PM, emissions from diesel-fueled engines include over 40 other cancer-causing substances. Because diesel PM consists of more than one compound, monitoring is more difficult than for single TACs. However, based on a limited amount of data, the California Air Resources Board (CARB) has estimated the statewide, ambient, "population-weighted," cancer risk due to essentially all TACs, based on year 2000 emissions, at 758 in 1 million; of this, CARB estimates that 540 in 1 million, or approximately 70 percent, is due to diesel particulate (CARB 2000).

[1] Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). ROG and NOx are known as precursor compounds for ozone.

Certain serpentine formations contain asbestos fibers, which are considered a TAC when released into the atmosphere. Based on available geologic mapping, there is currently no documented evidence of serpentine rock in the Study Area (California Geological Survey 2000). Based on this circumstance, the potential for encountering asbestos-containing geologic formations is considered unlikely.

Federal Policies and Regulations

As previously indicated, the federal CAA requires the USEPA to identify criteria pollutants and establish NAAQS to protect public health and welfare. National standards have been established for ozone, CO, NO_2, SO_2, lead (Pb), PM_{10}, and $PM_{2.5}$. USEPA is responsible for implementing the myriad of programs established under the federal CAA, such as establishing and reviewing the NAAQS and judging the adequacy of SIPs, but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

Emission Standards for Nonroad Diesel Engines

The USEPA has established a series of cleaner emission standards for new off-road diesel engines culminating in the Tier 4 Final Rule of June 2004. The Tier 1, Tier 2, Tier 3, and Tier 4 standards require compliance with progressively stringent emission standards. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006 and the Tier 3 standards were phased in from 2006 to 2008. The Tier 4 standards complement the latest 2007 on-road heavy-duty engine standards by requiring 90 percent reduction in PM and NO_x when compared against current emission levels. To meet these standards, engine manufacturers will produce new engines with advanced emissions control technologies similar to those already expected for on road heavy-duty diesel vehicles. Phasing in of Tier 4 standards started with smaller engines in 2008 until all but the very largest diesel engines meet NO_x and PM standards in 2015.

Emission Standards for On-Road Trucks

To reduce emissions from on-road, heavy-duty diesel trucks, USEPA established a series of cleaner emission standards for new engines starting in 1988. The final and cleanest Tier 4 standards apply to engines manufactured in year 2007.

Local Regulations

Through the attainment planning process, the BAAQMD has developed BAAQMD Rules and Regulations to regulate sources of air pollution in the SFBAAB. The most pertinent BAAQMD rules to the proposed project are listed below. The emission sources associated with the proposed project are considered mobile sources. Therefore, they are not subject to the BAAQMD rules that apply to stationary sources, namely Regulation 10 (Standards of Performance for New Stationary Sources). There will be an emergency generator on-site; however, it will operate very infrequently and will not produce significant emissions.

BAAQMD Rule 1-301 – Public Nuisance

Rule 1-301 prohibits discharge of air contaminants or other material that cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property

BAAQMD Rule 6-1-301, 305 – Ringelmann No. 1 Limitation and Visible Particles

The purpose of Rules 6-1-301 and 305 are to control the amount of PM entrained in the atmosphere from man-made sources of fugitive dust. The 301 rule prohibits emissions of visible emissions lasting a cumulative 3 minutes in any 60 minutes as dark as or darker than Ringelmann No. 1 or with an opacity to

obscure sight in an equivalent or greater manner. The 305 rule prohibits emissions of visible particles from any operation resulting in annoyance to any other person, visible on the individual particle level. During project construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earth-moving and grading activities. These measures would include site watering as necessary to maintain sufficient soil moisture content.

D. Impact Assessment

Methodology

As indicated in Section A of this TM, this analysis of the General Conformity Rule uses a modeling approach to determine if the proposed project would cause or contribute to new air quality violations, or increase the frequency or severity of existing violations. As part of this evaluation, emphasis is placed on the criteria air pollutants regulated by USEPA. In addition to criteria air pollutants, this analysis also addresses potential cumulative air quality impacts, potential sources of odor, impacts to sensitive receptors, and sources of greenhouse gases (GHGs) that would result from the proposed project.

This analysis involves the calculation of emission estimates using models widely used throughout BAAQMD and California and compares the model estimates to the General Conformity's thresholds for NOx, ROG, CO, and PM_{10}. The CalEEMod Model, Version 2013.2.2, was used to quantify construction and operational emissions associated with proposed storage tank and pump station facilities. Construction emissions from pipeline installation activities were estimated using the Road Construction Emissions Model, Version 7.1.5.1. Construction emissions related to electricity consumption of pumps and increased recycled water treatment were estimated.

Given that the County of Santa Clara is either in federal attainment or unclassified with respect to PM_{10}, CO, SO_2, sulfates, lead, and hydrogen sulfide, and the proposed project improvements would generate minimal to no emissions of these pollutants. Therefore, these pollutants require no further evaluation.

Threshold Exceedances

The BAAQMD has air quality screening-level thresholds (BAAQMD, 2010), which were published as updates to the CEQA Air Quality Handbook. While these thresholds are not enforced due to the ruling of the Alameda County Supreme Court in 2012, the merits of the threshold were not put into question and have been used as thresholds in other BAAQMD EIRs. They are also used as they are a conservative threshold of significance. The thresholds for criteria pollutants are presented in **Table 3**.

Table 3: BAAQMD Air Quality Screening-Level Thresholds

Pollutant	Emissions Rate[1]
Reactive Organic Gases (ROG)	54 lbs/day
Nitrogen Oxides (NOx)	54 lbs/day
Particulate Matter <10 micron (PM_{10})	82 lbs/day
Particulate Matter <2.5 micron ($PM_{2.5}$)	54 lbs/day

[1] Source: Revised Draft Options and Justification Report California Environmental Quality Act Thresholds of Significance (BAAQMD 2010).

Proposed project-related air quality impacts fall into two categories: 1) short-term impacts during construction and 2) long-term impacts during project operation. During project construction, construction activities would affect local particulate concentrations primarily because of fugitive dust emissions. Proposed project construction would also result in increased ROG and NO_x emissions from construction

equipment. During the project operations phase, project-related motor vehicle trips would also increase emissions of ozone precursors and particulates.

Table 4 provides a summary of the maximum daily air emissions generated for the proposed project components and evaluation of compliance with BAAQMD air quality significance thresholds, which are based on BAAQMD CEQA Significance Thresholds (2010). These maximum emissions take into consideration the proposed project's phased construction schedule.

Table 4: Maximum Daily Air Emissions Generated for Proposed Project

Pollutant	Construction (lbs/day)				*Significant Construction Emissions[3]*	Operation (lbs/day)	*Significant Operation Emissions[3]*
	Pipeline Segment 1	Pipeline Segment 2	1 Pump Station & Storage Tank	Total			
Reactive Organic Gases (ROG)	1.94	2.22	1.57	5.73	No	0.1	No
Nitrogen Oxides (NOx)	14.30	22.36	14.11	52.52	No	0.4	No
Carbon Monoxide (CO)	13.16	14.69	13.21	41.06	No	0.0	No
Particulate Matter <10 micron (PM_{10})	0.89	4.35	1.51	7.76	No	0	No
Particulate Matter <2.5 micron ($PM_{2.5}$)	0.79	1.70	0.88	3.51	No	0	No

1. The treatment plant and pump station emissions were calculated using CalEEMOD
2. Pipeline emissions were calculated using the Roadway Construction Emissions Model (SMAQMD 2013).
3. Thresholds from BAAQMD CEQA Significance Thresholds (BAAQMD 2010).

Based on maximum daily emissions for the proposed project, the air quality significance thresholds for emissions would be exceeded during construction if all components were constructed concurrently. For this reason as well as the logistics involved in a preliminary construction schedule, construction would be phased.

Construction Emissions. Project-related construction activities would occur in two distinct categories: pipeline and non-pipeline components. Depending on the phase, non-pipeline components ut would be constructed at the same time as one or more pipeline segments. For the non-pipeline components construction would involve site preparation, trenching, earthmoving, and stockpiling activities, followed by installing equipment, facility construction, on-site pipeline, concrete, and above ground improvements. Earthmoving activities include excavation, trenching, backfill, soil compaction, and grading. Installation of the pipelines and associated grading and roadway surface work would occur at the same time as the non-pipeline facility construction and would continue from 2017 to 2020 varying in intensity from one to two pipe segments at a time, while averaging one pipeline at a time. The emissions generated from these common construction activities include:

- Dust (including PM_{10} and $PM_{2.5}$) primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces;

- Combustion emissions of criteria air pollutants (including ROG, NO_X, PM_{10}) primarily from operation of heavy equipment construction machinery (primarily diesel operated), portable auxiliary equipment and construction worker automobile trips (primarily gasoline operated); and,
- Evaporative emissions (ROG) from asphalt paving and architectural coating applications.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity and the weather. However, construction-related fugitive dust emissions would not exceed established thresholds.

Construction activities would also result in the emission of pollutants of concern, including ROG, NO_X, and PM_{10}, from construction equipment exhaust and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operating schedules, and the number of construction workers. Construction-related ROG, NOx and PM10 emissions would not exceed established thresholds when a phased construction schedule is followed.

Construction emissions for pipeline installation were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Model (SMAQMD 2013). Vehicle trips would be dispersed along the roadway network based on the location of construction activities. Estimated annual construction-related fugitive dust emissions, as well as exhaust emissions from construction equipment and worker trips are shown in **Table 5**. A summary of the model outputs is provided as part of **Attachment A**.

As shown in **Table 5**, General Conformity significance thresholds would not be exceeded for the proposed project.

Table 5: Proposed Project Estimated Pollutant Emissions

Pollutant	Carbon Monoxide (CO) (Tons/Yr)	Nitrogen Oxides (NOx) (Tons/Yr)	Reactive Organic Gases (ROG) (Tons/Yr)	Particulate (PM10) (Tons/Yr)
Federal General Conformity Rule Threshold[1]	100	100	100	100
Construction Emissions[2]	3.3	4.7	0.5	0.6
Significant Emissions[1]	*No*	*No*	*No*	*No*
Operational Emissions[3]	0.6	1.1	0.1	0.1
Significant Emissions[1]	*No*	*No*	*No*	*No*

1. Thresholds applied by Federal General Conformity Rule.
2. Calculations for construction were completed using Roadway Construction Emissions Model (Version 7.1.5.1, 2013) and CalEEMod model (Version 2013.2) and are included in Attachment A.
3. Calculations for operations were completed using CalEEMod (Version 2013.2) and are included in Attachment A. The emissions listed above are for a worst-case day.

Project Operations. The main operational components of the project include three new pumping facilities, a storage tank with an adjacent pump station, and maintenance-related vehicle trips. CalEEMod Version 2013.2, was used to quantify operational area and mobile source emissions associated with proposed storage and pump station facilities. A summary of the CalEEMod outputs are included in **Attachment A**.

Once operational, the proposed project would require minor maintenance activities of the pump stations, storage tank, and pipelines. Pump station operations would be driven by electricity and would not generate local emissions directly, but would result in emissions at a power plant within or outside of the BAAQMD. Power plant emissions, if located in California, are subject to the rules and regulations of the air district in which they are located and have been subject to their own regulatory review. Emissions from power generation to supply pumps would occur anywhere in the western U.S. power grid and emissions from motors to service the pumps would be regional. Energy would be supplied by permitted power sources,

such as sources permitted by the California Energy Commission's Application for Certification (CEQA equivalent) process.

Traffic generation during the long-term operation of the project improvements would average less than 1 one-way passenger vehicle trips per day, a negligible number of new trips. Operational emissions were estimated for the pump station or storage tank facilities using the CalEEMod 2013 Model. As provided in **Table 5** above, given an anticipated increase in vehicle trips of less than one per day, no trips were entered into the CalEEMod model. The CalEEMod outputs indicate that operational emissions for these facilities would be minor and would not exceed General Conformity thresholds or the BAAQMD thresholds meant to conform to the SIP. Based on the discussion presented above, operational air quality emissions associated with proposed project implementation are anticipated to be less than significant from a federal de minimis threshold perspective.

Cumulatively Considerable Net Increase of Criteria Pollutants

The proposed project is located within the BAAQMD, which does not meet state PM_{10} standards, the national $PM_{2.5}$, state $PM_{2.5}$ standard, and the state 1-hour, state 8-hour and the national 8-hour ozone standards. The BAAQMD is active in establishing and enforcing air pollution control rules and regulations in order to attain all state and federal ambient air quality standards and to minimize public exposure to airborne toxins and nuisance odors. As identified earlier, air emissions would be generated during construction of the proposed project. These construction-related emissions would not exceed the BAAQMD CEQA Significance Thresholds (2010).

Upon completion of construction activities, emission sources resulting from project operations would be associated with pump station and storage tank operations. **Table 5** shows that system operational emissions would be below BAAQMD thresholds and do not require further quantification. As such it is reasonable to conclude that the proposed project would not result in a cumulatively considerable net increase of criteria air pollutants as a result of operations for purposes of Federal Conformity reporting, and the impact would be de minimis.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses are more susceptible to respiratory distress and other air quality-related health problems.

Within the Study Area, six sensitive receptors have been identified, all nearby schools. Construction of the proposed project would not emit hazardous air pollutants in significant quantity other than potentially from large, heavy-duty, diesel-powered equipment exhaust. The California Office of Environmental Health Hazard Assessment (OEHHA) currently describes the health risk from diesel exhaust entirely in terms of the amount of particulate, or PM_{10}, that is emitted. Currently, the health risk associated with diesel exhaust PM_{10} or diesel particulate matter is characterized as a carcinogenic and chronic effect; whereas no short-term acute effect is currently recognized. Construction of the proposed project improvements would be limited in duration and, therefore, no long-term chronic impact would be expected.

There is currently no documented evidence of serpentine rock in the Study Area, which could contain asbestos fibers, which are considered a TAC when released into the atmosphere (California Geological Survey 2000). Based on this circumstance, the potential for encountering asbestos-containing geologic formations during excavation is considered unlikely and no additional air contaminants would be released.

Based on the above discussion, the generation of significant emissions of TACs during construction activities is unlikely. However, based on the potential for close proximity of construction to sensitive receptors, the impact of construction-related dust and PM_{10} and $PM_{2.5}$ could potentially affect those sensitive receptors. The City of Milpitas is committed to implementing dust control measures per its standard construction specifications to reduce release of fugitive dust and associated impacts to sensitive receptors. With implementation of the standard construction specifications, the impact would be further reduced.

Over the longer term, operational emissions associated with the proposed pump stations would operate by electricity. The pumping facilities would operate year-round (24-hours a day, seven days a week). No backup generators are anticipated for this proposed project.

Creation of Objectionable Odors

Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Odors rarely directly affect health, but they can be very unpleasant and lead to distress and concern over possible health effects among the public, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The proposed project involves the expansion of the recycled water system. The recycled water would be supplied from the South Bay Water Recycling Program, which treats the recycled water to meet Title 22 standards, and is not anticipated to contribute to odorous emission. For this reason, no significant odorous emissions are anticipated. Further, pumping operations would be within fully enclosed structures and are not expected to result in the generation of objectionable odors during normal operation.

Directly or Indirectly Increase Generation of Greenhouse Gas Emissions

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. These layers of gas in the atmosphere can prevent the escape of heat much the same as glass in a greenhouse. Thus, climate change is often referred to as the "greenhouse effect". The gases most responsible for climate change are CO_2 and methane. Other greenhouse gases (GHG) include, but are not limited to, nitrous oxide (N_2O), sulfur hexafluoride, hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons. It is becoming more widely accepted that continued increases in GHG will contribute to climate change, although there is uncertainty concerning the magnitude and timing of the trend.

Energy-related CO_2 emissions, resulting from petroleum and natural gas, represent 82% of total U.S. human-made GHG emissions. Methane, a GHG that comes from landfills, coal mines, oil and gas operations, and agriculture, represents 9% of total emissions. Emitted from burning fossil fuels and through the use of certain fertilizers and industrial processes, N_2O totals about 5% of U.S. emissions. These gases collectively contribute to a project's total CO_2 equivalent per year ($MTCO_2e/yr$).

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, and Executive Order S-3-05, signed in June 2005, focus on reducing GHG emissions in California. The impacts of global climate change described in AB 32 include changing sea levels, changes in snow pack and availability of potable water, changes in storm flows and flood inundation zones, and other impacts. The list of impacts included in AB 32 is considered substantial evidence of the potential environmental impacts that could result as a consequence of continued GHG outputs.

At minimum, the proposed project would be required to comply with Title 24 energy efficiency standards, to the extent applicable; however, the extent to which these standards would help in achieving the goals outlined above is unknown. In response to this uncertainly and to provide clarification to lead agencies for

assessing GHG impacts, CARB has developed statewide interim thresholds of significance for common project types that, collectively, are responsible for substantial GHG emissions. In applying these interim thresholds, CARB developed a preliminary threshold of 7,000 $MTCO_2e$/yr for industrial projects. However, this applies to only operations and not construction. CARB is not establishing thresholds for construction projects, but rather is proposing mandatory performance standards. BAAQMD has set a threshold of 1,100 $MTCO_2e$/yr.

Quantification of GHG for the proposed project operations was based on the CO_2 outputs generated from CalEEMod combined with new electrical loads required for the operation of the proposed pumping facilities. GHG emissions generated by the collective proposed project operations are conservatively estimated at 853 $MTCO_2e$/yr for the construction and 193 $MTCO_2e$/yr for the operation. These assumptions lead to emission estimates less than either the CARB threshold or the BAAQMD threshold and, therefore, operational-related GHG emissions are *de minimis* and less than significant.

Mitigation Measures

No mitigation measures need to be implemented as a result of less than significant air quality pollutants or greenhouse gas emissions. Standard mitigation measure would be implemented based on BAAQMD regulations, including dust control measures and best available control technologies for construction equipment as needed and as available.

E. References

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Attachment A

Air Quality Model Outputs

Milpitas Recycled Water Pipeline Extension - Cardoza Park Storage Tank and PS

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.34	User Defined Unit	0.34	14,764.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage of the site to be graded

Construction Phase - Schedule based on existing preliminary excel schedule

Off-road Equipment - Based on preliminary construction schedule - Bore/Drill Rigs assumed to have comparable emissions to pile driver

Off-road Equipment - Off-Highway Truck a surrogate for a water truck
Construction equipment based on phased equipment received in "Conveyance Construction Data.xlsx"

Off-road Equipment - Based on preliminary construction schedule

Off-road Equipment - Based on preliminary construction schedule

Trips and VMT - Estimate based on construction equipment, hauling based on 10 CY-sized truck

Demolition -

Grading - Based on anticipated dimensions of excavation site

Vehicle Trips - Based on anticipated increase in employment as a result of changes to operations. Trip length conservatively over-estimated.

Road Dust -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	22146	32670
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	5.00	21.00
tblConstructionPhase	NumDays	1.00	21.00
tblConstructionPhase	PhaseEndDate	3/1/2018	2/28/2018
tblConstructionPhase	PhaseStartDate	2/1/2018	1/31/2018
tblGrading	MaterialExported	0.00	11,279.00
tblGrading	MaterialImported	0.00	1,078.00
tblLandUse	LandUseSquareFeet	0.00	14,764.00
tblLandUse	LotAcreage	0.00	0.34
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	913.00
tblTripsAndVMT	VendorTripNumber	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	3.00
tblTripsAndVMT	WorkerTripNumber	6.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0578	0.5352	0.4102	8.2000e-004	0.0143	0.0271	0.0414	3.7100e-003	0.0254	0.0291	0.0000	72.6123	72.6123	0.0122	0.0000	72.8689
2018	0.0176	0.1597	0.1454	2.9000e-004	8.6800e-003	8.1700e-003	0.0169	2.2400e-003	7.6800e-003	9.9100e-003	0.0000	25.4455	25.4455	4.2700e-003	0.0000	25.5352
Total	**0.0754**	**0.6949**	**0.5555**	**1.1100e-003**	**0.0230**	**0.0353**	**0.0582**	**5.9500e-003**	**0.0331**	**0.0391**	**0.0000**	**98.0578**	**98.0578**	**0.0165**	**0.0000**	**98.4041**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0578	0.5351	0.4102	8.2000e-004	0.0143	0.0271	0.0414	3.7100e-003	0.0254	0.0291	0.0000	72.6122	72.6122	0.0122	0.0000	72.8689
2018	0.0176	0.1597	0.1454	2.9000e-004	8.6800e-003	8.1700e-003	0.0169	2.2400e-003	7.6800e-003	9.9100e-003	0.0000	25.4455	25.4455	4.2700e-003	0.0000	25.5352
Total	**0.0754**	**0.6949**	**0.5555**	**1.1100e-003**	**0.0230**	**0.0353**	**0.0582**	**5.9500e-003**	**0.0331**	**0.0391**	**0.0000**	**98.0577**	**98.0577**	**0.0165**	**0.0000**	**98.4041**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0678	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0678**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0678	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0678**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Prep	Site Preparation	9/1/2017	9/29/2017	5	21	
2	Construction	Building Construction	9/30/2017	1/31/2018	5	88	
3	Restoration (final paving, cleaning)	Paving	1/31/2018	2/28/2018	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Prep	Cranes	1	6.00	226	0.29
Site Prep	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Construction	Air Compressors	1	2.00	78	0.48
Construction	Bore/Drill Rigs	1	1.00	205	0.50
Construction	Cranes	1	2.00	226	0.29
Construction	Excavators	1	6.00	162	0.38
Construction	Forklifts	1	2.00	89	0.20
Construction	Generator Sets	1	2.00	84	0.74
Construction	Plate Compactors	1	1.00	8	0.43
Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Construction	Welders	2	2.00	46	0.45
Restoration (final paving, cleaning)	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Prep	2	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	10	20.00	0.00	913.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Restoration (final paving, cleaning)	1	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Prep - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.8000e-004	0.0000	8.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-003	0.0846	0.0406	7.0000e-005		4.5000e-003	4.5000e-003		4.1400e-003	4.1400e-003	0.0000	6.3975	6.3975	1.9600e-003	0.0000	6.4387
Total	**7.6000e-003**	**0.0846**	**0.0406**	**7.0000e-005**	**8.8000e-004**	**4.5000e-003**	**5.3800e-003**	**1.3000e-004**	**4.1400e-003**	**4.2700e-003**	**0.0000**	**6.3975**	**6.3975**	**1.9600e-003**	**0.0000**	**6.4387**

3.2 Site Prep - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.4300e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2430	0.2430	1.0000e-005	0.0000	0.2433
Total	**1.0000e-004**	**1.5000e-004**	**1.4300e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2430**	**0.2430**	**1.0000e-005**	**0.0000**	**0.2433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.8000e-004	0.0000	8.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-003	0.0846	0.0406	7.0000e-005		4.5000e-003	4.5000e-003		4.1400e-003	4.1400e-003	0.0000	6.3975	6.3975	1.9600e-003	0.0000	6.4387
Total	**7.6000e-003**	**0.0846**	**0.0406**	**7.0000e-005**	**8.8000e-004**	**4.5000e-003**	**5.3800e-003**	**1.3000e-004**	**4.1400e-003**	**4.2700e-003**	**0.0000**	**6.3975**	**6.3975**	**1.9600e-003**	**0.0000**	**6.4387**

3.2 Site Prep - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.5000e-004	1.4300e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2430	0.2430	1.0000e-005	0.0000	0.2433
Total	**1.0000e-004**	**1.5000e-004**	**1.4300e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2430**	**0.2430**	**1.0000e-005**	**0.0000**	**0.2433**

3.3 Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0413	0.3572	0.2652	4.3000e-004		0.0214	0.0214		0.0202	0.0202	0.0000	38.2491	38.2491	9.8300e-003	0.0000	38.4555
Total	**0.0413**	**0.3572**	**0.2652**	**4.3000e-004**		**0.0214**	**0.0214**		**0.0202**	**0.0202**	**0.0000**	**38.2491**	**38.2491**	**9.8300e-003**	**0.0000**	**38.4555**

3.3 Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5700e-003	0.0902	0.0734	2.5000e-004	7.2100e-003	1.1600e-003	8.3700e-003	1.9400e-003	1.0600e-003	3.0000e-003	0.0000	22.7075	22.7075	1.7000e-004	0.0000	22.7109
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	3.0500e-003	0.0295	7.0000e-005	5.9200e-003	5.0000e-005	5.9600e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.0152	5.0152	2.5000e-004	0.0000	5.0205
Total	**8.7400e-003**	**0.0932**	**0.1030**	**3.2000e-004**	**0.0131**	**1.2100e-003**	**0.0143**	**3.5100e-003**	**1.1000e-003**	**4.6200e-003**	**0.0000**	**27.7226**	**27.7226**	**4.2000e-004**	**0.0000**	**27.7315**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0413	0.3572	0.2652	4.3000e-004		0.0214	0.0214		0.0202	0.0202	0.0000	38.2490	38.2490	9.8300e-003	0.0000	38.4554
Total	**0.0413**	**0.3572**	**0.2652**	**4.3000e-004**		**0.0214**	**0.0214**		**0.0202**	**0.0202**	**0.0000**	**38.2490**	**38.2490**	**9.8300e-003**	**0.0000**	**38.4554**

3.3 Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5700e-003	0.0902	0.0734	2.5000e-004	7.2100e-003	1.1600e-003	8.3700e-003	1.9400e-003	1.0600e-003	3.0000e-003	0.0000	22.7075	22.7075	1.7000e-004	0.0000	22.7109
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	3.0500e-003	0.0295	7.0000e-005	5.9200e-003	5.0000e-005	5.9600e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.0152	5.0152	2.5000e-004	0.0000	5.0205
Total	**8.7400e-003**	**0.0932**	**0.1030**	**3.2000e-004**	**0.0131**	**1.2100e-003**	**0.0143**	**3.5100e-003**	**1.1000e-003**	**4.6200e-003**	**0.0000**	**27.7226**	**27.7226**	**4.2000e-004**	**0.0000**	**27.7315**

3.3 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1089	0.0914	1.5000e-004		6.2800e-003	6.2800e-003		5.9400e-003	5.9400e-003	0.0000	13.3716	13.3716	3.4200e-003	0.0000	13.4435
Total	**0.0126**	**0.1089**	**0.0914**	**1.5000e-004**		**6.2800e-003**	**6.2800e-003**		**5.9400e-003**	**5.9400e-003**	**0.0000**	**13.3716**	**13.3716**	**3.4200e-003**	**0.0000**	**13.4435**

3.3 Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1900e-003	0.0290	0.0250	9.0000e-005	6.3000e-003	4.0000e-004	6.7000e-003	1.6000e-003	3.7000e-004	1.9800e-003	0.0000	7.8969	7.8969	6.0000e-005	0.0000	7.8981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	9.7000e-004	9.3800e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7085	1.7085	8.0000e-005	0.0000	1.7103
Total	**2.8800e-003**	**0.0300**	**0.0343**	**1.1000e-004**	**8.3900e-003**	**4.2000e-004**	**8.8100e-003**	**2.1600e-003**	**3.8000e-004**	**2.5500e-003**	**0.0000**	**9.6054**	**9.6054**	**1.4000e-004**	**0.0000**	**9.6084**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1089	0.0914	1.5000e-004		6.2800e-003	6.2800e-003		5.9400e-003	5.9400e-003	0.0000	13.3716	13.3716	3.4200e-003	0.0000	13.4435
Total	**0.0126**	**0.1089**	**0.0914**	**1.5000e-004**		**6.2800e-003**	**6.2800e-003**		**5.9400e-003**	**5.9400e-003**	**0.0000**	**13.3716**	**13.3716**	**3.4200e-003**	**0.0000**	**13.4435**

3.3 Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1900e-003	0.0290	0.0250	9.0000e-005	6.3000e-003	4.0000e-004	6.7000e-003	1.6000e-003	3.7000e-004	1.9800e-003	0.0000	7.8969	7.8969	6.0000e-005	0.0000	7.8981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	9.7000e-004	9.3800e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7085	1.7085	8.0000e-005	0.0000	1.7103
Total	**2.8800e-003**	**0.0300**	**0.0343**	**1.1000e-004**	**8.3900e-003**	**4.2000e-004**	**8.8100e-003**	**2.1600e-003**	**3.8000e-004**	**2.5500e-003**	**0.0000**	**9.6054**	**9.6054**	**1.4000e-004**	**0.0000**	**9.6084**

3.4 Restoration (final paving, cleaning) - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-003	0.0207	0.0184	2.0000e-005		1.4700e-003	1.4700e-003		1.3500e-003	1.3500e-003	0.0000	2.2345	2.2345	7.0000e-004	0.0000	2.2491
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-003**	**0.0207**	**0.0184**	**2.0000e-005**		**1.4700e-003**	**1.4700e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2345**	**2.2345**	**7.0000e-004**	**0.0000**	**2.2491**

3.4 Restoration (final paving, cleaning) - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.2800e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2340	0.2340	1.0000e-005	0.0000	0.2342
Total	**9.0000e-005**	**1.3000e-004**	**1.2800e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2340**	**0.2340**	**1.0000e-005**	**0.0000**	**0.2342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-003	0.0207	0.0184	2.0000e-005		1.4700e-003	1.4700e-003		1.3500e-003	1.3500e-003	0.0000	2.2345	2.2345	7.0000e-004	0.0000	2.2491
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-003**	**0.0207**	**0.0184**	**2.0000e-005**		**1.4700e-003**	**1.4700e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2345**	**2.2345**	**7.0000e-004**	**0.0000**	**2.2491**

3.4 Restoration (final paving, cleaning) - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.2800e-003	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2340	0.2340	1.0000e-005	0.0000	0.2342
Total	**9.0000e-005**	**1.3000e-004**	**1.2800e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2340**	**0.2340**	**1.0000e-005**	**0.0000**	**0.2342**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

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

5.3 Energy by Land Use - Electricity

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0678	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	0.0678	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0678**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0678**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation

Milpitas Recycled Water Pipeline Extension - Cardoza Park Storage Tank and PS

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.34	User Defined Unit	0.34	14,764.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage of the site to be graded

Construction Phase - Schedule based on existing preliminary excel schedule

Off-road Equipment - Based on preliminary construction schedule - Bore/Drill Rigs assumed to have comparable emissions to pile driver

Off-road Equipment - Off-Highway Truck a surrogate for a water truck
Construction equipment based on phased equipment received in "Conveyance Construction Data.xlsx"

Off-road Equipment - Based on preliminary construction schedule

Off-road Equipment - Based on preliminary construction schedule

Trips and VMT - Estimate based on construction equipment, hauling based on 10 CY-sized truck

Demolition -

Grading - Based on anticipated dimensions of excavation site

Vehicle Trips - Based on anticipated increase in employment as a result of changes to operations. Trip length conservatively over-estimated.

Road Dust -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	22146	32670
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	5.00	21.00
tblConstructionPhase	NumDays	1.00	21.00
tblConstructionPhase	PhaseEndDate	3/1/2018	2/28/2018
tblConstructionPhase	PhaseStartDate	2/1/2018	1/31/2018
tblGrading	MaterialExported	0.00	11,279.00
tblGrading	MaterialImported	0.00	1,078.00
tblLandUse	LandUseSquareFeet	0.00	14,764.00
tblLandUse	LotAcreage	0.00	0.34
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	913.00
tblTripsAndVMT	VendorTripNumber	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	3.00
tblTripsAndVMT	WorkerTripNumber	6.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.5601	13.9110	11.7314	0.0230	0.4179	0.6947	1.1126	0.1114	0.6549	0.7664	0.0000	2,234.4469	2,234.4469	0.3476	0.0000	2,241.7466
2018	1.5680	14.1093	13.2077	0.0256	0.7853	0.7227	1.5080	0.2022	0.6788	0.8810	0.0000	2,458.2243	2,458.2243	0.4160	0.0000	2,466.9605
Total	**3.1280**	**28.0203**	**24.9391**	**0.0486**	**1.2032**	**1.4174**	**2.6206**	**0.3136**	**1.3338**	**1.6473**	**0.0000**	**4,692.6712**	**4,692.6712**	**0.7636**	**0.0000**	**4,708.7071**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.5601	13.9110	11.7314	0.0230	0.4179	0.6947	1.1126	0.1114	0.6549	0.7664	0.0000	2,234.4469	2,234.4469	0.3476	0.0000	2,241.7466
2018	1.5680	14.1093	13.2077	0.0256	0.7853	0.7227	1.5080	0.2022	0.6788	0.8810	0.0000	2,458.2243	2,458.2243	0.4160	0.0000	2,466.9605
Total	**3.1280**	**28.0203**	**24.9391**	**0.0486**	**1.2032**	**1.4174**	**2.6206**	**0.3136**	**1.3338**	**1.6473**	**0.0000**	**4,692.6712**	**4,692.6712**	**0.7636**	**0.0000**	**4,708.7071**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3715	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3715**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3715	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3715**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Prep	Site Preparation	9/1/2017	9/29/2017	5	21	
2	Construction	Building Construction	9/30/2017	1/31/2018	5	88	
3	Restoration (final paving, cleaning)	Paving	1/31/2018	2/28/2018	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Prep	Cranes	1	6.00	226	0.29
Site Prep	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Construction	Air Compressors	1	2.00	78	0.48
Construction	Bore/Drill Rigs	1	1.00	205	0.50
Construction	Cranes	1	2.00	226	0.29
Construction	Excavators	1	6.00	162	0.38
Construction	Forklifts	1	2.00	89	0.20
Construction	Generator Sets	1	2.00	84	0.74
Construction	Plate Compactors	1	1.00	8	0.43
Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Construction	Welders	2	2.00	46	0.45
Restoration (final paving, cleaning)	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Prep	2	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	10	20.00	0.00	913.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Restoration (final paving, cleaning)	1	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Prep - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0837	0.0000	0.0837	0.0119	0.0000	0.0119			0.0000			0.0000
Off-Road	0.7236	8.0527	3.8626	6.5600e-003		0.4289	0.4289		0.3946	0.3946		671.6272	671.6272	0.2058		675.9487
Total	**0.7236**	**8.0527**	**3.8626**	**6.5600e-003**	**0.0837**	**0.4289**	**0.5126**	**0.0119**	**0.3946**	**0.4065**		**671.6272**	**671.6272**	**0.2058**		**675.9487**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0107	0.0154	0.1403	3.1000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		25.2023	25.2023	1.3000e-003		25.2295
Total	**0.0107**	**0.0154**	**0.1403**	**3.1000e-004**	**0.0283**	**2.1000e-004**	**0.0285**	**7.5000e-003**	**1.9000e-004**	**7.7000e-003**		**25.2023**	**25.2023**	**1.3000e-003**		**25.2295**

3.2 Site Prep - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0837	0.0000	0.0837	0.0119	0.0000	0.0119			0.0000			0.0000
Off-Road	0.7236	8.0527	3.8626	6.5600e-003		0.4289	0.4289		0.3946	0.3946	0.0000	671.6272	671.6272	0.2058		675.9487
Total	**0.7236**	**8.0527**	**3.8626**	**6.5600e-003**	**0.0837**	**0.4289**	**0.5126**	**0.0119**	**0.3946**	**0.4065**	**0.0000**	**671.6272**	**671.6272**	**0.2058**		**675.9487**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0107	0.0154	0.1403	3.1000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		25.2023	25.2023	1.3000e-003		25.2295
Total	**0.0107**	**0.0154**	**0.1403**	**3.1000e-004**	**0.0283**	**2.1000e-004**	**0.0285**	**7.5000e-003**	**1.9000e-004**	**7.7000e-003**		**25.2023**	**25.2023**	**1.3000e-003**		**25.2295**

3.3 Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2719	10.9914	8.1603	0.0132		0.6577	0.6577		0.6209	0.6209		1,297.3040	1,297.3040	0.3333		1,304.3039
Total	**1.2719**	**10.9914**	**8.1603**	**0.0132**		**0.6577**	**0.6577**		**0.6209**	**0.6209**		**1,297.3040**	**1,297.3040**	**0.3333**		**1,304.3039**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2165	2.8173	2.6358	7.7600e-003	0.2293	0.0356	0.2649	0.0614	0.0328	0.0942		769.1278	769.1278	5.6400e-003		769.2463
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.1023	0.9353	2.0800e-003	0.1886	1.3900e-003	0.1900	0.0500	1.2800e-003	0.0513		168.0152	168.0152	8.6400e-003		168.1965
Total	**0.2881**	**2.9196**	**3.5711**	**9.8400e-003**	**0.4179**	**0.0370**	**0.4549**	**0.1114**	**0.0340**	**0.1455**		**937.1429**	**937.1429**	**0.0143**		**937.4428**

3.3 Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2719	10.9914	8.1603	0.0132		0.6577	0.6577		0.6209	0.6209	0.0000	1,297.3040	1,297.3040	0.3333		1,304.3039
Total	**1.2719**	**10.9914**	**8.1603**	**0.0132**		**0.6577**	**0.6577**		**0.6209**	**0.6209**	**0.0000**	**1,297.3040**	**1,297.3040**	**0.3333**		**1,304.3039**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2165	2.8173	2.6358	7.7600e-003	0.2293	0.0356	0.2649	0.0614	0.0328	0.0942		769.1278	769.1278	5.6400e-003		769.2463
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.1023	0.9353	2.0800e-003	0.1886	1.3900e-003	0.1900	0.0500	1.2800e-003	0.0513		168.0152	168.0152	8.6400e-003		168.1965
Total	**0.2881**	**2.9196**	**3.5711**	**9.8400e-003**	**0.4179**	**0.0370**	**0.4549**	**0.1114**	**0.0340**	**0.1455**		**937.1429**	**937.1429**	**0.0143**		**937.4428**

3.3 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0928	9.4708	7.9443	0.0132		0.5462	0.5462		0.5164	0.5164		1,281.7125	1,281.7125	0.3282		1,288.6043
Total	**1.0928**	**9.4708**	**7.9443**	**0.0132**		**0.5462**	**0.5462**		**0.5164**	**0.5164**		**1,281.7125**	**1,281.7125**	**0.3282**		**1,288.6043**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2018	2.5603	2.5492	7.7500e-003	0.5684	0.0352	0.6036	0.1446	0.0324	0.1770		755.9094	755.9094	5.6700e-003		756.0286
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0642	0.0921	0.8362	2.0800e-003	0.1886	1.3500e-003	0.1900	0.0500	1.2400e-003	0.0513		161.7569	161.7569	7.9400e-003		161.9236
Total	**0.2660**	**2.6524**	**3.3854**	**9.8300e-003**	**0.7570**	**0.0366**	**0.7936**	**0.1947**	**0.0336**	**0.2283**		**917.6663**	**917.6663**	**0.0136**		**917.9521**

3.3 Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0928	9.4708	7.9443	0.0132		0.5462	0.5462		0.5164	0.5164	0.0000	1,281.7125	1,281.7125	0.3282		1,288.6043
Total	**1.0928**	**9.4708**	**7.9443**	**0.0132**		**0.5462**	**0.5462**		**0.5164**	**0.5164**	**0.0000**	**1,281.7125**	**1,281.7125**	**0.3282**		**1,288.6043**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2018	2.5603	2.5492	7.7500e-003	0.5684	0.0352	0.6036	0.1446	0.0324	0.1770		755.9094	755.9094	5.6700e-003		756.0286
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0642	0.0921	0.8362	2.0800e-003	0.1886	1.3500e-003	0.1900	0.0500	1.2400e-003	0.0513		161.7569	161.7569	7.9400e-003		161.9236
Total	**0.2660**	**2.6524**	**3.3854**	**9.8300e-003**	**0.7570**	**0.0366**	**0.7936**	**0.1947**	**0.0336**	**0.2283**		**917.6663**	**917.6663**	**0.0136**		**917.9521**

3.4 Restoration (final paving, cleaning) - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1996	1.9723	1.7525	2.3300e-003		0.1397	0.1397		0.1286	0.1286		234.5820	234.5820	0.0730		236.1156
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1996**	**1.9723**	**1.7525**	**2.3300e-003**		**0.1397**	**0.1397**		**0.1286**	**0.1286**		**234.5820**	**234.5820**	**0.0730**		**236.1156**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6200e-003	0.0138	0.1254	3.1000e-004	0.0283	2.0000e-004	0.0285	7.5000e-003	1.9000e-004	7.6900e-003		24.2635	24.2635	1.1900e-003		24.2885
Total	**9.6200e-003**	**0.0138**	**0.1254**	**3.1000e-004**	**0.0283**	**2.0000e-004**	**0.0285**	**7.5000e-003**	**1.9000e-004**	**7.6900e-003**		**24.2635**	**24.2635**	**1.1900e-003**		**24.2885**

3.4 Restoration (final paving, cleaning) - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1996	1.9723	1.7525	2.3300e-003		0.1397	0.1397		0.1286	0.1286	0.0000	234.5820	234.5820	0.0730		236.1156
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1996**	**1.9723**	**1.7525**	**2.3300e-003**		**0.1397**	**0.1397**		**0.1286**	**0.1286**	**0.0000**	**234.5820**	**234.5820**	**0.0730**		**236.1156**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6200e-003	0.0138	0.1254	3.1000e-004	0.0283	2.0000e-004	0.0285	7.5000e-003	1.9000e-004	7.6900e-003		24.2635	24.2635	1.1900e-003		24.2885
Total	**9.6200e-003**	**0.0138**	**0.1254**	**3.1000e-004**	**0.0283**	**2.0000e-004**	**0.0285**	**7.5000e-003**	**1.9000e-004**	**7.6900e-003**		**24.2635**	**24.2635**	**1.1900e-003**		**24.2885**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3715	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005
Unmitigated	0.3715	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.3160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005
Architectural Coating	0.0556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3715**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.0000e-005**	**7.0000e-005**	**0.0000**		**8.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		7.0000e-005	7.0000e-005	0.0000		8.0000e-005
Architectural Coating	0.0556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3715**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.0000e-005**	**7.0000e-005**	**0.0000**		**8.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Milpitas Recycled Water Pipeline Extension - Generic PS (1 of 3)

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.01	User Defined Unit	0.01	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage of the site to be graded

Construction Phase - Schedule based on existing preliminary excel schedule

Off-road Equipment - Based on preliminary construction schedule - Bore/Drill Rigs assumed to have comparable emissions to pile driver

Off-road Equipment - Off-Highway Truck a surrogate for a water truck
Construction equipment based on phased equipment received in "Conveyance Construction Data.xlsx"

Off-road Equipment - Based on preliminary construction schedule

Off-road Equipment - Based on preliminary construction schedule

Trips and VMT - Estimate based on construction equipment, hauling based on 10 CY-sized truck

Demolition -

Grading - Based on anticipated dimensions of excavation site

Vehicle Trips - Based on anticipated increase in employment as a result of changes to operations. Trip length conservatively over-estimated.

Road Dust -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	300	32670
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	MaterialExported	0.00	15.00
tblGrading	MaterialImported	0.00	7.50
tblLandUse	LandUseSquareFeet	0.00	200.00
tblLandUse	LotAcreage	0.00	0.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Restoration (final paving, cleaning)
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	UsageHours	4.00	6.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	913.00
tblTripsAndVMT	WorkerTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	5.00	3.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0260	0.2730	0.1991	5.2000e-004	9.8600e-003	0.0106	0.0205	2.6600e-003	9.9700e-003	0.0126	0.0000	45.3452	45.3452	5.0300e-003	0.0000	45.4508
2019	5.8700e-003	0.0606	0.0527	1.3000e-004	6.7500e-003	2.4800e-003	9.2300e-003	1.7100e-003	2.3200e-003	4.0300e-003	0.0000	11.0035	11.0035	1.5200e-003	0.0000	11.0355
Total	**0.0319**	**0.3335**	**0.2518**	**6.5000e-004**	**0.0166**	**0.0131**	**0.0297**	**4.3700e-003**	**0.0123**	**0.0167**	**0.0000**	**56.3487**	**56.3487**	**6.5500e-003**	**0.0000**	**56.4863**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0260	0.2730	0.1991	5.2000e-004	9.8600e-003	0.0106	0.0205	2.6600e-003	9.9700e-003	0.0126	0.0000	45.3452	45.3452	5.0300e-003	0.0000	45.4508
2019	5.8700e-003	0.0606	0.0527	1.3000e-004	6.7500e-003	2.4800e-003	9.2300e-003	1.7100e-003	2.3200e-003	4.0300e-003	0.0000	11.0035	11.0035	1.5200e-003	0.0000	11.0355
Total	**0.0319**	**0.3335**	**0.2518**	**6.5000e-004**	**0.0166**	**0.0131**	**0.0297**	**4.3700e-003**	**0.0123**	**0.0167**	**0.0000**	**56.3487**	**56.3487**	**6.5500e-003**	**0.0000**	**56.4863**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.3900e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.3900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.3900e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.3900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Prep	Site Preparation	11/1/2018	11/14/2018	5	10	
2	Construction	Building Construction	11/15/2018	1/9/2019	5	40	
3	Restoration (final paving, cleaning)	Paving	1/10/2019	1/23/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Prep	Cranes	1	4.00	226	0.29
Site Prep	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Construction	Air Compressors	1	2.00	78	0.48
Construction	Bore/Drill Rigs	1	1.00	205	0.50
Construction	Cranes	1	6.00	226	0.29
Construction	Excavators	1	2.00	162	0.38
Construction	Forklifts	1	2.00	89	0.20
Construction	Generator Sets	1	2.00	84	0.74
Construction	Plate Compactors	1	2.00	8	0.43
Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Construction	Welders	1	2.00	46	0.45
Restoration (final paving, cleaning)	Excavators	1	4.00	162	0.38
Restoration (final paving, cleaning)	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Prep	2	5.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	15.00	0.00	913.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Restoration (final paving, cleaning)	2	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Prep - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	0.0233	0.0120	2.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	1.9976	1.9976	6.2000e-004	0.0000	2.0107
Total	**2.0600e-003**	**0.0233**	**0.0120**	**2.0000e-005**	**0.0000**	**1.1900e-003**	**1.1900e-003**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**1.9976**	**1.9976**	**6.2000e-004**	**0.0000**	**2.0107**

3.2 Site Prep - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.1000e-004	1.0200e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1857	0.1857	1.0000e-005	0.0000	0.1859
Total	**7.0000e-005**	**1.1000e-004**	**1.0200e-003**	**0.0000**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1857**	**0.1857**	**1.0000e-005**	**0.0000**	**0.1859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	0.0233	0.0120	2.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	1.9976	1.9976	6.2000e-004	0.0000	2.0107
Total	**2.0600e-003**	**0.0233**	**0.0120**	**2.0000e-005**	**0.0000**	**1.1900e-003**	**1.1900e-003**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**1.9976**	**1.9976**	**6.2000e-004**	**0.0000**	**2.0107**

3.2 Site Prep - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.1000e-004	1.0200e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1857	0.1857	1.0000e-005	0.0000	0.1859
Total	**7.0000e-005**	**1.1000e-004**	**1.0200e-003**	**0.0000**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1857**	**0.1857**	**1.0000e-005**	**0.0000**	**0.1859**

3.3 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0163	0.1570	0.0972	1.8000e-004		8.1400e-003	8.1400e-003		7.6800e-003	7.6800e-003	0.0000	16.3967	16.3967	4.1200e-003	0.0000	16.4833
Total	**0.0163**	**0.1570**	**0.0972**	**1.8000e-004**		**8.1400e-003**	**8.1400e-003**		**7.6800e-003**	**7.6800e-003**	**0.0000**	**16.3967**	**16.3967**	**4.1200e-003**	**0.0000**	**16.4833**

3.3 Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.9000e-003	0.0915	0.0788	2.8000e-004	7.3800e-003	1.2800e-003	8.6500e-003	2.0000e-003	1.1700e-003	3.1700e-003	0.0000	24.9266	24.9266	1.9000e-004	0.0000	24.9305
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	1.0500e-003	0.0101	3.0000e-005	2.2500e-003	2.0000e-005	2.2700e-003	6.0000e-004	2.0000e-005	6.1000e-004	0.0000	1.8385	1.8385	9.0000e-005	0.0000	1.8404
Total	**7.6400e-003**	**0.0926**	**0.0889**	**3.1000e-004**	**9.6300e-003**	**1.3000e-003**	**0.0109**	**2.6000e-003**	**1.1900e-003**	**3.7800e-003**	**0.0000**	**26.7652**	**26.7652**	**2.8000e-004**	**0.0000**	**26.7709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0163	0.1570	0.0972	1.8000e-004		8.1400e-003	8.1400e-003		7.6800e-003	7.6800e-003	0.0000	16.3967	16.3967	4.1200e-003	0.0000	16.4833
Total	**0.0163**	**0.1570**	**0.0972**	**1.8000e-004**		**8.1400e-003**	**8.1400e-003**		**7.6800e-003**	**7.6800e-003**	**0.0000**	**16.3967**	**16.3967**	**4.1200e-003**	**0.0000**	**16.4833**

3.3 Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.9000e-003	0.0915	0.0788	2.8000e-004	7.3800e-003	1.2800e-003	8.6500e-003	2.0000e-003	1.1700e-003	3.1700e-003	0.0000	24.9266	24.9266	1.9000e-004	0.0000	24.9305
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	1.0500e-003	0.0101	3.0000e-005	2.2500e-003	2.0000e-005	2.2700e-003	6.0000e-004	2.0000e-005	6.1000e-004	0.0000	1.8385	1.8385	9.0000e-005	0.0000	1.8404
Total	**7.6400e-003**	**0.0926**	**0.0889**	**3.1000e-004**	**9.6300e-003**	**1.3000e-003**	**0.0109**	**2.6000e-003**	**1.1900e-003**	**3.7800e-003**	**0.0000**	**26.7652**	**26.7652**	**2.8000e-004**	**0.0000**	**26.7709**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0600e-003	0.0297	0.0199	4.0000e-005		1.4900e-003	1.4900e-003		1.4100e-003	1.4100e-003	0.0000	3.4369	3.4369	8.6000e-004	0.0000	3.4551
Total	**3.0600e-003**	**0.0297**	**0.0199**	**4.0000e-005**		**1.4900e-003**	**1.4900e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**3.4369**	**3.4369**	**8.6000e-004**	**0.0000**	**3.4551**

3.3 Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3700e-003	0.0179	0.0161	6.0000e-005	6.1300e-003	2.7000e-004	6.4000e-003	1.5400e-003	2.5000e-004	1.7900e-003	0.0000	5.1972	5.1972	4.0000e-005	0.0000	5.1980
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	1.9500e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3759	0.3759	2.0000e-005	0.0000	0.3763
Total	**1.5100e-003**	**0.0181**	**0.0181**	**7.0000e-005**	**6.6100e-003**	**2.7000e-004**	**6.8800e-003**	**1.6700e-003**	**2.5000e-004**	**1.9200e-003**	**0.0000**	**5.5731**	**5.5731**	**6.0000e-005**	**0.0000**	**5.5743**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0600e-003	0.0297	0.0199	4.0000e-005		1.4900e-003	1.4900e-003		1.4100e-003	1.4100e-003	0.0000	3.4369	3.4369	8.6000e-004	0.0000	3.4550
Total	**3.0600e-003**	**0.0297**	**0.0199**	**4.0000e-005**		**1.4900e-003**	**1.4900e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**3.4369**	**3.4369**	**8.6000e-004**	**0.0000**	**3.4550**

3.3 Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3700e-003	0.0179	0.0161	6.0000e-005	6.1300e-003	2.7000e-004	6.4000e-003	1.5400e-003	2.5000e-004	1.7900e-003	0.0000	5.1972	5.1972	4.0000e-005	0.0000	5.1980
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	2.0000e-004	1.9500e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3759	0.3759	2.0000e-005	0.0000	0.3763
Total	**1.5100e-003**	**0.0181**	**0.0181**	**7.0000e-005**	**6.6100e-003**	**2.7000e-004**	**6.8800e-003**	**1.6700e-003**	**2.5000e-004**	**1.9200e-003**	**0.0000**	**5.5731**	**5.5731**	**6.0000e-005**	**0.0000**	**5.5743**

3.4 Restoration (final paving, cleaning) - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2500e-003	0.0127	0.0141	2.0000e-005		7.2000e-004	7.2000e-004		6.6000e-004	6.6000e-004	0.0000	1.8861	1.8861	6.0000e-004	0.0000	1.8986
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2500e-003**	**0.0127**	**0.0141**	**2.0000e-005**		**7.2000e-004**	**7.2000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**1.8861**	**1.8861**	**6.0000e-004**	**0.0000**	**1.8986**

3.4 Restoration (final paving, cleaning) - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1074	0.1074	1.0000e-005	0.0000	0.1075
Total	**4.0000e-005**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1074**	**0.1074**	**1.0000e-005**	**0.0000**	**0.1075**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2500e-003	0.0127	0.0141	2.0000e-005		7.2000e-004	7.2000e-004		6.6000e-004	6.6000e-004	0.0000	1.8861	1.8861	6.0000e-004	0.0000	1.8986
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2500e-003**	**0.0127**	**0.0141**	**2.0000e-005**		**7.2000e-004**	**7.2000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**1.8861**	**1.8861**	**6.0000e-004**	**0.0000**	**1.8986**

3.4 Restoration (final paving, cleaning) - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1074	0.1074	1.0000e-005	0.0000	0.1075
Total	**4.0000e-005**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1074**	**0.1074**	**1.0000e-005**	**0.0000**	**0.1075**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

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

5.3 Energy by Land Use - Electricity

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.3900e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	8.3900e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.3900e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.3900e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation

Milpitas Recycled Water Pipeline Extension - Generic PS (1 of 3)

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.01	User Defined Unit	0.01	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage of the site to be graded

Construction Phase - Schedule based on existing preliminary excel schedule

Off-road Equipment - Based on preliminary construction schedule - Bore/Drill Rigs assumed to have comparable emissions to pile driver

Off-road Equipment - Off-Highway Truck a surrogate for a water truck
Construction equipment based on phased equipment received in "Conveyance Construction Data.xlsx"

Off-road Equipment - Based on preliminary construction schedule

Off-road Equipment - Based on preliminary construction schedule

Trips and VMT - Estimate based on construction equipment, hauling based on 10 CY-sized truck

Demolition -

Grading - Based on anticipated dimensions of excavation site

Vehicle Trips - Based on anticipated increase in employment as a result of changes to operations. Trip length conservatively over-estimated.

Road Dust -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	300	32670
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	MaterialExported	0.00	15.00
tblGrading	MaterialImported	0.00	7.50
tblLandUse	LandUseSquareFeet	0.00	200.00
tblLandUse	LotAcreage	0.00	0.01
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Restoration (final paving, cleaning)
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	PhaseName		Construction
tblOffRoadEquipment	UsageHours	4.00	6.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	0.00	913.00
tblTripsAndVMT	WorkerTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	5.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.4774	15.2180	12.1272	0.0298	0.6031	0.5719	1.1750	0.1621	0.5378	0.6999	0.0000	2,879.7294	2,879.7294	0.2939	0.0000	2,885.9016
2019	1.3310	13.7384	11.7045	0.0298	1.9617	0.5030	2.4647	0.4956	0.4729	0.9685	0.0000	2,834.0000	2,834.0000	0.2897	0.0000	2,840.0835
Total	**2.8084**	**28.9564**	**23.8317**	**0.0596**	**2.5648**	**1.0749**	**3.6397**	**0.6577**	**1.0107**	**1.6684**	**0.0000**	**5,713.7293**	**5,713.7293**	**0.5836**	**0.0000**	**5,725.9851**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.4774	15.2180	12.1272	0.0298	0.6031	0.5719	1.1750	0.1621	0.5378	0.6999	0.0000	2,879.7294	2,879.7294	0.2939	0.0000	2,885.9016
2019	1.3310	13.7384	11.7045	0.0298	1.9617	0.5030	2.4647	0.4956	0.4729	0.9685	0.0000	2,834.0000	2,834.0000	0.2897	0.0000	2,840.0835
Total	**2.8084**	**28.9564**	**23.8317**	**0.0596**	**2.5648**	**1.0749**	**3.6397**	**0.6577**	**1.0107**	**1.6684**	**0.0000**	**5,713.7293**	**5,713.7293**	**0.5836**	**0.0000**	**5,725.9851**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0460	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0460**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0460	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0460**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Prep	Site Preparation	11/1/2018	11/14/2018	5	10	
2	Construction	Building Construction	11/15/2018	1/9/2019	5	40	
3	Restoration (final paving, cleaning)	Paving	1/10/2019	1/23/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Prep	Cranes	1	4.00	226	0.29
Site Prep	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Construction	Air Compressors	1	2.00	78	0.48
Construction	Bore/Drill Rigs	1	1.00	205	0.50
Construction	Cranes	1	6.00	226	0.29
Construction	Excavators	1	2.00	162	0.38
Construction	Forklifts	1	2.00	89	0.20
Construction	Generator Sets	1	2.00	84	0.74
Construction	Plate Compactors	1	2.00	8	0.43
Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Construction	Welders	1	2.00	46	0.45
Restoration (final paving, cleaning)	Excavators	1	4.00	162	0.38
Restoration (final paving, cleaning)	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Prep	2	5.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	9	15.00	0.00	913.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Restoration (final paving, cleaning)	2	3.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Prep - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	1.0000e-004	0.0000	1.0000e-004			0.0000			0.0000
Off-Road	0.4122	4.6514	2.4020	4.3700e-003		0.2376	0.2376		0.2186	0.2186		440.4034	440.4034	0.1371		443.2826
Total	**0.4122**	**4.6514**	**2.4020**	**4.3700e-003**	**7.8000e-004**	**0.2376**	**0.2383**	**1.0000e-004**	**0.2186**	**0.2187**		**440.4034**	**440.4034**	**0.1371**		**443.2826**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0160	0.0230	0.2091	5.2000e-004	0.0472	3.4000e-004	0.0475	0.0125	3.1000e-004	0.0128		40.4392	40.4392	1.9800e-003		40.4809
Total	**0.0160**	**0.0230**	**0.2091**	**5.2000e-004**	**0.0472**	**3.4000e-004**	**0.0475**	**0.0125**	**3.1000e-004**	**0.0128**		**40.4392**	**40.4392**	**1.9800e-003**		**40.4809**

3.2 Site Prep - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	1.0000e-004	0.0000	1.0000e-004			0.0000			0.0000
Off-Road	0.4122	4.6514	2.4020	4.3700e-003		0.2376	0.2376		0.2186	0.2186	0.0000	440.4034	440.4034	0.1371		443.2826
Total	**0.4122**	**4.6514**	**2.4020**	**4.3700e-003**	**7.8000e-004**	**0.2376**	**0.2383**	**1.0000e-004**	**0.2186**	**0.2187**	**0.0000**	**440.4034**	**440.4034**	**0.1371**		**443.2826**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0160	0.0230	0.2091	5.2000e-004	0.0472	3.4000e-004	0.0475	0.0125	3.1000e-004	0.0128		40.4392	40.4392	1.9800e-003		40.4809
Total	**0.0160**	**0.0230**	**0.2091**	**5.2000e-004**	**0.0472**	**3.4000e-004**	**0.0475**	**0.0125**	**3.1000e-004**	**0.0128**		**40.4392**	**40.4392**	**1.9800e-003**		**40.4809**

3.3 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9852	9.5163	5.8919	0.0112		0.4934	0.4934		0.4656	0.4656		1,095.4109	1,095.4109	0.2755		1,101.1961
Total	**0.9852**	**9.5163**	**5.8919**	**0.0112**		**0.4934**	**0.4934**		**0.4656**	**0.4656**		**1,095.4109**	**1,095.4109**	**0.2755**		**1,101.1961**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4440	5.6327	5.6081	0.0171	0.4616	0.0775	0.5391	0.1246	0.0713	0.1959		1,663.0008	1,663.0008	0.0125		1,663.2629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0481	0.0691	0.6272	1.5600e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		121.3177	121.3177	5.9500e-003		121.4427
Total	**0.4922**	**5.7018**	**6.2353**	**0.0186**	**0.6031**	**0.0785**	**0.6816**	**0.1621**	**0.0722**	**0.2343**		**1,784.3184**	**1,784.3184**	**0.0184**		**1,784.7055**

3.3 Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9852	9.5163	5.8919	0.0112		0.4934	0.4934		0.4656	0.4656	0.0000	1,095.4109	1,095.4109	0.2755		1,101.1961
Total	**0.9852**	**9.5163**	**5.8919**	**0.0112**		**0.4934**	**0.4934**		**0.4656**	**0.4656**	**0.0000**	**1,095.4109**	**1,095.4109**	**0.2755**		**1,101.1961**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4440	5.6327	5.6081	0.0171	0.4616	0.0775	0.5391	0.1246	0.0713	0.1959		1,663.0008	1,663.0008	0.0125		1,663.2629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0481	0.0691	0.6272	1.5600e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		121.3177	121.3177	5.9500e-003		121.4427
Total	**0.4922**	**5.7018**	**6.2353**	**0.0186**	**0.6031**	**0.0785**	**0.6816**	**0.1621**	**0.0722**	**0.2343**		**1,784.3184**	**1,784.3184**	**0.0184**		**1,784.7055**

3.3 Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8734	8.4898	5.6819	0.0112		0.4256	0.4256		0.4016	0.4016		1,082.4469	1,082.4469	0.2717		1,088.1532
Total	**0.8734**	**8.4898**	**5.6819**	**0.0112**		**0.4256**	**0.4256**		**0.4016**	**0.4016**		**1,082.4469**	**1,082.4469**	**0.2717**		**1,088.1532**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4137	5.1856	5.4543	0.0170	1.8203	0.0765	1.8967	0.4581	0.0704	0.5284		1,634.6068	1,634.6068	0.0124		1,634.8678
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0439	0.0629	0.5684	1.5600e-003	0.1415	9.9000e-004	0.1424	0.0375	9.2000e-004	0.0384		116.9463	116.9463	5.5300e-003		117.0624
Total	**0.4576**	**5.2485**	**6.0227**	**0.0186**	**1.9617**	**0.0775**	**2.0392**	**0.4956**	**0.0713**	**0.5668**		**1,751.5531**	**1,751.5531**	**0.0180**		**1,751.9303**

3.3 Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8734	8.4898	5.6819	0.0112		0.4256	0.4256		0.4016	0.4016	0.0000	1,082.4469	1,082.4469	0.2717		1,088.1532
Total	**0.8734**	**8.4898**	**5.6819**	**0.0112**		**0.4256**	**0.4256**		**0.4016**	**0.4016**	**0.0000**	**1,082.4469**	**1,082.4469**	**0.2717**		**1,088.1532**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4137	5.1856	5.4543	0.0170	1.8203	0.0765	1.8967	0.4581	0.0704	0.5284		1,634.6068	1,634.6068	0.0124		1,634.8678
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0439	0.0629	0.5684	1.5600e-003	0.1415	9.9000e-004	0.1424	0.0375	9.2000e-004	0.0384		116.9463	116.9463	5.5300e-003		117.0624
Total	**0.4576**	**5.2485**	**6.0227**	**0.0186**	**1.9617**	**0.0775**	**2.0392**	**0.4956**	**0.0713**	**0.5668**		**1,751.5531**	**1,751.5531**	**0.0180**		**1,751.9303**

3.4 Restoration (final paving, cleaning) - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2501	2.5436	2.8243	4.2000e-003		0.1443	0.1443		0.1328	0.1328		415.8037	415.8037	0.1316		418.5663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2501**	**2.5436**	**2.8243**	**4.2000e-003**		**0.1443**	**0.1443**		**0.1328**	**0.1328**		**415.8037**	**415.8037**	**0.1316**		**418.5663**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	8.7800e-003	0.0126	0.1137	3.1000e-004	0.0283	2.0000e-004	0.0285	7.5000e-003	1.8000e-004	7.6900e-003		23.3893	23.3893	1.1100e-003		23.4125
Total	**8.7800e-003**	**0.0126**	**0.1137**	**3.1000e-004**	**0.0283**	**2.0000e-004**	**0.0285**	**7.5000e-003**	**1.8000e-004**	**7.6900e-003**		**23.3893**	**23.3893**	**1.1100e-003**		**23.4125**

3.4 Restoration (final paving, cleaning) - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2501	2.5436	2.8243	4.2000e-003		0.1443	0.1443		0.1328	0.1328	0.0000	415.8037	415.8037	0.1316		418.5663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2501**	**2.5436**	**2.8243**	**4.2000e-003**		**0.1443**	**0.1443**		**0.1328**	**0.1328**	**0.0000**	**415.8037**	**415.8037**	**0.1316**		**418.5663**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	8.7800e-003	0.0126	0.1137	3.1000e-004	0.0283	2.0000e-004	0.0285	7.5000e-003	1.8000e-004	7.6900e-003		23.3893	23.3893	1.1100e-003		23.4125
Total	**8.7800e-003**	**0.0126**	**0.1137**	**3.1000e-004**	**0.0283**	**2.0000e-004**	**0.0285**	**7.5000e-003**	**1.8000e-004**	**7.6900e-003**		**23.3893**	**23.3893**	**1.1100e-003**		**23.4125**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0460	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0460	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0417					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0460**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0417					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0460**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment1 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.5	2.9	4.6	3.3	0.2	3.1	0.8	0.2	0.6	792.3
Grading/Excavation	2.3	15.2	23.7	4.4	1.3	3.1	1.7	1.1	0.6	4,714.0
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	1.9	13.2	14.3	0.9	0.9	-	0.8	0.8	-	2,333.3
Maximum (pounds/day)	2.3	15.2	23.7	4.4	1.3	3.1	1.7	1.1	0.6	4,714.0
Total (tons/construction project)	0.3	1.8	2.7	0.4	0.1	0.2	0.2	0.1	0.1	509.3

Notes: Project Start Year -> 2017
Project Length (months) -> 13
Total Project Area (acres) -> 11
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 112

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment1 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.2	1.3	2.1	1.5	0.1	1.4	0.4	0.1	0.3	360.1
Grading/Excavation	1.0	6.9	10.8	2.0	0.6	1.4	0.8	0.5	0.3	2,142.7
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	0.9	6.0	6.5	0.4	0.4	-	0.4	0.4	-	1,060.6
Maximum (kilograms/day)	1.0	6.9	10.8	2.0	0.6	1.4	0.8	0.5	0.3	2,142.7
Total (megagrams/construction project)	0.2	1.7	2.4	0.4	0.1	0.2	0.2	0.1	0.0	461.9

Notes: Project Start Year -> 2017
Project Length (months) -> 13
Total Project Area (hectares) -> 4
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 85

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment2 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.4	2.5	4.6	3.3	0.2	3.1	0.8	0.2	0.6	693.5
Grading/Excavation	2.2	14.7	22.4	4.4	1.3	3.1	1.7	1.1	0.6	4,324.0
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	2.0	12.9	14.9	0.9	0.9	-	0.8	0.8	-	2,234.6
Maximum (pounds/day)	2.2	14.7	22.4	4.4	1.3	3.1	1.7	1.1	0.6	4,324.0
Total (tons/construction project)	0.2	1.4	2.1	0.3	0.1	0.2	0.1	0.1	0.0	389.7

Notes: Project Start Year -> 2017
Project Length (months) -> 10
Total Project Area (acres) -> 5
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 94

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment2 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.2	1.1	2.1	1.5	0.1	1.4	0.4	0.1	0.3	315.2
Grading/Excavation	1.0	6.7	10.2	2.0	0.6	1.4	0.8	0.5	0.3	1,965.5
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	0.9	5.9	6.8	0.4	0.4	-	0.4	0.4	-	1,015.7
Maximum (kilograms/day)	1.0	6.7	10.2	2.0	0.6	1.4	0.8	0.5	0.3	1,965.5
Total (megagrams/construction project)	0.2	1.3	1.9	0.3	0.1	0.2	0.1	0.1	0.0	353.5

Notes: Project Start Year -> 2017
Project Length (months) -> 10
Total Project Area (hectares) -> 2
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 72

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment3 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.5	2.7	4.6	3.3	0.2	3.1	0.8	0.2	0.6	742.9
Grading/Excavation	2.2	14.9	22.4	4.4	1.3	3.1	1.7	1.1	0.6	4,373.4
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	2.0	13.1	14.9	0.9	0.9	-	0.8	0.8	-	2,284.0
Maximum (pounds/day)	2.2	14.9	22.4	4.4	1.3	3.1	1.7	1.1	0.6	4,373.4
Total (tons/construction project)	0.2	1.5	2.1	0.3	0.1	0.2	0.1	0.1	0.0	395.2

Notes: Project Start Year -> 2017
Project Length (months) -> 10
Total Project Area (acres) -> 8
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 94

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment3 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.2	1.2	2.1	1.5	0.1	1.4	0.4	0.1	0.3	337.7
Grading/Excavation	1.0	6.8	10.2	2.0	0.6	1.4	0.8	0.5	0.3	1,987.9
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	0.9	5.9	6.8	0.4	0.4	-	0.4	0.4	-	1,038.2
Maximum (kilograms/day)	1.0	6.8	10.2	2.0	0.6	1.4	0.8	0.5	0.3	1,987.9
Total (megagrams/construction project)	0.2	1.3	1.9	0.3	0.1	0.2	0.1	0.1	0.0	358.4

Notes: Project Start Year -> 2017
Project Length (months) -> 10
Total Project Area (hectares) -> 3
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 72

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment4 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.4	3.5	3.6	3.3	0.2	3.1	0.8	0.1	0.6	1,031.6
Grading/Excavation	1.9	15.2	17.9	4.1	1.0	3.1	1.5	0.8	0.6	4,609.4
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	1.6	13.5	11.4	0.7	0.7	-	0.6	0.6	-	2,576.1
Maximum (pounds/day)	1.9	15.2	17.9	4.1	1.0	3.1	1.5	0.8	0.6	4,609.4
Total (tons/construction project)	0.2	1.9	2.0	0.4	0.1	0.2	0.1	0.1	0.1	513.3

Notes: Project Start Year -> 2019
Project Length (months) -> 13
Total Project Area (acres) -> 24
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 107

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment4 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.2	1.6	1.7	1.5	0.1	1.4	0.4	0.1	0.3	468.9
Grading/Excavation	0.9	6.9	8.1	1.9	0.5	1.4	0.7	0.4	0.3	2,095.2
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	0.7	6.1	5.2	0.3	0.3	-	0.3	0.3	-	1,170.9
Maximum (kilograms/day)	0.9	6.9	8.1	1.9	0.5	1.4	0.7	0.4	0.3	2,095.2
Total (megagrams/construction project)	0.2	1.7	1.8	0.3	0.1	0.2	0.1	0.1	0.0	465.6

Notes: Project Start Year -> 2019
Project Length (months) -> 13
Total Project Area (hectares) -> 10
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 82

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment5 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	0.3	2.3	3.1	3.2	0.1	3.1	0.8	0.1	0.6	684.1
Grading/Excavation	1.7	13.9	15.6	4.0	0.9	3.1	1.4	0.7	0.6	4,228.7
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	1.4	12.3	10.8	0.6	0.6	-	0.5	0.5	-	2,231.7
Maximum (pounds/day)	1.7	13.9	15.6	4.0	0.9	3.1	1.4	0.7	0.6	4,228.7
Total (tons/construction project)	0.2	1.4	1.5	0.3	0.1	0.2	0.1	0.1	0.0	404.2

Notes: Project Start Year -> 2020
Project Length (months) -> 10
Total Project Area (acres) -> 4
Maximum Area Disturbed/Day (acres) -> 0
Total Soil Imported/Exported (yd^3/day)-> 93

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Milpitas WaterReuse Pipeline Segment5 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	0.1	1.0	1.4	1.5	0.1	1.4	0.3	0.1	0.3	311.0
Grading/Excavation	0.8	6.3	7.1	1.8	0.4	1.4	0.6	0.3	0.3	1,922.2
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	0.6	5.6	4.9	0.3	0.3	-	0.2	0.2	-	1,014.4
Maximum (kilograms/day)	0.8	6.3	7.1	1.8	0.4	1.4	0.6	0.3	0.3	1,922.2
Total (megagrams/construction project)	0.2	1.3	1.4	0.2	0.1	0.2	0.1	0.1	0.0	366.6

Notes: Project Start Year -> 2020
Project Length (months) -> 10
Total Project Area (hectares) -> 2
Maximum Area Disturbed/Day (hectares) -> 0
Total Soil Imported/Exported ($meters^3$/day)-> 71

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Appendix B - Biological Resources Technical Report

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RMC WATER AND ENVIRONMENT

Milpitas Recycled Water Pipeline Extension Project

Biological Resources Assessment

March 2016

BIOLOGICAL RESOURCES ASSESSMENT

MILPITAS RECYCLED WATER PIPELINE EXTENSION PROJECT

MILPITAS, SANTA CLARA COUNTY, CALIFORNIA

Prepared for:

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March 2016

Rincon Consultants, Inc. 2016 (March). Biological Resources Assessment, Milpitas Recycled Water Pipeline Extension Project. Milpitas, Santa Clara County, California. Prepared for RMC Water and Environment. 50+ pgs.

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EXECUTIVE SUMMARY

This Biological Resources Assessment evaluates the proposed Milpitas Recycled Water Pipeline Extension Project located primarily within the City of Milpitas, California, and in part within unincorporated Santa Clara County. Rincon Consultants, Inc. (Rincon) conducted reconnaissance-level biological surveys to document the existing site conditions and to evaluate the potential for adverse impacts to biological resources from project development. Most of the proposed pipeline alignments (Segments 1, 2, 4 and 5 and their associated alternatives) are located in or adjacent to existing roads in an urban setting and portions of the pipeline alignment traverse City parks and the Summitpointe Golf Club. Undeveloped areas that the pipeline traverses (Segment 3 and its alternatives) are limited and include non-native grasslands at the Summitpointe Golf Club, Ed Levin County Park, and Mission Monument Peak Regional Preserve. Several ponds, oak (Quercus sp.) and riparian woodlands, occur along Segment 3 and its alternative alignments. Berryessa Creek is a channelized creek that flows north and south through the City of Milpitas and crosses Segment 1 at Los Coches Street and Segment 5 at Ames Avenue.

Based on field studies and review of literature and sensitive species records, Rincon determined that Segment 3 and its alternatives contain suitable habitat for two special status plant species and several special status wildlife species. Special status plants with potential to occur onsite include fragrant fritillary (*Fritillaria liliacea*) and arcuate bush-mallow (*Malacothamnus arcuatus*). Special status amphibian and reptile species with potential to occur within the project area include California tiger salamander (*Ambystoma californiense*), western pond turtle (*Emys marmorata*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*) and Alameda whipsnake (*Masticophis lateralis euryxanthus*). Special status avian species with potential to occur within the project area include golden eagle **(***Aquila chrysaetos***),** white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), tri-colored blackbird (*Agelaius tricolor*), and burrowing owl (*Athene cunicularia*). White-tailed kite and northern harrier were observed foraging in the project area. The entirety of the proposed project contains habitat suitable for nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. Pallid bat (*Antrozous pallidus*) potentially roosts in trees or rock outcrops in the project area and may forage in grasslands in the project area. In general, habitat for special status species in the proposed project area is limited because the narrow and linear project area is located predominantly along existing paved roads, and only occurs in areas of natural habitat in very restricted and narrow areas.

Alignments utilizing existing pipes are not expected to have a significant impact to biological resources because these occur in previously disturbed areas. Staging of equipment in previously developed areas and roadways will further reduce potential impacts to special status species. Installation of new pipes, pump stations and water tanks would result in ground disturbance and these proposed activates have the potential to result in impacts to biological resources; however, these impacts would be avoided and/or minimized when sited in existing roadways and other previously disturbed or developed areas. Due to the potential for special status biological resources in general to occur in the project area some additional surveys are recommended to determine if the proposed project has the potential to significantly impact

these resources. The following surveys are recommended for work that will not be completely restricted to existing roads and previously developed areas:

- Vegetation mapping of the project alignment for special status communities;
- Focused rare plant surveys in areas with suitable habitat (Portions of Segment 3 and its alternatives);
- Habitat assessments and possibly protocol-level surveys for California tiger salamander, California red legged frog, and Alameda whipsnake in areas with suitable habitat (Portions of Segment 3 and its alternatives);
- Jurisdictional delineation (where project area crosses potentially jurisdictional drainages or other wetlands); and
- Protected tree survey.

If findings of focused surveys identify potential impacts to biological resources, then agency consultations, regulatory permits and/or mitigation may be required to offset impacts to one or more types of biological resources (i.e. special status species, vegetation communities, trees and jurisdictional waters) to reduce project impacts to less than significant levels.

1 INTRODUCTION

This report documents the findings of a Biological Resources Assessment (BRA) conducted by Rincon Consultants, Inc. (Rincon) for the Milpitas Recycled Water Pipeline Extension Project (project). The purpose of this report is to document the existing conditions within the proposed project area and to evaluate the potential for project-related impacts to special status or otherwise regulated biological resources under the California Environmental Quality Act (CEQA) review process.

1.1 PROJECT LOCATION

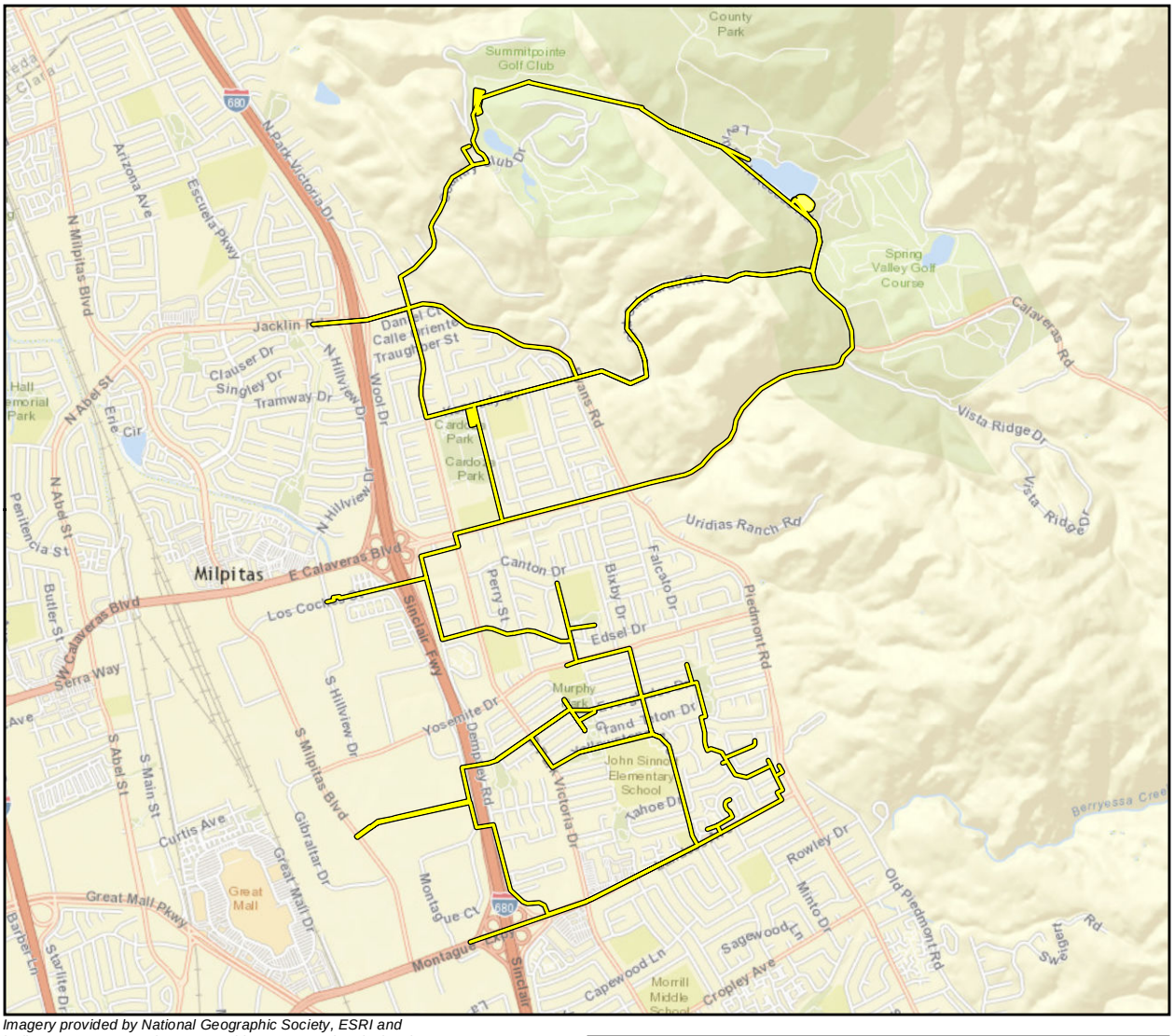
The majority of the proposed project is located east of Interstate 680 (I-680) within the City of Milpitas, Santa Clara County, California, with one segment (Segment 3, Alternative 3c and Alternative 3d) extending northeast into the unincorporated Santa Clara County (Figure 1). The approximate center of the proposed project area occurs at latitude 37.44 N and longitude 121.87 W (WGS-84 datum) and is depicted on the Milpitas and Calaveras Reservoir, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles T05S R01E S32, T05S R01E S33, T05S R01E S34, T06S R01E S03, T06S R01E S04, T06S R01E S05, T06S R01E S08, T06S R01E S09, T06S R01E S16, T06S R01E S17. Most of the proposed pipeline alignments are located in or adjacent to existing paved roads in residential and commercial areas. Project activities will also include the installation of a water tank and pump station at the Summitpointe Golf Club and at Cardoza Park. A temporary staging area for vehicles, equipment and materials will be located in the parking lot adjacent to Sandy Wool Lake at the Ed Levin County Park.

1.2 PROJECT DESCRIPTION

In response to the historic drought in California, several golf courses in the Milpitas foothills that are currently served with raw water have been notified that they will no longer receive these deliveries. In order to serve these golf courses and other customers, such as parks and schools, the City of Milpitas is planning a multi-phased design and construction approach to meet recycled water demands. The existing recycled water system is located entirely west of I-680. All five segments and alternatives thereof described below will be analyzed as part of the CEQA environmental review process (Figure 2).

Segment 1

The purpose of the new 12-inch recycled water (RW) main is to provide a RW distribution network to the east side of Interstate 680 (I-680). Segment 1 connects to the existing South Bay Water Recycling (SBWR) pipeline at the intersection of South Hillview Drive and Los Coches Street. After crossing I-680, Segment 1 splits into a northern and a southern branch at Dempsey Road. The northern branch stays within the roadway along Dempsey Road, North Park Victoria Drive and East Calaveras Boulevard, then follows the eastern edge of the Milpitas Sports Complex and Cardoza Park and ends within the roadway on Kennedy Drive by Burnett Elementary School. The southern branch follows Dempsey Road and then Edsel Drive ending by Randall Elementary School.



Imagery provided by National Geographic Society, ESRI and its licensors © 2015. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

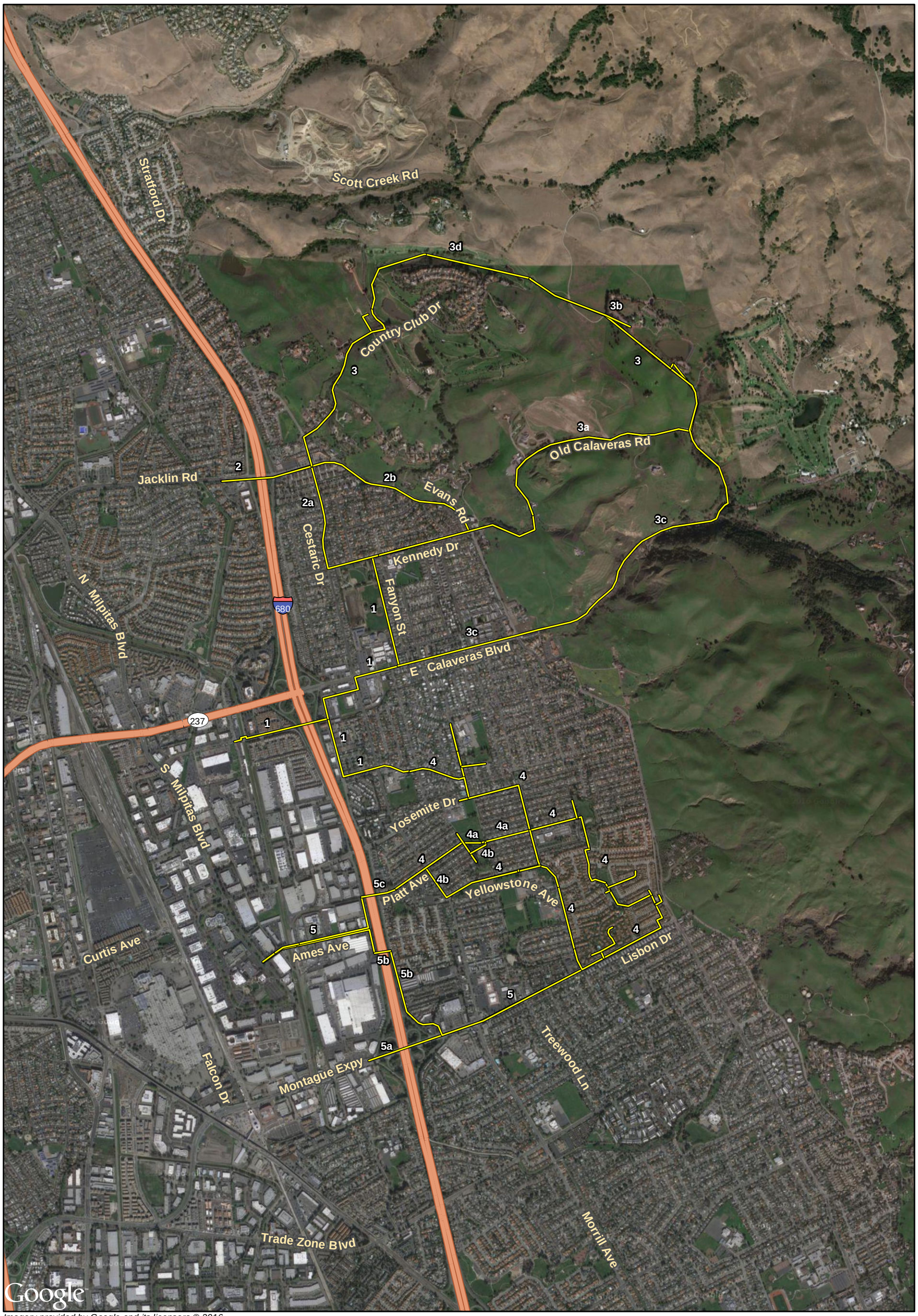
Project Location

N

0 1,750 3,500
Feet

Project Location

Figure 1



Imagery provided by Google and its licensors © 2016.

Proposed Alignments

0 1,000 2,000 Feet

1:24,000

N

Area of Potential Effects

Figure 2

Segment 2

The main purpose of Segment 2 is to loop the RW system by providing another path across I-680. A secondary purpose of Segment 2 may be to serve Cardoza Park. Originally Cardoza Park was intended to be served by Segment 1, which is being constructed as part of the Dempsey Utility Improvements Project. However, the irrigation meter for Cardoza Park has been determined to be along Kennedy Drive and not along the pre-defined alignment for Segment 1.

As of February 17, 2016, a decision has yet to be made on whether to include Cardoza Park on Segment 1 or 2.

Both Segment 2 alignments cross I-680 at Jacklin Road which goes under the Interstate. Construction vehicle height limitations under the Interstate overpass should be considered – there is a posted 14′-9″ clearance.

Segment 2 Alternative Alignment A

- This alignment connects to Segment 1 on Kennedy Drive and to the existing SBWR system on Jacklin Road.
- It is independent of the alignment chosen for Segment 3.
- Cardoza Park could be served by this alignment.
- Provides a connection point for the proposed tank and pump station at Cardoza Park that would serve the City of Milpitas customers.
- This alignment is approximately 5,200 linear feet (LF).

Segment 2 Alternative Alignment B

- This alignment connects to Segment 3 on Old Calaveras Road and to the existing SBWR system on Jacklin Road.
- It is dependent on selecting an alignment for Segment 3 that provides a connection point along. Old Calaveras Road (i.e. Segment 3 Alignments A and B).
- Cardoza Park would not be served by this alignment. The park would need to be served by Segment 1.
- Proposed tank and pump station at Cardoza Park would connect to Segment 1.
- This alternative may be easier to construct because it avoids construction on a busy residential street by using the less traveled Evans Road.
- This alignment is approximately 5,700 LF.

Segment 3

The purpose of Segment 3 is to serve the hillside customers. A secondary purpose that has been considered for Segment 3 is to serve as a transmission line for a regional storage tank located on the hillside.

Segment 3 Alternative Alignment A

- This option consists of two distinct sections of pipeline. One pipeline connects to Segment 2 on Jacklin Road and travels along Country Club Drive to serve Summitpointe Golf Club. The other pipeline connects to Segment 1 on Kennedy Drive and travels along Old Calaveras Road to serve Ed Levin Park, Spring Valley

Golf Course and a proposed CalFire/Spring Valley Volunteer Fire Department truck fill station.

- The County's existing raw water distribution line has the potential to be repurposed for RW in this alternative.
- This alternative requires three pump stations to serve the hillside customers. One will boost RW up to Summitpointe, and two are needed to boost RW to Ed Levin Park/Spring Valley.
- This alternative does not include storage tanks for the hillside customers.
- This alignment is approximately 14,100 LF.

Segment 3 Alternative Alignment B

- This alignment connects to Segment 1 where it ends by Burnett Elementary School on Kennedy Drive and travels along Old Calaveras Road to Downing Road to serve Ed Levin Park and Spring Valley Golf Course. The alignment then continues down Downing Road and turns onto Monument Peak Road to serve Summitpointe.
- The County's existing raw water distribution line has the potential to be repurposed for RW in this alternative.
- This alternative will require Summitpointe to accept RW at a different location than where it receives raw water. This alternate delivery point has been discussed with Summitpointe, and they would be responsible for reworking their on-site system.
- This alternative requires two pump stations to serve the hillside customers. There will be two to boost up to Ed Levin Park/Spring Valley and then Summitpointe can be gravity fed.
- This alignment is approximately 14,400 LF.

Segment 3 Alternative Alignment C

- This alignment connects to Segment 1 on Calaveras Road and continues on Downing Road to serve Ed Levin Park/Spring Valley and then continues to Monument Peak Road to serve Summitpointe.
- This alternative would require Summitpointe to accept RW at a different location than where it receives raw water.
- This alternative requires two pump stations to serve the hillside customers. There will be two to boost up to Ed Levin Park/Spring Valley and then Summitpointe can be gravity fed.
- This alignment is approximately 15,400 LF.

Segment 3 Alternative Alignment D

- This alignment connects to Segment 1 on Jacklin Road and travels along Country Club Drive to serve Summitpointe and then continues through Summitpointe and Monument Peak Road to serve Ed Levin Park/Spring Valley.
- This alternative requires only two pump stations to serve the hillside customers. There will be one to boost to Summitpointe and one to pump from storage at Summitpointe to Ed Levin Park/Spring Valley.
- This alternative includes the option for an underground or partially buried storage tank at Summitpointe. A storage tank is included in the alternative as opposed to

using the irrigation pond for storage because of concerns about protecting RW quality and the City's preference for closed storage.
- This alignment is approximately 11,600 LF.

Segment 4

The purpose of Segment 4 is to serve the numerous customers located to the south and east of Segment 1. Segment 4 will not directly connect to any storage tanks or pump stations.

Segment 4 Alternative Alignment A

- This alignment connects to Segment 1 where it ends by Randall Elementary School on Edsel Drive and can connect to Segment 5 either at the intersection of Yellowstone Avenue and Landess Avenue or off of Olympic Drive at Creighton Park.
- It serves the 29 identified, potential customers in this area of the city.
- This alignment is approximately 16,000 LF.

Segment 4 Alternative Alignment B

- This alignment connects to Segment 1 where it ends by Randall Elementary School on Edsel Drive and can connect to Segment 5 either at the intersection of Yellowstone Avenue and Landess Avenue or off of Olympic Drive at Creighton Park.
- It varies from Segment 4 Alignment A in that the recycled water main travels along Yellowstone Ave instead of crossing through Murphy Park.
- It serves the 29 identified potential customers in this area of the city.
- This alignment is approximately 16,000 LF.

Segment 5

The main purpose of Segment 5 is to loop of the recycled water system by connecting to Segment 4 and providing another path across I-680 in order to connect to the City's Transit Area Specific Plan extensions or the SBWR system. Segment 5 will not directly connect to any storage tanks or pump stations.

Segment 5 Alternative Alignment A

- This alignment crosses I-680 at Landess Avenue to connect to the future Transit Area Specific Plan extensions.
- This alignment crosses approximately 1,750 LF of Caltrans right-of-way, which lies below Landess Avenue and would require a deep and long trenchless crossing.
- This alignment is approximately 4,800 LF.

Segment 5 Alternative Alignment B

- This alignment turns north from Landess Avenue at Dempsey Road in order to cross I-680 at a narrow location to connect to the existing SBWR at South Milpitas Boulevard at Ames Avenue.
- The alignment requires a relatively short trenchless crossing of approximately 300 LF across Caltrans right-of-way at Creighton Court.
- This alignment is approximately 8,700 LF.

Segment 5 Alternative Alignment C

- This alignment connects to Segment 4 off of Olympic Drive at Creighton Park.
- It connects to the existing SBWR at at South Milpitas Boulevard at Ames Avenue.
- The alignment requires a relateively short trenchless crossing of approximately 300 LF across Caltrans right-of-way at Creighton Court.
- This alignment is approximately 3,700 LF.

2 METHODOLOGY

2.1 REGULATORY OVERVIEW

The City of Milpitas is the responsible lead agency for this project under CEQA. This BRA was prepared to support CEQA environmental review, and for compliance with the National Environmental Policy Act (NEPA) in the event that a Federal nexus with the project is established (e.g., Federal funding or permit/approval). If a Federal nexus is established, the project would need to meet CEQA-Plus regulatory standards (CEQA and NEPA). The State Water Resources Control Board would have the responsibility for CEQA-Plus review which applies federal standards to the CEQA process.

This section provides a general summary of the applicable federal, state, and local regulations related to biological resources that could occur within the project area and immediate vicinity. Regulated or sensitive biological resources considered and evaluated in this BRA include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement corridors, and other biological resources afforded protection under local and regional jurisdictions, such as protected trees.

2.1.1 Environmental Statutes

For the purposes of this BRA, potential project-related impacts to biological resources were analyzed on the basis of the following regulatory statutes and guiding documents:

- California Environmental Quality Act (CEQA);
- Federal Endangered Species Act (FESA);
- California Endangered Species Act (CESA);
- Federal Clean Water Act (CWA);
- California Fish and Game Code (CFGC);
- Migratory Bird Treaty Act (MBTA);
- The Bald and Golden Eagle Protection Act; and
- Porter-Cologne Water Quality Control Act.

A more detailed account of the current regulatory framework applicable to the proposed project is presented as Appendix A.

2.1.2 Guidelines for Determining CEQA Significance

The following significance threshold as defined within the *CEQA Guidelines, Appendix G – Initial Study Checklist*, were used to evaluate potential environmental effects. Based on these criteria, a proposed project would have a significant effect on biological resources if it would:

a. *Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc…) through direct removal, filling, hydrological interruption, or other means.*
d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.*

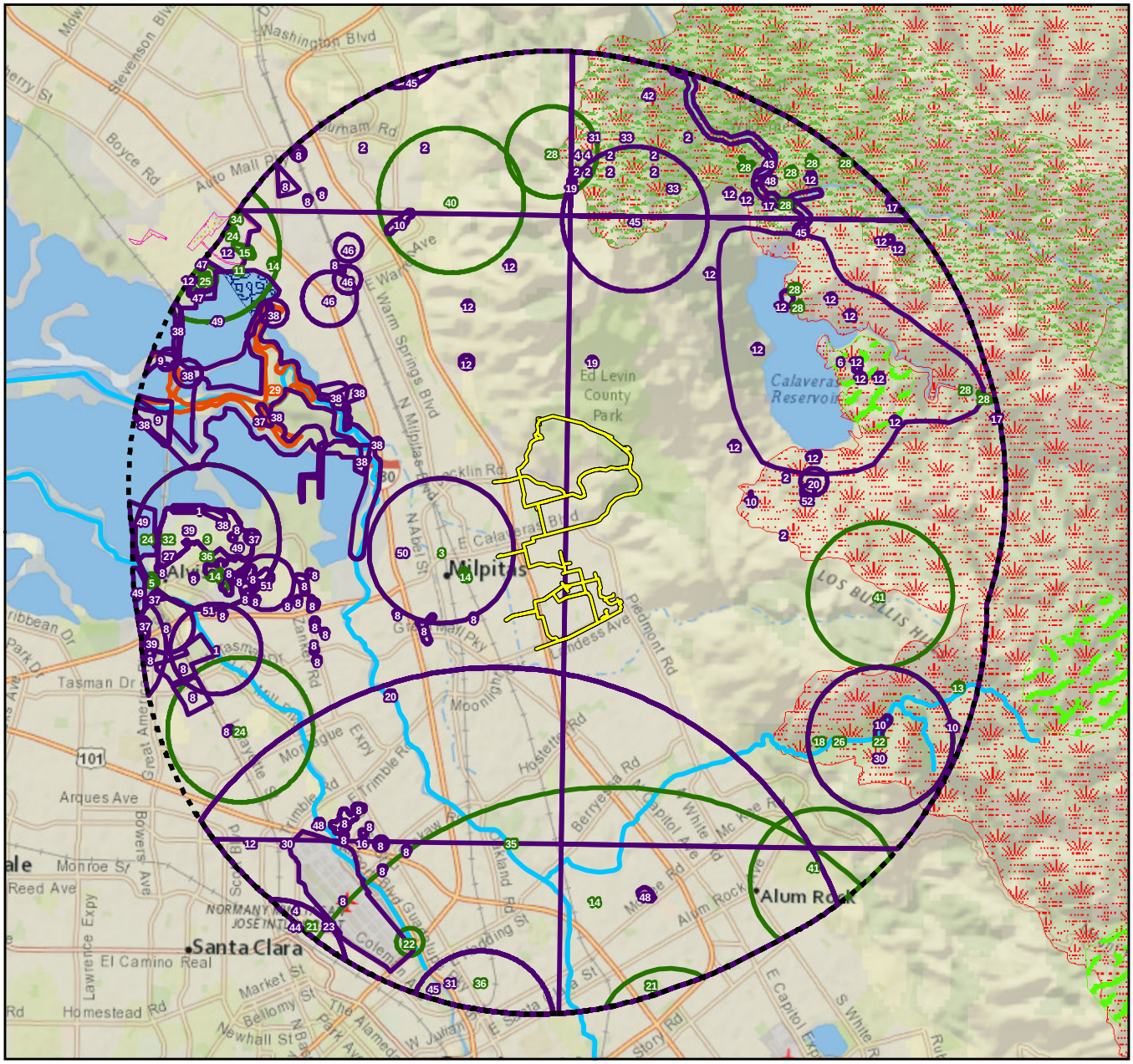
2.2 DATABASE AND LITERATURE REVIEW

The project area, or project area, is defined as the proposed pipeline alignments, a staging area, and two pump stations with water tanks. Rincon biologists evaluated a Biological Study Area (BSA) that consisted of a 75-foot buffer along both sides of the centerline of the pipeline alignments, and a 50-foot buffer around the footprint of the two pump station and water tank sites, and staging area.

Rincon reviewed literature to obtain baseline information about biological resources with potential to occur in the BSA, vicinity of the proposed project, and the region. The literature review included information from peer reviewed scientific publications, standard biological reference materials, and regionally applicable regulatory guidance documents. These included: Baldwin et al., 2012; Bowers et al., 2004; Holland, 1986; Sawyer et al., 2009; CDFW, 2010; Stebbins, 2003; Zeiner et al., 1988; and Zeiner et al., 1990. In addition, Rincon conducted queries of several relevant scientific databases that provide information about occurrences of sensitive biological resources: the California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game) California Natural Diversity Data Base (CNDDB) (CDFW, 2015a) and Biogeographic Information and Observation System (CDFW, 2015b) as shown in Figure 3.

Other resources included; the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS, 2015a) and Information, Planning, and Conservation System Query (USFWS, 2015b); the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS, 2015); and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS, 2015). The queries included the Milpitas and Calaveras Reservoir, California USGS 7.5-minute topographic quadrangles and the other ten USGS quadrangles that surround these two quadrangles (Mountain View, Newark, Niles, La Costa Valley, Mendenhall Springs, Mt. Day, Lick Observatory, San Jose East, San Jose West, and Cupertino); as well as aerial photographs, topographic maps, geologic maps, climatic data, and general project plans.

A complete list of the regionally occurring special status species reported from the scientific literature review and database queries was compiled for the BSA (Appendix B). Then an analysis to determine which of these special status species have the potential to occur within the BSA was conducted. Conclusions regarding which species have the potential to occur onsite



Imagery provided by ESRI and its licensors © 2015.
Additional data provided by the: California Natural Diversity Database, December, 2015.

0 1.1 2.2
Miles
N

Project Location
5-Mile Radius

CNDDB
- Animals
- Plants
- Natural Communities

Critical Habitat
- Alameda whipsnake (=striped racer)
- California red-legged frog
- California tiger Salamander
- Contra Costa goldfields
- Vernal pool tadpole shrimp
- Western snowy plover
- Steelhead

1 - Alameda song sparrow
2 - Alameda whipsnake
3 - alkali milk-vetch
4 - American peregrine falcon
5 - arcuate bush-mallow
6 - Berkeley kangaroo rat
7 - brittlescale
8 - burrowing owl
9 - California clapper rail
10 - California red-legged frog
11 - California seablite
12 - California tiger salamander
13 - chaparral harebell
14 - Congdon's tarplant
15 - Contra Costa goldfields
16 - Crotch bumble bee
17 - foothill yellow-legged frog
18 - fragrant fritillary
19 - golden eagle
20 - great blue heron
21 - hairless popcornflower
22 - Hall's bush-mallow
23 - hoary bat
24 - Hoover's button-celery
25 - lesser saltscale
26 - maple-leaved checkerbloom
27 - mimic tryonia (=California brackishwater snail)
28 - most beautiful jewelflower
29 - Northern Coastal Salt Marsh
30 - obscure bumble bee
31 - pallid bat
32 - Point Reyes salty bird's-beak
33 - prairie falcon
34 - prostrate vernal pool navarretia
35 - robust spineflower
36 - saline clover
37 - saltmarsh common yellowthroat
38 - salt-marsh harvest mouse
39 - salt-marsh wandering shrew
40 - San Joaquin spearscale
41 - Santa Clara red ribbons
42 - sharp-shinned hawk
43 - steelhead - central California coast DPS
44 - Swainson's hawk
45 - Townsend's big-eared bat
46 - tricolored blackbird
47 - vernal pool tadpole shrimp
48 - western pond turtle
49 - western snowy plover
50 - western yellow-billed cuckoo
51 - white-tailed kite
52 - Yuma myotis

Special Status Species Occurrences, Sensitive Communities, and Critical Habitat

Figure 3

were based not only on background research and literature review previously mentioned; but also on the data collected in the field during the site surveys.

Several regionally occurring special status species were eliminated due to lack of suitable habitat within the BSA, range in elevation, and/or geographic distribution. Special status species determined to have the potential to occur within the BSA are discussed in Section 4.1. Special status species that were determined not to have potential to occur within the BSA are not discussed.

2.3 RECONNAISSANCE FIELD SURVEY

Rincon Botanist/Biologist Michele Lee conducted two reconnaissance surveys on December 2 and 18, 2015. A reconnaissance-level field survey of the BSA at the Summitpointe Golf Club was conducted on December 2, 2015 and a reconnaissance-level field survey of the remaining portions of the BSA was conducted on December 18, 2015. The reconnaissance surveys were conducted in order to document the existing site conditions, identify vegetation communities, document wildlife habitats, and to assess the overall potential for the habitats observed in the BSA to support special status species. The survey consisted of a combined pedestrian/vehicular survey, and all of the BSA was observed by walking or driving.

Weather conditions were mild and generally favorable for the detection of wildlife species typically active during the day. On December 2nd, it was cloudy throughout the duration of the site visit, the temperature ranged from approximately 51-60 degrees Fahrenheit, and winds were mild at approximately 0-7 miles per hour (mph) out of the west. On December 18th, it was partly cloudy throughout the duration of the site visit, the temperature ranged from approximately 56-62 degrees Fahrenheit, and winds were at approximately 0-18 mph out of the south-southeast.

2.3.1 Vegetation Classification

Rincon classified vegetation communities broadly following CDFW's List of Vegetation Alliances and Associations (CDFW, 2010) (note: the CDFW system has recently superseded the system in The Manual of California Vegetation, second edition [Sawyer et al., 2009]). However, vegetation communities observed within the BSA were mostly dominated by species associated with urbanized areas, or consisted largely of ornamental and non-native species. These plant types are not always categorized in the List of Vegetation Alliances and Associations, therefore nomenclature was modified as needed to accurately describe the existing habitats observed onsite.

2.3.2 Flora and Fauna

During the field surveys, incidental observations of plant and animal species were recorded, and these observations were compiled and appended to this report (see appendices D and E). Rincon evaluated the habitat requirements for each regionally occurring species and compared those requirements to the type and quality of habitats observed in the BSA during the field reconnaissance surveys. Plant species nomenclature and taxonomy followed The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al., 2012), and Supplement I

(The Jepson Herbarium, 2013) and Supplement II (The Jepson Herbarium, 2014) of that publication. All plant species encountered were noted and identified to the lowest possible taxonomic level necessary to determine rarity (see Appendix E). Nomenclature for avian species based on the American Ornithologists' Union (AUO) Check-list of North and Middle American Birds, 7th edition and the 56th supplement (AOU, 2015).

2.3.3 Jurisdictional Waters

The reconnaissance-level field survey also evaluated the BSA for the presence of potentially jurisdictional aquatic features. The reconnaissance survey was based solely on visual inspection of the BSA and a formal jurisdictional delineation of waters and wetlands was not conducted.

3 EXISTING CONDITIONS

This section summarizes the existing biological conditions in the project area based on the results of the reconnaissance-level field surveys and literature review. Discussions regarding the general environmental setting, vegetation communities, plants and wildlife, and aquatic features are presented below. Representative photographs of the project area and vicinity are provided in Appendix C. A complete list of all plant species observed in the BSA and vicinity during the field surveys is presented as Appendix D. A complete list of all wildlife species observed in the BSA and vicinity during field surveys is presented as Appendix E.

3.1 ENVIRONMENTAL SETTING

Most of the proposed pipeline alignments (Segments 1, 2, 4, 5 and their alternatives) are located in existing paved roads in residential and commercial areas, landscaped city parks, including Ben Rodgers Park, Cardoza Park, Ed Levin County Park, Foothill Park, Hillcrest Park, Murphy Park, and Yellowstone Park, with portions of the pipeline (Segment 3 and its alternatives) that traverse the Summitpointe Golf Club. Elevations in the project area range from approximately 26 feet (8 meters) above mean sea level at the northwestern end along Jacklin Road to 631 feet (192 meters) above mean sea level in the northwestern portion along Downing Road at the Ed Levin County Park. Land uses immediately adjacent to the BSA include land developed for residential and commercial purposes and for recreation. Undeveloped areas include range and grazing land as well as protected open space. The project area is located in northeastern Santa Clara County. The climate within Santa Clara County is moderate and typifies a Mediterranean coastal climate throughout the year. The majority of rainfall occurs during the winter months and the summers are dry and warm.

3.1.1 SOILS

According to the NRCS Web Soil Survey of Santa Clara County (western part), the following soil map units occur within the project area: Alo-Altamont complex, 15 to 30 percent slopes (305); Urbanland-Hangerone complex, 0 to 2 percent slopes, drained (145); Urbanland-Embarcadero complex, 0 to 2 percent slopes, drained (150); Urbanland-Cropley complex, 0 to 2 percent slopes (317); Urban land-Cropley complex, 2 to 9 percent slopes (318); Urban land-Flaskan complex, 2 to 9 percent slopes (141); Kawenga-Alo complex, 20 to 40 percent slopes (307); Cropley clay, 2 to 9 percent slopes, MLRA 14 (316); Argixerolls, 20 to 50 percent slopes (345); Urbanland-Campbell complex, 0 to 2 percent slopes, protected (165); Urbanland-Clear Lake complex, 0 to 2 percent slopes (160); Urban land-Flaskan complex, 0 to 2 percent slopes (140); and Urbanland-Landelspark complex, 0 to 2 percent slopes (170) (USDA NRCS, 2015).

3.2 VEGETATION COMMUNITIES AND HABITATS

Most of the proposed pipeline segments are located in or adjacent to existing paved roads in residential and commercial areas, with portions that traverse the Summitpointe Golf Club and landscaped city parks, including Ben Rodgers Park, Cardoza Park, Ed Levin County Park, Foothill Park, Hillcrest Park, Murphy Park, and Yellowstone Park. Undeveloped areas that the pipeline alignment traverses include non-native grassland, remnant valley oak woodland, and coast live oak woodland (Figures 4a and 4b).

3.2.1 Developed

Segments 1, 2, 4, 5 and their alternatives are located within the City of Milpitas and the alignments follow existing paved roads. Vegetation in these areas is typical of urban areas and includes ornamental trees, shrubs, and turf adjacent to existing roadways, sidewalks and buildings. Golf course greens and residential areas along Segment 3 and its alternatives are also considered developed lands as they are regularly maintained and dominated by ornamental species.

3.2.2 Non-native Grassland

This habitat is dominated by grass species, including wild oat (Avena sp.), ripgut brome (*Bromus diandrus*), Harding grass (*Phalaris aquatica*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), and Medusa head (*Elymus caput-medusae*). Associated non-native forbs include rose clover (*Trifolium hirtum*), redstem filaree (*Erodium cicutarium*), dove's foot geranium (*Geranium molle*), vetch (*Vicia* sp.), and prickly lettuce (*Lactuca serriola*). Few native plant species were observed in this habitat, although not many native annuals would be expected in December. In some of the more disturbed areas, a higher abundance of invasive plant species, such as fennel (*Foeniculum vulgare*), Italian thistle (*Carduus pycnocephalus*), artichoke thistle (*Cynara cardunculus*), and black mustard (Brassica nigra) were present. Native species observed included coyote brush (*Baccharis pilularis*) and fireweed (*Epilobium brachycarpum*), a native forb common in disturbed areas. Native species were very sparsely scattered throughout non-native grassland areas.

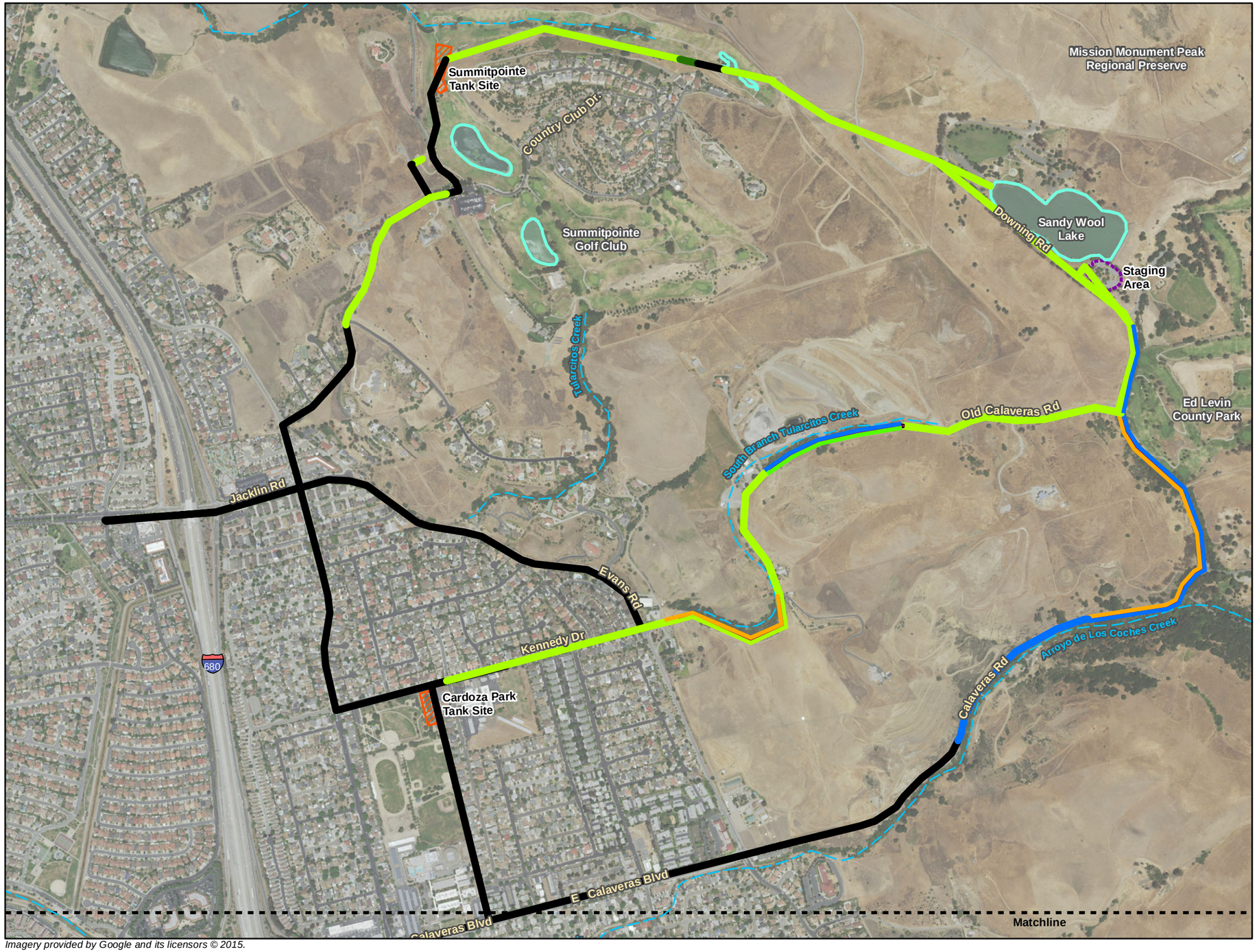
Non-native grassland areas occur along Segment 3 and its alternative alignments. Specifically, portions of the alignment at the Ed Levin County Park and Mission Peak Regional Preserve (East Bay Regional Park District) Bay Area Ridge Trail at the northeastern portion of the BSA cross through non-native grasslands.

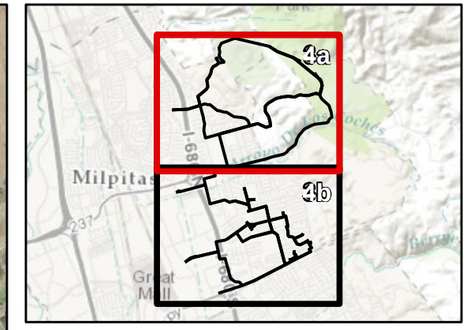
3.2.3 Coast Live Oak Woodland (Quercus agrifolia Alliance)

Individual coast live oaks can be found throughout the project area; however, an oak woodland is defined as a grouping of trees on a unit of land or project area where oak trees encompass 10 percent or greater of the canopy cover. The 10 percent canopy cover applies to the individual woodland and not the entire project area, which can contain one or more oak woodlands. Coast live oak woodlands occur along the proposed project in Segments 3, 3a, 3b, and 3c along Calaveras Road and Old Calaveras Road. These stands primarily occur on north-facing slopes and in drainages along the roadside, and are surrounded by non-native grasslands. Stands can be dominated by coast live oak with few understory species, or in mixed woodlands with western sycamore (*Platanus occidentalis*) and California sagebrush (*Artemisia californica*), and/ or ornamental species.

3.2.4 Valley Oak Woodland (Quercus lobata Alliance)

A small stand of valley oak, consisting of four valley oaks, is located on the Summitpointe Golf Club in Segment 3d. This stand occurs on a steep north-facing slope and it supports and an understory of soap plant (*Chlorogalum pomeridianum*), poison oak (*Toxicodendron diversilobum*), and snowberry (*Symphoricarpos albus* var. *laevigatus*). Invasive Himalayan blackberry (*Rubus*





Tank Site
Staging Area

Habitat Types

Developed
Non-Native Grassland
Coast Live Oak Woodland
Valley Oak Woodland
Riparian / Oak Woodland

Waters

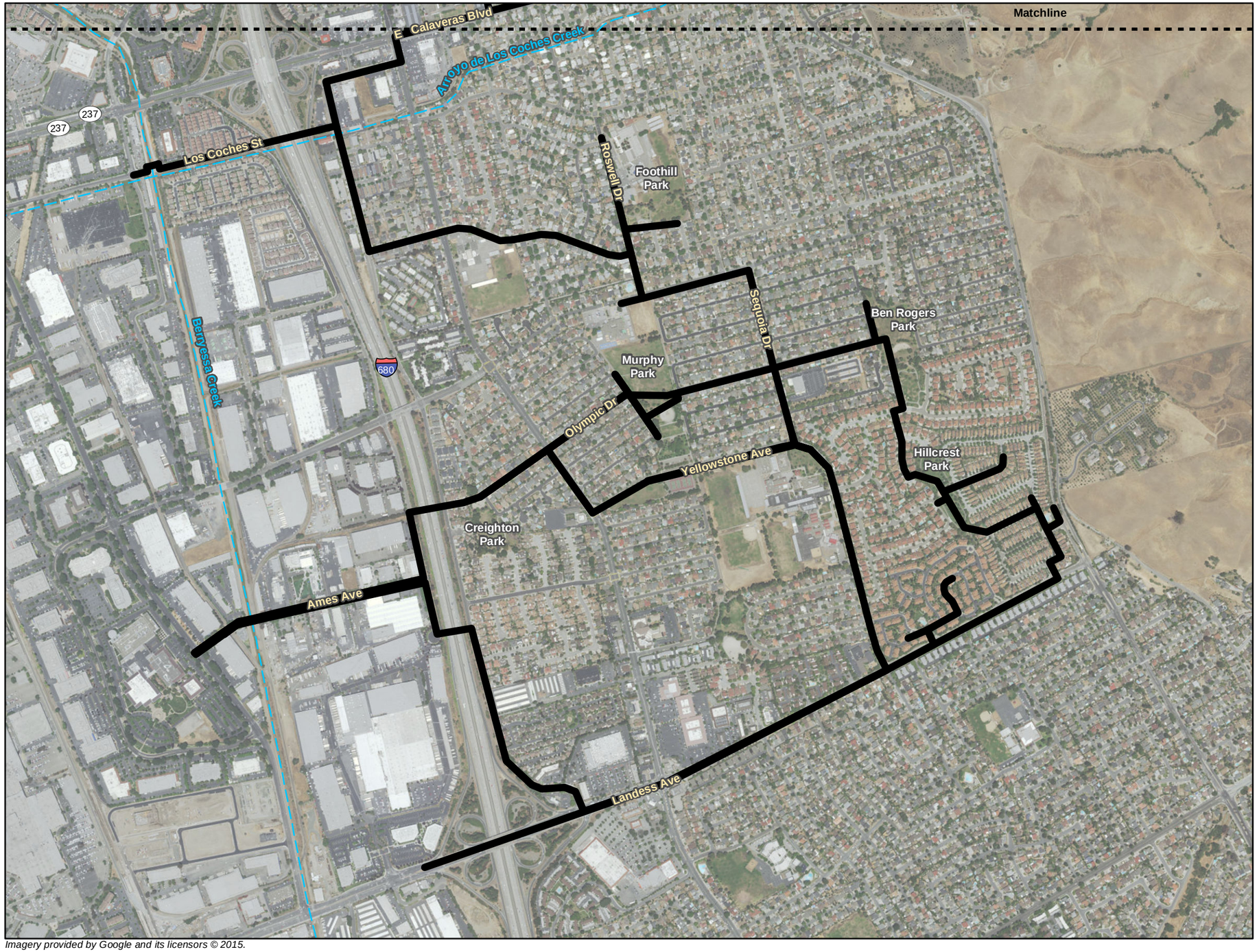
Creeks
Freshwater Pond

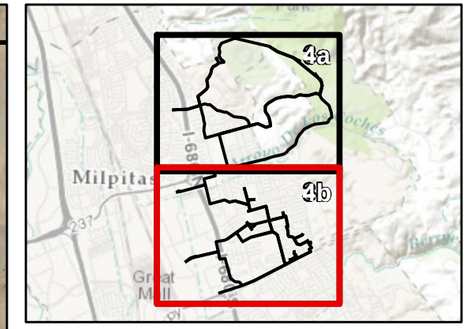
N
0 500 1,000
Feet

Imagery provided by Google and its licensors © 2015.

Vegetation Communities and Habitats

Figure 4a





Tank Site
Staging Area

Habitat Types

Developed
Non-Native Grassland
Coast Live Oak Woodland
Valley Oak Woodland
Riparian

Waters

Creek
Freshwater Pond

N

0 500 1,000
Feet

Imagery provided by Google and its licensors © 2015.

Vegetation Communities and Habitats

Figure 4b

armeniacus) was also observed in the understory, as well as a bunch grass that could potentially be a native fescue.

3.2.5 Riparian Woodlands

Coast live oak riparian forest, as well as mixed riparian woodlands occur immediately adjacent and in the vicinity of Segments 3a, 3b, and 3c following drainage ditches, South Branch Tularcitos Creek and Arroyo De Los Coches Creek. These stands include native species such as blue elderberry (*Sambucus nigra* ssp. *caerulea*), northern California black walnut (*Juglans hindsii*), western sycamore, narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), and California buckeye (*Aesculus californica*).

3.2.6 California Sagebrush Scrub

Small communities of fragmented and isolated California sagebrush scrub (*Artemisia californica* Alliance) are located along Segment 3d in Summitpointe Golf Course north, downslope from Pebble Beach Court, and along the north side (south facing slope) of Calaveras Road on Segment 3c.

3.3 WATERSHED AND DRAINAGES

The project area is located within the Coyote Watershed (Hydrologic Unit Code # 18050003) (USGS, 1978) which drains directly to the San Francisco Bay. Aquatic and wetland habitats adjacent to the project area include ponds, seasonal wetland, creeks, and mixed riparian woodlands. Creeks adjacent to the project area include the South Branch Tularcitos Creek adjacent to Old Calaveras Road, Tularcitos Creek, Arroyo de los Coches adjacent to Calaveras Road, an unnamed drainage along Downing Road at the Ed Levin County Park that drains into Arroyo de los Coches near Calaveras Road, and Berryessa Creek which runs north/south through the City of Milpitas. Tularcitos Creek, Arroyo de los Coches and South Branch Tularcitos Creek all contain areas with dense mixed riparian woodlands (Figure 4).

Segment 1 of the pipeline alignment crosses over Berryessa Creek at Los Coches Street and Segment 5 crosses at Ames Avenue (Figure 4b). At both locations, the creek is channelized and was inundated during the December 18, 2015 site visit. The channel is approximately 20 feet wide at the Los Coches crossing and approximately 6 feet wide at the Ames Avenue crossing. The channel was not accessible, but horsetail (*Equisetum* sp.) and potentially other hydrophytic vegetation were observed along the channel. The channel drains directly to the San Francisco Bay.

Lakes and Ponds

Several freshwater ponds occur along the northern most project alignment (Segments 3a, 3b, 3c, and 3d) including Sandy Wool Lake and ponds within Summitpointe Golf Course. Sandy Wool Lake is a perennial lake and supports recreational fishing. The pond nearest Calaveras Creek Drive and Country Club Drive was inundated during the December 2, 2015 reconnaissance survey. A small fringe of hydrophytic vegetation occurs along the edges of the pond. Hydrophytic vegetation includes brass buttons (*Cotula coronopifolia*), tall flatsedge (*Cyperus eragrostis*), rabbitsfoots grass (*Polypogon monspeliensis*), Dallis grass (*Paspalum dilatatum*),

watercress (*Nasturtium officinale*), and rush (*Juncus* sp.). Small willow (*Salix* sp.) saplings were present in low numbers along this pond. This pond is hydrologically connected to adjacent ponds on the golf club by an unnamed drainage that flows west through the golf club and is a tributary to Calera Creek. Segment 3d traverses a pond on the golf course that occurs along a tributary to Calera Creek that flows through the golf course and connects several golf course ponds. One of the ponds has dense patches of broad-leaved cattail (*Typha latifolia*) and California bulrush (*Schoenoplectus californicus*) and it includes watercress and tall flatsedge. A pond with a similar floristic composition is located at the northwestern corner of the golf course property along this same drainage. There are two larger, isolated ponds on the golf course property with sporadic patches of California bulrush. These ponds are perennial and support fish.

Seasonal Wetland

Segment 3d crosses through the outer edge of a seasonal wetland at the Summitpointe Golf Club. This wetland is hydrologically connected to a pond by culverts. It was dry during the December 2, 2015 site visit with the exception of some moist surface patches. Algal mats and hydrophytic vegetation were observed here including tall flatsedge, Bermuda grass (*Cynodon dactylon*), hyssop loosestrife (*Lythrum hyssopifolia*), and rabbitsfoot grass, with sparse willow seedlings.

3.4 GENERAL WILDLIFE

Wildlife was observed throughout the proposed project area and vicinity during the field surveys. All observed wildlife was consistent with the typical wildlife that would be expected in mixed urban/suburban residential areas, golf course developments, or otherwise associated with urbanized areas. Appendix E provides a list of animal species that were observed in the proposed project area and in the vicinity during the December 2 and 18, 2015 site surveys. Mammals observed include black-tailed jackrabbit (*Lepus californicus*) and black-tailed deer (Odocoileus hemionus). Several small mammal burrows were observed in non-native grasslands in the project area at the Summitpointe Golf Club and at the Ed Levin County Park. California ground squirrels (*Otospermophilus beecheyi*) were observed in close proximity to these burrows at the Ed Levin County Park paragliding area. These burrows were examined and did not show sign of burrowing owl use. Common bird species that are adapted to urban environments were also observed and included American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), and western scrub-jay (*Aphelocoma californica*). Other birds that were observed include ruby-crowned kinglet (*Regulus calendula*) and red-tailed hawk (*Buteo jamaicensis*). Two special status birds were observed during surveys: a northern harrier (*Circus cyaneus*) was observed perching and preening in an ornamental tree near Sandy Wool Lake at the staging area; and a white-tailed kite (*Elanus leucurus*) was observed foraging in non-native grasslands adjacent to the northern end of the Summitpointe Golf Club on December 2, 2015. Two white-tailed kites were also observed in this vicinity of the project area on December 18, 2015.

4 SENSITIVE BIOLOGICAL RESOURCES

This section discusses the potential for special status species to occur within the proposed project area. 'Potential to occur' is based on the presence or absence of suitable habitat for each special status species reported in the scientific database queries and literature review that was conducted for the proposed project. The CNDDB documents 52 special status species within a five-mile radius of the proposed project. Several scientific databases were queried, multiple sources of pertinent scientific literature were reviewed, and the technical expertise of Rincon's staff was utilized to determine the habitat requirements, ecology, and distribution of the special status species potentially affected by the proposed project. All occurrences of special status species, sensitive vegetation communities, and USFWS designated critical habitats that have been reported by the resource agencies within a five-mile radius of the project area were plotted on a map using Geographic Information System (GIS) software (Figure 3). As discussed in Section 2.2, an analysis was conducted to determine which of the regionally occurring special status species have potential to occur within the project area (Appendix B).

4.1 SPECIAL STATUS SPECIES

Fifty two special status plants, animals, and vegetation communities were evaluated for their potential to occur in the proposed project area (Appendix B). Figure 3 shows the CNDDB records of special status species within five miles of the proposed project area. Rincon staff determined that the project area contains suitable habitat for two special status plant species and 12 special status animal species. Three of these animals are listed either under FESA, CESA, or both.

Most of the project area is developed with patches of ruderal habitat and lacks suitable habitat for many special status species. However, Segment 3 and its alternatives will traverse several undeveloped areas including non-native grasslands, remnant oak woodlands, creeks and associated riparian woodlands, and fragmented patches of California sagebrush scrub. Breeding habitat for California tiger salamander, California red-legged frog, foothill yellow-legged frog, and western pond turtle are not present in the project area; however, potential breeding habitats are present adjacent to the project area. In addition, there are CNDDB records of these species within five miles of the project area. Trees in and adjacent to the project area provide potential suitable nesting habitat for special status raptors, such as golden eagles and white-tailed kites, as well as birds protected under the MBTA and CFGC. Special status species with potential to occur within the project area are discussed in greater detail below.

4.1.1 Special Status Plant Species

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS or National Marine Fisheries Service under the FESA; those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the CESA; and those recognized as Species of Special Concern (SSC) by the CDFW. In addition, plant species are ranked by the CDFW California Rare Plant Rank (CRPR) system, as follows, with species occurring on lists 1 and 2 considered special status:

- List 1A = Plants presumed extinct in California
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
- List 2 = Rare, threatened or endangered in California, but more common elsewhere.
- List 3=Need more information (a Review List)
- List 4=Plants of Limited Distribution (a Watch List)

Furthermore, biological resources, including vegetation communities, are ranked globally (G) and State-wide (S) 1 through 5 based on NatureServe's (2010) methodologies, as follows, with those alliances ranked G or S as 1 through 3 considered special status:

- G1 or S1 - Critically Imperiled Globally or State-wide
- G2 or S2 - Imperiled Globally or State-wide
- G3 or S3 - Vulnerable to extirpation or extinction Globally or State-wide
- G4 or S4 - Apparently secure Globally or State-wide
- G5 or S5 - Secure Globally or State-wide.

There are two CNDDB records of two special status plant species that overlap the proposed project area (Figure 3); Congdon's tarplant (*Astragalus tener* var. *tener*) and alkali milk vetch (*Centromadia parryi* ssp. *congdonii*). However, the proposed project area lacks alkaline seasonal wetland habitats that these species typically inhabit; therefore these species are not expected to occur. The following two special status plants have potential to occur on the proposed project area:

Fragrant fritillary (*Fritillaria liliacea*) – CRPR 1B.2. There is one CNDDB record of fragrant fritillary within five miles of the proposed project area (Figure 3). This record is located at Alum Rock Park in the City of San Jose and is approximately 2.9 miles southeast of the proposed project area. This occurrence is presumed extant but is based on a 1941 herbarium specimen and was not relocated in a survey for it in 1994. Fragrant fritillary could potentially occur on the project area in oak woodlands and grasslands.

Arcuate bush-mallow (*Malacothamnus arcuatus*) – CRPR 1B.2. There is one record of arcuate bush mallow within five miles of the project area (Figure 3). It was recorded along Alviso Slough in 1955 and is presumed extant. This occurrence is located approximately4.6 miles west of the proposed project area. Arcuate bush mallow could potentially occur on the project area in oak woodlands.

4.1.2 Special Status Animal Species

Special status animal species were evaluated for their potential to occur in the project area (Appendix B). Twelve special status animal species have the potential to occur based on the presence of suitable habitat in the project area or adjacent to the project area. Three of these

species are listed under the FESA and/or CESA. Habitat for special status species in the project area is limited because the project area is narrow and linear and most of it is in existing paved roads. The project area lacks breeding habitat for most of these special status species except for California tiger salamander and western pond turtle, and five special status birds. Mature trees in oak woodlands and adjacent riparian woodlands that overhang the project area potentially provide breeding habitat for white-tailed kite and grasslands provide nesting and foraging habitat for northern harriers. White-tailed kite and northern harrier were observed on the project area. Pallid bats could roost in hollow trees on the project area and forage in oak woodlands and grasslands on the project area. California red-legged frog, California tiger salamander, foothill yellow-legged frog, northern western pond turtle, and Alameda whipsnake could potentially breed in the vicinity of the project area and use the uplands on the project area or disperse through habitats on the project area. The following discussions provide more detail about special status animal species that have the potential to occur on the project area:

California tiger salamander (*Ambystoma californiense*) – FT, ST. California tiger salamander (CTS) is a lowland species found primarily in grasslands and low foothill and oak woodland habitats located within approximately 2,200 ft (671 meters [m]) of breeding pools (Trenham and Shaffer, 2005). CTS breed in long-lasting rain pools (e.g., seasonal ponds, vernal pools, slow moving streams) that are often turbid, and occasionally in permanent ponds lacking fish predators. During the non-breeding season, adults occur in upland habitats and occupy ground squirrel or pocket gopher burrows. They migrate nocturnally to aquatic sites to breed during relatively warm winter or spring rains. CTS has been documented to migrate up to 1.0 mile from breeding sites to refugia sites (Austin and Shaffer, 1992). Following breeding, adults move 9 to 518 ft (3 to 158 m) away from breeding ponds within the first night (Loredo et al., 1996; Trenham, 2001). Most salamanders continue to move to different burrow systems further from the pond over the next one to four months, with an average distance of 374 ft (114 m) from the pond (Trenham, 2001). Trenham and Shaffer (2005) estimated that conserving upland habitats within 2,200 ft (671 m) of breeding ponds would protect 95 percent of CTS at their study location in Solano County.

There are eighteen CNDDB occurrences within a 5-mile radius of the project area (Figure 3). The closest CNDDB record to the project area is an extirpated record from 1895 that is located approximately 0.28 mile south of the project area. The next closet CNDDB record to the project area is located in the City of Fremont approximately 1.2 miles northwest of the project area. This occurrence consists of three juvenile larvae that were captured and released in 1995. Another record is approximately 1.4 miles east of the project area in the vicinity of Calaveras Road at a pond where egg masses were observed in 2010. Suitable breeding habitat for this species does not occur in the project area, but is documented within 1.2 miles of the project area. CTS have been documented migrating up to 1.0 mile from breeding sites to refugia sites, and California ground squirrels and small mammal burrows adjacent to the project area could provide refugia for dispersing CTS during the non-breeding migration periods.

California red-legged frog (*Rana draytonii*) – FT, SSC. The California red-legged frog (CRLF) inhabits quiet pools of streams, marshes, and ponds. All life history stages are most likely to be encountered in and around breeding sites, which include coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams, as well as artificial impoundments such as stock ponds, irrigation ponds, and siltation ponds. Essential breeding should hold water for a minimum of 20 weeks in all but the driest of years

(USFWS, 2010). Eggs are typically deposited in permanent pools, attached to emergent vegetation.

CRLF generally prefer to remain close to water, but disperse along streams and in uplands. During rainy periods CRLF disperse through uplands for distances up to 2.0 miles (USFWS, 2002) and have been documented dispersing along stream systems up to 1.7 miles from breeding sites (Fellers and Kleeman, 2007). During the summer, they disperse in response to drying breeding habitats, to forage, and to seek moist habitats. They seek refuge in rodent burrows, boulders, logs, trees, organic debris, drains, watering troughs, abandoned sheds, and hay-ricks (Fellers and Kleeman, 2007; USFWS, 2002). CRLF will also move from breeding sites to forage in riparian vegetation (USFWS, 2002).

There are five CNDDB occurrences within a 5-mile radius of the project area (Figure 3). The closest CNDDB record to the project area is approximately 1.67 miles east where 2 adults were observed in a reservoir in 1994. The other records are located between 3.24 and 4.78 miles from the project. The project area is not within federally designated critical habitat for CRLF (Figure 3; USFWS 2015a).

The ponds on Summitpointe Golf Course and Sandy Wool Lake are not likely to provide breeding habitat for CRLF, but grasslands on-site potentially provides upland refugia habitat and estivation habitat in on-site burrows. Creeks adjacent to the project area also could provide suitable breeding habitat and migration corridors for CRLF. CRLF have been documented migrating up to 2.0 miles from breeding sites to refugia sites and may cross the alignment while dispersing to breeding or foraging habitat.

Foothill yellow-legged frog (*Rana boylii*) – State Species of Special Concern (SSC). Foothill yellow-legged frog inhabits partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, riparian forest, and riparian woodland. They need at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.

There are three CNDDB occurrences within a 5-mile radius of the project area (Figure 3). The closest record is approximately 3.8 miles northeast of the project area in Alameda Creek, and a second record in Alameda Creek is 4.9 miles northeast of the project area. The third record is approximately 5.0 miles east of the project area Arroyo Hondo near Calaveras Reservoir.

The project area does not provide breeding habitat for this species, but creeks adjacent to the area could provide breeding habitat and foothill yellow-legged frogs, could be distributed throughout upland grasslands on the project area.

Western pond turtle (*Emys marmorata*) – SSC. Western pond turtle (WPT) is an aquatic turtle that occurs in ponds, marshes, rivers, streams and irrigation ditches that typically support aquatic vegetation. It requires downed logs, rocks, mats of vegetation, or exposed banks for basking. Western pond turtle lay their eggs in nests that are dug along the banks of streams or other uplands in sandy, friable soils. Northern western pond turtles, especially those that reside in creeks are also known to over winter in upland habitats. Upland movements can be quite extensive and individuals have been recorded nesting or overwintering hundreds of feet from

aquatic habitats. The typical nesting season is usually from April through August; however, variation exists depending upon geographic location.

There are three CNDDB occurrences within a 5-mile radius of the project area (Figure 3). The closest record is approximately 3.6 miles southeast of the project area at the Overfelt Gardens pond in San Jose. Another record is at the Guadalupe River in San Jose, approximately 3.8 miles southwest of the project area. The third record is approximately 4.0 miles northeast of the project area at Alameda Creek. The project area is not within federally designated critical habitat for this species (Figure 3; USFWS 2015a).

Though the larger ponds and Sandy Wool Lake could potentially provide suitable aquatic habitat for western pond turtles, it is unlikely that the species would be found there due to the level of human disturbance and lack of observation records within 3 miles of the project. Creeks in the vicinity of the project can provide suitable habitat for this species, depending on water levels throughout the year.

Alameda whipsnake (*Masticophis lateralis euryxanthus*) –FT, ST. This species is typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. It is typically found mostly on south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasslands. They shelter in rocks, outcrops, or small mammal burrows.

There are eleven CNDDB occurrences within a 5-mile radius of the project area (Figure 3). The locations for these records are broadly mapped by 7.5-minute USGS quadrangle. There is one record in the *Calaveras Reservoir* quadrangle and other records are in surrounding quadrangles.

The project area does not provide core chaparral habitat for this species, but California sagebrush scrub occurs adjacent to the project area on south-facing slopes along Calaveras Road which could be occupied by Alameda whipsnake. They could disperse throughout the project area or use grassland or oak woodland habitat within the project area. Rodent burrows in the project area could provide shelter for this species.

Golden eagle (*Aquila chrysaetos*) –FP. Golden eagles occur in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Cliff-walled canyons provide nesting habitat in most parts of range and they will nest in large trees in open areas.

There are two CNDDB breeding records of this species within a 5-mile radius of the project area (Figure 3). The closest record is approximately 0.86 mile north of the project area at Calera Creek. The other record is approximately 3.27 miles north of the project area at the Mission Peak Regional Preserve.

Large undeveloped grasslands are present adjacent to the northern portions of the project area that are suitable foraging habitat for this species.

Burrowing owl (*Athene cunicularia*) – SSC. Burrowing owls occur in open dry grasslands, desert habitats and in open areas within pinyon-juniper shrublands. They typically prefer habitats with low growing vegetation in open areas, which a perch site nearby for hunting**.** They are subterranean nesters that are dependent upon burrowing mammals, most notably, the California ground squirrel.

There are thirty-three CNDDB occurrences within 5 miles of the project area (Figure 3)**.** The closet record is an extirpated record approximately 0.4 mile west of the project area**.** The next closest record is approximately 1.41 miles west of the project area and it is possibly extirpated. Most of the other records are west of the project area, with the closet record located approximately 2.43 miles away.

Mammal burrows that were the appropriate size for burrowing owls were observed in the project area during the December reconnaissance surveys**.** Though a formal survey was not conducted, the burrows were evaluated for the presence of burrowing owl sign (pellets, white wash, etc.) but no sign was observed. A complex of burrows is located at the Summitpointe Golf Course on a slope with non-native grasses that is adjacent to a small coast live oak stand. Another burrow complex was observed near the project area in grasslands at the Ed Levin County Park paragliding area in Segment 3a and 3b. Other burrows were present at the Summitpointe Golf Course and in other non-native grassland locations throughout the project area.

White-tailed kite (*Elanus leucurus*) – FP. This species occurs in grasslands, meadows, marshes, dry farmed agricultural fields, savannahs, relatively open oak woodlands, and other relatively open lowland scrublands. It uses dense-topped trees in riparian corridors for nesting and perching.

Mature trees in the project area potentially provide nesting habitat for this species. The remnant coast live oak and valley oak woodlands, and mixed riparian habitats in the project area provide nesting habitat and grasslands in the project area provide foraging habitat. A white-tailed kite was observed foraging in the project area in the grasslands adjacent to the golf course on December 2, 2015. Two white-tailed kites were observed foraging in the vicinity of this area on December 18, 2015. There are two CNNDB records of this species within five miles of the project area (Figure 3). White-tailed kites are fairly adapted to urban environments and could be present either nesting or foraging in and immediately adjacent to the project area.

Northern harrier (*Circus cyaneus*) –SSC. Northern harriers occur in open areas, particularly in grasslands, wet meadows and marshes, and require larger areas for foraging. It nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests are typically on ground in tall grasses or shrubby vegetation.

There are no CNNDB records of this species within five miles of the project area (Figure 3); however, this species was observed perched and preening in an ornamental tree at the Sandy Wool Lake parking lot staging area. Nesting and foraging habitat occur in the vicinity of Segment 3 and its alternatives.

Tricolored blackbird (*Agelaius tricolor*) – Federal Candidate Endangered, SSC.
In 1991, the USFWS included this species as a candidate (Category 2) for federal listing as either threatened or endangered (59 Federal Register [219]:58990). After decline of population numbers in the 1980s, CDFW added the Tricolored blackbird to its list of Bird Species of Special Concern in 1990. Tricolored Blackbirds are permanent residents of California, though they can migrate extensive distances within their range during the breeding season and in winter (DeHaven et al. 1975a, Hamilton 1998). With the diminishing natural flooding cycle and loss of most native wetland and upland habitats in the Central Valley, Tricolored Blackbirds now forage primarily in artificial habitats in Central and Southern California. Ideal foraging conditions for this species are created when shallow flood irrigation, mowing, or grazing keeps the vegetation at an optimal height. The Tricolored blackbird relies on vegetation associated with ponds (cattails and bulrush) for nesting (Beedy and Hamilton 1999) and they have been documented using seasonal wetlands for foraging and breeding habitat. They are a colonial species and will form large nesting colonies if enough suitable habitat is present (Shuford, W. D., 2008).

Even though the nearest documented occurrence of this species in CNDDB is approximately 3.5 miles northwest of the project area, suitable foraging habitat for this species occurs adjacent to Segment 3 and its alternatives, and marginal breeding habitat may be present in restricted areas along Segment 3c. The portions of the project area within unincorporated Santa Clara County fall within the Santa Clara County Habitat Conservation Plan (HCP) area. The Santa Clara Valley HCP includes required tricolored blackbird surveys in some of parts of the project area.

Pallid bat (Antrozous pallidus) – SSC. Pallid bats typically inhabit deserts, grasslands, shrublands, woodlands and forests in arid to semi-arid areas. They are most common in open, dry habitats with rocky areas for roosting. They prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Their day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Pallid bats are very sensitive to disturbance of roosting sites.

There are two CNNDB records of this species within five miles of the project area (Figure 3). The closet record is approximately 2.8 miles north of the project area. The other record is from 1943 and is generally mapped in the San Jose area. This record is approximately 4.49 miles southwest of the project area.

Pallid bats may potentially roost in rock outcrops or trees on the project area. Non-native grasslands on the project area potentially provide limited foraging habitat.

Nesting Birds
Nesting birds, in addition to those mentioned above, are afforded protection under the CFGC and/or MBTA and have the potential to occur within the project area. Landscaped areas with mature trees and shrubs, ruderal areas with grassland vegetation or cleared areas, and oak woodland and grassland immediately adjacent to the project area all provide suitable nesting habitat for a wide variety of birds.

4.2 SENSITIVE PLANT COMMUNITIES

Valley oak woodland (*Quercus lobata* alliance) is a sensitive plant community that is recognized by the CDFW (2010). The valley oak stand on-site is a remnant of a larger stand. An unidentified fescue grass was observed in the understory of this woodland. Fescue grasslands such as Idaho fescue grassland (*Festuca idahoensis* Alliance) or red fescue (*Festuca rubra* Alliance) are also considered a sensitive vegetation community.

Segments 3a, 3b, and 3c are located within a Santa Clara County mapped oak woodland area (ICF, 2012). Coast live oak and blue oak (*Quercus douglasii*) woodlands are considered sensitive by Santa Clara County and evaluation of impacts to oak woodlands may be required as part of the environmental analysis conducted in compliance with CEQA.

4.3 JURSIDICTIONAL WATERS AND WETLANDS

The BSA is located within the Coyote Watershed (Hydrologic Unit Code # 18050003) (USGS, 1978) which drains directly to the San Francisco Bay. Blue line streams in the project vicinity include Berryessa Creek, Tularcitos Creek, South Branch Tularcitos Creek and Arroyo De Los Coches Creek are expected to be subject to the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the U.S. Army Corps of Engineers (USACE). Segment 1 crosses over Berryessa Creek at Los Coches Street and Segment 5 crosses the creek at Ames Avenue (Figure 4b). At both locations, the creek is channelized.

Other water features including, freshwater ponds, seasonal wetlands, and riparian woodlands traversing and adjacent to the BSA are potentially subject to the jurisdiction of the RWQCB, USACE, and CDFW pursuant to Section 1600 et. seq. of the California Fish and Game Code (CFGC).

4.4 WILDLIFE MOVEMENT

Segment 3 and its alternatives follow existing roads within undeveloped areas, the entirety of which is within a mapped California Essential Habitat Connectivity (CEHC) area. Woodlands and riparian corridors along creeks are also expected to be used as migration corridors by local wildlife. Project activities may temporarily displace wildlife during construction; however, the proposed project would involve the installation of pipes underground along existing roads, and would not change the function of the area to serve as wildlife movement corridors. All other segments are proposed within developed areas that are not expected to serve as wildlife movement corridors; therefore, no further analysis of wildlife movement is included within this report.

4.5 RESOURCES PROTECTED BY LOCAL POLICIES AND ORDINANCES

4.5.1 City of Milpitas Protected Trees

The *Tree Maintenance and Protection Ordinance of the City of Milpitas (Ord. 201.5 (1) (part), 10/16/07)* regulates removing and pruning trees in or adjacent to streets and within easements, in rights-of-way and other public places within the City of Milpitas and on private property.

This ordinance defines protected trees as:

- All trees which have a fifty-six-inch (56") or greater circumference of any trunk measured 4 ½ feet from the ground and located on developed residential property.
- All trees which have a thirty-seven-inch (37") or greater circumference of any trunk measured 4 ½ feet from the ground and located on developed commercial or industrial property.
- All trees which have a thirty-seven-inch (37") or greater circumference of any trunk measured 4 ½ feet from the ground, when removal relates to any transaction for which zoning approval or subdivision approval is required.
- Any tree existing at the time of a zoning or subdivision approval and was a specific subject of such approval or otherwise covered under the second bullet above.
- All trees which have a thirty-seven-inch (37") or greater circumference of any trunk measured 4 ½ feet from the ground and located on a vacant, undeveloped or underdeveloped property.
- All heritage trees or groves. A heritage tree or grove has historical significance, special character or community benefit, and is specifically designated by resolution of the City Council.
- An oak tree (*Quercus* spp.) which is native to California and has a trunk with a circumference of 31.4 inches (diameter of ten [10] inches) or more, measured at fifty-four (54) inches above natural grade. Trees with more than one trunk shall be measured at the point where the trunks divide, with the exception of trees that are under twelve (12) feet in height, which will be exempt from this section.
- All trees other than oaks which have a trunk with a circumference of 47.1 inches (diameter of fifteen (15) inches) or more, measured fifty-four (54) inches above natural grade. Trees with more than one trunk shall be measured at the point where the trunks divide, with the exception of trees that are less than twelve (12) feet in height, which will be exempt from this section. (Ord. 928 Section 1 (part), 2004).

A permit is required from the City Public Works Department for the removal or pruning of a protected tree. A permit is not required for removing less than 10 percent of the tree canopy, sucker growth, watersprouts, and low hanging branches less than 4" in diameter causing obstructions.

Compensation for removing protected trees consists of the following:

- Reimbursement to the City for the full costs of time and materials to prune, remove and/or replace trees within the public right-of-way or tree planting easements;

- Reimbursement to the City for the value of the removed or damaged tree as determined by an arborist certified by the International Society of Arboriculture utilizing the current edition of the "*Guide for Plant Appraisal, International Society of Arboriculture*"; or
- A combination of the above terms as determined by the Public Works Director.

4.5.2 Santa Clara County Protected Trees and Heritage Trees

In accordance with Santa Clara County's Municipal Code for *Tree Preservation and Removal (Division C-16)*, a permit is required from the County Planning Office or the Department of Roads and Airports for the removal or adverse pruning of protected trees. Removal of any tree, regardless of size, located within a County road right-of-way shall require an encroachment permit from the Department of Roads and Airports not less than 60 days prior to planned removal.

A protected tree consists of any of the following:

- Any tree having a main trunk or stem measuring 37.7 inches or greater in circumference (12 inches or more in diameter) at a height of 4½ feet above ground level, or in the case of multi-trunk trees a total of 75.4 inches in circumference (24 inches or more of the diameter) of all trunks in the following areas of the County: Parcels zoned "Hillsides" (three acres or less); Parcels within a "-d" (Design Review) combining zoning district; Parcels within the Los Gatos Hillside Specific Plan Area.
- Any tree within the "-h1" Historic Preservation zoning district for New Almaden having a main trunk or stem measuring six inches or more in diameter (18.8 inches or greater in circumference) at a height of 4.5 feet above ground level, or in the case of multi-trunk trees, a total of 12 inches in diameter (37.7 inches in circumference) of all trunks at 4.5 feet above ground. For parcels having a base zoning district of "HS, Hillside" within the "-h1" combining zoning district, this provision supersedes C16-3(a)(1).
- Any heritage tree, as that term is defined in Section C16-2.
- Any tree required to be planted as a replacement for an unlawfully removed tree, pursuant to Section C16-17(e) of this division.
- Any tree that was required to be planted or retained by the conditions of approval for any use permit, building site approval, grading permit, architectural and site approval (ASA), design review, special permit or subdivision.
- On any property owned or leased by the County, any tree which measures over 37.7 inches in circumference (12 inches or more in diameter) measured 4.5 feet above the ground, or which exceeds 20 feet in height.
- Any tree, regardless of size, within road rights-of-way and easements of the County, whether within or without the unincorporated territory of the County.

Heritage trees include any tree which, because of its history, girth, height, species, or other unique quality, has been recommended for inclusion on the heritage resource inventory by the Historical Heritage Commission and found by the Board of Supervisors to have special significance to the community, and which has therefore been included in the heritage resource

inventory adopted by resolution of the Board of Supervisors. The removal of a heritage tree requires that the Planning Office submit the permit to County Historical Heritage Commission (HHC). A written evaluation of the status of the tree may be required at the expense of the applicant and the Commission will conduct a hearing to approve or deny the permit application. A tree survey and replanting plan that describes tree replacement details is required as part of the permit application. Replacement trees should be in-kind if the removed tree is a native species, or an appropriate species as determined by the Planning Office. Replacement trees should be at least a five-gallon size. The ratio of trees removed to trees planted shall be determined by the Planning Department. An erosion control plan may also be required where deemed appropriate by the County.

4.6 HABITAT CONSERVATION PLANS

4.6.1 Santa Clara Valley Habitat Conservation Plan (HCP)

A majority of Segment 3 and its alternatives occurs within the Santa Clara Valley Habitat Conservation Plan (HCP) area. The HCP, which was finalized in 2012 and was developed by the Santa Clara Valley Transportation Agency, Santa Clara Valley Water District, County of Santa Clara, and the Cities of Gilroy, Morgan Hill, and San Jose covers a majority of Santa Clara County. The Habitat Plan provides streamlined state and federal permitting for public and private projects, while offering a comprehensive and effective way to address impacts of those projects on endangered and threatened species and their habitats, as well as acquire and manage a Reserve System that will serve as mitigation for project impacts and contribute to the recovery of the species covered by the HCP (ICF, 2012). The project area in part (Segment 3) includes areas defined in the Santa Clara Valley HCP as tri-colored blackbird survey areas, and falls within Fee Zone A.

Public or quasi-public entities, such as special districts or entities not subject to the jurisdiction of the Co-Permittees, may conduct or initiate projects or ongoing activities within the permit area that could affect listed species and that may require take authorization from USFWS and/or CDFW. However, municipalities that are not a Co-Permittee are not eligible to participate using this status, therefore the City of Milpitas is not expected to be eligible to seek coverage under the HCP (ICF, 2012) for impacts within the City boundaries. However, for impacts within unincorporated Santa Clara County, the City of Milpitas, as a Participating Special Entity, would be required to go through the Santa Clara Valley HCP review process, meet HCP conditions for surveys and reporting, pay required fees, and comply with pertinent HCP impact avoidance measures. The City would proceed as if they were a typical private developer, and submit the Private Application Form to the Habitat agency for review.

No other adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan overlaps the proposed project so HCPs and other conservation plans are therefore not discussed further in this report.

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5 IMPACT ANALYSIS AND MITIGATION MEASURES

This section discusses the possible significant impacts (CEQA) and adverse effects (NEPA) to biological resources that may occur from implementation of the proposed project and proposes appropriate mitigation measures that would reduce potential impacts/adverse effects to less than significant levels. The criteria used to evaluate potential project-related impacts to biological resources are presented in Section 2.1.2.

The proposed project has the potential to impact protected trees, nesting birds and jurisdictional waters. Alignments utilizing existing pipes are not expected to have a significant impact to biological resources, especially if staging of equipment and crews is conducted within previously developed areas and roadways. Installation of new pipelines, and the pump station and water tank at Summitpointe Golf Course, would cause ground disturbance potentially in areas where sensitive biological resources may be present. These activities have the potential to have a significant impact or adverse effect on biological resources; however, impacts/effects would be reduced or eliminated if development is sited in roadways and previously disturbed or developed areas. Potential impacts/adverse effects to special status biological resources, as well as avoidance and mitigation measures for the proposed project are discussed in greater detail below.

Impact BIO-1 **Special Status Plants**

There is no suitable habitat for specials status plants in Segments 1, 2, 4 and 5 or their alternative alignments, therefore no impacts to special status plant species are expected to occur in these segments as a result of the proposed project.

Proposed project activities associated with Segment 3 and its alternatives have the potential to result in direct impacts/ adverse effects to two special status (but non-listed) plant species through direct removal, and/ or as a of result of vehicle activity. Therefore, the following avoidance, minimization, and mitigation measures are recommended for Segment 3 and its alternatives to reduce potential impacts to special status plants to less than significant levels.

- Prior to the commencement of any ground-disturbing activities, surveys for special status plants shall be conducted in suitable habitats within the proposed project impact area. The surveys shall be conducted in general accordance with CDFW (CDFG, 2009), California Native Plant Society (CNPS, 2001), and U.S. Fish and Wildlife Service (USFWS, 2000) protocols for special status plant surveys. The survey area shall be traversed on foot by walking meandering transects to ensure thorough coverage of the area; surveys shall be timed to ensure adequate coverage of the spring and summer bloom periods; and the surveys shall be floristic in nature (meaning all plant species observed shall be identified to a sufficient level to determine rarity). If no special status plant species are observed during the focused surveys, no further action shall be required.
    - If special status plants are observed, all special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and their location shall be recorded with a Global Positioning System (GPS). Field data shall be recorded on the population size, cover, and associated species. The results shall be evaluated in the context of known local populations (the definition of local

population should be determined by a qualified botanist on a species by species basis) for any non-listed special status plant species to determine the extent of impacts to the local population. If impacts are determined to affect less than 10% of the local population of any non-listed special status plant species, no further measures are necessary. If impacts are determined to affect more than 10% of the local population of any non-listed special status plant species the following measure should be implemented.

- If feasible, measures shall be implemented to avoid special status plants within the limits of disturbance. If special status plants cannot be avoided, a qualified biologist shall prepare a mitigation and monitoring plan in consultation with wildlife agencies. If a state-listed plant species would be impacted, the restoration plan shall be submitted to CDFW for review and approval. If a federally listed plant species would be impacted, the restoration plan shall be submitted to USFWS for review and approval. The Special Status Plant Mitigation and Monitoring Plan (Plan) shall be developed by a qualified biologist. The Plan shall include at a minimum the following: the species and number of individuals to be relocated; a map depicting the relocation planting area; replanting site preparation methods; irrigation and weed control methods; schedule of replanting and monitoring activities; success criteria; reporting requirements; and a list of suitable contingency measures in the event of relocation failure.

Impact BIO-2 **Special Status Animals**

There is no suitable habitat for specials status animals in segments 1, 2, 4 and 5 or their alternative alignments (excluding birds which is discussed further under Impact BIO-3 Nesting Birds), therefore no impacts to special status wildlife is expected to occur in these segments as a result of the proposed project.

Segment 3 and its alternative alignments, as well as the proposed pump station and water tank at Summitpointe Golf Course have the potential to result in direct impacts to special status animals which as discussed in further detail below. Therefore following avoidance, minimization, and mitigation measures are recommended for these areas to reduce potential impacts/adverse effects to special status animals.

California Red-legged Frog (CRLF), Alameda Whipsnake, and California Tiger Salamander (CTS) - Recommended Measures

Proposed project activities associated with Segment 3 and its alternative alignments have the potential to impact federal and/or state listed species such as California Red-legged Frog (CRLF), Alameda Whipsnake, and California Tiger Salamander (CTS). Therefore, the following measures are recommended to avoid take of these species and reduce impacts to less than significant levels. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which

includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS advise project applicants that they could be elevated to listed status at any time. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et seq.) regulates take of State listed as threatened or endangered species. Take authorized under the CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The California Department of Fish and Wildlife (CDFW) prohibits take for species designated as Fully Protected.

- If feasible, initial ground disturbing activities adjacent to suitable habitat for these species should be conducted between May 1 and October 31 during dry weather conditions to minimize the potential for encountering CRLF, Alameda whipsnake, and CTS. Work should be restricted to daylight hours.
- Prior to start of project activities, a qualified biologist shall prepare and administer a Worker Environmental Awareness Program (WEAP) training to familiarize all personnel conducting project activities with the identification and life-history of CRLF, Alameda whipsnake, and CTS, and other special status species that have the potential to occur in the project area.
- A focused habitat assessment to determine the potential for CRLF, Alameda whipsnake, and CTS shall be conducted by a qualified biologist for all areas within 150 feet of the project alignment that may contain suitable habitat for the species (Segment 3 and its alternatives only). If suitable habitat is present and would be directly impacted by the project, protocol-level surveys to determine presence or absence of CRLF, Alameda whipsnake, and CTS are recommended. According to the CTS survey protocol (USFWS, 2003), a drift fence study conducted during each of two fall/winter rainy seasons with aquatic sampling in spring between the two fall/winter is the primary method used to study CTS in upland habitats.
- A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that are suitable habitat for Alameda whipsnake, suitable upland habitat for CRLF or CTS or within 150 feet of potential CRLF or CTS aquatic habitat.
    - If CRLF, Alameda whipsnake, and CTS are found to be present, a federal permit for incidental take would be required from the USFWS under either Section 7 or Section 10 of the FESA. Take can be authorized under Section 7 if a federal agency is involved in the project (e.g., permitting or funding) and agrees to be the lead agency requesting Section 7 consultation. This consultation process takes 135 days from the official request that includes the preparation of a Biological Assessment (BA) of the predicted impacts of the project on the species with measures to avoid, minimize, and mitigate for such impacts. The result is a Biological Opinion (BO) issued by the USFWS that includes specified life stage(s) and allowable number of individuals for each life stage to which take can occur in addition to terms and conditions to minimize and offset such take. Take may or may not be issued for operation of the project. Section 10 is used to authorize incidental take when no federal permit or funding is involved. This process can take years to complete and involves preparation of a Habitat Conservation Plan (HCP) typically including protection of the covered species at a specific location

in perpetuity. If no federal nexus can be invoked, the only option is to obtain a Section 10 permit through preparation and approval of a HCP.
  - The CDFW may also require an incidental take permit (ITP) pursuant to Section 2081 of the California Fish and Game Code if CTS or Alameda Whipsnake presence is assumed or they are found to be onsite. The issuance of an ITP is dependent upon the following: 1) the authorized take is incidental to an otherwise lawful activity; 2) the impacts of the authorized take are minimized and fully mitigated; 3) the measures required to minimize and fully mitigate the impacts of the authorized take are roughly proportional in extent to the impact of the taking on the species, maintain the applicant's objectives to the greatest extent possible, and are capable of successful implementation; 4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures; and 5) issuance of the permit will not jeopardize the continued existence of a State-listed species.
  - An alternative, depending on the planned components and activities of the project would be to obtain a "may affect but is not likely to adversely affect" concurrence from USFWS and/or consistency determination from CDFW through informal consultation.
- To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force should be followed at all times.

Western Burrowing Owl - Recommended Measures

- Prior to start of project activities within suitable habitat for western burrowing owl, a qualified biologist shall conduct a WEAP training to familiarize all personnel conducting project activities with the identification and life-history of burrowing owls.
- Prior to the commencement of construction activities within suitable habitat for western burrowing owl, a qualified biologist should conduct protocol surveys in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation within all areas of the project area that contain suitable habitat for the species. The survey methodology shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing owls. Copies of the survey results shall be submitted to CDFW and Santa Clara County.
- If burrowing owls are detected on-site, no ground-disturbing activities, such as vegetation clearance or grading, shall be permitted within a buffer of no fewer than 100 meters (330 feet) from an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the non-breeding (winter) season (September 1 to January 31), ground-disturbing work can proceed as long as the work occurs no closer than 50 meters (165 feet) from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.
- If burrow avoidance is infeasible during the non-breeding season or during the breeding season (February 1 through August 31), where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, a qualified biologist shall implement a passive relocation program in accordance with Appendix E1 (i.e., Example Components for Burrowing Owl

Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation.

- If passive relocation is required, a qualified biologist shall prepare a Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan in accordance with CDFWs 2012 Staff Report on Burrowing Owl Mitigation and for review by CDFW prior to passive relocation activities. The Burrowing Owl Exclusion and Mitigation Plan shall include all necessary measures to minimize impacts to burrowing owls during passive relocation, including all necessary monitoring of owls and burrows during passive relocation efforts. The Mitigation Land Management Plan shall include a requirement for the permanent conservation of off-site Burrowing Owl Passive Relocation Compensatory Mitigation.
- If passive relocation is required, the project proponent shall implement the Mitigation Land Management Plan and permanently conserve off-site habitat suitable for burrowing owl at a ratio of 15 acres per passively relocated burrowing owl pair, not to exceed the size of the final project footprint. Land identified to mitigate for passive relocation of burrowing owl may be combined with other off-site mitigation requirements of the project if the compensatory habitat is deemed suitable to support the species. The Passive Relocation Compensatory Mitigation plan shall be approved by CDFW. If the project is located within the service area of a CDFW-approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits in lieu of placing off-site habitat into a conservation easement, if acceptable to the CDFW.
- The project proponent shall mitigate for the loss of acres of burrowing owl foraging habitat by providing habitat management lands at a ratio of ten acres per burrow identified within the final project footprint. These lands must be on suitable habitat for burrowing owl within the Santa Clara County HCP prior to completion of the project. Land identified to mitigate for foraging habitat may be combined with other offsite mitigation requirements of the proposed project if the compensatory habitat is deemed suitable. A Foraging Habitat Compensatory Mitigation Plan describing the proposed mitigation, including suitability for meeting the objectives of the mitigation, and methods for preserving the mitigation values of the habitat shall be provided to the City of Milpitas and CDFW for approval.

Foothill Yellow-legged Frog (FYLF) - Recommended Measures

No suitable habitat for this species occurs in Segments 1, 2, 4 and 5 or their alternative alignments. Only project activities associated with Segment 3 and its alternatives have the potential to result in direct impacts to FYLF. The following measures are recommended for Segment 3 and its alternatives only to reduce impacts to FYLF to less than significant levels.

- Prior to start of project activities, a qualified biologist shall conduct a WEAP training to familiarize all personnel conducting project activities with the identification and life-history of FYLF.
- A focused habitat assessment to determine the potential for FYLF shall be conducted by a qualified biologist for all areas within 150 feet of the project alignment that may contain suitable habitat for the species (Segment 3 and its alternatives only).
- If the focused habitat assessment finds no suitable aquatic habitat for this species occurs within 150 feet of the proposed project, no further action is necessary

- If suitable aquatic habitat is for this species is identified within 150 feet of the proposed project a qualified biologist shall conduct a survey within 48 hours of initial ground disturbing activities within FYLF habitat. The survey area should include all potential suitable habitat in the project area and suitable habitat located within a 100 feet of the project area.
    - If an FYLF is encountered, all activities within 100 feet of the species shall cease until the species leaves the site**.** If the species has because entrapped in the project area, it will be safely relocated by a qualified biologist 100 feet from the project area**.**
    - To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force should be followed at all times.
- A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that are suitable upland habitat for FYLF and within 150 feet of potential aquatic habitat.

Western Pond Turtle (WPT) - Recommended Measures
Only project activities associated with Segment 3 and its alternatives have the potential to result in direct impacts to WPT. The following measures are recommended for Segment 3 and its alternatives only to reduce impacts to WPT to less than significant levels.

- Prior to start of project activities, a qualified biologist should conduct a WEAP training to familiarize all personnel conducting project activities with the identification and life-history of WPT.
- A pre-construction survey for WPT shall be conducted within suitable habitat that will be impacted by the proposed project, plus a 50-foot buffer, no more than 7 days prior to the initiation of construction.
- A qualified biologist shall be present on site during activities within 150 feet of aquatic habitat.
- If WPT is found and these individuals are likely to be killed or injured by construction activities, construction activities within 100 feet of the animal shall cease until a qualified biologist can capture and relocate the animals from the project n. A qualified biologist(s) should relocate the individuals the shortest distance possible to a location that contains suitable habitat not likely to be affected by activities associated with the proposed project.

Roosting Pallid Bats - Recommended Measures

- Prior to start of project activities, a qualified biologist should conduct a WEAP training to familiarize all personnel conducting project activities with the identification and life-history of pallid bats.
- A qualified biologist shall conduct a pre-construction survey for roosting pallid bats. The survey shall be conducted within 50 feet of project activities within 15 days prior to any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities).

- If active maternity roosts or non-breeding bat hibernacula are found in trees scheduled to be removed, relocation or other measures shall be determined in consultation with the County and/or CDFW, as appropriate, and a qualified biologist.

General Wildlife - Recommended Measures
Implementation of these recommended measures would reduce potential impacts to special status animals to less than significant levels.

- Prior to start of project activities, a qualified biologist should conduct a WEAP training to familiarize all personnel conducting project activities with the identification and life-history of special status wildlife and plants.
- A qualified biologist should conduct a survey within 7 days of initial ground disturbing activities within suitable habitat for special status species. The survey area should include the project area and a 150 foot buffer.
- All work areas within 150 feet of suitable aquatic habitat should be flagged for monitoring during construction activity.
- All trash should be removed from the site daily and disposed of properly to avoid attracting potential predators to the site.
- No pets should be permitted on-site during project activities.
- All vehicles and equipment should be in good working condition and free of leaks. All leaks should be contained and cleaned up immediately to reduce the potential or soil/vegetation contamination.
- All refueling, maintenance, and staging of equipment and vehicles should occur at least 100 feet from riparian habitat or water bodies and in a location from where a spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water).
- The number of access routes, size of staging areas, and the total area of the activity should be limited to the minimum necessary to achieve the project goals.
- The biologist(s) should maintain sufficiently detailed records of any individual observed, captured, relocated, etc., including size, coloration, any distinguishing features and photographs (preferably digital) to assist him or her in determining whether translocated animals are returning to the project area.
- No herbicide should be used within 50 feet of water ways.

Impact BIO-3 **Nesting Birds**

All alignments of the proposed project have potential to result in direct impacts to nesting birds, including raptors such as white-tailed kite, passerine species such as tri-colored blackbird, and other species protected under the MBTA and/or CFGC. Birds nesting on or adjacent to the project area during construction activities may be killed or injured by crushing or tree/shrub removal (direct impact) or may abandon active nests as a result of construction activity and/or noise (indirect impact). The following avoidance, minimization, and mitigation measures are recommended to reduce potential impacts/adverse effects to nesting birds.

Recommended Measures

- Nesting bird surveys are not required for construction activities that occur between September 1 and January 31. If construction must occur within the bird breeding season

(February 1 through August 31), then no more than seven days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird and raptor pre-construction survey should be conducted by a qualified biologist within the disturbance footprint plus a 300-foot buffer, where feasible. If the project is phased, a subsequent pre-construction nesting bird and raptor survey may be required prior to each phase of construction within the project area.

- Pre-construction nesting bird and raptor surveys should be conducted during the time of day when birds are active and should be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors onsite and within the designated vicinity. A report of the nesting bird and raptor survey results, if applicable, should be submitted to the lead agency for review and approval prior to land use clearance for grading.
- If nests are found, their locations should be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for song birds, and up to 250 feet for raptors depending upon the species and the proposed work activity should be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests should be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No ground disturbance should occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed and all the young have fledged.

Implementation of these recommended measures would reduce potential impacts to nesting birds and raptors to less than significant levels.

Impact BIO-4 **Sensitive Vegetation Communities**

Vegetation communities with a ranking of G or S as 1 through 3 considered special-status. This includes the Valley oak stand along Segment 3d. Oak woodland communities with a ranking of S4 may not require analysis under CEQA, however the County of Santa Clara considers oak woodland to be a sensitive biological resource. In addition, riparian habitats typically fall under the jurisdiction of CDFW. Impacts can be considered significant and adverse effects may be substantial without mitigation.

Recommended Measures

- **Vegetation Mapping.** Following the selection of the preferred alignment, a qualified biologist shall conduct a survey to map all existing vegetation communities within 150 feet of the proposed alignment. Vegetation mapping will be done by visual observation and walking surveys. The extent of vegetation communities will be recorded using a GPS and vegetation classification will follow in *The Manual of California Vegetation*.

- **Minimize impacts to the Native Vegetation**. Habitat disturbance to mapped special status communities and woodlands shall be minimized to the extent feasible.

- **Riparian Habitats.** If impacts to riparian communities cannot be avoided then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the California Fish and Game Code will be required. Temporary impacts to riparian habitats should be mitigated at no less than a 1:1 ratio. More information regarding requirements under section 1600 of the California Fish and Game Code are discussed below in Impact BIO-5 Jurisdictional Waters.

- **Protected Tree Survey.** Following the selection of the preferred alignment, a tree survey shall be conducted by an International Society of Arboriculture (ISA) Certified Arborist/City Qualified Arborist for protected trees that occur in riparian habitats within 25 feet of the impact area. The tree survey should identify protected trees (defined below in Impact BIO-6 Protected trees), including protected oak trees and woodlands. During the survey, each tree having a caliper measure of 1 inch at 12 inches above grade shall be assigned a number and will be physically tagged in the field. The biologist shall document qualifying data for each oak tree on the site, including:
    - Location
    - Height
    - Diameter of dripline
    - Number and size of trunks
    - Health characteristics

- **Impacts to Valley Oak Woodlands**. Valley oak woodland was identified in Segments 3d. If impacts to Valley oak woodland cannot be avoided, the habitat should be mitigated as follows:

    - A tree removal plan and an arborist report (if requested) shall be submitted which identifies the species type, diameter, and amount of canopy of oak trees proposed for removal within the woodland.
        - <u>Planting Replacement Oak Trees:</u>
          Tree replacement can be dependent upon the amount of canopy of the removed trees, the number and size of trees to be removed, steepness of the slope on which trees will be removed, or the amount of room on a parcel in which trees can be planted. The objective of tree planting shall be to restore former oak woodland at a ratio of 2:1 or 3:1 based on the condition of the oak woodland habitat. 2:1 restoration is recommended for medium quality oak woodland habitat, and 3:1 restoration is recommended for high quality oak woodland habitat.
            - The following minimum standard mitigation ratios shall be used unless otherwise accepted by the Santa Clara County Planning Office based on site specific characteristics:
                - For the removal of one small tree (5″-18″):
                - (2) 24″ boxed trees or (3) 15 gallon trees
                - For the removal of 1 medium tree (18-24″):
                - (3) 24″ boxed trees or (4) 15 gallon trees
                - For the removal of a tree larger than 24″:
                - (4) 24″ boxed trees or (5) 15 gallon trees
            - All tree replacement shall be with in-kind species.
            - A Tree Planting and Maintenance Plan shall be submitted showing species, size, spacing and location of plantings and the location and species of established vegetation. The plan may be required to be prepared by a Licensed Landscape Architect will be subject to approval by the Santa Clara County Planning Office.

- **Impacts to Other Oak Woodlands**. Segments 3a, 3b, and 3c are located within a Santa Clara County mapped oak woodland area (ICF, 2012). Per Santa Clara County thresholds, if project activities were to impact a half-acre or more of "other oak woodland", this would be considered a significant impact. Therefore, the following mitigation measures are options to reduce impacts to oak woodlands to less than significant levels if impacts are expected to exceed 0.5 acre:

    - If the proposed project is within the mapped oak woodland area, and proposes oak tree removal, a tree removal plan and an arborist report (if requested) shall be submitted which identifies the species type, diameter, and amount of canopy of oak trees proposed for removal within the woodland.

    - <u>Planting Replacement Oak Trees</u>
      Planting of oaks shall not fulfill more than 50 percent of the mitigation requirement for the proposed project. Tree replacement can be dependent upon the amount of canopy of the removed trees, the number and size of trees to be removed, steepness of the slope on which trees will be removed, or the amount of room on a parcel in which trees can be planted. The objective of tree planting shall be to restore former oak woodland at a ratio of 2:1 or 3:1 based on the condition of the oak woodland habitat. 2:1 restoration is recommended for medium quality oak woodland habitat, and 3:1 restoration is recommended for high quality oak woodland habitat.
    - The following minimum standard mitigation ratios shall be used unless other ratios are approved by the Lead Agencies' Planning Office(s) based on site specific characteristics:
        - For the removal of one small tree (5"-18"):
        - (2) 24" boxed trees or (3) 15 gallon trees
        - For the removal of 1 medium tree (18-24"):
        - (3) 24" boxed trees or (4) 15 gallon trees
        - For the removal of a tree larger than 24":
        - (4) 24" boxed trees or (5) 15 gallon trees

    - All tree replacement shall be with in-kind species.
    - A Tree Planting and Maintenance Plan shall be submitted showing species, size, spacing and location of plantings and the location and species of established vegetation. The plan may be required to be prepared by a Licensed Landscape Architect will be subject to approval by the Santa Clara County Planning Office.

    - <u>Conservation Easement.</u>
      Protect existing native oak trees on or off the proposed project area from future development through a conservation easement or fee title dedication to the County or a land conservation group approved by the County. Oak woodland offered as mitigation must be configured in such a manner as to best preserve the integrity of the oak ecosystem and minimize the ratio of edge to area. Priority should be given to conserving oak habitat adjacent to existing woodlands under conservation easements, public lands or open space lands. As a general guide, the protection of existing oak woodlands through conservation easements should

mitigate for the loss of oaks at a ratio equal to 2:1 or 3:1 based on the condition of the oak woodland habitat. 2:1 conservation is recommended for medium quality oak woodland habitat, and 3:1 conservation is recommended for high quality oak woodland habitat. Land proposed as mitigation, when viewed with adjacent conservation land, should not result in conserved parcels of less than 1 acre.

- Other options.
  If the onsite preservation of oak woodlands and / or tree planting is not feasible, oak woodland mitigation may occur in the form of in lieu fees paid to an agency, acceptable to the Planning Office, which shall use the fees for the preservation, restoration, or creation of oak woodland habitat. There must be a direct nexus between the amount of fees paid and mitigation required in terms of oak tree replacement and oak woodland preservation.
  - In-lieu fees shall be paid to a natural resource agency or nonprofit organization (i.e. Open Space, Parks) for planting of oak trees to create oak woodland habitat located in Santa Clara County. The project proponent must obtain documentation from the local agency or organization confirming receipt of the payment, and that the funds will be used for planting of oak trees for preservation, restoration, or creation of oak woodland habitat at the required ratio

Impact BIO-5 **Jurisdictional Waters**

The proposed project has potential to result in direct impacts to jurisdictional waters and non-wetland waters. The following avoidance, minimization, and mitigation measures are recommended to reduce potential impacts/adverse effects to these features.

Recommended Measures

- To determine the presence and extent of federal and state waters that may fall under the jurisdiction of the CDFW, USACE, or RWQCB a formal jurisdictional delineation should be conducted for project activities that have the potential to impact jurisdictional waters. The delineation should be conducted in accordance with the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (United States Army Corps of Engineers, 2008). If jurisdictional areas are expected to be impacted, then the RWQCB will require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the California Fish and Game Code could also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act will likely be required.
- Temporary impacts to jurisdictional features should be compensated at a minimum 1:1 ratio and permanent impacts at a minimum 2:1 ratio to reduce impacts to less than significant under CEQA. Mitigation should be based on the type of impact and the type of habitat impacted. Final ratios negotiated through the agency permitting process may differ, but mitigation must meet the minimum ratios outlined above.

- Best Management Practices, such as silt fencing, that will protect jurisdictional areas from erosion and sedimentation shall be implemented during project construction activities.

Impact BIO-6 **Protected Trees**

All alignments within the proposed project have the potential to impact trees considered protected by the City of Milpitas or the County of Santa Clara. Protected trees under these municipalities are described in Section 4.5.1 and 4.5.2 of this report. Accordance with the Tree Maintenance and Protection Ordinance of the City of Milpitas (Ord. 201.5 (1) (part) for activities that may impact protected trees within the City of Milpitas are expected to reduce impacts to special status trees to less than significant. Accordance with the with the Santa Clara County's Municipal Code for *Tree Preservation and Removal (Division C-16)*, for activities that may impact protected trees in unincorporated areas of Santa Clara County are expected to reduce impacts/adverse effects to special status trees to less than significant. Note that Impact BIO-6 addresses potential impacts to trees outside of oak woodlands discussed in Impact BIO-4 above.

Recommended Measures

- Following the selection of the preferred alignment, a tree survey shall be conducted by an International Society of Arboriculture (ISA) Certified Arborist/City Qualified Arborist for protected trees that occur within 25 feet of the impact area. The tree survey should identify protected trees (defined below in E6-Protected trees), including protected oak trees and woodlands. During the survey, each tree having a caliper measure of 1 inch at 12 inches above grade shall be assigned a number and will be physically tagged in the field.
- The Tree Maintenance and Protection Ordinance of the City of Milpitas (Ord. 201.5 (1) (part), 10/16/07) regulates removing and pruning trees in or adjacent to streets and within easements, in rights-of-way and other public places within the City of Milpitas and on private property. A permit is required from the City Public Works Department for the removal or pruning of a protected tree. A permit is not required for removing less than 10 percent of the tree canopy, sucker growth, watersprouts, and low hanging branches less than 4" in diameter causing obstructions.
    - Compensation for removing protected trees consists of the following:
        - Reimbursement to the City for the full costs of time and materials to prune, remove and/or replace trees within the public right-of-way or tree planting easements;
        - Reimbursement to the City for the value of the removed or damaged tree as determined by an arborist certified by the International Society of Arboriculture utilizing the current edition of the "*Guide for Plant Appraisal, International Society of Arboriculture*"; or
        - A combination of the above terms as determined by the Public Works Director.
- In accordance with Santa Clara County's Municipal Code for *Tree Preservation and Removal (Division C-16)*, a permit is required from the County Planning Office or the Department of Roads and Airports for the removal or adverse pruning of protected trees. Removal of any tree, regardless of size, located within a County road right-of-way shall require an encroachment permit from the Department of Roads and Airports not

less than 60 days prior to planned removal. Heritage trees include any tree which, because of its history, girth, height, species, or other unique quality, has been recommended for inclusion on the heritage resource inventory by the Historical Heritage Commission and found by the Board of Supervisors to have special significance to the community, and which has therefore been included in the heritage resource inventory adopted by resolution of the Board of Supervisors. The removal of a heritage tree requires that the Planning Office submit the permit to County Historical Heritage Commission (HHC).

- A written evaluation of the status of the tree may be required at the expense of the applicant and the Commission will conduct a hearing to approve or deny the permit application.
    - A tree survey and replanting plan that describes tree replacement details is required as part of the permit application. Replacement trees should be in-kind if the removed tree is a native species, or an appropriate species as determined by the Planning Office.
    - Replacement trees should be at least a five-gallon size. The ratio of trees removed to trees planted shall be determined by the Planning Department.
    - An erosion control plan may also be required where deemed appropriate by the County.

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6 LIMITATIONS, ASSUMPTIONS, AND USER RELIANCE

This BRA has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed; namely, only a reconnaissance survey was conducted. Biological surveys for the presence or absence of certain taxa have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind3, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Framework

Appendix A
Regulatory Framework

The following is a brief summary of the regulatory context under which biological resources are managed at the federal and state levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility and regulatory guiding documents for protection of biological resources within the project area include:

- *U.S. Army Corps of Engineers (wetlands and other waters of the United States);*
- *U.S. Fish and Wildlife Service (federally listed species and migratory birds);*
- *California Department Fish and Wildlife (formerly California Department of Fish and Game) (riparian areas and other waters of the State, state-listed species);*
- *Regional Water Quality Control Board (waters of the State).*

These agencies are responsible for ensuring the implementation of regulations under the following acts and laws:

- *California Environmental Quality Act (CEQA);*
- *Federal Endangered Species Act (FESA);*
- *California Endangered Species Act (CESA);*
- *Federal Clean Water Act (CWA);*
- *California Fish and Game Code (CFGC);*
- *Migratory Bird Treaty Act (MBTA);*
- *The Bald and Golden Eagle Protection Act;* and
- *Porter-Cologne Water Quality Control Act.*

Federal Regulations

Federal Endangered Species Act. The Endangered Species Act (ESA) provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing ESA are the U.S. Fish and Wildlife Service (USFWS) and the U.S. National Oceanic and Atmospheric Administration Fisheries Service or National Marine Fisheries Service (NMFS). The USFWS maintains a worldwide list of endangered species. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.

The law requires federal agencies, in consultation with the USFWS and/or NMFS, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife. Likewise, import, export, interstate, and foreign commerce of listed species are all generally prohibited.

Clean Water Act and U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other “waters of the

United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving the creation or enhancement of similar habitats.

State Water Resources Control Board. The CWA established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards, granting these agencies the responsibility for controlling water quality in California. This act created a water quality policy, enforced standards for water quality, and regulated the discharge of pollutants from point and non-point sources. The State Control Board was additionally authorized to establish water quality guidelines for long range resource planning concerning ground and surface water management and the use of recycled water. This act has become the cornerstone of water protection regulations in California and was used as the basis of several sections of the Federal Water Pollution Control Act Amendments of 1972.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.) provides for implementation of the federal CWA by SWRCB, including issuance of Section 401 Certifications and Section 402 NPDES Permits. Issuance of a Section 401 Certification requires documenting compliance with state water quality standards, including watershed plans, designated beneficial uses, and the total maximum daily load (TMDL) program. The Porter-Cologne Water Quality Control Act requires the regulation of all pollutant discharges, including wastes in Project runoff that could affect the quality of the state's water. Any entity proposing to discharge a waste must file a Report of Waste Discharge with the appropriate RWQCB or SWRCB. The RWQCBs are responsible for implementing CWA Sections 401, 402, and 303(d). The act also provides for the development and periodic reviews of basin plans that designate beneficial uses of California's major rivers and groundwater basins and establish water quality objectives for those waters. The Act regulates discharges that could affect the quality of waters of the state and requires a waste discharge requirements (WDR) form be obtained for discharges, including fill of wetlands that are not otherwise authorized by Section 404 or Section 402 of the federal CWA.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. According to the Act, a person, association, partnership or corporation which violates the Act or its regulations is guilty of a misdemeanor and subject to a fine of up to $500, jail up to six months, or both. Anyone who knowingly takes a migratory bird and intends

to, offers to, or actually sells or barters the bird is guilty of a felony, with fines up to $2,000, jail up to two years, or both. (Permissible fines are increased significantly by the Sentencing Reform Act of 1984, as amended in 1987, which is summarized separately in this Handbook.). The Act should not be construed to prevent states and territories from making or enforcing laws or regulations not inconsistent with the Act or which give further protection to migratory birds, nests and eggs, if such laws and regulations do not extend open seasons.

The Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." As defined by the act "Disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment. A violation of the Act can result in a fine of $100,000 ($200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony.

U.S. Fish and Wildlife Service and National Marine Fisheries Service. The USFWS implements the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and NMFS share responsibility for implementing the FESA (16 USC § 153 *et seq.)*. The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species.

"Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

State Regulations

California Endangered Species Act. The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Wildlife will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats. CESA allows for take incidental to otherwise lawful activity. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species.

California Department of Fish and Wildlife. The California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game) derives its authority from the Fish and Game Code (Code) of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.)* prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under Fish and Game Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 *et seq*.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and the local Central Coast Regional Water Quality Control Board (RWQCB) have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

Appendix B

Regionally Occurring Special Status Species

Appendix B - Regionally Occurring Special Status Species

Table B1. Special Status Plants

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Plants					
Astragalus tener var. *tener* alkali milk-vetch Fabaceae	--/--/1B.2	Alameda, Contra Costa*, Merced, Monterey*, Napa, San Benito*, Santa Clara*, San Francisco*, San Joaquin*, Solano, Sonoma*, Stanislaus*, and Yolo counties.	Occurs in alkaline regions within playas, adobe clay valley and foothill grassland, and vernal pools. Elevations: 1-60 meters.	March-June	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.
Atriplex depressa brittlescale Chenopodiaceae	--/--/1B.2	Alameda, Contra Costa, Colusa, Fresno, Glenn, Kern, Merced, Solano, Stanislaus, Tulare, and Yolo counties.	Alkaline flats and scalds, and sandy soils in chenopod scrub, valley and foothill grassland, and meadows. Elevations: 1-320 meters.	April-October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.
Atriplex joaquinana *San Joaquin spearscale* *Chenopodiaceae*	*--/--/1B.2*	*Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara*, San Joaquin*, San Luis Obispo?, Solano, Tulare?*, and Yolo counties.*	*Occurs on alkaline substrates within chenopod scrub, meadows and seeps, playas, and valley and foothill grassland. Elevations: 1-835 meters.*	*April - October*	***No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.*
Atriplex minuscula lesser saltscale Chenopodiaceae	--/--/1B.1	Alameda, Butte, Fresno, Kern, Madera, Merced, Stanislaus*, and Tulare counties.	Alkaline, sandy soils in chenopod scrub, playas, and valley and foothill grassland. Elevations: 5-200 meters.	May - October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Campanula exigua chaparral harebell Campanulaceae	--/--/1B.2	Alameda, Contra Costa, Merced, San Benito, Santa Clara, and Stanislaus counties.	Chaparral in rocky, usually serpentinite substrates. Elevations: 275-1250 meters.	May - June	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support serpentinite substrates.
Centromadia parryi ssp. *congdonii* Congdon's tarplant Asteraceae	--/--/1B.1	Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz*, San Luis Obispo, San Mateo, and Solano* counties.	Occurs on alkaline substrates within valley and foothill grassland. Elevations: 0-230 meters.	May-November	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak Orobanchaceae	--/--/1B.2	Alameda*, Humboldt, Marin, Santa Clara*, San Francisco, San Mateo*, and Sonoma counties.	Coastal salt marsh. Elevations: 0-10 meters.	June - October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not contain coastal salt marsh habitat.
Chorizanthe robusta var. *robusta* robust spineflower Polygonaceae	FE/--/1B.1	Alameda*, Monterey, Marin?, Santa Clara*, Santa Cruz, San Francisco, and San Mateo*, counties.	Cismontane woodland (openings), coastal dunes and coastal scrub. Sandy terraces and bluffs or in loose sand or gravel. Elevations: 3-120 meters.	April-September	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support sandy substrates.
Clarkia concinna ssp. *automixa* Santa Clara red ribbons	--/--/4.3, S3	Northern Coast Ranges from Santa Clara County to Humboldt County and the Sierra foothills.	Chaparral and cismontane woodland on slopes and near drainages at elevations of 90 to 1,500 meters.	April - September	**Yes.** Oak woodlands in the project site are potentially suitable habitat for this species.
Eryngium aristulatum var. *hooveri* Hoover's button-celery Apiaceae	--/--/1B.1	Alameda, San Benito, Santa Clara*?, San Diego, and San Luis Obispo counties.	Vernal pools. Elevations: 3-45 meters.	June - August	**No.** Suitable habitat for this species does not occur within the project site. The project site does not contain vernal pool habitat.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Fritillaria liliacea fragrant fritillary Liliaceae	--/--/1B.2	Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties.	Often occurs on serpentine substrates within cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland. Elevations: 3-410 meters.	February-April	**Yes.** Oak woodlands and grasslands in the project site are potentially suitable habitat for this species.
Lasthenia conjugens Contra Costa goldfields Asteraceae	FE/--/1B.1	Alameda, Contra Costa, Mendocino*, Monterey, Marin, Napa, San Barbara*, Santa Clara*, San Francisco, San Mateo, Solano, and Sonoma counties.	In vernal pools, swales, and low depressions, in open grassy areas within valley and foothill grassland and cismontane woodland, and alkali playas. Extirpated from most of its range. 1-445 meters. Elevations: 0-470 meters.	March-June	**No.** Suitable habitat for this species does not occur within the project site. The project site does not contain vernal pool habitat.
Malacothamnus arcuatus arcuate bush-mallow Malvaceae	--/--/1B.2	Santa Clara, Santa Cruz, and San Mateo counties.	Chaparral and cismontane woodland. Elevations: 15-355 meters.	April - September	**Yes.** Oak woodlands in the project site are potentially suitable habitat for this species.
Malacothamnus hallii Hall's bush-mallow Malvaceae	--/--/1B.2	Contra Costa, Lake, Mendocino, Merced, Santa Clara, San Mateo, and Stanislaus counties.	Chaparral and coastal scrub. Elevations: 10-760 meters.	May - October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not contain chaparral or coastal scrub habitats.
Navarretia prostrata prostrate vernal pool navarretia Polemoniaceae	--/--/1B.1	Alameda, Fresno, Los Angles, Merced, Monterey, Orange, Riverside, San Bernardino*?, San Benito, Santa Clara, San Diego, and San Luis Obispo counties.	Alkaline soils in grassland or in vernal pools within coastal scrub and valley and foothill grassland habitats. Elevations: 3 - 1210 meters.	April - July	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Plagiobothrys glaber hairless popcornflower Boraginaceae	--/--/1A	San Felipe*, Hollister*,Los Gatos*, San Jose West*, San Jose East*, Altamont*, Dublin, Hayward, Newark*, and San Rafael* counties.	Coastal salt marshes and alkaline meadows. Elevations 5-180 meters.	March - May	**No.** Last confirmed sighting in 1954. Possibly relocated near Antioch; identification uncertain. Suitable habitat for this species does not occur within the project site.
Sidalcea malachroides mapleleaf checkerbloom	--/--/4.2, S3	Del Norte, Humboldt, Mendicino, Monterey, Santa Clara, Santa Cruz, and Sonoma counties.	In clearings in broadleaved upland forest, coastal prairie, coastal scrub, and north coast coniferous forest near the coast at elevations from 0 to 730 meters; often in disturbed areas.	March-August	**No.** Suitable habitat for this species does not occur within the project site. The project site lacks upland and coniferous forests, coastal prairie, and coastal scrub habitats.
Streptanthus albidus ssp. *peramoenus* most beautiful jewel-flower Brassicaceae	--/--/1B.2	Alameda, Contra Costa, Fresno, Monterey Santa Clara, and San Luis Obispo counties.	Chaparral, valley and foothill grassland, and cismontane woodland on ridges and slopes in serpentine outcrops. Elevations: 95-1000 meters.	March-October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support serpentine substrates.
Suaeda californica California seablite	FE/--/1B.1	Alameda*, Contra Costa*, Santa Clara*, San Francisco*, and San Luis Obispo counties.	Coastal salt marsh. Elevations: 0-15 meters.	July-October	**No.** Suitable habitat for this species does not occur within the project site. The project site does not contain coastal salt marsh habitat.
Trifolium hydrophilum saline clover Fabaceae	--/--/1B.2	Alameda, Contra Costa, Colusa?, Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Solano, Sonoma, and Yolo counties.	Mesic, alkaline areas in vernal pools, seasonal wetlands, and marshes within valley and foothill grassland. Elevations: 0-300 meters.	April-June	**No.** Suitable habitat for this species does not occur within the project site. The project site does not support alkaline substrates.

Table B2. Special Status Wildlife

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Invertebrates					
Bombus crotchcii Crotch bumble bee	--/--, S1S2	Coastal California east to Sierra-Cascade crest and south into Mexico	Grassland and scrub habitats; food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*	Spring through Summer	**Yes.** Suitable habitat for this species' food plant genera occurs in grassland on the project site.
Lepidurus packardi vernal pool tadpole shrimp	FE/--/--	Sacramento Valley	Inhabits vernal pools, seasonal wetlands, and swales.	Winter to Spring	**No.** Suitable habitat for this species does not occur within the project site (i.e., no vernal pools occur onsite).
Fish					
Oncorhynchus mykiss irideus steelhead - central California coast DPS	FT/--/--	Central coastal California	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	Year Round	**No.** Suitable habitat for this species does not occur within the project site (i.e., no streams occur onsite).
Amphibians					
Ambystoma californiense California tiger salamander Central CA DPS	FT/CT, CSSC/--	Central Valley and surrounding Sierra Nevada foothills and Coast Ranges, occurs from northern Yolo County, near the town of Dunnigan, southward to northwestern Kern County and northern Tulare and Kings counties. Along the coast the range includes southern San Mateo County south to San Luis Obispo County.	Breeding and aestivation habitat includes vernal pools, seasonal and perennial ponds, and surrounding upland areas in grassland and oak savannah.	Adults: wet season (approximately September-April with at least 70% average rainfall) Aquatic Larvae: March-May	**Yes.** Suitable breeding habitat for this species does not occur in the project site, but is documented within 1.2 miles of the project site. The project site could provide suitable burrows for CTS and CTS could be dispersing throughout the project site during migration periods.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Rana boylii foothill yellow-legged frog	--/CSSC/--	Occurs in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles Co., in most of northern California west of the Cascade crest, and along the western flank of the Sierra south to Kern Co. Isolated population also known to occur in San Joaquin Co. in the Central Valley in Los Angeles County in the mountains.	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, riparian forest, and riparian woodland. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	Year Round	**Yes.** Suitable breeding and upland habitat for this species potentially occurs in the project site. Small rodent burrows present tin the project site could provide summer refugia and grasslands could provide dispersal habitat. There is a non-breeding record of FYLF within the project site.
Rana draytonii California red-legged frog	FT/CSSC/--	Found primarily in coastal drainages of central California, from Marin County, south to San Diego County. Also found inland as far north as Shasta County south, west of the crest of the Sierra Nevada in a few isolated locations, south to eastern Tulare County. Current range does not include the Central Valley.	Found in permanent and temporary pools of deep water in streams, marshes, and ponds with dense grassy, shrubby, or emergent vegetation and sometimes in stock ponds without emergent vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to upland aestivation habitat.	November-June	**Yes.** Suitable breeding and upland habitat for this species potentially occurs in the project site. Small rodent burrows present tin the project site could provide summer refugia and grasslands could provide dispersal habitat. There is a non-breeding record of CRLF within the project site.
Reptiles					
Emys marmorata western pond turtle	--/CSSC/--	Found along the entire western part of California, including the coast ranges and the central valley, west of the crest of Cascades and Sierra Nevadas.	Occurs in ponds, marshes, rivers, streams, and irrigation canals with moderate amounts of riparian and emergent vegetation. Requires open sunny sites for basking and gently sloped open upland habitat for egg laying.	March-October	**Yes.** Potentially suitable aquatic and breeding habitat for this species occurs in the project site.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Masticophis lateralis euryxanthus Alameda whipsnake	FT/ST/--	Inner Coast Range in western and central Contra Costa, Alameda, San Joaquin, and Santa Clara Counties (five isolated populations).	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasslands. They shelter in rocks, outcrops, or small mammal burrows.	Year round	**Yes.** Potentially suitable habitat for this species occurs in the project site in chaparral, riparian woodland, and oak woodlands, and grasslands.
Birds					
Agelaius tricolor tricolored blackbird	--/CE/--	Breeds primarily in the Central Valley and a few other locations west of the Cascades and Sierra Nevadas.	Requires riparian habitat, ponds, and other wetland features with emergent vegetation such as cattails or blackberry for nesting. Forages in open fields, grasslands, and agricultural croplands.	Year Round	**No.** Potentially suitable nesting habitat for this species does not occur in the project site.
Aquila chrysaetos golden eagle	--/ CFP/--	Resident and migrant in California. Breeds throughout California, except the Central Valley.	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Year Round	**Yes.** Potentially suitable foraging habitat occurs adjacent to the project site.
Ardea herodias great blue heron	--/--, S4	Resident throughout most of California except at high elevation montane areas.	Shallow, open water in estuaries, and fresh and saline emergent wetlands; uses salt ponds in summer months. Perches and roosts in tall secluded trees. Usually nests in colonies in secluded large snags or live trees.	Year Round	**No.** Potentially suitable foraging and breeding habitat is not present within the project site.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Athene cunicularia burrowing owl	--/CSSC/--	Occurs throughout the Central Valley, the Modoc Plateau and northeastern California, and the southeastern portions of the State.	Occurs in open dry grasslands and desert habitats. Also occurs in open areas within pinyon-juniper shrublands.	Year Round	**Yes.** Potentially suitable habitat for this species occurs in the project site. Ground squirrels and burrows were observed in the project site. Fairly open non-native grasslands occur in the project site and adjacent to the project site.
Accipiter striatus Sharp-shinned hawk	--/--/, S4/WL	Winters throughout most of California except at high elevations of Sierra Nevada; year-round resident and breeder in mid-elevation habitats.	Cismontane woodland, lower montane coniferous forest, and riparian forest/woodland; prefers riparian areas. Wooded, north-facing slopes with plucking perches are critical requirements; nests within 275 feet of water in dense, small-tree conifer stands.	Winter (but potential for year round occurrence in project vicinity).	**Yes.** Limited suitable foraging habitat for this species is present on the project site. Not expected to breed on-site due to lack of specific breeding habitat requirements.
Buteo swainsoni Swainson's hawk	--/ CT/--	Breeds primarily in the Central Valley and Great Basin, as well as Shasta Valley, the Owens Valley, and the Mohave Desert.	Great Basin grassland, riparian forest, riparian woodland, and valley & foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Year Round	**No.** This area is generally outside the breeding range of this species. There is only one CNDDB record within five miles of the project site. It is from 1889 and is possibly extirpated.
Charadrius alexandrinus nivosus western snowy plover	FT/CSSC/--	Breed along the coast of California, with larger number of breeding birds occurring from south San Francisco Bay to southern Baja California.	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Year Round	**No.** Suitable habitat for this species does not occur within the project site.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Circus cyaneus northern harrier	--/CSSC/--	Occurs in California in coastal areas, Central Valley, northeastern California, and Sierra Nevada region up to 3,600 feet.	Open areas, particularly in grasslands, wet meadows and marshes; requires larger areas for foraging. Nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation.	Year Round	**Present.** This species was observed in a tree in the project site at the Sandy Wool Lake at the Ed Levin County Park. Potentially suitable nesting habitat and foraging habitat for this species occurs in the project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/CE/--	In California, primarily breeds in the upper Sacramento River from Red Bluff to Colusa, and at the South Fork Kern River.	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Needs large riparian blocks for nesting. Nests in riparian woodlands and forests in willow (*Salix* spp.), often mixed with cottonwoods (*Populus* spp.), w/ lower story of blackberry (*Rubus* spp.), nettles (*Urtica* sp.), or wild grape (*Vitus californica*).	Year Round	**No.** Suitable habitat for this species does not occur within the project site.
Elanus leucurus white-tailed kite	--/CFP/--	Occurs throughout most of California's coastal and valley regions excluding the Cascades, Sierra Nevadas, Mojave Desert, and Peninsular Ranges.	Grasslands, meadows, marshes, dry farmed agricultural fields, savannahs and relatively open oak woodlands, and other relatively open lowland scrublands. Dense-topped trees for nesting and perching.	Year Round	**Present.** This species was observed foraging in grasslands in the project site adjacent to the Summitpointe Golf Club. Potentially suitable nesting habitat for this species occurs in the project site. Large mature trees may provide suitable nesting sites. Non-native grasslands provide potential foraging habitat.

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Falco peregrinus anatum American peregrine falcon	FD/CD, CFP/--	Breeding range in California includes the Channel Islands, the coast of southern and central California, inland north coastal mountains, the Klamath Mountains and Cascade Range, and the Sierra Nevada.	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Year Round	**No.** Suitable breeding habitat for this species does not occur within the project site.
Geothlypis trichas sinuosa saltmarsh common yellowthroat	--/CSSC/--	Resident of the San Francisco Bay region.	Freshwater marshes and salt marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule (*Schoenoplectus* spp.) patches, willows (*Salix* spp.) for nesting.	Year Round	**No.** Suitable breeding habitat for this species does not occur within the project site.
Lanius ludovicianus loggerhead shrike	--/CSSC/--	Breeds throughout much of California except northwestern California and the high Sierras.	Occurs in broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, and scrub and washes. Nests in dense shrubs and prefers open grasslands for perching and hunting.	Year Round	**Yes.** Potentially suitable nesting habitat for this species occurs in the project site in shrubs in the grasslands in the project site. Grasslands in the project site also provide potential foraging habitat.
Melospiza melodia pusillula Alameda song sparrow	--/CSSC/--	Resident of the San Francisco Bay region.	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in gumplant (*Grindelia* sp.) shrubs (high enough to escape high tides) and in pickleweed (*Salicornia* sp.).	Year Round	**No.** Suitable habitat for this species does not occur within the project site.
Rallus longirostris obsoletus California clapper rail	FE/CE,CFP/--	Resident of the San Francisco Bay region.	Salt marshes and brackish marshes traversed by tidal sloughs. Associated with abundant growths of pickleweed (*Salicornia* spp.), but feeds away from cover on invertebrates from mud-bottomed sloughs.	Year Round	**No.** Suitable habitat for this species does not occur within the project site.
Mammals					

Scientific Name/ Common Name Family (Plants Only)	Status Federal/State/ CRPR- Other	Distribution	Habitat Requirements	Period of Identification	Rationale
Antrozous pallidus pallid bat	--/CSSC/--	Occurs throughout California except for the high Sierra range.	Typically inhabits deserts, grasslands, shrublands, woodlands and forests in arid to semi-arid areas. Most common in open, dry habitats with rocky areas for roosting. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Very sensitive to disturbance of roosting sites.	Year Round	**Yes.** Potentially suitable roosting habitat for this species occurs in trees in the project site. Non-native grasslands and chaparral in the project site potentially provide foraging habitat.
Corynorhinus townsendii Townsend's big-eared bat	--/C, CSSC/--	Throughout California.	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Year Round	**No.** Suitable roosting habitat for this species does not occur within the project site, but potential foraging sites are present in grasslands in the project site.
Dipodomys heermannii berkeleyensis Berkeley kangaroo rat	--/--, S1	Uncertain but historical occurrences reported from east San Francisco Bay hills and Mt. Diablo.	Hilltops with open grassland and open areas in chaparral and oak or pine woodlands; requires deep, well-drained soil for burrowing.	Year Round (?)	**Yes.** Potential suitable habitat (grassland and oak woodland) for this species occurs within the project site.
Reithrodontomys raviventris salt-marsh harvest mouse	FE/SE, CFP/--	San Francisco Bay and its tributaries.	Saline marshes. Pickleweed (*Salicornia* sp.) is primary habitat. Does not burrow, build loosely organized nests. Requires higher areas for flood escape.	Year Round	**No.** Suitable habitat for this species does not occur within the project site.
Sorex vagrans halicoetes salt-marsh wandering shrew	--/CSSC/--	South San Francisco Bay.	Salt marshes that are medium high 6-8 ft above sea level where abundant driftwood is scattered among pickleweed (*Salicornia* sp.).	Year Round	**No.** Suitable habitat for this species does not occur within the project site.

STATUS CODES
FE: Federally Endangered
FT: Federally Threatened
FD: Federally Delisted
C: Candidate Threatened

CE: California Endangered
CT: California Threatened
CR: California Rare
CSSC: California Species of Special Concern
CD: State Delisted
CFP: California Fully Protected
CRPS 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPS 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPS 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
CRPS 4.2: Plants of Limited Distribution, Moderately Threatened in California.
CRPS 4.3: Plants of Limited Distribution, Not Very Threatened in California.
State Rank: S1 = Critically Imperiled in California; S2 = Imperiled in California; S3 = Vulnerable in California; S4 = Apparently Secure in California.
WL: California Department of Fish and Wildlife Watch List
? Uncertain About Distribution or Identity
* May be Extirpated

Sources: CDFW, 2015a; USFWS, 2015b; and CNPS, 2015.

Appendix C

Site Photographs

Appendix C
Representative Site Photographs

Photo 1. Summitpointe Golf Club pond along proposed pipeline route.

Photo 2. Summitpointe Golf Club pond.

Photo 3. Pipeline route along Country Club Drive.

Photo 4. Pipeline route adjacent to non-native grassland on unnamed road off of County Club Drive.

Photo 5. Staging Area at Ed Levin County Park.

Photo 6. Unnamed creek at Ed Levin County Park.

Photo7. Sandy Wool Lake at Ed Levin County Park (adjacent to

Photos 8. Arroyo de los Coches Creek along Calaveras Road.

Appendix D

Plant Species Observed in the Vicinity of the Project Area

Appendix D
Plant Species Observed in the Vicinity of the Project Site[1]

December 2 and 18, 2015

Family Name	Scientific Name	Common Name	Origin (Native or Non-native)
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	Native
Agavaceae	*Chlorogalum pomeridianum*	soap plant	Native
Apiaceae	*Foeniculum vulgare*	sweet fennel	Non-native*
Apocynaceae	*Nerium oleander*	oleander	Non-native
Anacardaceae	*Toxicodendron diversilobum*	western poison oak	Native
Anacardaceae	*Schinus molle*	California pepper	Non-native*
Araliaceae	*Hedera helix*	English ivy	Non-native*
Asteraceae	*Artemisia californica*	California sagebrush	Native
Asteraceae	*Artemisia douglasiana*	mugwort	Native
Asteraceae	*Baccharis pilularis*	coyote brush	Native
Asteraceae	*Bellis perennis*	English daisy	Non-native
Asteraceae	*Carduus pycnocephalus*	Italian thistle	Non-native*
Asteraceae	*Centaurea calcitrapa*	purple star thistle	Non-native*
Asteraceae	*Cirsium vulgare*	bull thistle	Non-native*
Asteraceae	*Cotula coronopifolia*	brass buttons	Non-native*
Asteraceae	*Cynara cardunculus*	artichoke thistle	Non-native*
Asteraceae	*Dittrichia graveolens*	stinkwort	Non-native*
Asteraceae	*Erigeron canadensis*	horseweed	Native
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	Non-native*
Asteraceae	*Lactuca serriola*	prickly lettuce	Non-native
Asteraceae	*Silybum marianum*	milk thistle	Non-native*
Asteraceae	*Senecio vulgaris*	common groundsel	Non-native
Asteraceae	*Sonchus asper* ssp. *asper*	common sow thistle	Non-native
Asteraceae	*Pseudognaphalium luteoalbum*	Jersey cudweed	Non-native
Betulaceae	*Alnus rhombifolia*	white alder	Native
Betulaceae	*Corylus cornuta* ssp. *californica*	beaked hazelnut	Native
Brassicaceae	*Brassica nigra*	black mustard	Non-native*
Brassicaceae	*Nasturtium officinale*	watercress	Native
Caprifoliaceae	*Symphoricarpos albus* var. *laevigatus*	common snowberry	Native
Cupressaceae	*Juniperus* sp.	juniper	Non-native
Cupressaceae	*Sequoia sempervirens*	coast redwood	Native
Cyperaceae	*Cyperus eragrostis*	tall flatsedge	Native
Cyperaceae	*Schoenoplectus acutus*	hardstem bulrush	Native

Family Name	Scientific Name	Common Name	Origin (Native or Non-native)
Cyperaceae	*Schoenoplectus californicus*	California bulrush	Native
Equisetaceae	*Equisetum* sp.	horsetail	Native
Fabaceae	*Trifolium hirtum*	rose clover	Non-native*
Fabaceae	*Vicia* sp.	vetch	Non-native
Fagaceae	*Quercus agrifolia*	coast live oak	Native
Fagaceae	*Quercus lobata*	valley oak	Native
Geraniaceae	*Erodium cicutarium*	redstem filaree	Non-native*
Geraniaceae	*Erodium moschatum*	white stemmed filaree	Non-native
Geraniaceae	*Geranium molle*	dove's foot geranium	Non-native
Hamamelidaceae	*Liquidambar* sp.	Sweet gum	Non-native
Juglandaceae	*Juglans hindsii*	northern California black walnut	Native
Juncaceae	*Juncus* sp.	rush	Native
Lauraceae	*Cinnamomum camphora*	camphor tree	Non-native
Lauraceae	*Umbellularia californica*	California bay	Native
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	Non-native*
Malvaceae	*Malva* sp.	mallow	Non-native
Malvaceae	*Malvella leprosa*	alkali mallow	Native
Myrtaceae	*Eucalyptus* sp.	eucalyptus	Non-native
Myrtaceae	*Eucalyptus globulus*	blue gum	Non-native*
Myrtaceae	*Eucalyptus polyanthemos*	silver dollar	Non-native
Myrtaceae	*Eucalyptus sideroxylon*	red ironbark	Non-native
Myrtaceae	*Melaleuca* sp.	paperbark tree	Non-native
Oleaceae	*Olea europaea*	European olive	Non-native*
Onagraceae	*Epilobium brachycarpum*	fireweed	Native
Onagraceae	*Epilobium ciliatum*	fringed willowherb	Native
Plantaginaceae	*Plantago major*	common plantain	Non-native
Platanaceae	*Platanus racemosa*	western sycamore	Native
Pinaceae	*Pinus* sp.	pine	Non-native
Pinaceae	*Pinus pinea*	Italian stone pine	Non-native
Poaceae	*Avena* sp.	wild oat	Non-native*
Poaceae	*Bromus diandrus*	ripgut grass	Non-native*
Poaceae	*Cynodon dactylon*	Bermuda grass	Non-native
Poaceae	*Elymus caput-medusae*	Medusa head	Non-native*
Poaceae	*Elymus triticoides*	creeping wild rye	Native
Poaceae	*Festuca perennis*	rye grass	Non-native*
Poaceae	*Hordeum murinum* ssp. *leporinum*	foxtail barley	Non-native*
Poaceae	*Phalaris aquatica*	Harding grass	Non-native*
Poaceae	*Paspalum dilatatum*	Dallis grass	Non-native

Family Name	Scientific Name	Common Name	Origin (Native or Non-native)
Poaceae	*Polypogon monspeliensis*	rabbitsfoots grass	Non-native*
Poaceae	*Poa annua*	annual bluegrass	Non-native
Polygonaceae	*Polygonum* sp.	smartweed	Native or Non-native
Polygonaceae	*Rumex crispus*	curly dock	Non-native*
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	Non-native*
Rubiaceae	*Galium aparine*	common bedstraw	Native
Salicaceae	*Populus nigra* 'Italica'	Lombardy poplar	Non-native
Salicaceae	*Salix babylonica*	weeping willow	Non-native
Salicaceae	*Salix exigua*	narrow-leaved willow	Native
Salicaceae	*Salix laevigata*	red willow	Native
Salicaceae	*Salix lasiolepis*	arroyo willow	Native
Sapindaceae	*Aesculus californica*	California buckeye	Native

Notes:

[1]This list includes plants species that were observed within the project site and the immediate vicinity of the project. The biological study area consisted of a 75-foot buffer along both sides of the centerline of the pipeline alignments and a 50-foot buffer around the footprint of the two tank sites and staging area.

This list does not include all ornamental trees and shrubs in the vicinity of the project site.

* Indicates a non-native species that is recognized and being tracked by the California Invasive Plant Council (Cal-IPC).

Appendix E

Wildlife Species Observed in the Vicinity of the Project Area

Appendix E
Animal Species Observed in the Vicinity of the Project Site[1]

December 2 and 18, 2015

Common Name	Scientific Name
AMPHIBIANS	
Sierran treefrog	*Pseudacris sierra* [*Pseudacris regilla*]
BIRDS	
western scrub-jay	*Aphelocoma californica*
Canada goose	*Branta canadensis*
red-tailed hawk	*Buteo jamaicensis*
great egret	*Ardea alba*
turkey vulture	*Cathartes aura*
killdeer	*Charadrius vociferous*
northern harrier	*Circus cyaneus**
American crow	*Corvus brachyrhynchos*
white-tailed kite	*Elanus leucurus***
northern mockingbird	*Mimus polyglottos*
house sparrow	*Passer domesticus**
ruby-crowned kinglet	*Regulus calendula*
black phoebe	*Sayornis nigricans*
American robin	*Turdus migratorius*
golden-crowned sparrow	*Zonotrichia atricapilla*
MAMMALS	
black-tailed jackrabbit	*Lepus californicus*
black-tailed deer	*Odocoileus hemionus*
California ground squirrel	*Otospermophilus beecheyi*

Notes:

[1]This list includes plants species that were observed in the immediate vicinity of the project site as well as the project site. The biological study area consisted of a 75-foot buffer along both sides of the centerline of the pipeline alignments and a 50-foot buffer around the footprint of the two tank sites and staging area.

*Indicates a non-native species.

**Indicates a special-status species

Appendix C - Hazardous Materials Database Search Results

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Appendix C: Hazardous Materials Database Search Results

	Site Name	Location	Status
1	Devcon Construction (GeoTracker - T0608501634)	555 Los Coches Street	LUST Cleanup Site: Completed – Case Closed
2	Shell (GeoTracker - T0608592466)	950 Calaveras Blvd	LUST Cleanup Site: Completed – Case Closed
3	Shell (T0608501315)	950 E Calaveras Blvd	LUST Cleanup Site: Completed – Case Closed
4	Exxon #7-8993 (GeoTracker - T0608500573)	39 S Park Victoria Dr	LUST Cleanup Site: Completed – Case Closed
5	Unocal #5130 (GeoTracker - T0608502234)	27 S Park Victoria Dr	LUST Cleanup Site: Completed – Case Closed
6	Unocal #5130 (GeoTracker - T0608501513)	27 S Park Victoria Dr	LUST Cleanup Site: Completed – Case Closed
7	**Victorian Square Cleaners (GeoTracker - T10000004709)**	**1285 E Calaveras Blvd**	**Cleanup Program Site: Open – Site Assessment**
8	Shell – 12 N Park Victoria (GeoTracker - T0608501249)	12 N Park Victoria	LUST Cleanup Site: Completed – Case Closed
9	Shell (GeoTracker - T0608591760)	990 Jacklin Rd	LUST Cleanup Site: Completed – Case Closed
10	Shell (GeoTracker – T0608565949)	990 Jacklin Rd	LUST Cleanup Site: Completed – Case Closed
11	Private Residence (GeoTracker - T0608500641)	Private Residence	LUST Cleanup Site: Completed – Case Closed
12	**Fox Hollow – Park Victoria Site (GeoTracker - T10000008074)**	**Park Victoria and Fox Hollow**	**Cleanup Program Site: Open – Site Assessment**
13	**Prudential Properties (GeoTracker - T10000008057)**	**1051 S Milpitas Blvd**	**Cleanup Program Site: Open – Inactive**
14	Olympian Oil (GeoTracker – T0608502432)	800 Ames Ave	LUST Cleanup Site: Completed – Case Closed
15	Balch Petroleum (GeoTracker – T0608532324)	930 Ames Ave	LUST Cleanup Site: Completed – Case Closed
16	**Great Western Stinnes Western Chem (GeoTracker – T0608591605)**	**945 Ames Ave**	**Cleanup Program Site: Open – Remediation *(Land Use Restrictions*)**
17	Talley Property (GeoTracker – T0608502382)	893 Ames Ave	LUST Cleanup Site: Completed – Case Closed
18	Mission Linen (GeoTracker – T0608500912)	1180 Ames Ave	LUST Cleanup Site: Completed – Case Closed
19	**Sipex Corporation (EnviroStor – 71003694)**	**233 S Hillview Dr**	**Tiered Permit – Inactive – Needs Evaluation**
20	Cook Paint and Varnish Company (EnviroStor - 43280132)	201 Sinclair Frontage Rd	State Response – Certified as of 3/29/1988
21	Great Western Chemical Co (EnviroStor – CAD095991253)	945 Ames Ave	Haz Waste - Closed

22	**Great Western Chemical Co (EnviroStor – 80001721)**	**945 Ames Ave**	**Corrective Action – Refer: RWQCB**
23	**Great Western Chemical Co. – Milpitas (EnviroStor – 71002637)**	**945 Ames Ave**	**Tiered Permit – Inactive – Needs Evaluation**
24	**Sherwin Williams Company (EnviroStor – 80001382)**	**805 Sinclair Frontage Rd**	**Corrective Action – Inactive – Needs Evaluation**

Memorandum

Milpitas Recycled Water Pipeline Extension Project

Subject:	**Response to Comments on Initial Study/Mitigated Negative Declaration (SCH #2016092026)**
Prepared For:	City of Milpitas
Prepared by:	Susan Yogi, Micah Eggleton, RMC Water and Environment
Reviewed by:	Robin Cort
Date:	October 26, 2016

This memo has been prepared to address comments received on the Initial Study/Mitigated Negative Declaration (IS/MND) that was prepared for the City of Milpitas Recycled Water Pipeline Extension Project. The IS/MND was published on September 13, 2016 with the comment period ending on October 17, 2016. The IS/MND was circulated to the State Clearinghouse, and to state, regional and local agencies, and individuals who might have an interest in the project. The City of Milpitas (City) received 7 comment letters. Comments were submitted by the California Department of Transportation (Caltrans), Pacific Gas & Electric (PG&E), Santa Clara County Parks and Recreation Department (SCCPR), Santa Clara County Communications (SCCC), San Francisco Public Utilities Commission (SFPUC), the Santa Clara Valley Transportation Authority (VTA), and the California State Clearinghouse and Planning Unit (Clearinghouse), and are included here as Attachment A. Each comment is repeated verbatim, followed by a response.

1 Response to Comments from California Department of Transportation (Caltrans) (Comment Letter 1)

1.1 Comment 1-1

As the lead agency, the City is responsible for all project mitigation, including any needed improvements to the State Transportation Network. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

1.2 Response 1-1

Chapter 3 of the IS/MND identified mitigation measures for the proposed project. The Milpitas City Council will consider the adequacy of the Mitigated Negative Declaration in complying with the requirements of CEQA. If the City Council finds that the IS/MND complies with CEQA, it will adopt the IS/MND and consider the Mitigation Monitoring and Reporting Program (MMRP). If the City Council approves the project, it will also adopt an MMRP at the hearing. The MMRP ensures implementation of the mitigation measures identified in the Mitigated Negative Declaration to reduce or avoid significant environmental effects (CEQA Guidelines Section 15097). The City would be responsible for administering the MMRP, which also details the responsibility for implementation, monitoring/reporting responsibility, and schedule. The proposed project would be constructed within existing local roadways. No mitigation or

improvements were identified for the State Transportation Network. The City will coordinate with Caltrans to obtain an encroachment permit for construction work within State right-of-way.

1.3 Comment 1-2

Caltrans requires that a project's environmental document include documentation of a current archaeological record search form the Northwest Information Center of the California Historical Resources Information System if construction activities are proposed within State right-of-way (ROW). Current record searches must be no more than five years old. Caltrans requires the records search, and if warranted, a cultural resources study by a qualified, professional archaeologist, and evidence of Native American consultation to ensure compliance with CEQA, Section 5024.5 and 5097 of the California Public Resources Code, and Volume 2 of Caltrans' Standard Environmental Reference (www.dot.ca.gov/ser/vol2/vol2.htm).

These requirements, including applicable mitigation, must be fulfilled before an encroachment permit can be issued for project-related work in state ROW. Work subject to these requirements includes, but is not limited to: lane widening, channelization, auxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks, and driveways within or adjacent to State ROW.

1.4 Response 1-2

As described in Section 3.5, Cultural Resources of the IS/MND (pages 3-25 through 3-28), a Cultural Resources Assessment (CRA) was prepared by Rincon Consultants in March of 2016. The IS/MND and CRA document the field surveys conducted for the proposed project area, and records searches of the Area of Potential Effect (APE) at the California Historical Resources Information System (CHRIS) Northwestern Information Center (NWIC).

The Native American Heritage Commission (NAHC) was contacted in August 2015 for review of the Sacred Lands File (SLF). Follow up contacts were made with the list of Native American individuals and organizations provided by NAHC that may have knowledge of cultural resources in or near the proposed project APE. The CRA will be submitted as part of obtaining the encroachment permit.

There are no known cultural resources in the APE for the project, but the IS/MND includes mitigation measures to address the possibility of discovery of a previously unidentified resources during construction. Please refer to Mitigation Measures CUL-1 and CUL-2.

1.5 Comment 1-3

Since traffic restriction and detours may affect vehicular, bicycle, and pedestrian traffic along I-680, the Traffic Management and Construction Staging Plan (TMCP) must be submitted to Caltrans for review and approval and a construction Traffic Impact Analysis may be required for approval by Caltrans prior to construction. These must be prepared in accordance with Caltrans' *TMP Guidelines*. Further information is available for download at the following web address: www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

The TMCP must also comply with the requirements of corresponding jurisdictions. In addition, pedestrian access through the construction zone must be in accordance with the Americans with Disabilities Act (ADA) regulations (see Caltrans' *Temporary Pedestrian Facilities Handbook* for maintaining pedestrian access and meeting ADA requirements during construction at www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf) (see also Caltrans' Traffic Operations Policy Directive 11-01 "Accommodating Bicyclists in Temporary Traffic Control Zones" at: www.dot.ca.gov/trafficops/policy/11-01.pdf). All curb ramps and pedestrian facilities located within the limits of the project are required to be brought up to current ADA standards as part of this project.

For further assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579. Further traffic management information is available at the following website: www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

1.6 Response 1-3

Construction-related transportation impacts are described in Section 3.16, Transportation/Traffic on pages 3-69 to 3-71. Construction impacts may require temporary and short-term roadway closures and/or one-way traffic control limitations. Mitigation Measure TRA-1 would require the preparation and implementation of a Traffic Management and Construction Staging Plan to ensure appropriate traffic controls are implemented. The City is required to comply with pedestrian access requirements in accordance with the Americans with Disabilities Act (ADA). As shown on Figure 2-4 on page 2-8 of the IS/MND, crossings of I-680 would be constructed using trenchless technology so there would be no direct impacts to vehicular, bicycle of pedestrian traffic along I-680.

1.7 Comment 1-4

Please be advised that any work, staging, or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to: David Salladay, District Office Chief, Office of Permits, California Department of transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See this website for more information: www.dot.ca.gov/hq/traffops/developserv/permits.

1.8 Response 1-4

The City of Milpitas appreciates the resources and permitting instructions provided by Caltrans. As stated on page 2-16, *Section 2.8, Right-of-Way Issues / Permits Required,* an Encroachment Permit from Caltrans is identified. The City will work with Caltrans to obtain the encroachment permit, and will submit the information required for the permit.

2 Response to Comments from PG&E (Comment Letter 2)

2.1 Comment 2-1

PG&E owns and operates a variety of gas and electric facilities which are located within the proposed project boundaries. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utilities access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

Some examples of actives which could have an impact upon our facilities include permanent/temporary changes in grade over or under our facilities; construction of structures within or adjacent to PG&E's easements; and planting of certain types of vegetation over or underneath our gas and electric facilities respectively.

2.2 Response 2-1

The City of Milpitas will coordinate with PG&E as necessary to ensure compliance with all mandated clearance requirements necessary for the safe and reliable maintenance and operation of utility facilities. Existing utility lines along the pipeline alignment would be identified during design of the proposed pipelines and facilities would be designed to avoid existing utilities to the extent possible. In addition, the contractor shall be required to notify and coordinate with utility providers at least 48 hours before the start of work adjacent to any existing utility.

3 Response to Comments from County of Santa Clara Parks and Recreation Department (County)

3.1 Comment 3-1

The City of Milpitas proposed to utilize a public parking area within Ed Levin County Park as a temporary staging area for vehicles, equipment, and materials. The California Park Preservation Act of 1971 precludes the County from using dedicated park property for a non-park purpose. Pub. Res. Code §5400 *et seq*. The County cannot authorize this use without further consideration. The Construction Staging and Traffic Management Plan should be submitted to the County of Santa Clara for legal and administrative review and approval for the proposed staging.

3.2 Response 3-1

The City thanks the County of Santa Clara Parks and Recreation Department for this clarification. The staging area that was proposed in a public parking area within Ed Levin County Park was recommended for one of the alignment options for Segment 3. This would not apply for the Segment 3 option that was carried forward as the proposed project. The text on page 2-14 has been corrected as follows:

> Equipment and vehicle staging would be located ~~at the parking lot adjacent to Sandy Wool Lake at the Ed Levin County Park. Additional staging areas~~ along the construction route and would be established where space is available and no potentially sensitive resources are present, such as vacant lots, roadway turnouts, and parking lots. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of convenient access and lack of sensitive receptors. As pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods of time. The City of Milpitas would need to review the Construction Staging and Traffic Management Plan and approve lane closures to street segments and intersections. The City or its contractor would make arrangements for the use of staging areas.

3.3 Comment 3-2

Figure 2-3, depicts the segment connecting to and terminating at the County Park's water meter. In the past, the Santa Clara Valley Water District (SCVWD) has taken the position to keep both treated water and raw water separate. In the 2012 *Guidelines for Water Reuse* the U.S. Environmental Protection Agency states, "many [golf] facilities are required to implement special management practices where reuse is implemented to minimize the potential of cross-connection of water sources." This proposed change in use should be reviewed by SCVWD with their feedback incorporated into the project alternative alignments.

3.4 Response 3-2

As described on page 2-9 of the IS/MND, Segment 3 would terminate at the existing SCVWD Ed Levin/Spring Valley raw water meter. Segment 3 would not connect into this meter, for the reasons stated in the comment. There would be no cross-connection of water sources. As stated on page 2-9 of the IS/MND:

"*In the future, the SCVWD could connect to the recycled water system and extend the pipeline further up Old Calaveras Road to serve Ed Levin Park and Spring Valley Golf Course. The timing and details of this are unknown at this time. Any future approval and implementation of SCVWD's potential future connection would be subject to separate environmental documentation.*" The existing meter shown on Figure 2-3 represents the demarcation of where Segment 3 would terminate. In the future, if SCVWD connects to Segment 3, a separate recycled water meter would be installed. Segment 3 would allow the SCVWD to connect into and extend the recycled water pipeline in the future.

The text on page 2-9 has been modified to clarify that Segment 3 would not connect into the existing raw water line:

> One pipeline would connect to Segment 2 at the intersection of Jacklin Road and Country Club Drive; this pipeline would continue northeast along Country Club Drive to serve Summitpointe Golf Club. The other pipeline would connect to Segment 1 at its terminus by Burnett Elementary School and continue easterly along Kennedy Drive and Old Calaveras Road and terminate at, but not connect into the existing SCVWD's Ed Levin/Spring Valley raw water meter. Both sections of pipeline would require a pump station to convey the recycled water to customers.

3.5 Comment 3-3

On Jacklin and Evans Road is the Calaveras Connector Trail which serves as a trail linkage from nearby residential areas to the hillside. This trail provides an important recreational opportunity for residents. Construction on Jacklin and Evans Road may temporarily adversely impact use of the on-street trail. We recommend to include a detour for Calaveras Connector Trail bicycle users in the project's Traffic Management Plan.

3.6 Response 3-3

The Calaveras Connector Trail described by the commenter is listed as a Class III Bike Route on page 3-68 of the IS/MND, and identified as *"Jacklin Road between I-680 and transition to Evans Road"*. The analysis identified potential increase in conflicts between vehicles, bicyclists, and pedestrian during construction. Implementation of Mitigation Measure TRA-1 (page 3-70 in the IS/MND), would require the preparation and implementation of a Construction Staging and Traffic Management Plan, and would include, "*…the location of transit stop and transit and bicycle routes that would be temporarily impacted by construction activities, and shall recommend places to temporarily relocate transit stops and transit and bicycle routes, if necessary.*" This mitigation measure will ensure that bicycle routes impacted by the proposed project, including the Calaveras Connector Trail, would have adequate detours when and if affected by the project.

4 Response to Comments from Santa Clara County Communications (SCCC) (Comment Letter 4)

4.1 Comment 4-1

County Communications has no concerns with this project. Please let me know if there are any additional questions.

4.2 Response 4-1

The City appreciates the SCCC for taking the time to review the project IS/MND.

5 Response to Comments from SFPUC (Comment Letter 5)

5.1 Comment 5-1

Thank you for sending over the MND. In my original email to the City of Milpitas, I commented that the project was going to cross the SFPUC ROW perpendicularly at a 4-5 different locations – this was an error based on the poor quality map I initially received (see SFPUC ROW Mark-Up). The existing "South Bay Water Recycling (SBWR) Existing Pipes" (violet/purple) looked similar to the proposed "Segment 5 Main" blue) extension. In the MND, there is a better quality map that makes it easier to differentiate the colors in the legend. The SBWR already crosses the SFPUC ROW and all new pipelines will be installed east of the SFPUC ROW (i.e. no work will occur in the SFPUC ROW). After reading the MND carefully, I don't see any potential impacts to the SFPUC ROW.

5.2 Response 5-1

The City appreciates the follow up and correction of the original map interpretation error. As there are no new crossings proposed under the project, the City agrees that there will be no potential impacts to the SFPUC ROW.

6 Response to Comments from VTA (Comment Letter 6)

6.1 Comment 6-1

VTA has no comments on the above Initial Study. Thanks.

6.2 Response 6-1

The City appreciates the VTA's review of the IS/MND.

7 Response to Comments from State of California, Governor's Office of Planning and Research, State Clearinghouse (Comment Letter 7)

7.1 Comment 7-1

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on October 12, 2016, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse

review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

7.2 Response 7-1

The City appreciates the assistance of the State Clearinghouse in completing the CEQA review requirements for the IS/MND.

Attachment A – Letters Received During Public Comment Period

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DEPARTMENT OF TRANSPORTATION
DISTRICT 4
P.O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Letter 1

Serious Drought.
Help save water!

October 12, 2016

04-SCL-2016-00042
SCL/680/PM M6.8

Mr. Michael Fossati
Planning and Neighborhood Services Office
City of Milpitas
455 E. Calaveras Boulevard
Milpitas, CA 95035

Dear Mr. Fossati:

Milpitas Recycled Water Pipeline Extension Project – Mitigated Negative Declaration

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. Our comments are based on the Mitigated Negative Declaration (MND).

Project Understanding
The proposed project crosses underneath Interstate (I-) 680 between Yosemite Drive and Ames Avenue. It would construct new recycled water infrastructure to expand the City of Milpitas' (City) existing recycled water system east of I-680 to meet recycled water demand and reduce potable water and raw water use. It includes 5 segments of new recycled water pipeline totaling approximately 50,500 linear feet (9.5 miles), a storage tank with capacity of up to 1.5 million gallons at Cardoza Park and 4 pump stations. It will provide approximately 750 acre-feet per year of recycled eater in the City for non-potable demands such as irrigation, offsetting potable and raw water usage. Pipelines would connect to existing system at Jacklin Road and N. Hillview Drive, Los Coches Street and S. Hillview Drive and S. Milpitas Boulevard and Ames Avenue.

Lead Agency
As the lead agency, the City is responsible for all project mitigation, including any needed improvements to the State Transportation Network. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. 1-1

Cultural Resources
Caltrans requires that a project's environmental document include documentation of a current archaeological record search from the Northwest Information Center of the California Historical Resources Information System if construction activities are proposed within State right-of-way 1-2

(ROW). Current record searches must be no more than five years old. Caltrans requires the records search, and if warranted, a cultural resource study by a qualified, professional archaeologist, and evidence of Native American consultation to ensure compliance with CEQA, Section 5024.5 and 5097 of the California Public Resources Code, and Volume 2 of Caltrans' Standard Environmental Reference (www.dot.ca.gov/ser/vol2/vol2.htm). 1-2 cont.

These requirements, including applicable mitigation, must be fulfilled before an encroachment permit can be issued for project-related work in State ROW. Work subject to these requirements includes, but is not limited to: lane widening, channelization, auxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks and driveways within or adjacent to State ROW.

Traffic Management and Construction Staging Plan

Since traffic restrictions and detours may affect vehicular, bicycle, and pedestrian traffic along I-680, the Traffic Management and Construction Staging Plan (TMCP) must be submitted to Caltrans for review and approval and a construction Traffic Impact Analysis may be required for approval by Caltrans prior to construction. These must be prepared in accordance with Caltrans' *TMP Guidelines*. Further information is available for download at the following web address: www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm. 1-3

The TMCP must also comply with the requirements of corresponding jurisdictions. In addition, pedestrian access through the construction zone must be in accordance with the Americans with Disabilities Act (ADA) regulations (see Caltrans' *Temporary Pedestrian Facilities Handbook* for maintaining pedestrian access and meeting ADA requirements during construction at: www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf) (see also Caltrans' Traffic Operations Policy Directive 11-01 "Accommodating Bicyclists in Temporary Traffic Control Zones" at: www.dot.ca.gov/trafficops/policy/11-01.pdf). All curb ramps and pedestrian facilities located within the limits of the project are required to be brought up to current ADA standards as part of this project.

For further assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579. Further traffic management information is available at the following website:
www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

Encroachment Permit

Please be advised that any work, staging, or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. 1-4
Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See this website for more information:
www.dot.ca.gov/hq/traffops/developserv/permits.

Should you have any questions regarding this letter, please contact Brian Ashurst at (510) 286-5505 or brian.ashurst@dot.ca.gov.

Sincerely,

Lisa Carboni

for PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

Pacific Gas and Electric Company

Land & Environmental Management
111 Almaden Blvd., 8th floor
San Jose, CA 95113
(408) 282-7138
d2g6@pge.com

September 29, 2016

City of Milpitas
Attention: Michael Fossati
455 E. Calaveras Blvd.
Milpitas, CA 95035-5479

Re: Milpitas Recycled Water Pipeline Project – Mitigated Negative Declaration

Dear Michael:

Thank you for the opportunity to review the Initial Study and Mitigated Negative Declaration for the proposed Recycled Water Pipeline Extension Project. PG&E has the following comments to offer regarding the proposed project:

PG&E owns and operates a variety of gas and electric facilities which are located within the proposed project boundaries. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities. 2-1

Some examples of activities which could have an impact upon our facilities include permanent/temporary changes in grade over or under our facilities; construction of structures within or adjacent to PG&E's easements; and planting of certain types of vegetation over or underneath our gas and electric facilities respectively.

PG&E remains committed to working with the City of Milpitas to provide timely, reliable and cost effective gas and electric service to the City. Please contact me if you have any questions regarding our comments. We would also appreciate being copied on future correspondence regarding this subject as this project develops.

Sincerely,

Dan Gilardoni
Land Agent

Letter 3

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

17 October 2016

Mr. Michael Fossati
Department of Planning and Neighborhood Services
City of Milpitas
455 E. Calaveras Boulevard
Milpitas, CA 95035

Subject: Notice of Intent to Adopt a Mitigated Negative Declaration for the Milpitas Recycled Water Pipeline Extension Project

The County of Santa Clara Parks and Recreation Department (the County) has reviewed the Initial Study and Mitigated Negative Declaration (IS/MND) for the proposed Milpitas Recycled Water Pipeline Extension Project. Construction includes approximately 50,500 linear feet of pipeline (9.5 miles), a storage tank with a capacity of up to 1.5-million gallons and four pump stations. We offer the following comments:

The City of Milpitas proposed to utilize a public parking area within Ed Levin County Park as a temporary staging area for vehicles, equipment, and materials. The California Park Preservation Act of 1971 precludes the County from using dedicated park property for a non-park purpose. Pub. Res. Code §5400 *et seq*. The County cannot authorize this use without further consideration. The Construction Staging and Traffic Management Plan should be submitted to the County of Santa Clara for legal and administrative review and approval for the proposed staging. 3-1

Figure 2-3, depicts the segment connecting to and terminating at the County Park's water meter. In the past, the Santa Clara Valley Water District (SCVWD) has taken the position to keep both treated water and raw water separate. In the 2012 *Guidelines for Water Reuse* the U.S. Environmental Protection Agency states, "many [golf] facilities are required to implement special management practices where reuse is implemented to minimize the potential of cross-connection of water sources." This proposed change in use should be reviewed by SCVWD with their feedback incorporated into the project alternative alignments. 3-2

Board of Supervisors: Mike Wasserman, Dave Cortese, Ken Yeager, S. Joseph Simitian, Cindy Chavez
County Executive: Jeffrey V. Smith

SANTA CLARA COUNTY PARKS

On Jacklin and Evans Road is the Calaveras Connector Trail which serves as a trail linkage from nearby residential areas to the hillside. This trail provides an important recreational opportunity for residents. Construction on Jacklin and Evans Road may temporarily adversely impact use of the on-street trail. We recommend to include a detour for Calaveras Connector Trail bicycle users in the project's Traffic Management Plan. 3-3

The County is enthusiastic about the benefits that the project may potentially provide to Ed Levin County Park, Spring Valley Golf Course, and the City of Milpitas. Securing more reliable sources of water for Ed Levin County Park and Spring Valley Golf Course is a priority for the Department. We hope to continue this collaborative effort of finding innovative water supply solutions in and around the City of Milpitas.

The County of Santa Clara Parks and Recreation Department appreciates the opportunity to provide comments on the IS/MND for the Milpitas Recycled Water Pipeline Extension Project. If you should have any questions or concerns, please contact me, commercial 408.355.2228 or by email Cherise.Orange@prk.sccgov.org.

Sincerely,

Cherise D. Orange

Cherise D. Orange
Associate Planner

cc: Annie Thomson, Principal Planner
Mark Frederick, Park Development Manager
Tim Heffington, Senior Real Estate Agent

Archived: Friday, October 07, 2016 1:45:56 PM
From: Bivens, Jason
Sent: Friday, October 07, 2016 12:37:37 PM
To: Michael Fossati
Cc: Bodduna, Aruna; Finley, Gavin
Subject: RE: CEQA Referral - NOI-MND Milpitas Recycled Water Pipeline Extension
Importance: Normal

Good Afternoon,

County Communications has no concerns with this project. Please let me know if there are any additional questions. 4-1

JB

Jason J. Bivens
Deputy Director | Santa Clara County Communications
2700 Carol Drive | San Jose, CA 95125
408-977-3200 (Office) | 408-279-2666 (Fax) |jason.bivens@911.sccgov.org

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From: Finley, Gavin
Sent: Friday, September 30, 2016 12:31 PM
To: Bivens, Jason <jason.bivens@911.sccgov.org>
Cc: Bodduna, Aruna <Aruna.Bodduna@rda.sccgov.org>
Subject: RE: CEQA Referral - NOI-MND Milpitas Recycled Water Pipeline Extension

Hi Jason,

Unfortunately I'm not the best qualified person to really provide you with direction as I'm just filling in as the distributer of notices while Aruna is out. When she returns she would be better positioned to know what sort of feedback Communications has provided on CEQA documents in the past. Sorry I can't really provide much help on this.

Thanks,

Gavin Finley
Junior Civil Engineer
Land Development and Permits Unit
County of Santa Clara Roads and Airports Department
101 Skyport Drive, San Jose, CA 95110
P: 1 (408) 573-2491

Letter 5

Archived: Tuesday, October 18, 2016 9:53:32 AM
From: Mendoza, Jonathan S
Sent: Monday, October 17, 2016 6:34:51 PM
To: Michael Fossati
Cc: Wilson, Joanne; Jeffery Leung
Subject: RE: Milpitas Recycled Water Pipeline Extension Project
Importance: Normal
Attachments:
Milpitas_Recycled_Water_Project_Map-SFPUC_ROW_Mark-Up.pdf; Milpitas_Recycled_Water_Pipeline_Extension_Project_Map-Better_Quality.pdf;

Hello Michael:

Thank you for sending over the MND. In my original email to the City of Milpitas, I commented that the project was going to cross the SFPUC ROW perpendicularly at 4-5 different locations – this was an error based on the poor quality map I initially received (see SFPUC ROW Mark-Up). The existing "South Bay Water Recycling (SBWR) Existing Pipes" (violet/purple) looked similar to the proposed "Segment 5 Main" (blue) extension. In the MND, there is a better quality map that makes it easier to differentiate the colors in the legend. The SBWR already crosses the SFPUC ROW and all new pipelines will be installed east of the SFPUC ROW (i.e. no work will occur in the SFPUC ROW). After reading the MND carefully, I don't see any potential impacts to the SFPUC ROW. 5-1

Let me know if you have any questions.

Regards,

Jonathan S. Mendoza
Land and Resources Planner
Natural Resources and Lands Management Division
San Francisco Public Utilities Commission
1657 Rollins Road
Burlingame, CA 94010
O: 650.652.3215 (Mondays and Fridays)
C: 415.770.1997 (Tuesdays and Thursdays)
F: 650.652.3219
E: jsmendoza@sfwater.org
W: http://www.sfwater.org/ProjectReview

NOTE: I am out of the office on Wednesdays

From: Michael Fossati [mailto:mfossati@ci.milpitas.ca.gov]
Sent: Friday, October 07, 2016 3:55 PM
To: Mendoza, Jonathan S
Cc: Wilson, Joanne; Herman, Jane; Leung, Tracy; Feng, Stacie; Jeffery Leung
Subject: RE: Milpitas Recycled Water Pipeline Extension Project

Archived: Monday, October 03, 2016 12:29:26 PM
From: Michael Fossati
Sent: Wednesday, September 21, 2016 10:08:00 AM
To: 'Molseed, Roy'
Subject: RE: Milpitas Recycled Water Pipeline Extension
Importance: Normal

Thank you Roy.

Michael

From: Molseed, Roy [mailto:Roy.Molseed@VTA.ORG]
Sent: Wednesday, September 21, 2016 9:10 AM
To: Michael Fossati <mfossati@ci.milpitas.ca.gov>
Subject: Milpitas Recycled Water Pipeline Extension

Michael,

VTA has no comments on the above Initial Study. Thanks. 6-1

Roy Molseed
Senior Environmental Planner
VTA
(408) 321-5784
Roy.molseed@vta.org

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

October 13, 2016

Michael Fossati
City of Milpitas
455 E. Calaveras Boulevard
Milpitas, CA 95035

Subject: Milpitas Recycled Water Pipeline Extension Project
SCH#: 2016092026

Dear Michael Fossati:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on October 12, 2016, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 7-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	**2016092026**
Project Title	Milpitas Recycled Water Pipeline Extension Project
Lead Agency	Milpitas, City of

Type	**MND** Mitigated Negative Declaration
Description	The Milpitas Recycled Water Pipeline Extension Project (proposed project) consists of expanding the City's existing recycled water system east of I-680 to meet recycled water demands and reduce potable water and raw water use. The proposed project would consist of 50,560 linear feet (approximately 9.5 miles) of pipeline installation, a new storage tank, and four new pump stations, and would serve users within the City and in some adjacent areas of unincorporated Santa Clara County northeast of the City.

Lead Agency Contact

Name	Michael Fossati		
Agency	City of Milpitas		
Phone	408-586-3274	*Fax*	
email			
Address	455 E. Calaveras Boulevard		
City	Milpitas	*State* CA	*Zip* 95035

Project Location

County	Santa Clara			
City	Milpitas			
Region				
Lat / Long				
Cross Streets	Various			
Parcel No.				
Township		*Range*	*Section*	*Base*

Proximity to:

Highways	680
Airports	
Railways	VTA Light Rail
Waterways	Berryessa Creek
Schools	Multiple
Land Use	Roadways (pipelines), parks and open space (storage tank/pump station), single family residential hillside (pump station)

Project Issues	Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; Department of Fish and Wildlife, Region 3; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; Office of Emergency Services, California; California Highway Patrol; Caltrans, District 4; State Water Resources Control Board, Division of Drinking Water, District 17; State Water Resources Control Board, Divison of Financial Assistance; State Water Resources Control Board, Division of Water Quality; State Water Resources Control Board, Division of Water Rights; Native American Heritage Commission; Public Utilities Commission; Regional Water Quality Control Board, Region 2

Date Received 09/13/2016 *Start of Review* 09/13/2016 *End of Review* 10/12/2016

Mitigation Monitoring and Reporting Program

The City of Milpitas (City) is the lead agency responsible for authorizing the proposed recycled water pipeline extension project. The Initial Study / Mitigated Negative Declaration (IS/MND) prepared for the project provides analysis of the environmental effects resulting from constructing 50,560 linear feet of new recycled water pipeline, a 1.5-million gallon (MG) storage tank at Cardoza Park, and four pump stations. The proposed project would provide approximately 750 acre-feet per year of recycled water in the City for non-potable demands such as irrigation, offsetting potable and raw water usage. After considering the environmental analysis provided in the Draft IS/MND and public comments submitted on the Draft IS/MND, the City of Milpitas has determined that the project would not have a significant effect on the environment upon implementation of the mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP).

Twenty three (23) mitigation measures have been identified, which would reduce or avoid potential environmental impacts associated with project implementation. Section 21081.6 of the California Public Resources Code requires a lead or responsible agency that approves or carries out a project, where an IS/MND has identified measures to mitigate significant environmental effects, to adopt a "reporting monitoring program for adopted or required changes to mitigate or avoid significant environmental effects." This MMRP has been prepared in accordance with Section 21081.6 of the Public Resources Code.

A mitigation monitoring checklist has been developed for the proposed project, and is intended for use by the City, as the lead agency and designated monitoring entity for the proposed project. The checklist, presented as **Table 1** and **Table 2**, summarizes the mitigation and improvement measures for the proposed project (respectively), anticipates timing, and identifies responsible parties for ensuring implementation of each mitigation measure. These mitigation and improvement measures are presented using the naming conventions and categories in the Initial Study.

Table 1: Mitigation Monitoring and Reporting Checklist for the Recycled Water Pipeline Extension Project

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Aesthetics					
Mitigation Measure AES-1: Design, Vegetation, and Screening of Above-Ground Storage Tank, Cardoza Park Pump Station, Country Club Drive Pump Station, Old Calaveras Boulevard Pump Station, and Ben Rodgers Park Pump Station Vegetation and/or fencing shall be placed around the storage tank and pump station structures to provide screening if existing vegetation is deemed insufficient. Landscaping shall include re-vegetation of disturbed areas in the parking lot at Cardoza Park to minimize contrasts with the existing vegetation and to screen the storage tank and pump station from surrounding areas. The tank and pump stations shall be painted with low-glare earth-tone colors that blend with the surrounding terrain.	City of Milpitas	City of Milpitas	1. Confirm siting and design requirements are included in project specifications. 2. Confirm design measures are implemented. Document compliance and retain in the project file.	1. Design 2. Construction	1._____ 2._____
Air Quality					
Mitigation Measure AIR-1: Dust Abatement Program This mitigation applies to the proposed project as a whole, and therefore is required for all five segments. The City shall require the construction contractor(s) to implement a dust abatement program that includes, but is not necessarily limited to, the following BAAQMD-recommended measures as needed to control dust: • Water[1] all active construction areas at least twice a day.	City of Milpitas	City of Milpitas	1. Confirm Dust Abatement is included in project specifications. 2. Confirm measures are implemented during construction Document compliance and retain in project file.	1. Design 2. Construction	1._____ 2._____

[1] The City of Milpitas Municipal Code Title VIII, Chapter 6, Section 5 prohibits the use of potable water for construction purposes including dust control and compaction. The City requires pre-approval for construction water customers, which includes a recycled water meter for use with the City's fill station sites.

<table>
<tr><th>Mitigation Measure</th><th>Responsible Party</th><th>Review & Approval</th><th>Monitoring and Reporting Action</th><th>Implementation Schedule
- Design
- Pre-Construction
- Construction
- Operation</th><th>Verification:
Status/ Date Completed/ Initials</th></tr>
<tr><td>• Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
• Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, exposed stockpiles, and staging areas at construction sites.
• Sweep daily (with water or vacuum sweepers) all paved access roads, parking areas, and staging areas at construction sites.
• Sweep streets daily (with water or vacuum sweepers) if visible soil material is carried onto adjacent public streets.</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Mitigation Measure AIR-2: Construction Schedule Phasing

The City shall include provisions in the bid specifications to phase the construction activities to comply with the following scheduling restrictions:
<table><tr><th>Project Component</th><th>Construction Restriction</th></tr><tr><td>Pump Station</td><td>Construct one at a time</td></tr><tr><td>Segment 1 and 2</td><td>No more than 3 months of overlap</td></tr></table></td><td>City of Milpitas</td><td>City of Milpitas</td><td>1. Confirm construction phasing is included in project specifications.
2. Confirm schedule is implemented during construction

Document compliance and retain in project file.</td><td>1. Design
2. Construction</td><td>1._____

2._____</td></tr>
</table>

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Biological Resources					
Mitigation Measure BIO-1: General Requirements for Special Status Species The following measures shall be implemented for the construction of Segment 3: • Prior to start of project construction activities, a qualified biologist shall conduct mandatory Worker Environmental Awareness Program (WEAP) training to familiarize all personnel conducting project activities with the identification and life-history of special status wildlife and plants. • A qualified biologist shall conduct a survey within 7 days of initial ground disturbing activities within suitable habitat for special status species. The survey area shall include the project area and a 150-foot buffer. • All work areas within 150 feet of suitable aquatic habitat shall be flagged for monitoring during construction. • Off-road travel of project-related vehicles and construction equipment shall be restricted to designated construction areas. • All trash shall be removed from the site daily and disposed of properly to avoid attracting potential predators to the site. • No pets shall be permitted on site during project activities. • All vehicles and equipment shall be in good working condition and free of leaks. All leaks shall be contained and cleaned up immediately to	City of Milpitas	City of Milpitas	1. Confirm protection measures are included in project specifications. 2. Confirm pre-construction surveys conducted. 3. Confirm completion of WEAP prior to construction of Segment 3 and retain sign-in sheet in file. 4. Confirm that suitable aquatic habitat is flagged. 5. Monitor construction activities to verify that measures are implemented during construction. Document compliance and	1. Design 2. Pre-construction 3. Pre-construction 4. Pre-construction 5. Construction	1._____ 2._____ 3._____ 4._____ 5._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
reduce the potential or soil/vegetation contamination. • All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from riparian habitat or water bodies and in a location from which a spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water). • The number of access routes, size of staging areas, and the total construction area shall be limited to the minimum necessary to achieve the project goals. • The biologist(s) shall maintain sufficiently detailed records of any individual observed, captured, or relocated, including size, coloration, any distinguishing features and photographs (preferably digital) to assist in determining whether translocated animals are returning to the project area. • No herbicide shall be used within 50 feet of water ways.			retain in project file.		
Mitigation Measure BIO-2: California Red-legged Frog, Alameda Whipsnake, and California Tiger Salamander Protection Measures In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3: • If feasible, initial ground disturbing activities adjacent to suitable habitat for these species shall be conducted between May 1 and October 31 during dry weather conditions to minimize the potential for	City of Milpitas	City of Milpitas, CDFW/USFWS if needed	1. Confirm protection measures are included in project specifications.. 2. Confirm completion of focused habitat assessment. 3. Monitor construction	1. Design 2. Pre-construction 3. Construction 4. Construction	1._____ 2._____ 3._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
encountering CRLF, Alameda whipsnake, and CTS. Work shall be restricted to daylight hours. • A focused habitat assessment to determine the potential for CRLF, Alameda whipsnake, and CTS shall be conducted by a qualified biologist for all areas within 150 feet of the Segment 3 alignment that may contain suitable habitat for the species. If suitable habitat is present and would be directly impacted by the project, protocol-level surveys to determine presence or absence of CRLF, Alameda whipsnake, and CTS are recommended. According to the CTS survey protocol (USFWS, 2003), a drift fence study conducted during each of two fall/winter rainy seasons with aquatic sampling in spring between the two fall/winter is the primary method used to study CTS in upland habitats. • A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that contain suitable habitat for Alameda whipsnake, suitable upland habitat for CRLF or CTS or within 150 feet of potential CRLF or CTS aquatic habitat. • If CRLF, Alameda whipsnake, and CTS are found to be present, the USFWS (for CRLF and CTS) and CDFW (for CTS and Alameda whipsnake) shall be consulted to determine the appropriate course of action. • To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times.			activities to verify that measures are implemented as needed during initial ground disturbance activities. 4. Document consultation with CDFW if CRLF, Alameda whipsnake, or CTS are found. Document compliance and retain in project file		4._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Mitigation Measure BIO-3: Western Burrowing Owl Protection Measures In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3: • Prior to the commencement of construction activities within suitable habitat for western burrowing owl, a qualified biologist shall conduct protocol surveys in accordance with the 2012 CDFW Staff Report on Burrowing Owl Mitigation within all areas of the project area that contain suitable habitat for the species. The survey methodology shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing owls. Copies of the survey results shall be submitted to CDFW. • If burrowing owls are detected on site, no ground-disturbing activities, such as vegetation clearance or grading, shall be permitted within a buffer of no fewer than 100 meters (330 feet) from an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the non-breeding (winter) season (September 1 to January 31), ground-disturbing work can proceed as long as the work occurs no closer than 50 meters (165 feet) from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.	City of Milpitas	City of Milpitas, CDFW if needed	1. Confirm protection measures are included in project specifications. 2. Confirm completion of protocol surveys for construction activities within suitable habitat. 3. Confirm buffers are established if burrowing owls are found on site. 4. Document consultation with CDFW and implementation of passive relocation program if burrow avoidance is infeasible. 5. Monitor construction activities to verify that measures are implemented as needed during construction.	1. Design 2. Pre-construction 3. Construction 4. Construction 5. Construction	1._____ 2._____ 3._____ 4._____ 5._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
• If burrow avoidance is infeasible during the non-breeding season or during the breeding season (February 1 through August 31), where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, a qualified biologist shall implement a passive relocation program in accordance with Appendix E1 (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation. • If passive relocation is required, a qualified biologist shall prepare a Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation and for review by CDFW prior to passive relocation activities. The Burrowing Owl Exclusion and Mitigation Plan shall include all necessary measures to minimize impacts to burrowing owls during passive relocation, including all necessary monitoring of owls and burrows during passive relocation efforts. The Mitigation Land Management Plan shall include a requirement for the permanent conservation of off-site Burrowing Owl Passive Relocation Compensatory Mitigation. • If passive relocation is required, the City shall implement the Mitigation Land Management Plan and permanently conserve off-site habitat suitable for burrowing owl at a ratio of 15 acres per passively relocated burrowing owl pair, not to exceed the size of the final project footprint. Land identified to mitigate for passive relocation of burrowing owl			Document compliance and retain in project file		

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
may be combined with other off-site mitigation requirements of the project if the compensatory habitat is deemed suitable to support the species. The Passive Relocation Compensatory Mitigation plan shall be approved by CDFW. If the project is located within the service area of a CDFW-approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits in lieu of placing off-site habitat into a conservation easement, if acceptable to the CDFW. • The City shall mitigate for the loss of acres of burrowing owl foraging habitat by providing habitat management lands at a ratio of ten acres per burrow identified within the final project footprint. These lands must be on suitable habitat for burrowing owl within the Santa Clara County HCP prior to completion of the project. Land identified to mitigate for foraging habitat may be combined with other offsite mitigation requirements of the proposed project if the compensatory habitat is deemed suitable. A Foraging Habitat Compensatory Mitigation Plan describing the proposed mitigation, including suitability for meeting the objectives of the mitigation, and methods for preserving the mitigation values of the habitat shall be provided to the City of Milpitas and CDFW for approval.					
Mitigation Measure BIO-4: Foothill Yellow-legged Frog Protection Measures In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3 only:	City of Milpitas	City of Milpitas	1. Confirm protection measures are included in project specifications.	1. Design 2. Pre-construction 3. Pre-construction 4. Construction	1._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
• A focused habitat assessment to determine the potential for FYLF shall be conducted by a qualified biologist for all areas within 150 feet of the project alignment that may contain suitable habitat for the species. • If the focused habitat assessment finds no suitable aquatic habitat for this species occurs within 150 feet of the proposed project, no further action is necessary • If suitable aquatic habitat is for this species is identified within 150 feet of the proposed project a qualified biologist shall conduct a survey within 48 hours of initial ground disturbing activities within FYLF habitat. The survey area should include all potential suitable habitat in the project area and suitable habitat located within a 100 feet of the project area. o If an FYLF is encountered, all activities within 100 feet of the species shall cease until the species leaves the site. If the species has because entrapped in the project area, it will be safely relocated by a qualified biologist 100 feet from the project area. o To ensure that diseases are not conveyed between work sites by the qualified biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force should be followed at all times. • A qualified biologist shall be present on site during initial ground disturbance in portions of the project area that are suitable upland habitat for FYLF and within 150 feet of potential aquatic habitat.			2. Confirm completion of focused habitat assessment. 3. If suitable habitat is found, verify completion of survey within 48 hours of initial ground disturbance. 4. Confirm buffers established if FYLF are encountered during construction. 5. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	5. Construction	2._____ 3._____ 4._____ 5._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Mitigation Measure BIO-5: Roosting Pallid Bats Protection Measures In addition to **Mitigation Measure BIO-1**, the following measures shall be implemented for the construction of Segment 3: • A qualified biologist shall conduct a pre-construction survey for roosting pallid bats. The survey shall be conducted within 50 feet of project activities within 15 days prior to any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). • If active maternity roosts or non-breeding bat hibernacula are found in trees scheduled to be removed, relocation or other measures shall be determined in consultation with the County and/or CDFW, as appropriate, and a qualified biologist.	City of Milpitas	City of Milpitas, County of Santa Clara County/CDFW if needed	1. Confirm protection measures are included in project specifications. 2. Confirm completion of pre-construction survey. 3. Document consultation with County and/or CDFW if roosting pallid bats found. 4. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Pre-construction 3. Pre-construction 4. Construction	1._____ 2._____ 3._____ 4._____
Mitigation Measure BIO-6: Special Status Plant Surveys The following measures shall be implemented for the construction of Segment 3:	City of Milpitas	City of Milpitas, CDFW/USFWS if needed	1. Confirm requirements are included in project specifications.	1. Design 2. Pre-construction 3. Pre-construction	1._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
• Prior to the commencement of any ground-disturbing activities, surveys for special status plants (fragrant fritillary [*Fritillaria liliacea]* and arcuate bush mallow [*Malacothamnus arcuatus])* shall be conducted in suitable habitats within the proposed project impact area. The surveys shall be conducted in general accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009), California Native Plant Society *Inventory of Rare and Endangered Plants of California* (sixth edition, 2001), and U.S. Fish and Wildlife Service *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (2000) protocols for special status plant surveys. The survey area shall be traversed on foot by walking meandering transects to ensure thorough coverage of the area; surveys shall be timed to ensure adequate coverage of the spring and summer bloom periods; and the surveys shall be floristic in nature (meaning all plant species observed shall be identified to a sufficient level to determine rarity). If no special status plant species are observed during the focused surveys, no further action shall be required. o If special status plants are observed, all special status plant species identified on site shall be mapped onto a site-specific aerial photograph and their location shall be recorded with a Global Positioning System (GPS). Field data shall be recorded on the population size, cover, and associated species. The results shall be evaluated in the context of known local populations (the			2. Confirm pre-construction surveys are conducted. 3. Confirm mapping of special status plants if observed. 4. Confirm restoration plan submittal to CDFW/USFWS if avoidance is not feasible. 5. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	4. Pre-construction 5. Construction	2._____ 3._____ 4._____ 5._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
definition of local population should be determined by a qualified botanist on a species by species basis) for any non-listed special status plant species to determine the extent of impacts to the local population. If impacts are determined to affect less than 10% of the local population of any non-listed special status plant species, no further measures are necessary. If impacts are determined to affect more than 10% of the local population of any non-listed special status plant species the following measure should be implemented. o If feasible, measures shall be implemented to avoid special status plants within the limits of disturbance. If special status plants cannot be avoided, a qualified biologist shall prepare a mitigation and monitoring plan in consultation with wildlife agencies. If a state-listed plant species would be impacted, the restoration plan shall be submitted to CDFW for review and approval. If a federally listed plant species would be impacted, the restoration plan shall be submitted to USFWS for review and approval. The Special Status Plant Mitigation and Monitoring Plan (Plan) shall be developed by a qualified biologist. The Plan shall include at a minimum the following: the species and number of individuals to be relocated; a map depicting the relocation planting area; replanting site preparation methods; irrigation and weed control methods; schedule of replanting and monitoring activities; success criteria; reporting requirements; and a list of suitable contingency measures in the event of relocation failure.					

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Mitigation Measure BIO-7: Preconstruction Nesting Bird Surveys This mitigation applies to the proposed project as a whole, and therefore is required for all five segments. • If construction occurs within the bird breeding season (February 1 through August 31), then no more than seven days prior to initiation of ground disturbance and/or vegetation removal, a nesting bird and raptor pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 300-foot buffer, where feasible. If the project is phased, a subsequent pre-construction nesting bird and raptor survey may be required prior to each phase of construction within the project area. • Pre-construction nesting bird and raptor surveys shall be conducted during the time of day when birds are active and should be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors on site and within the designated vicinity. A report of the nesting bird and raptor survey results, if applicable, shall be submitted to the lead agency for review and approval prior to land use clearance for grading. • If nests are found, their locations shall be flagged. An appropriate avoidance buffer ranging in size from 25 to 50 feet for song birds, and up to 250 feet for raptors depending upon the species and the proposed work activity shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a	City of Milpitas	City of Milpitas	1. Confirm protection measures are included in project specifications. 2. Confirm completion of pre-construction surveys of nesting birds and raptors. 3. Confirm buffers established if nests are found during surveys. 4. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Pre-construction 3. Pre-construction 4. Construction	1._____ 2._____ 3._____ 4._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No ground disturbance shall occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed and all the young have fledged.					
Mitigation Measure BIO-8: Protected Trees This mitigation applies to the proposed project as a whole, and therefore is required for all five segments where trees are to be removed. • Prior to obtaining a permit from the City Public Works Department, a tree survey shall be conducted by an International Society of Arboriculture (ISA) Certified Arborist/City Qualified Arborist for protected trees that occur within 25 feet of the impact area. The tree survey shall identify protected trees, including protected oak trees and woodlands. • Removal of protected trees shall be compensated by the following, in accordance with the City's Tree Maintenance and Protection Ordinance: o Reimbursement to the City Public Works Department for the full costs of time and materials to prune, remove and/or replace trees within the public right-of-way or tree planting easements; o Reimbursement to the City Public Works Department for the value of the removed or damaged tree as determined by an arborist certified by the International Society of Arboriculture utilizing the current edition of the	City of Milpitas	City of Milpitas	1. Confirm protection measures are included in project specifications. 2. Confirm completion of tree survey. 3. Confirm permit has been obtained. 4. Confirm compensation required by permit has been provided, if necessary. Document compliance and retain in project file	1. Design 2. Pre-construction 3. Pre-construction 4. Pre-construction	1._____ 2._____ 3._____ 4._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
"Guide for Plant Appraisal, International Society of Arboriculture"; or o A combination of the above terms as determined by the Public Works Director.					
Cultural Resources					
Mitigation Measure CUL-1: Workers Environmental Awareness Program This mitigation applies to the proposed project as a whole, and therefore is required for all five segments. Prior to construction of the proposed project, the City or the City's construction contractor shall retain a qualified archaeologist meeting the Secretary of the Interior's Standards for archaeology to conduct a WEAP for all construction personnel working on the proposed project. The training shall include an overview of potential cultural resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and notification to a qualified archaeologist in the event of unanticipated discoveries.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm completion of construction crew training. Retain sign-in sheet in project file. Document compliance and retain in project file	1. Design 2. Pre-construction	1._____ 2._____
Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources This mitigation applies to the proposed project as a whole, and therefore is required for all five segments. In the event that archaeological resources are unearthed during construction for the proposed project, all earth disturbing work within 50 feet of the find shall be temporarily suspended or redirected until a qualified archaeologist meeting the Secretary of the Interior's Standards for archaeology has evaluated the nature and significance of the find. Evaluation of significance for the	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm suspension of construction activities if resources are discovered.	1. Design 2. Construction 3. Construction	1._____ 2._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
find may include the determination of whether or not the find qualifies as an archaeological site. Isolated finds do not qualify as historic properties under the National Historic Preservation Act (NHPA) or historical resources under CEQA and require no management consideration under either regulation. Should any resource(s) be identified, an evaluation of eligibility for the NRHP and CRHR may be required through the development of a treatment plan including a research design and subsurface testing through the excavation of test units and shovel test pits. After effects on the find have been appropriately mitigated, work in the area may resume. Mitigation of effects on the find may include a damage assessment of the find, archival research, and/or data recovery to remove any identified archaeological deposits, as determined by a qualified archaeologist. If prehistoric or Native American cultural resources are identified during project construction, a Native American consultant shall also be contacted to provide input regarding the treatment and disposition of the find.			3. If cultural resources are discovered, confirm that construction is halted and appropriate measures are taken. Document compliance and retain in project file		3._____
Mitigation Measure CUL-3: Develop and Implement Paleontological Mitigation Program This mitigation applies to the proposed project as a whole, and therefore is required for all five segments. A qualified paleontologist approved by the City of Milpitas shall be retained to develop and implement a Paleontological Mitigation Program (PMP) following final design and prior to project construction. The PMP shall include the following components: o Prior to the start of construction, construction personnel shall be informed of the appearance of fossils and the procedures for notifying	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm completion of PMP. 3. Confirm construction crew are informed of paleontological resources. Retain	1. Design 2. Pre-construction 3. Pre-construction 4. Construction	1._____ 2._____ 3._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
paleontological staff should fossils be discovered by construction staff. o Any excavations or other ground disturbing activity in areas mapped as high paleontological sensitivity (refer to details in the PRA) shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of excavations, paleontological monitoring could be reduced to weekly spot-checking under the discretion of the qualified paleontologist. o If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist without disrupting construction activity. In some cases larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. o Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data, and maps. o Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the			sign-in sheet in project file. 4. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file		4._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.					
Hazards and Hazardous Materials					
Mitigation Measure HAZ-1: Hazardous Materials Management and Spill Prevention and Control Plan This mitigation applies to the proposed project as a whole, and therefore is required for all 5 segments. Before construction begins, the City shall require its construction contractor to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project-specific contingency plan for hazardous materials and waste operations. The Plan shall be applicable to construction activities, and shall establish policies and procedures according to applicable codes and regulations, including but not limited to the California Building and Fire Codes, and federal and California Occupational Safety and Health Administration (OSHA) regulations. Elements of the Plan shall include, but not be limited to the following: • A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas; • Notification and documentation of procedures; and • Spill control and countermeasures, including employee spill prevention/response training.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in in project specifications. 2. Confirm preparation of Hazardous Materials Management Spill Prevention and Control Plan 3. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Pre-construction 3. Construction	1._____ 2._____ 3._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Mitigation Measure HAZ-2: Contingency Plan for Contaminated Soil or Groundwater This mitigation applies to the proposed project as a whole, and therefore is required for all 5 segments. While there are no known areas of contaminated soil within the project site, the City of Milpitas shall require its construction contractors to follow the procedures below in the event contaminated soil or groundwater is encountered (either visually or through odor detection) during excavation activities: • Stop work in areas of contact; • Notify the San Francisco Bay Regional Water Quality Control Board and the California Department of Toxic Substances Control; • Contain the areas of contamination; • Perform appropriate clean up procedures; and • Segregate, profile, and dispose of all contaminated soil. Required disposal method shall depend on the type and concentration of contamination identified. Any site investigation or remediation shall be performed in accordance with applicable regulations.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in in project specifications. 2. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Construction	1._____ 2._____
Mitigation Measure HAZ-3: Phase I Environmental Site Assessment During the design phase, the City or its contractor shall conduct a Phase I Environmental Site Assessment (ESA) to clarify the potential for soil contamination due to the adjacent open hazardous materials sites. The recommendations set forth in the Phase I ESA shall be implemented before construction begins. Follow-up	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm that Phase I ESA is prepared.	1. Design 2. Design 3. Pre-construction	1._____ 2._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
sampling may be conducted, if necessary, to characterize soil and groundwater quality. Prior to construction, contractors shall be informed of the locations of potential areas of hazardous materials that may be encountered during construction, and shall ensure that safety precautions are in place to avoid or minimize exposure to potentially contaminated soils, and to reduce the potential for accidental damage to underground storage tanks that could cause accidental release of hazardous materials into the environment.			3. Confirm Phase I ESA recommendations are implemented Document compliance and retain in project file		
Mitigation Measure HAZ-4: Implement Fire Safety Construction Practices The City shall require its construction contractor to implement fire safety practices, including but not limited to: clearing dried vegetation or other material that could ignite during construction from staging areas, welding areas, or other areas slated for construction. Construction equipment that includes a spark arrestor shall be equipped in good working order. Additionally, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, such as accidental sparks. Other construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction zones. During construction of the proposed project, the construction contractors shall require vehicles and crews working at the project site to have access to functional fire extinguishers.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Construction	1._____ 2._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Hydrology and Water Quality					
Mitigation Measure HYD-1: Development and Implementation of Frac-Out Contingency Plan If HDD is employed for trenchless installation at creek crossings in Segment 1 and 5, a Frac-Out Contingency Plan shall be developed by the contractor. The Frac-Out Contingency Plan shall include a description of potential short-term and long-term impacts of frac-out in terrestrial and aquatic systems; design and construction criteria to minimize the potential for frac-out, including but not limited to minimum depth and drilling fluid requirements; identification of equipment such as a vacuum truck, absorbent pads, or straw logs, and actions to minimize and contain frac-out, including halting directional boring, relieving pressure, inspecting equipment, and using a standing pipe to contain mud; identification of appropriate follow-up measures, including notification of appropriate entities and environmental compliance documentation. Construction personnel shall be trained to recognize frac-out and briefed on the use of any safety equipment and actions included in the Frac-Out Contingency Plan	City of Milpitas	City of Milpitas	1. Confirm that frac-out contingency plan is developed and measures are included in project specifications. 2. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Construction	1._____ 2._____
Noise					
Mitigation Measure NOI-1: Implement Noise Control Measures during Construction To reduce noise during construction, the City shall require its construction contractor implement the following noise control measures: • **Locate Staging Areas away from Sensitive Receptors.** The City shall require the contractor to	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm pre-construction notification has occurred.	1. Design 2. Pre-construction 3. Construction	1._____ 2._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
select staging areas as far as feasibly possible from sensitive receptors. • **Idling Prohibition and Enforcement.** The City shall prohibit unnecessary idling of internal combustion engines. In practice, this would mean turning off equipment if it would not be used for five or more minutes. • **Equipment Location, Mufflers, and Shielding.** The City shall require its contractors to locate stationary noise-generating construction equipment such as air compressors and generators as far as possible from homes and businesses. Mufflers and/or temporary noise barriers shall be used as necessary to meet the City's applicable sound level limits (unless a variance has been obtained in advance from the City). Use of temporary walls, stockpiles of excavated materials, or moveable sound barrier curtains would be appropriate for construction at the pump station and storage tank sites and can provide a 10 to 15 dBA reduction in noise levels. • **Pre-Construction Notification.** Prior to construction, written notification to residents within 100 feet of the proposed project segment(s) undergoing construction shall be provided, identifying the type, duration, and frequency of construction activities. Notification materials shall also identify a mechanism for residents to register complaints with the City if construction related noise impacts should occur.			3. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file		3._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Mitigation Measure NOI-2: Noise Reduction Features The City shall include noise reduction features as part of the proposed project to ensure that noise levels associated with proposed pump stations would be in conformance with applicable City performance standards (General Plan Policy 6-I-7) avoiding Day-Night Noise Level (Ldn) exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm noise limits at property line are achieved	1. Design 2. Operation	1._____ 2._____
Mitigation Measure NOI-3: Vibration Monitoring The City shall require its contractors to conduct vibration monitoring at any residences or buildings located less than 50-feet from construction activities. Ground vibration level at the nearest residential structure to the construction site will be monitored using vibration sensor(s) or velocity transducer with adequate sensitivity capable of measuring peak particle velocity level in the frequency range of 1 hertz (Hz) to 100 Hz. If the vibration level due to construction activities exceeds 0.2 inch/second, the contractor shall make modifications/revisions to construction methods for approval by the City.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm vibration monitoring is conducted. 3. Monitor construction activities to verify that measures are implemented as needed during construction. Document compliance and retain in project file	1. Design 2. Construction 3. Construction	1._____ 2._____ 3._____
Transportation/Traffic					
Mitigation Measure TRA-1: Develop and Implement Construction Staging and Traffic Management Plan	City of Milpitas	City of Milpitas	1. Confirm requirements are included in	1. Design 2. Pre-construction	1._____

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Prior to construction or the issuance of applicable permits, the contractor shall submit a Traffic Management and Construction Staging Plan to the City of Milpitas for review and approval. The contractor shall work with the City of Milpitas to ensure that the City concurs with the provisions and requirements of the Traffic Management and Construction Staging Plan. This plan shall: • Show the impact of various construction stages, including proposed lane closures, detours, staging areas, and routes of construction vehicles. • Describe traffic control measures that will be implemented to manage traffic and reduce potential traffic impacts in accordance with stipulations of the most recent version of the California Manual of Uniform Traffic Control Devices (CMUTCD). Traffic control measures may include, but are not limited to, flag persons, warning signs, lights, barricades and cones to provide safe passage of vehicular (including cars and buses), bicycle and pedestrian traffic, and access by emergency responders. • Demonstrate the location of transit stops and transit and bicycle routes that would be temporarily impacted by construction activities, and shall recommend places to temporarily relocate transit stops and transit and bicycle routes, if necessary. • Require written notification of the timing, location, and duration of construction activities, and the location of lane closures or detours (if any) to all emergency service providers (fire, police, and ambulance) prior to road closure. Emergency service vehicles shall be given priority for access.			project specifications. 2. Review and approve Traffic Management and Construction Staging Plan. 3. Confirm measures are implemented during construction. Document compliance and retain in project file	3. Construction	2._____ 3._____

Table 2: Improvement Measure Monitoring and Reporting Checklist for the Recycled Water Pipeline Extension Project

Mitigation Measure	Responsible Party	Review & Approval	Monitoring and Reporting Action	Implementation Schedule - Design - Pre-Construction - Construction - Operation	Verification: Status/ Date Completed/ Initials
Recreation					
Improvement Measure REC-1: Effects on Rose Elementary, Randall Elementary, Merryhill Elementary and Middle, and Rancho Middle Schools. The City shall coordinate with school officials to identify the appropriate timing of construction adjacent to school property. Construction shall occur either on weekends or during the summer, when school is not in session.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm coordination with school officials have occurred.	1. Design 2. Pre-construction	1._____ 2._____
Improvement Measure REC-2: Effects on Neighborhood Trails. Prior to construction, the City or its contractors shall post signage along the Hillcrest Park and Ben Rogers Neighborhood Park Trails informing the public of anticipated construction activities and schedule.	City of Milpitas	City of Milpitas	1. Confirm requirements are included in project specifications. 2. Confirm posting of signage.	1. Design 2. Pre-construction	1._____ 2._____