

City of Hayward Recycled Water Project



Initial Study/Mitigated Negative Declaration And Environmental Assessment/Finding of No Significant Impact Report

Prepared by:



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List of Abbreviations

ABWF	average base wastewater flow
ARB	Air Resources Board
BAAQMD	Bay Area Air Quality Management District
Basin	Bay Area Air Basin
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal EPA	California Environmental Protection Agency
Cal/OSHA	State of California Occupational Safety and Health Administration
CALTRANS	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CEQA- Plus	California Environmental Quality Act, Plus Federal Requirements
CESA	California Endangered Species Act
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society's
CWA	Federal Clean Water Act
dBA	Outdoor Ambient Sound levels
DPM	Diesel particulate matter
DTSC	Department of Toxics Substances Control
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact

gpd	gallons per day
gpm	gallons per minute
HCP	Habitat Conservation Plan
I/I	infiltration/inflow
ISA	International Society of Arboriculture Standards
IS	Initial Study
Leq	Equivalent Sound Level
LU	Landscape Unit
mgd	million gallons per day
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone 4
NAAQS	National Ambient Air Quality Standards
NBWRP	North Bay Water Recycling Program
ND	Negative Declaration
NEPA	National Environmental Quality Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service
NO _x	Nitrous Oxides
NPDES	National Pollutant Discharge Elimination System
OHWM	Ordinary High Water Mark
PWWF	Peak wet weather flow
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SR	State Route
SRF	State Revolving Funds
SWPPP	Stormwater Pollution Prevention Permit
SWRCB	State Water Resources Control Board
TAZ	Traffic Analysis Zones
TSP	Total Suspended Particles
USACE	United States Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compounds
WWTP	Wastewater Treatment Plant

Chapter 1 Introduction

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) and an Environmental Assessment/Finding of No Significant Impact (EA/FONSI) that addresses the potential environmental impacts of the City of Hayward's (City) proposed Recycled Water Project (Proposed Project/Action and/or Preferred Alternative) as defined in the City's *Recycled Water Project Facility Plan*. The purpose of the Proposed Project/Action is to augment the existing potable water supplies within the City for the irrigation of landscape as well as industrial uses for cooling towers and boilers within the City.

Many successful recycled water programs receive funding assistance in the form of low-interest loans and in some instances, grants are available to reduce the financial burden of initial capital and implementation costs. Funding programs are offered at times through the United States Department of Interior, Bureau of Reclamation (USBR), United States Department of Agriculture (USDA), the California State Water Resources Control Board (State Board), and/or the California Department of Water Resources (DWR). In addition, local and regional programs, statewide, occasionally offer additional incentives directed at actual deliveries to promote recycling as an offset to potable water demand. It is anticipated that the City will pursue federal funding under the USBR's Public Law 102-575, Title XVI Water Reclamation and Reuse Program (Title XVI). In addition, the City may also seek funds from the State Revolving Fund (SRF) Loan Program that is administered by the State Board on behalf of the U.S. Environmental Protection Agency (USEPA). As a result, the Proposed Project/Action would be subject to the California Environmental Quality Act (CEQA) at a minimum where the City would be the CEQA Lead Agency to ensure that all of the applicable state environmental regulations are adhered to. If Title XVI funds are used, then USBR would be the lead agency under the National Environmental Policy Act (NEPA) to ensure that all federal environmental regulations are adhered to. Under the State Board's SRF Program, the State Board is responsible on behalf of the USEPA for ensuring that the project adheres to federal environmental regulations, including the Endangered Species Act, the National Historic Preservation Act (NHPA) and the General Conformity Rule for the Clean Air Act (CAA), among others. The USEPA has chosen to use the CEQA as the compliance base for California's SRF Loan Program, in addition to compliance with ESA, NHPA, and CAA. Collectively, the State Board calls these requirements CEQA-Plus. Additional federal regulations may also apply.

The purpose of this document is to provide project-level CEQA and NEPA environmental analysis of the City's Proposed Project/Action to augment the existing surface water and groundwater supplies within the City for the irrigation of landscape and industrial use for cooling towers and boilers. What follows is a review and analysis of the major state and federal environmental issues that may be a factor as a result in the construction and/or operation of the Proposed Project/Action. For this analysis, we have reviewed prior and relevant existing environmental documentation and have used a modified CEQA environmental checklist to assess the potential impacts on endangered/threatened species, public health or safety, natural resources, regulated waters, and cultural resources, among others to include and address specific issues associated with CEQA as well as NEPA. Based on our experience with evaluating these kinds of recycled water projects in California, most of the potential environmental issues appear to be short-term/temporary impacts due to construction activities, which can be avoided and/or mitigated to less-than-significant levels. For any potentially significant impact(s) identified, we have identified appropriate mitigation measures and strategies to attempt to avoid and/or reduce those impacts to less-than-significant levels. The information developed is designed to assist the City, USBR and/or the State Board determine what the major potential environmental impacts are to comply with CEQA, NEPA and/or CEQA-plus requirements.

1.1 Project Location, Setting, and Background

The City of Hayward is located in the San Francisco Bay Area in the southern portion of Alameda County. The City has approximately 150,000 residents. The City boundaries extend from the San Francisco Bay on the west to the East Bay hills on the east. Figure 1 illustrates the project location. The City has a Mediterranean coastal climate, with mild dry summers and cool winters. Temperatures vary from average highs in September of 73.5 degrees Fahrenheit (deg F) to average lows in January of 42 degree Fahrenheit. Rainfall averages 18 inches annually with most rain occurring between October and April.

There is a mixture of industrial parks, office parks, commercial areas, golf courses, recreational parks, residential areas, an airport, schools and open space throughout the City. The City has a large and diverse industrial section including food and beverage processors and high-technology manufacturing. Additionally, the City is home to two regional public post-secondary educational institutions - California State University-East Bay and Chabot Community College.

The City operates the City-owned utilities, including water distribution and wastewater collection and treatment services, within the City boundaries. In 1993, the City participated in the preparation of a Recycled Water Master Plan by East Bay Dischargers Authority (EBDA) to investigate potential recycled water projects. In 2007, the City completed a *Recycled Water Feasibility Study* (RMC 2007), including preliminary market and recycled water supply assessment and evaluation of two conceptual alternatives to serve recycled water customers to assess overall feasibility of expanding the City's water supply portfolio to include recycled water. As a result of the Feasibility Study, the City decided to prepare a *Recycled Water Facility Plan* in 2013 for treatment and distribution facilities to assist the City in making informed decisions about the use of recycled water in the City of Hayward. This *Recycled Water Facility Plan* is the basis for this environmental document.

1.2 Goal and Objective and Purpose and Need

The purpose of the Proposed Project/Action is to construct and operate a new recycled water system to allow the City to maximize recycled water to offset potable water sources. There are several drivers for the need to develop a recycled water resource including:

- Increases in San Francisco Public Utility Commission (SFPUC) water charges and potential decreases in SFPUC water availability at current reliability levels
- Potential for increasingly stringent discharge requirements to the San Francisco Bay
- City's desire to evaluate more sustainable alternatives to using potable water for certain applications

In addition, Calpine has constructed and is operating a power generation facility located on the property adjacent to the City's Water Pollution Control Facility (WPCF). Calpine treats secondary effluent from the WPCF for use as tertiary treated recycled water at their power generation facility. The power generation facility has been operational since June 2013. Calpine has indicated that may agree to provide surplus tertiary treated recycled water to the City for reuse, but final agreement has not been reached. Therefore, the Proposed Project/Action assumes that the City will construct a tertiary treatment facility on the WPCF site.

Figure 1
General Location Map



1.3 Document Organization and Review Process

This document is intended to provide a preliminary environmental investigation of the Proposed Project/Action to determine if it may have a significant adverse impact on the environment. This document is organized into the following chapters:

- Chapter 1, Introduction. Chapter 1 describes the background, goals and objectives of the Proposed Project/Action, and document contents.
- Chapter 2, Proposed Project Description and Alternatives. Chapter 2 describes the major components of the Proposed Project/Action and describes the No Project/Action Alternative.
- Chapter 3, Environmental Review and Consequences. Chapter 3 discusses the potential environmental impacts associated with the construction and operation of the Proposed Project/Action. Each resource section of a modified CEQA checklist is followed by a discussion of each potential impact listed in that section. It also presents corresponding mitigation measures proposed to avoid or reduce potentially significant impacts to a less-than-significant level. This checklist has been modified to include additional topics to meet the requirements of NEPA.
- Chapter 4, Determination. Chapter 4 provides the proposed action as a result of this IS/MND and EA/FONSI.
- Chapter 5, Bibliography. Chapter 5 provides a list of reference materials and persons consulted during the preparation of the environmental issues and constraints evaluation.

This Document will be available for a 30-day public review period, during which written comments may be submitted to the following address:

Ms. Suzan England
City of Hayward
3700 Enterprise Avenue
Hayward, CA 94545
Phone: 510.293.5098
suzan.english@hayward-ca.gov

Responses to written comments received by the end of the 30-day public review period will be prepared and included in the final document to be considered by the City, USBR, and/or the State Board prior to taking any discretionary decision/action on the Proposed Project/Action.

Chapter 2 Proposed Project Description and Alternatives

This chapter provides a detailed description of Proposed Project/Action including a discussion of the construction considerations, compliance with the California Code of Regulations (CCR) Title 22 and State Board Requirements, operational plans, and potential approvals and permits that may be necessary. In addition, this section also describes the No Project/Action Alternative.

2.1 Proposed Project/Action Description

The City proposes to construct and operate a recycled water project located within the City of Hayward. The City has prepared a Recycled Water Facility Plan to identify potential users for recycled water within the City, including a conceptual distribution system and an estimate of project costs. Figure 2 provides a schematic of the overall project. As shown on Figure 3, the initial phase of the project consists of installing a new Recycled Water Facility (RWF) located at the City's Water Pollution Control Facility (WPCF) at 3700 Enterprise Avenue, Hayward, California. As shown in Table 1, the RWF would deliver an estimated 290 acre-feet per year of recycled water to 24 customers within the City of Hayward. Table 2, provides a summary of the Proposed Project/Action Facilities.

In addition and as shown in Figure 2, the RWF will be served by 1.5 miles of distribution lines (ranging in diameter from 6 to 8 inches) to the north and south of the WPCF, rehabilitation and connection to an existing and abandoned Shell Oil Pipeline, and over three miles of laterals to customers including installation of customer connections. The majority of recycled water customers will utilize the recycled water for irrigation, with some industrial uses for cooling towers and boilers. The City is pursuing an agreement with Shell Oil to purchase and use the existing abandoned 8-inch diameter pipeline that runs through the City. However, the environmental document assumes both the reuse of the existing abandoned 8-inch Shell Oil Pipeline as well as the construction of a new recycled water pipeline (in the event an agreement with Shell Oil is not reached or the use is otherwise determined infeasible). As a result, we have assumed a worst-case scenario and assumed approximately 3 miles of a new 8-inch pipeline paralleling portions of the Shell Oil Pipeline in existing roadways.

**Table 1
Proposed Project/Action Customers and Demands**

Customer No.	Customer Name	Type of Use	Average Demand (AFY) ^b	Average Demand (mgd) ^c	Peak Month Demand (mgd) ^c
1	Bottling Group LLC (Pepsi)	Combined ^a	31	0.03	0.04
4	Shasta Beverages	Industrial	8	0.01	0.01
5	Rohm & Haas	Industrial	22	0.02	0.02
8	Chabot-Las Positas Community College	Irrigation	6	0.005	0.01
29	Life Chiropractic College	Combined ^a	3	0.003	0.003
30	SCA Packaging	Industrial	2	0.001	0.001
40	Bay Center II	Irrigation	20	0.02	0.001
42	BB&K Franklin Township	Irrigation	13	0.01	0.03
72	Robert Chang & Associates	Irrigation	10	0.01	0.02
79	Caltrans D-4 HDWS	Irrigation	9	0.01	0.02
80	Caltrans D-4	Irrigation	8	0.01	0.02

Customer No.	Customer Name	Type of Use	Average Demand (AFY)^b	Average Demand (mgd)^c	Peak Month Demand (mgd)^c
91	Mt. Eden High School	Irrigation	43	0.04	0.09
98	Eden Garden School	Irrigation	3	0.003	0.01
105	Loren Eden High School	Irrigation	8	0.01	0.02
114	Oliver Sports Park	Irrigation	35	0.03	0.07
116	Mt. Eden Park	Irrigation	21	0.02	0.04
119	Eden Greenway – Part 1	Irrigation	10	0.01	0.02
129	Brenkwitz School	Irrigation	8	0.01	0.02
132	Christian Penke Park	Irrigation	7	0.01	0.01
135	Rancho Arroyo Park	Irrigation	7	0.01	0.01
160	Bay Center II	Irrigation	7	0.01	0.02
163	Winton Industrial Center	Irrigation	7	0.01	0.01
168	Hayward Executive Airport	Combined ^a	4	0.004	0.005
169	Fire Training Center	Combined ^a	1	0.001	0.001
	Total		290	0.3	0.5

Notes:

- a. Either has irrigation as a primary use and industrial as a secondary use, or vice-versa.
- b. Individual customers rounded to the nearest 1 AFY.
- c. Total rounded to the nearest 0.1 mgd.

Description	Units	Proposed
Customers		
Number of Customers	#	24
Annual Average Demand	AFY	290
Peak Month Demand	mgd	0.5
Peak Hour Demand	mgd	0.5
Treatment Facilities		
Influent Pump Station	hp	20
Flocculating Clarifiers ^a	mgd	0.5
Granular Media Filters ^a	mgd	0.5
Chlorine Disinfection	mgd	0.5
Treated Recycled Water Storage		
Storage Tank ^b	MG	0.4
Distribution Pump Station(s)		
Calpine Pump Station ^c	hp	NA
Other Customers Pump Station ^{c, d}	hp	165

Table 2 Proposed Project/Action Facilities		
Description	Units	Proposed
Distribution System		
Total Pipeline Length ^e	LF	23,900
14" Pipe	LF	0
8" Pipe	LF	7,100
6" Pipe	LF	16,800
Retrofit of Abandoned Shell Oil Pipeline for Conveyance	LF	7,460
Connections to Retrofitted Shell Oil Pipeline	#	11
New Pipeline Conveyance (If needed) ^f	LF	15,840

Notes:

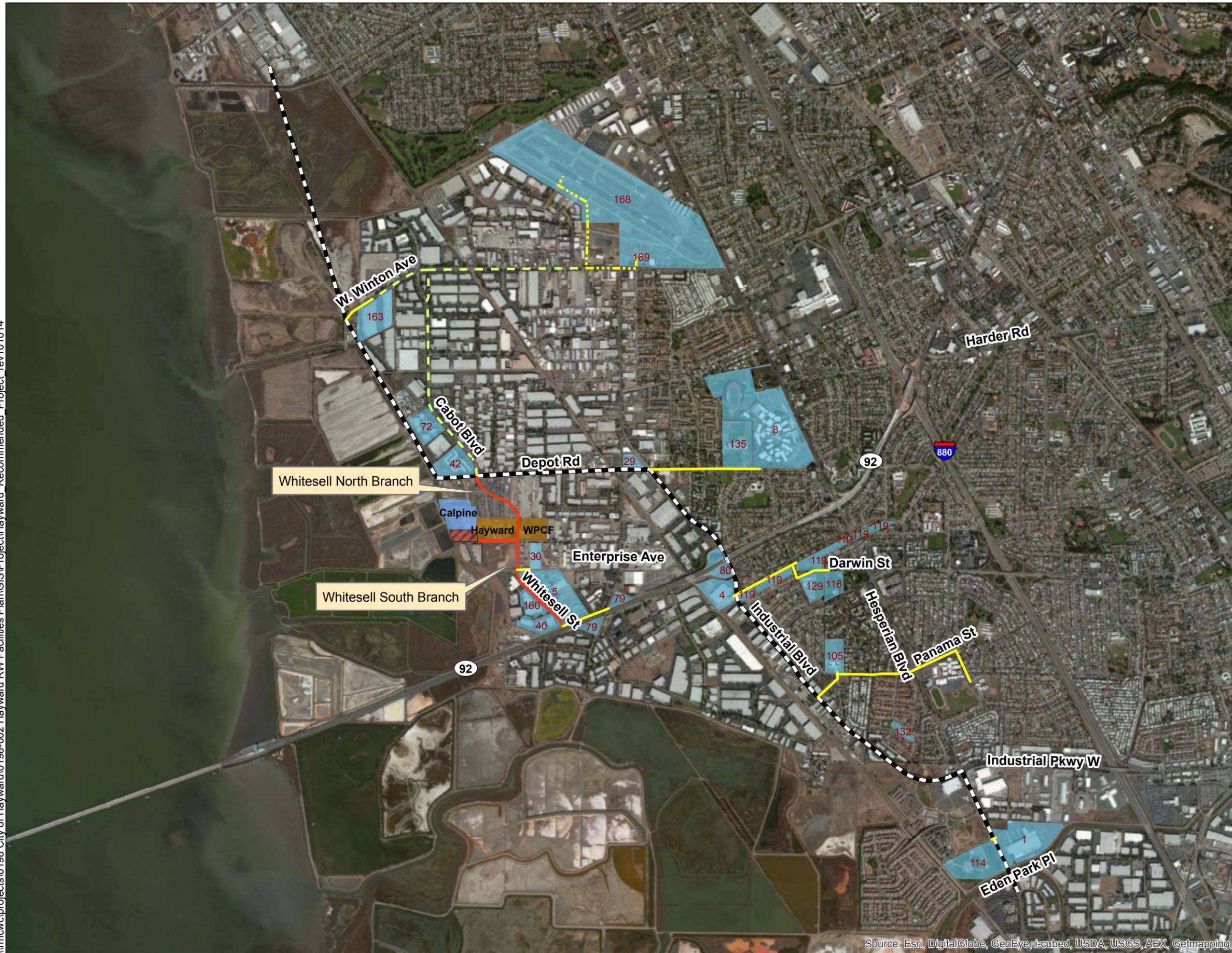
- a. Facilities are oversized to account for 3-4% water consumption/loss through treatment processes.
- b. Storage tank was sized using the SWRCB Office of Water Recycling Storage Excel Workbook and maximum drawdown criteria of 2 feet.
- c. Pumps were sized based on peak hour flow, pipeline headloss, and downstream required pressures
- d. Summary of total distribution pumping needs for each alternative. One or more distribution pump stations maybe utilized.
- e. Pipelines were sized based on peak hour flow, pipeline headloss, and existing pipeline sizes (Shell Oil pipeline).
- f. To replace Shell Oil Pipeline if agreement is not reached.

2.2 Construction Considerations

Construction of the Proposed Project/Action facilities is expected to begin in the spring/summer of 2016 and will likely continue for 18 months into the summer of 2017. Construction work will typically be done within normal working hours, weekdays between the hours of 7 a.m. and 7 p.m., and possibly on Saturdays between the hours of 10 a.m. and 6 p.m. The Proposed Project/Action would be constructed primarily within existing roadways and any damages occurring during construction will be returned to the pre-construction condition or better. Detailed below is a summary of the construction techniques and activities.

- The new RWF system would involve installing a tertiary treatment filtration system within the City's existing WPCF.
- Each customer location will require some level of work due to possible meter location changes and pressure differences affecting overspray requirements. On-site plumbing changes may be required to comply with cross connection requirements.
- The majority of the pipelines would be installed in existing roadways using conventional cut and cover construction techniques and installing pipe in open trenches. It is assumed that up to a 50-foot wide construction corridor would be used to help maximize the efficiency during construction. However, in most places a 25-foot construction corridor could be realized, especially for the smaller diameter pipelines. It is anticipated that excavation would range from 2-5 feet wide and would typically be no more than 6-feet deep.

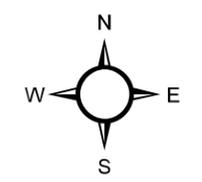
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Legend

- Target Users Parcel (with Customer Number)
- Distribution System**
- Main
- Lateral
- Existing Shell Pipeline/ Repurposed for Main
- Alternative Main
- Alternative Laterals

Figure 2 Proposed Project/ Action Facilities



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, /

Figure 3

Proposed Recycled Water Facility



- Any and all creek or drainage crossings would be constructed using trenchless techniques and will be done in the dry season and will not occur during inclement weather or between October 15 and April 1. Specifically, the existing Shell Oil Pipeline crosses a designated wildlife refuge in the northwestern portion of the Proposed Project/Action area, near the intersection of Depot Road and West Winton Avenue. If a new pipeline is necessary, its alignment in that area would not be placed along the existing Shell Oil Pipeline, but rather along or within the roadway. A flood control channel crosses Depot Road where the road turns west south of the Winton Industrial Center, one of the City's potential recycled water customers. Because of its location, crossing of the flood control channel will likely require microtunneling rather than another trenchless method. As a result, the City proposes microtunneling under the flood channel and will stay out of all creeks, streams, wetlands and/or flood control channels to avoid any adverse environmental impacts to these resources.
- Dewatering of the pipeline as a result of hydrostatic testing during construction as well as any dewatering as a result of operations and maintenance activities shall be discharged to land and/or the sanitary sewer system and not into any creeks, drainages, or waterways and shall require prior approval from the San Francisco Bay Regional Water Quality Control Board.

Construction activities for this kind of project will typically occur with periodic activity peaks, requiring brief periods of significant effort followed by longer periods of reduced activities. In order to characterize and analyze potential construction impacts, the City has assumed that the project would be constructed by two (2) crews of 10-15 workers each and would proceed at a rate of approximately 500-1,000 feet per day. However, specific details may change or vary slightly. Staging areas for storage of pipe, construction equipment, and other materials would be placed at locations (primarily city owned empty lots at the WPCF and adjacent to the City's Hesperian Pump station) that would minimize hauling distances and long-term disruption.

Excavation and grading activities would be necessary for construction of the Proposed Project/Action. Excavated materials resulting from site preparation would either be used on-site during construction or disposed of at a fill area authorized by the City. It is not anticipated that any soils would be imported for this project. Additional truck trips would be necessary to deliver materials, equipment, and asphalt-concrete to the site. During peak excavation and earthwork activities, the Proposed Project/Action could generate up to 40 round-trip truck trips per day. In support of these activities and for the assumptions for this document, the types of equipment that may be used at any one time during construction may include, but not be limited to:

- Track-mounted excavator
- Backhoe
- Grader
- Crane
- Dozer
- Compactor
- Trencher/boring machine
- End and bottom dump truck
- Front-end loader
- Water truck
- Flat-bed delivery truck

- Forklift
- Compressor/jack hammer
- Asphalt paver & roller
- Street sweeper

It is recognized that details of the construction activities and methods may change slightly as the specific details will be developed during final design and by the selected contractor. However, this description provides sufficient information to base the conclusions to probable environmental impacts associated with construction activities for this kind of project. Therefore, as long as the construction methods are generally consistent with these methods and do not conflict with any of the City's design standards or established ordinances, and does not create any new potential environmental impacts that are not described within this document, then no new environmental analyses will likely be required for any minor change in construction activities, timing, and/or schedule.

2.3 Compliance with CCR Title 22 and State Board's Recycled Water Policy

The Proposed Project/Action will be designed and operated in accordance with the applicable requirements of CCR Title 22 and any other state or local legislation that is currently effective or may become effective as it pertains to recycled water. The State Board adopted a Recycled Water Policy (RW Policy) in 2009 to establish more uniform requirements for water recycling throughout the State and to streamline the permit application process in most instances. As part of that process, the State Board prepared an Initial Study and Mitigated Negative Declaration for the use of recycled water. The newly adopted RW Policy includes a mandate that the State increase the use of recycled water over 2002 levels by at least 1,000,000 AFY by 2020 and by at least 2,000,000 AFY by 2030. Also included are goals for storm water reuse, conservation and potable water offsets by recycled water. The onus for achieving these mandates and goals is placed both on recycled water purveyors and potential users. The State Board has designated the Regional Water Quality Control Boards as the regulating entities for the Recycled Water Policy. In this case, the San Francisco Bay Regional Water Quality Control Board (San Francisco RWQCB) is responsible for permitting recycled water projects throughout the San Francisco Bay Area, including the City of Hayward.

The Proposed Project/Action will provide high quality unrestricted use tertiary treated recycled water and make it available to users within the City. All irrigation systems will be operated in accordance with the requirements of Title 22 of the CCR, the State Board Recycled Water Policy, and any other local legislation that is effective or may become effective as it pertains to recycled water and any reclamation permits issued by the San Francisco RWQCB. Reclamation permits typically require the following:

- Irrigation rates will match the agronomic rates of the plants being irrigated;
- Control of incidental runoff through the proper design of irrigation facilities;
- Implementation of a leak detection program to correct problems within 72 hours or prior to the release of 1,000 gallons whichever occurs first;
- Management of ponds containing recycled water to ensure no discharges; and
- Irrigation will not occur within 50 feet of any domestic supply wells, unless certain conditions have been met as defined in Title 22.

2.4 Operational and Maintenance Plans

The City has existing qualified staff and will be responsible for the operations, maintenance, and support staff to distribute recycled water. The City will require and enforce an irrigation schedule among its users. The City will develop an irrigation schedule in a way that optimizes use of the distribution system. The irrigation schedule may be modified in the future, but the initial assumptions are outlined below.

- Landscaping Demand Factor - 2.5 AFY/acre
- Landscape Irrigation hours (Summer) 6pm – 6am
- Summer storage filling 6pm – 6am
- Winter storage filling 24 hours per day

By irrigating using the above scheduling, peak flows are reduced and pipe sizing is optimized.

Maintenance procedures will include 1 or 2 existing City workers who will routinely inspect the pipeline alignment and connections for leaks and repair facilities on an as needed basis as well as conduct scheduled preventative maintenance procedures to keep the facilities in good working order.

2.5 Responsible Agencies, Permits and Approvals

Table 3 below summarizes the potential permits and/or approvals that may be required prior to construction of the Proposed Project/Action. Additional local approvals and permits may also be required.

Table 3	
Regulatory Requirements, Permits, and Authorizations for Project/Action Facilities	
Agency	Type of Approval
California Department of Fish and Wildlife (CDFW)	Stream Bed Alteration Agreement/Waiver, if necessary
California Department of Public Health (CDPH)	Title 22 Engineers' Report for the Distribution and Use of Recycled Water
California Department of Transportation (Caltrans)	Encroachment Permit
California Division of Occupational Safety and Health	Construction activities in compliance with CAL/OSHA safety requirements
City of Hayward Department of Public Works	Grading and clearing
	Encroachment Permit
Pacific Gas and Electric, cable and telecommunications providers	Infrastructure review, as applicable
San Francisco Bay Area Air Quality Management District (BAAQMD)	Authority to Construct
	Permit to Operate
San Francisco Bay Conservation and Development Commission	Permit to Operate
San Francisco Bay Regional Water Quality Control Board	National Pollutant Discharge Elimination System
	General Permit for Stormwater Discharge

Table 3
Regulatory Requirements, Permits, and Authorizations for Project/Action Facilities

Agency	Type of Approval
	Associated with Construction Activities
	Recycled Water Use Permit Amendment

2.6 No Project/Action Alternative

Under the No Project/Action Alternative, the City's Proposed Project/Action would not be constructed and therefore impacts as a result of this specific Proposed Project/Action as described here within this document would not be encountered. For this analysis, it is assumed that the existing baseline condition and the future No Project/Action condition are the same. This No Project/Action Alternative assumes that none of the Proposed Project/Action facilities would be constructed. As a result, the impact description and summary compares the Proposed Project/Action to the No Project/Action. With that said, if the City does not implement the Proposed Project/Action, one of two scenarios will likely need to be implemented to meet the City's future water supply demands: 1) meet increased demands through more aggressive conservation measures or 2) procure additional water supplies to meet the City's increased water supply demands. However, at this time, the specific details of these activities are not known and therefore it would be difficult to have a meaningful discussion of their potential environmental impacts in relation to the Proposed Project/Action.

Chapter 3 Environmental Review and Consequences

This chapter evaluates the potential for the Proposed Project/Action to have a significant effect on the environment. Using a modified CEQA Environmental Checklist Form as presented in Appendix G of the CEQA Guidelines as a framework, the checklist identifies the potential environmental impacts of the Proposed Project/Action pursuant to both CEQA and NEPA. This document compares the Proposed Project/Action against the No Project/Action Alternative as is required by CEQA and NEPA.

Environmental Impact Designations

For this checklist, the following designations are used to distinguish between levels of significance of potential impacts to each resource area:

Potentially Significant Impact. 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 resultant potentially significant impacts are identified, an EIR/EIS may need to be prepared to meet CEQA and NEPA requirements, respectively.

Less-than-Significant Impact with Mitigation. 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/Action description.

Less-than-Significant Impact. 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.

Environmental Resources Evaluated

The following are the key environmental resources that were evaluated in this document.

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Hazards/Hazardous Materials | <input checked="" type="checkbox"/> Population and Housing |
| <input checked="" type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input checked="" type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Land Use / Planning | <input checked="" type="checkbox"/> Socioeconomics |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Geology / Soils | <input checked="" type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

3.1 Aesthetics

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

Discussion

- (a) **No Impact.** The Proposed Project/Action is not located in or near any designated scenic vistas and therefore would not have a substantial impact on a scenic vista. Specifically, scenic views in the project vicinity are primarily limited to distant hills to north, west, and east. The construction activities of the Proposed Project/Action would not substantially interfere with views of these resources from surrounding publicly accessible areas. No impacts are anticipated and no specific mitigation measures are required.
- (b) **No Impact.** The Proposed Project/Action is not located near or within a designated state scenic highway and therefore would not damage scenic resources, including but not limited to trees, outcroppings, and historic buildings within a state scenic highway. The Proposed Project/Action's construction activities would not be located within any area that has been designated as a scenic vista or scenic resource. Therefore, no impacts are anticipated and no specific mitigation measures are required.
- (c) **Less-than-Significant Impact.** Construction of the Proposed Project/Action's pipeline facilities would be visible and would involve temporary negative aesthetic effects, including open trenches as well as the presence of construction equipment and materials. Construction impacts of the pipeline facilities would be temporary and are considered to be less-than-significant. Once built, the pipeline facilities would be buried underground and not visible. Construction of the Recycled Water Facility (RWF) would occur within the City's Water Pollution Control Facility (WPCF) and would not have any significant visual impacts. Operation of the Proposed Project/Action would not affect any visual resources. Therefore, no impacts are anticipated and no specific mitigation measures are required.

- (d) **No Impact.** The Proposed Project/Action would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The Proposed Project/Action would not be constructed during nighttime hours and once constructed there would be no lights or other sources of light or glare. Therefore no impacts would occur and no mitigation is required.

3.2 Agricultural Resources

Would the Proposed Project/Action:	<u>Potentially Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **No Impact.** The Proposed Project/Action would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The Proposed Project/Action would be constructed within existing roadways within the City. In addition, the Proposed Project/Action will not be located on any existing agricultural fields or farmlands. As a result, the Proposed Project/Action would not convert any farmland to non-agricultural usage. No mitigation is required or necessary.
- (b) **No Impact.** The Proposed Project/Action would not conflict with existing zoning for agricultural use or a Williamson Act contract. As stated above, the Proposed Project/Action would be constructed within existing roadways within the City. In addition, the Proposed Project/Action will not be located on any existing agricultural fields or farmlands. As a result, the Proposed Project/Action would not conflict with agricultural practices and/or a Williamson Act Contract. No mitigation is required or necessary.
- (c) **No Impact.** As mentioned above, the Proposed Project/Action would be primarily constructed within existing roadways within the City. Therefore, the Proposed Project/Action would not involve changes in the existing environment, which, due to their location or nature, would result in the conversion of farmland or agricultural practices to non-agricultural use. No mitigation is required or necessary.

3.3 Air Quality

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Conflict with an application plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **Less-than-Significant Impact.** The Proposed Project/Action is located within the jurisdiction of the San Francisco Bay Area Air Quality Management District (BAAQMD), the regional agency empowered to regulate air pollutant emissions from stationary sources in the Bay Area. BAAQMD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review process. The Project site is located in the San Francisco Bay Area Air Basin. This Basin is currently designated “non-attainment” for the state 1-hour ozone standard. To meet planning requirements related to this standard, the BAAQMD developed a regional air quality plan, the Bay Area 2000 Clean Air Program (CAP), the BAAQMD’s most recent triennial update of the 1991 Clean Air Plan. A significant impact would occur if a project conflicted with the plan by not mirroring assumptions of the plan regarding population growth and vehicle-miles-traveled. The Proposed Project/Action could accommodate population growth because the Project would provide recycled water, making potable supplies more available,

and thus increasing the overall supply of water. However, the addition of up to 290 acre-feet of recycled water for irrigation within the City would not significantly result in any increased growth or development.

Once constructed, the Proposed Project/Action would not generate any new significant operational vehicle trips. Any impacts are considered to be less-than-significant. No mitigation is required or necessary.

- (b) **Less-than-Significant Impact with Mitigation.** The entire San Francisco Bay Area is currently designated “non-attainment” for the state PM₁₀ and PM_{2.5} standards, and the state 1-hour ozone standard. The Bay Area is in “attainment” or “unclassified” with respect to the other ambient air quality standards. As part of the effort to reach attainment of these standards, the BAAQMD has established thresholds of significance for several criteria air pollutants associated with both the construction and operation of projects¹. Specifically, a project is considered to have a significant regional air quality impact if it would result in an increase in emissions of 80 pounds per day or 15 tons per year of PM₁₀, and/or of reactive organic gases (ROG) or nitrogen oxides (NO_x). ROG and NO_x are both ozone precursors.

Construction activities at the project site would begin in the spring/summer of 2016 and continue into the summer of 2017 and would include excavation and grading activities. Overall construction work would require the use of various types of mostly diesel-powered equipment, including bulldozers, wheel loaders, excavators, and various kinds of trucks.

Construction activities typically result in emissions of particulate matter, usually in the form of fugitive dust from activities such as trenching and grading. Emissions of particulate matter vary day-to-day, depending on the level and type of activity, silt content of the soil, and the prevailing weather. Estimated construction emissions for the pipeline construction were generated using the Sacramento Metropolitan Air Quality Management District’s i.e. URBEMIS Construction Emissions Model (See Appendix A). Please note that this model was used because it has been recommended by BAAQMD. The URBEMIS Construction Emissions Model is a Microsoft Excel worksheet available to assess the emissions of linear construction projects. The estimated construction equipment fleet-mix and the acreage and soil volume were put into the URBEMIS model in order to determine potential emissions. Table 4 summarizes the Proposed Project/Action’s estimated construction related emissions output from the URBEMIS model in maximum pounds per day as well as in estimated tons for the entire construction duration and compares that data with BAAQMD’s daily and project/year thresholds. As shown in Table 4, the Proposed Project/Action’s construction

¹ BAAQMD’s CEQA Guidelines were developed to assist local jurisdictions and lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality. These CEQA Guidelines were updated in June 2010 to include reference to thresholds of significance (“Thresholds”) adopted by the Air District Board on June 2, 2010. The Guidelines were further updated in May 2011. On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the Air District had failed to comply with CEQA when it adopted the Thresholds. The court did not determine whether the Thresholds were valid on the merits, but found that the adoption of the Thresholds was a project under CEQA. The court issued a writ of mandate ordering the District to set aside the Thresholds and cease dissemination of them until BAAQMD had complied with CEQA. In view of the court’s order, BAAQMD is no longer recommending that the Thresholds be used as a generally applicable measure of a project’s significant air quality impacts. Lead agencies will need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Although lead agencies may rely on BAAQMD’s CEQA Guidelines (updated May 2011) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, BAAQMD has been ordered to set aside the Thresholds and is no longer recommending that these Thresholds be used as a general measure of a project’s significant air quality impacts. Lead agencies may continue to rely on the Air District’s 1999 Thresholds of Significance and they may continue to make determinations regarding the significance of an individual project’s air quality impacts based on the substantial evidence in the record for that project.

emissions would only exceed BAAQMD’s daily and/or annual significance thresholds for NOx.

BAAQMD’s approach to analyses of construction impacts as noted in their BAAQMD CEQA Guidelines is to emphasize implementation of effective and comprehensive basic construction control measures rather than detailed quantification of emissions. With implementation of the mitigation measures below, the Proposed Project/Action’s construction-related impacts would be further reduced to less-than-significant levels.

Table 4: Estimated Proposed Project/Action Construction Emissions					
Construction Phase	Construction Emissions (lbs/day)				
	ROG	CO	NOx	PM ₁₀	PM _{2.5} *
Grubbing/Land Clearing	8.1	36.2	38.9	3.4	2.4
Grading/Excavation	15.0	71.2	113.2	7.1	5.7
Drainage/Utilities/Subgrade	13.0	62.2	88.9	6.2	4.9
Paving	8.5	41.9	45.2	3.1	2.8
Maximum (lbs/day)**	15	71.2	113.2	7.1	5.7
Total Tons Project/ Year	2.5	11.9	17.2	1.2	0.9
BAAQMD’s Thresholds of Significance***					
Pounds per Day	80	550	80	80	80
Tons per Project/Year	15	100	15	15	15
Potentially Significant Impact?	No	No	Yes	No	No
Notes					
* BAAQMD does not have a threshold for PM _{2.5} ; however, the same threshold for PM ₁₀ is used herein.					
**Maximum daily emissions refers to the maximum emissions that would occur in one day. Not all phases will be occurring concurrently; therefore, the maximum daily emissions are not a summation of the daily emission rates of all phases.					
*** BAAQMD’s May 2011 Thresholds were invalidated by Alameda County Superior Court and BAAQMD recommends using its 1999 Thresholds.					

BAAQMD’s approach to analyses of construction impacts as noted in their BAAQMD CEQA Guidelines is to emphasize implementation of effective and comprehensive basic construction control measures rather than detailed quantification of emissions. With implementation of the mitigation measures below, the Proposed Project/Action’s construction-related impacts would be further reduced to less-than-significant levels.

Mitigation Measure AIR-1: Basic Construction Mitigation Measures Recommended for ALL Proposed Projects. During all phases of construction, the following procedures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AIR-2: Additional Construction Mitigation Measures for Projects with Emissions over the Thresholds. During all phases of construction, the following procedures shall be implemented as appropriate:

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- Windbreaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Windbreaks should have at maximum 50 percent air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Minimizing the idling time of diesel powered construction equipment to five (5) minutes.
- The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent Air Resources Board (ARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Use low volatile organic compounds (VOC) (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- Requiring all contractors use equipment that meets the California Air Resources Board's (CARB) most recent certification standard for off-road heavy-duty diesel engines.

Once operational, emission sources resulting from project operations would be associated with primarily regular maintenance and inspection work. Operational impacts would be considered less-than-significant. With respect to project conformity with the federal Clean Air Act, the Proposed Project/Action's potential emissions are well below minimum thresholds and are below 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.

- (c) **Less-than-Significant Impact with Mitigation.** As stated above, the entire San Francisco Bay Area is currently designated "non-attainment" for the state PM₁₀ and PM_{2.5} standards, and the state 1-hour ozone standard. The Bay Area is in "attainment" or "unclassified" with respect to the other ambient air quality 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. Air emissions would be generated during construction of the Proposed Project/Action, which could increase criteria air pollutants, including PM₁₀. However, construction activities would be temporary and would incorporate the implementation of **Mitigation Measure AIR-1 and AIR-2** as identified above.

As mentioned above, upon completion of construction activities emission sources resulting from Project operations would be associated with regular maintenance and inspection work. Given the limited number of trips that would be required, only limited emissions would be generated; these emissions would be expected to be well below BAAQMD guidelines. See Table 4 above. As such, the Proposed Project/Action would not result in a cumulatively considerable net increase of any criteria air pollutants, and the impacts would be even less-than-significant with implementation of **Mitigation Measure AIR-1 and AIR-2** as identified above.

- (d) **Less-than-Significant Impact with Mitigation.** Diesel emissions would result both from diesel-powered construction vehicles and any diesel trucks associated with project

operation. Diesel particulate matter (DPM) has been classified by the California Air Resources Board as a toxic air contaminant for the cancer risk associated with long-term (i.e., 70 years) exposure to DPM. Given that construction would occur for a limited amount of time and that only a limited number of diesel trucks would be associated with operation of the project, localized exposure to DPM would be minimal. As a result, the cancer risks from the project associated with diesel emissions over a 70-year lifetime are very small. Therefore, the impacts related to DPM would be less-than-significant. Likewise, as noted above, the project would not result in substantial emissions of any criteria air pollutants either during construction or operation with the implementation of **Mitigation Measure AIR-1 and AIR-2**; therefore, the project would not expose sensitive receptors, including residents in the project vicinity, to substantial pollutant concentrations. With the implementation of **Mitigation Measure AIR-1 and AIR-2**, impacts to sensitive receptors would be less-than-significant. No additional mitigation measures are required.

- (e) **Less-than-Significant Impact.** During construction of the Proposed Project/Action, the various diesel-powered vehicles and equipment in use on-site could create minor odors. These odors are not likely to be noticeable beyond the immediate area and, in addition, would be temporary and short-lived in nature. In addition the use of recycled water would not produce any objectionable odors. Therefore, odor impacts would be less-than-significant. No specific mitigation measures are required.
- (f) **Less-than-Significant Impact with Mitigation.** During construction of the Proposed Project/Action, the various diesel-powered vehicles and equipment in use on-site could generate greenhouse gas emissions. Specifically, while BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions, the Proposed Project/Action would exceed the thresholds for NO_x that would generate greenhouse gas emissions that could be considered significant. However, with implementation of **Mitigation Measure AIR-1 and AIR-2** any potential to generate greenhouse gas emissions would be reduced to less-than-significant levels. No additional mitigation measures are required.
- (g) **No Impact.** The Proposed Project/Action would not conflict with an application plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. No mitigation is necessary or required.

3.4 Biological Resources

Would the Proposed Project/Action:	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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 Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

A record search of CDFW’s California Natural Diversity Database (CNDDDB) and USFWS’ Species List was conducted for the area within a five-mile radius of the Project area to identify previously reported occurrences of state and federal special-status plants and animals. In addition, a field visit of the pipeline alignment was conducted on August 7, 2014 to determine the potential for special-status species to occur within the general vicinity of the Proposed Project/Action Study Area (i.e.

Construction Area) as described in Chapter 2 – Project Description. These field visits were not intended to be protocol-level surveys to determine the actual absence or presence of special-status species, but were conducted to determine the potential for special-status species to occur within the Proposed Project/Action Area. No special-status species were observed during the field visits. Figure 4 shows the location of known state and federal listed species within the Project/Action Area. Appendix B provides a summary of the potential for state and federal special status species to occur within the Proposed Project/Action Study Area. Appendix C provides an analysis of the potential for the Proposed Project/Action to adversely effect federal special status species in order to satisfy the requirements for CEQA-Plus and NEPA and the federal resource agencies.

- (a) **Less-than Significant Impact with Mitigation.** The Proposed Project/Action would be primarily constructed within existing roadways in the City and within the City’s existing WPCF. While the Proposed Project/Action would occur in a highly urban area, the potential exists that construction activities could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS.

A review of the CDFW’s CNDDDB and USFWS’ Species List and indicates that there is not suitable habitat for special status plant species (See Appendix B and Figure 4). However, there is the potential (albeit very minor) for the construction activities of the Proposed Project/Action to affect the Alameda whipsnake (*Masticophis lateralis euryxanthus*), which is both a federal and state listed species (i.e Threatened). As a precautionary measure due to the fact that final design has not been established, these potential impacts to the Alameda whipsnake would be minimized to less-than-significant levels with the incorporation of the following mitigation measures and procedures:

BIO-1: Conduct Alameda whipsnake Pre-construction Surveys. Prior to construction, the City shall conduct focused pre-construction surveys for the Alameda whipsnake at all project sites/areas within or directly adjacent to areas identified as having high potential for whipsnake occurrence. Project sites within high potential areas shall be fenced to exclude snakes prior to project implementation. Methods for pre-construction surveys, burrow excavation, and site fencing shall be developed prior to implementation of any project located within or adjacent to areas mapped as having high potential for whipsnake occurrence. Such methods would be developed in consultation or with approval of USFWS for any development taking place in USFWS officially designated Alameda whipsnake critical habitat. Pre-construction surveys of such project sites shall be carried out by a permitted biologist familiar with whipsnake identification and ecology. These are not intended to be protocol-level surveys but designed to clear an area so that individual whipsnakes are not present within a given area prior to initiation of construction. At sites where the project footprint would not be contained entirely within an existing developed area footprint and natural vegetated areas would be disturbed any existing animal burrows shall be carefully hand-excavated to ensure that there are no whipsnakes within the project footprint. Any whipsnakes found during these surveys shall be relocated according to the Alameda Whipsnake Relocation Plan. Snakes of any other species found during these surveys shall also be relocated out of the project area. Once the site is cleared it shall then be fenced in such a way as to exclude snakes for the duration of the construction activities. Fencing shall be maintained intact throughout the duration of the construction activities. All construction activities shall be performed during daylight hours, or with suitable lighting so that snakes can be seen. Vehicle speed on the construction

site shall not exceed 5 miles per hour. In addition, there are numerous mature trees within and adjacent to the proposed pipeline construction activities. Mature trees can serve as perching or nesting sites for migratory birds, including raptors, and their removal can adversely affect breeding behavior. Also portions of the pipeline could be located adjacent to the Hayward Regional Shoreline wildlife refuge near the intersection of Depot Road and West Winton Avenue). As a result, construction activities could affect the western burrowing owl (*Athene cunicularia*), the California Clapper rail (*Rallus longirostris obsoletus*), and the California least tern (*Sternula antillarum*). These species may occur within the area, which are protected under the U.S. Fish and Wildlife Service, the California Fish and Wildlife Code and/or the Federal Migratory Bird Treaty Act. Potential impacts to special status birds would be minimized to less-than-significant levels with the incorporation of the following mitigation measures and procedures:

Mitigation Measure BIO-2: Conduct Breeding Surveys. For construction activities that occur between February 1 and August 31, preconstruction breeding bird surveys shall be conducted by a qualified biologist prior to and within 10 days of any initial ground-disturbance activities. Surveys shall be conducted within all suitable nesting habitat within 250 feet of the activity. All active, non-status passerine nests identified at that time shall be protected by a 50-foot radius minimum exclusion zone. Active raptor or special-status species nests shall be protected by a buffer with a minimum radius of 200 feet. CDFW and USFWS recommend that a minimum 500-foot exclusion buffer be established around active white-tailed kite and golden eagle nests. The following considerations apply to this mitigation measure:

- Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. If no breeding birds are encountered, then work may proceed as planned.
- Exclusion zone sizes may vary, depending on habitat characteristics and species, and are generally larger for raptors and colonial nesting birds. Each exclusion zone would remain in place until the nest is abandoned or all young have fledged.
- The non-breeding season is defined as September 1 to January 31. During this period, breeding is not occurring and surveys are not required. However, if nesting birds are encountered during work activities in the non-breeding season, disturbance activities within a minimum of 50 feet of the nest should be postponed until the nest is abandoned or young birds have fledged.

Mitigation Measure BIO-3: Conduct Nesting Surveys. For any construction activities initiated between March 15 and September 1, surveys for nesting special status species are required within 250 feet of areas of disturbance. If an active nest is found, a qualified biologist shall monitor the nest during construction activities within 250 feet of the nest to determine whether project construction may result in abandonment. The biologist shall continue monitoring the nest until construction within 250 feet of the nest is completed, or until all chicks have completely fledged. If the monitor determines that construction may result in abandonment of the nest, all construction activities within 250 feet shall be halted until the nest is abandoned or all young have fledged.

The implementation of the above mitigation measures would reduce impacts associated with the Proposed Project/Action to a level of less-than-significant. No additional mitigation measures are required.

- (b) **No Impact.** The Proposed Project/Action would not have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. As a result, no impact is expected and no specific mitigation is required.
- (c) **No Impact.** The Proposed Project/Action would not have an 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. As a result, no impact is expected and no specific mitigation is required.
- (d) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action would not interfere substantially with the movement of any native resident or migratory fish or wildlife corridors, or impede the use of native wildlife nursery sites. As stated above, the Proposed Project/Action would be constructed primarily within existing roadways within the City. However, construction activities could adversely affect the Alameda whipsnake, the western Burrowing Owl, the California clapper rail, and the California least tern, and non-listed special-status nesting raptors. Many raptors are sensitive to loud construction noise such as that associated with grading and demolition. Such activities could cause nest abandonment or destruction of individual active raptor nests. Because the Alameda whipsnake is a threatened species under the state and federal lists and the western burrowing owl as well as all raptors and their nests are protected under 3503.5 of the California Fish and Wildlife Code, construction of the Proposed Project/Action could result in a significant impact to these species. However, with the implementation of **Mitigation Measures BIO-1, BIO-2, and BIO-3** these potential impacts would be reduced to less-than-significant levels.
- (e) **No Impact.** The Proposed Project/Action is not expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. As a result, no impact is expected and no specific mitigation is required.
- (f) **No Impact.** The Proposed Project/Action would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there is no impact and no mitigation is required.

3.5 Cultural Resources

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

On July 14, 2014, a records search was conducted by staff at the Northwest Information Center, Sonoma State University, Rohnert Park, California. The record search included the Project Area of Potential Effect (APE) and a 0.50-mile radius outside the project boundaries. The record search included current inventories of National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), California State Historic Landmarks, and the California Points of Historical Interest. In addition, a field reconnaissance survey was conducted on August 7, 2014 to determine the presences of any known cultural resources. In short, no cultural resources were identified in the records search and on the field survey that would be affected by the construction and/or operation of the Proposed Project/Action. A more complete analysis is provided in Appendix D.

- (a) **No Impact.** The Proposed Project/Action would not cause a substantial adverse change in the significance of a historical resource. No listed or historical properties exist within the Proposed Project/Action Area. As a result, there is no impact and no specific mitigation is required.
- (b) **Less-than-Significant Impact with Mitigation.** No known significant archaeological resources are known to exist within the Project area. Therefore, the Proposed Project/Action is not likely to cause a substantial adverse change in the significance of unique archaeological resources. Nevertheless, there is a slight chance that construction activities of the Proposed Project/Action could result in accidentally discovering unique archaeological resources. However, to further reduce this less-than-significant impact, the following mitigation measures are recommended:

Mitigation Measure CR-1: Halt work if cultural resources are discovered. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 100 feet of the resources shall be halted and after notification, the City shall consult with a qualified archaeologist to assess the significance of the find. If any find is determined to be significant (CEQA Guidelines 15064.5[a][3] or as unique archaeological resources per Section 21083.2 of the California Public Resources Code), representatives of the City and a qualified archaeologist shall meet to determine the appropriate course of action. In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the lead agency shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.

With the implementation of the above mitigation measure, the Proposed Project/Action would not result in impacts to archeological resources.

- (c) **Less-than-Significant Impact with Mitigation.** Paleontologic resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils – particularly vertebrate fossils – are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

No known significant paleontological resources exist within the Project area. Also, because the Proposed Project/Action would result in minimal excavation in bedrock conditions, significant paleontologic discovery would be unlikely. However, fossil discoveries can be made even in areas of supposed low sensitivity. In the event a paleontologic resource is encountered during project activities, implementation of the following mitigation measure would reduce potential impacts to less-than-significant.

Mitigation Measure CR-2: Stop work if paleontological remains are discovered. If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City.

With the implementation of the above mitigation measure, the Proposed Project/Action would not result in impacts to unique paleontological or geological resources.

- (d) **Less-than-Significant Impact with Mitigation.** There are no known burial sites within the project area. Nonetheless, the possibility exists that subsurface construction activities may encounter undiscovered human remains. Accordingly, this is a potentially significant impact. Mitigation is proposed to reduce this potentially significant impact to a level of less-than-significant.

Mitigation Measure CR-3: Halt work if human remains are found. If human remains are encountered during excavation activities conducted for the Proposed

Project/Action, all work in the adjacent area shall stop immediately and the Alameda County Coroner's office shall be notified. If the Coroner determines that the remains are Native American in origin, the Native American Heritage Commission shall be notified and will identify the Most Likely Descendent, who will be consulted for recommendations for treatment of the discovered human remains and any associated burial goods.

3.6 Geology and Soils

	<u>Potentially Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
Would the Proposed Project/Action:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **Less-than-Significant Impact.** The Proposed Project/Action consists primarily of a pipeline system that would be constructed within and under existing roadways. In addition, the Proposed Project/Action will involve the construction of a tertiary filtration system at

the City's existing WPCF. However, the Proposed Project/Action does not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i) Rupture of a known earthquake fault. The Proposed Project/Action is located in an area of known faults in the region, including the Hayward Fault. The Proposed Project/Action area is susceptible to strong ground shaking during an earthquake that could occur along known faults in the region, including the Hayward Fault. However, the Proposed Project/Action does not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to a seismic event over existing conditions.
- ii) Strong seismic ground shaking. The Proposed Project/Action area is susceptible to strong ground shaking during an earthquake that could occur along known faults in the region, including the Hayward Fault. However, the Proposed Project/Action does not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to a seismic event over existing conditions.
- iii) Seismic-related ground failure, including liquefaction. Liquefaction is defined as the transformation of a granular material from a solid state into a liquefied state as a consequence of increased pore pressure and decreased effective stress. Liquefaction typically is caused by strong ground shaking during an earthquake. The potential for liquefaction to occur depends on both the susceptibility of near-surface deposits to liquefaction, and the likelihood that ground motions will exceed a specified threshold level. Much of the city is adjacent to the Hayward fault and thus will be exposed to strong ground shaking during a large earthquake on the fault. The State of California has mapped the distribution of liquefaction hazard within the Hayward area as part of ongoing efforts to implement the statewide Seismic Hazards Mapping Act. Areas most susceptible to liquefaction in Hayward are underlain by granular sediments within younger alluvium and include low-lying lands adjacent to creeks and estuaries. However, the Proposed Project/Action does not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to an event causing liquefaction over existing conditions.
- iv) Landslides. The eastern part of Hayward is located on steep, hilly terrain underlain by geologic materials prone to slope instability during large earthquakes. Landslides and slope instability can also occur as a result of wet weather, weak soils, improper grading, improper drainage, steep slopes, adverse geologic structure, or a combination of any of these factors. Landslides are most likely to occur in areas where they have occurred previously. Landslides and debris flows can result in damage to property and cause buildings to become unsafe either due to distress or collapse during sudden or gradual slope movement. Construction on slopes steeper than about 15 percent typically require special grading, special foundation design, or site modification to mitigate slope ground conditions and reduce the potential for slope instability. Slope instabilities produced by seismically induced strong ground motions are likely to occur in the eastern, hilly parts of the city, given the occurrence of a moderate or large earthquake on the Hayward Fault or a nearby seismic source. The Proposed Project/Action is not located in the eastern part of Hayward and does not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to an event causing landslides.

In summary, the Proposed Project/Action would not expose people or structures to potential adverse effects, including the risk of loss, injury, or death. Any impacts are less than significant and no mitigation is required.

- (b) **Less-than-Significant Impact.** The operation of the Proposed Project/Action would not result in any excavation and earthmoving that could cause erosion or loss of topsoil. Construction activities associated with the Proposed Project/Action would involve excavation and earthmoving that could cause erosion or loss of topsoil. Construction activities would involve excavation, moving, filling, and the temporary stockpiling of soil. Earthwork associated with development construction could expose soils to erosion. However, the Proposed Project/Action would be constructed in existing roadways and utility corridors and would be covered and paved immediately after the pipeline has been installed. In addition, all areas not paved would be re-vegetated immediately after construction. As a result, any soil erosion or loss of topsoil would be considered less-than-significant.
- (c) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action may be located in areas that consist of medium dense to dense fine granular soils. In addition, perched groundwater could be present. As such, the soil in some areas of the alignment may have a high susceptibility to liquefaction during seismic shaking. Other portions of the Proposed Project/Action may be less susceptible to liquefaction and related damage. Lateral spreading, often associated with liquefaction, is less likely because there are no steep banks or hard ground bordering the Proposed Project/Action area, but could still potentially be a hazard. As a result, the following mitigation is proposed:
- Mitigation Measure GEO-1: Perform Geotechnical Investigation.** The City shall require a design-level geotechnical study to be prepared prior to project implementation to determine proper design and construction methods, including design of any soil remediation measures as required to reduce hazards caused by landslides, liquefaction, and/or lateral spreading.
- With the incorporation of this mitigation measure, any resulting impacts would be considered to be less-than-significant.
- (d) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). However, with the incorporation of **Mitigation Measures GEO-1** above, any impacts would be less-than-significant.
- (e) **Less-than-Significant Impact.** The Proposed Project/Action would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no adverse effects to soil resources are expected. No mitigation is required.

3.7 Hazards and Hazardous Materials

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- (a) **Less-than-Significant Impact with Mitigation.** Operation of the Proposed Project/Action would not involve the routine transportation, use, storage, and/or disposal of hazardous materials. However, construction of the Proposed Project/Action could temporarily increase the transport of

materials generally regarded as hazardous materials 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 similarly related materials would be brought onto the project site, used, and stored during the construction period. The types and quantities of materials to be used could pose a significant risk to the public and/or the environment. In addition, construction of the Proposed Project/Action could result in the exposure of construction workers and residents to potentially contaminated soils. As a result the following mitigation measures are proposed:

Mitigation Measure HAZ-1: Store, Handle, Use Hazardous Materials in Accordance with Applicable Laws. The City shall ensure that all construction-related and operational hazardous materials and hazardous wastes shall be stored, handled, and used in a manner consistent with relevant and applicable federal, state, and local laws. In addition, construction-related and operational hazardous materials and hazardous wastes shall be staged and stored away from stream channels and steep banks to keep these materials a safe distance from near-by residents and prevent them from entering surface waters in the event of an accidental release.

Mitigation Measure HAZ-2: Properly Dispose of Contaminated Soil and/or Groundwater. If contaminated soil and/or groundwater is encountered or if suspected contamination is encountered during project construction, work shall be halted in the area, and the type and extent of the contamination shall be identified. A contingency plan to dispose of any contaminated soil or groundwater will be developed through consultation with appropriate regulatory agencies.

Mitigation Measure HAZ-3: Properly Dispose of Hydrostatic Test Water. Dewatering of the pipeline during hydrostatic testing during construction, as well as any dewatering as a result of operations and maintenance activities, shall be discharged to land or the sanitary sewer system and not into any creeks, drainages, or waterways and shall require prior approval from the San Francisco Bay Regional Water Quality Control Board.

- (b) **Less-than-Significant Impact with Mitigation.** The operation of the Proposed Project/Action could create an additional significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. However, with the incorporation of **Mitigation Measure HAZ-1** identified above, any potential impacts are considered to be less-than-significant. As with all construction activities, the potential exists for accidents to occur, which could result in the release of hazardous materials into the environment. With the incorporation of **Mitigation Measures HAZ-1 and HAZ-2** identified above, potential impacts are considered to be less-than-significant.
- (c) **Less-than-Significant Impact.** Construction of portions of the pipeline segments of the Proposed Project/Action would be located within one-quarter mile and would serve recycled water to several schools for irrigation purposes (See Table 1: Proposed Project/Action Customers and Demands on pages 2-1 and 2-2 above). Although construction activities would require the use of some hazardous materials, due to the short duration and limited extent of construction activity, the potential for accidental release of hazardous materials associated with construction activities to affect nearby school children would be considered less-than-significant. No mitigation is required.

- (d) **Less than Significant Impact with Mitigation.** The Proposed Project/Action is not located on a site that is known to be included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and therefore would not create a significant hazard to the public or the environment. However, a records search was conducted using the State of California Department of Toxic Substance Control's Envirostor Database and GIS mapping system and there are identified hazardous waste or materials within the Proposed Project/Action Area. However, the Proposed Project/Action pipeline alignment does not appear to pass through any identified hazardous wastes sites or materials. In addition, with the incorporation of **Mitigation Measure HAZ-2**, any potential impacts would be reduced to less than significant levels.
- (e) **Less-than-Significant Impact.** The Proposed Project/Action is located within two miles of the Hayward Executive Airport. However, construction and/or operation of the Proposed Project/Action would not adversely affect an airport or airport operations, including, noise, take-offs, landings, flight patterns, safety, light, navigation, or communications between aircraft and the control tower within the Project area. Any potential impacts are considered to be less-than-significant. No specific mitigation is required.
- (f) **Less-than-Significant Impact.** The Proposed Project/Action is located within two miles of the Hayward Executive Airport. In addition, there might be private airstrips in the vicinity of the Proposed Project/Action. However, construction and/or operation of the Proposed Project/Action would not adversely affect an airport or airport operations, including, noise, take-offs, landings, flight patterns, safety, light, navigation, or communications between aircraft and the control tower within the Project area. Any potential impacts are considered to be less-than-significant. No specific mitigation is required.
- (g) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. As a result, no impacts are anticipated and no mitigation is required. However, when installing the pipelines in the existing roadways, the Proposed Project/Action could block access to nearby roadways for emergency vehicles. With the incorporation of the following mitigation, potential impacts are considered to be less-than-significant.

Mitigation Measure HAZ-4: Develop and Maintain Emergency Access Strategies. In conjunction with Mitigation Measure Traffic-1: Develop a Traffic Control Plan identified below in the Traffic and Transportation section, comprehensive strategies for maintaining emergency access shall be developed. Strategies shall include, but not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. Also, police, fire, and other emergency service providers shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures.

- (h) **Less-than-Significant Impact with Mitigation.** Construction of the Proposed Project/Action would be located within an urban setting and is not generally located in an area where there is the risk of wildland fire. Specifically, a records search of the California Department of Forestry and Fire Protection Fire Severity mapping system does not regard the Proposed Project/Action Area to be in an area of moderate or high risk to wildfires. As a result, there is little potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires. However, the potential exists that construction activities could cause a fire, especially in a drought situation or in the dry season. With the incorporation of the following mitigation measure, any potential impacts are considered to be less than significant.

Mitigation Measure HAZ-5 Fire Prevention and Control: The City shall comply with all federal, state, county and local fire regulations pertaining to burning permits and the prevention of uncontrolled fires. The following measures shall be implemented to prevent fire hazards and control of fires:

- A list of relevant fire authorities and their designated representative to contact shall be maintained on site by construction personnel.
- Adequate firefighting equipment shall be available on site in accordance with the applicable regulatory requirements.
- The level of fire hazard shall be posted at the construction office (where visible for workers) and workers shall be made aware of the hazard level and related implications.
- The City or its contractor shall provide equipment to handle any possible fire emergency. This shall include, although not be limited to, water trucks; portable water pumps; chemical fire extinguishers; hand tools such as shovels, axes, and chain saws; and heavy equipment adequate for the construction of fire breaks when needed. Specifically, the City or its contractor shall supply and maintain in working order an adequate supply of fire extinguishers for each crew engaged in potentially combustible work such as welding, cutting, and grinding.
- All equipment shall be equipped with spark arrestors.
- In the event of a fire, the City or its contractor shall immediately use resources necessary to contain the fire. The City or contractor shall then notify local emergency response personnel.
- Any and all tree-clearing activities (if any) are to be carried out in accordance with local rules and regulations for the prevention of forest fires.
- Burning shall be prohibited.
- Flammable wastes shall be removed from the construction site on a regular basis.
- Flammable materials kept on the construction site must be stored in approved containers away from ignition sources.
- Smoking shall be prohibited on the construction site.

3.8 Hydrology and Water Quality

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 that would result in substantial erosion of siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality? (erosion potential)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation of seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **Less-than-Significant Impact with Mitigation.** Excavation, grading, and construction activities associated with the Proposed Project/Action could violate water quality as those activities would expose and disturb soils, resulting in potential increases in erosion and siltation in the Project area. Construction during the rainy season could result in increases in erosion, siltation, and water quality issues. Generally, excavation, grading, paving, and other construction activities would expose disturbed and loosened soils to erosion by wind and runoff. Construction activities could therefore result in increased erosion and siltation, including nutrient loading and increasing the total suspended solids concentration. Erosion and siltation from construction have the potential to impact the creeks and drainage crossings, therefore posing a potentially significant impact to water quality. With the incorporation of the following mitigation measures, any potential impacts to water quality as a result of construction are reduced to less-than-significant levels.

Mitigation Measure HWQ-1: Implement Construction Best Management Practices.

To reduce potentially significant erosion and siltation, the City and/or its selected contractor(s) shall obtain a Stormwater Pollution Prevention Permit (SWPPP) and implement Best Management Practices and erosion control measures as required by the San Francisco RWQCB. Best Management Practices to reduce erosion and siltation shall include the following measures: Avoidance of construction activities during inclement weather; limitation of construction access routes and stabilization of access points; stabilization of cleared, excavated areas by providing vegetative buffer strips, providing plastic coverings, and applying ground base on areas to be paved; protection of adjacent properties by installing sediment barriers or filters, or vegetative buffer strips; stabilization and prevention of sediments from surface runoff from discharging into storm drain outlets; use of sediment controls and filtration to remove sediment from water generated by dewatering; and returning all drainage patterns to pre-existing conditions.

Mitigation Measure HWQ-2: Avoid cutting through the creeks. As described in the Proposed Project/Action description, all creek crossings will be crossed by using trenchless technologies such as micro tunneling, directional drilling, or suspending the pipeline on the downstream side of a bridge. Construction crews shall avoid entering the stream channels during installation. With these mitigation measures in place, the Proposed Project/Action is unlikely to have a direct and/or indirect adverse effect on water quality standards and/or waste discharge requirements. Once constructed, the operation and maintenance of the Proposed Project/Action will not adversely affect water quality standards and/or waste discharge requirements.

In addition, the operation of the Proposed Project/Action and application of recycled water for irrigation on landscape will increase salts and nutrient loadings on the soils that could result in significant impacts to adjacent surface and groundwater resources. The City's existing potable water supply includes surface water from the SFPUC that has an average TDS level of approximately 71 milligrams per liter (mg/l)². At build out, the Proposed Project/Action would offset approximately 290 afy of that supply with recycled water for irrigation and industrial cooling tower purposes. The proposed new recycled water supply would have an average TDS level of approximately 535 mg/l³ which would result in an approximately 750 percent increase in salt loading for the 290 afy of water

² San Francisco Public Utilities Commission. San Francisco Water Power Sewer. 2013 Annual Water Quality Report.

³ City of Hayward, *Updated Recycled Water Facility Plan*, September 2013. (Ranges from 430 to 640 mg/L)

to be used for irrigation purposes. It is assumed that with proper irrigation best management practices, recycled water operations would have an 80 percent irrigation efficiency, meaning that 80 percent of the applied recycled water would be lost through evapotranspiration and the remaining 20 percent of the flow would percolate through the root zone. All of the applied salts are assumed to remain with the 20 percent flow and would percolate into the groundwater as a result of winter rains. The increased salt loading would result in approximately 161 tons per year. However, in context to the overall groundwater basin, this incremental increase is not considered to be a significant impact as it would remain predominately within the perched upper groundwater layer that is separated from the groundwater basin by a clay layer. Specifically, the main aquifer in the Project area is the Niles Cone Subbasin of the Santa Clara Valley Groundwater Basin. The Niles Cone Subbasin west of the Hayward Fault is composed of a series of gently westward dipping aquifers separated by extensive clay aquitards; including the Newark Aquifer, which is confined except at the forebay area, and deeper confined aquifers including Centerville and Fremont. The Newark aquifer is an extensive permeable gravel and sand layer between 40 to 140 feet below ground surface, except in the forebay area where it begins near the surface. The aquifer is overlain by a thick layer of Young Bay Mud, which may be considered a restrictive layer with very low permeability, extending to the east of I-880. The immediate underlying geology in the vicinity of the Project area consists mainly of Young Bay Mud (California Groundwater Bulletin 118). Based on the City's current treated effluent water quality and the underlying hydrogeological and soil characteristics of the area, no potential issues are anticipated with the use of recycled water for irrigation. Also, recycled water has higher amounts of nitrogen, phosphorus, and potassium than potable supplies. Thus, recycled water would help alleviate the need to use fertilizers that are more readily applied if potable supplies are used for irrigation and which are not accounted for in its TDS calculations. Further, with the implementation of the following recycled water best management practices, any of these impacts can be further reduced and remain to be less-than-significant.

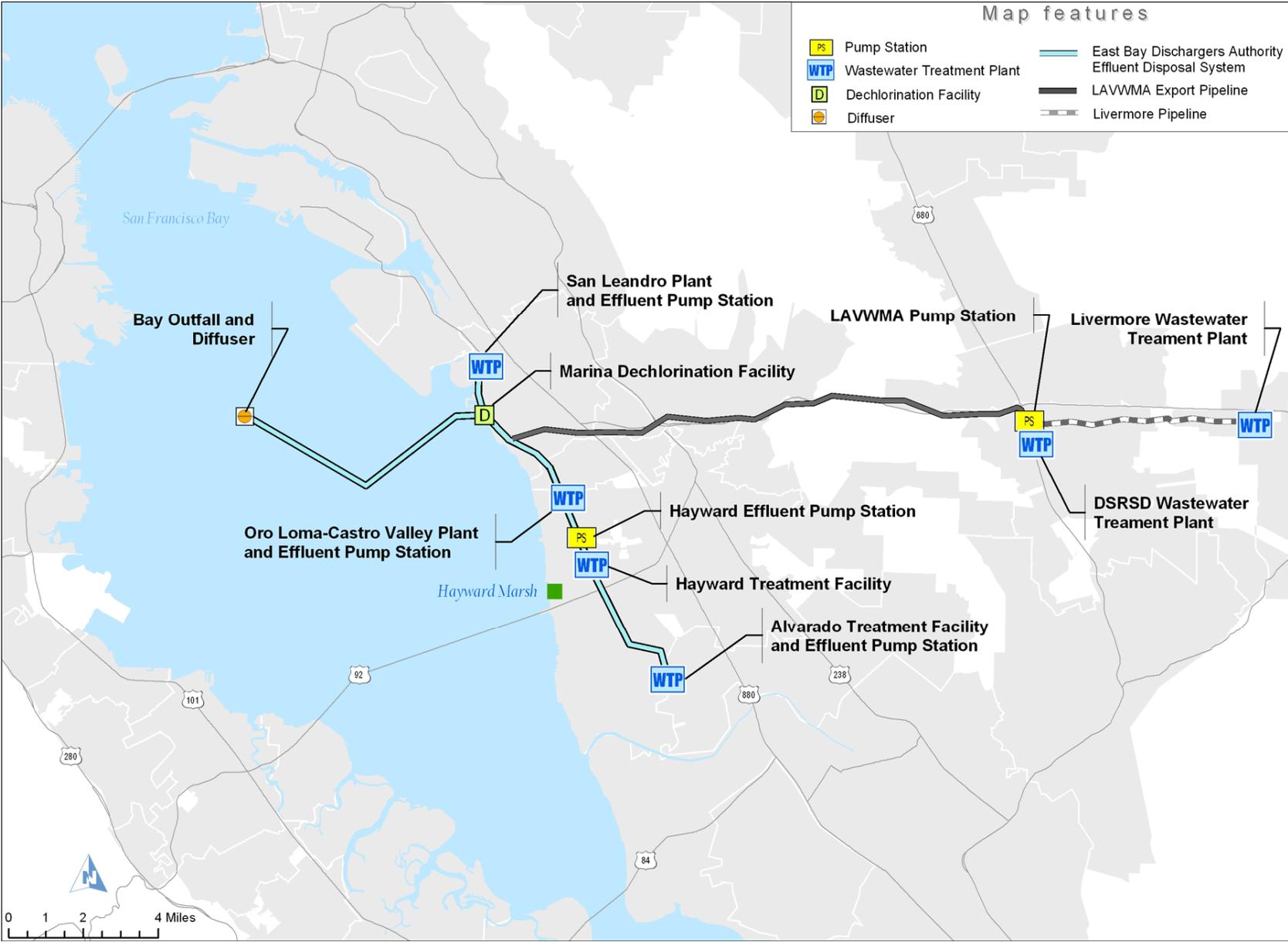
Mitigation Measure HWQ-3: Implement Recycled Water Best Management Practices. In order to help reduce the potential effects of increased salt loading potential as a result of using recycled water, the City shall:

- Apply water consistent with Title 22 requirements and in amounts (frequency and intensity) which meet the demands of the plant (agronomic rates), but not in excessive amounts such that salts buildup in the soil beyond the root zone and/or otherwise are leached to groundwater;
- Ensure that adequate soil drainage is maintained;
- Ensure that salt-sensitive plants (e.g. Colonial bentgrass) are not to be spray wet;
- Replace salt-sensitive plants with salt-tolerant plants (e.g. Bermudagrass);
- Addressing sodium and alkalinity concerns through addition of water and soil amendments, including addition of gypsum; and
- Comply with the State Board's General Waste Discharge Requirements of Recycled Water Use (Water Quality Order 2014-0090).

With the implementation of **Mitigation Measures HWQ-1, HWQ-2, and HWQ-3**, any water quality impacts as a result of the use of recycled water will be reduced to less-than-significant levels. No additional mitigation measures or demineralization facilities would be required.

Also, the Proposed Project Action would remove 290 afy or approximately 0.25 million gallons per day (mgd) and associated pollutants from being discharged to the San Francisco Bay. As shown on Figure 5, the City of Hayward discharges its wastewater (approximately 12 mgd) to the

Figure 5 East Bay Dischargers Wastewater Common Outfall System



San Francisco Bay through the East Bay Dischargers Authority (EBDA) Common Outfall. The EBDA Outfall has an overall discharge capacity of an average dry weather flow of 106 mgd and includes discharges from the City of Hayward, the City of San Leandro, the Oro Loma Sanitary District, the Castro Valley Sanitary District, the Union Sanitary District, and Livermore-Amador Valley Water Management Agency (LAVWMA). Current average dry weather discharge flows in the EBDA common outfall are approximately 74 mgd. To put this in perspective, the City would eliminate approximately 2% of its discharges of 12 mgd to the San Francisco Bay and overall this decrease would represent approximately 0.34% of the overall discharge to the San Francisco Bay of all of the EBDA member agencies (i.e. 74mgd). This reduction in discharge would generally represent a beneficial impact to the San Francisco Bay. However, the quantity of this reduction is so small in comparison to the total discharge and the San Francisco Bay, that it is essentially unnoticeable and not measureable by any practical standards. This reduction in flow would not violate any water quality standards or wastewater discharge requirements.

- (b) **No Impact.** Construction and/or operation of the Proposed Project/Action would not 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. Construction of the Proposed Project/Action would be done primarily within existing roadways and subsurface excavation would be limited to 3-6 feet below surface elevation and would not interfere with groundwater supplies. Once constructed, the pipeline will also not adversely affect groundwater supplies. Therefore, no adverse impacts are anticipated and no mitigation is required.
- (c) **Less-than-Significant Impact with Mitigation.** Construction and/or operation of the Proposed Project/Action would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site. As described in the Project Description, the Proposed Project/Action would be located primarily within existing roadways. With the implementation of **Mitigation Measure HWQ-1**, above, the Proposed Project/Action would not significantly alter any existing drainage areas.
- (d) **Less-than-Significant Impact with Mitigation.** Construction and/or operation of the Proposed Project/Action would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in flooding on- or off-site. As described in the Project Description, the Proposed Project/Action would be located within existing roadways. With the implementation of **Mitigation Measures HWQ-1, HWQ-2, and HWQ-3**, above, the Proposed Project/Action would not significantly alter any existing drainage areas.
- (e) **No Impact.** The Proposed Project/Action would not result in any new significant impervious surfaces and would not create new areas of low permeability. The Proposed Project/Action would be located primarily within existing roadways. The Proposed Project/Action would be returned to pre-construction conditions and would not increase the impervious surfaces and therefore would not create new areas of low permeability. The construction of the RWF would create a new, but very small impervious layer at the existing WPCF, which is not considered to be a significant impact. In addition, any additional run-off would be treated on-site at the WPCF. As a result, no significant additional runoff will be generated by the Proposed Project/Action. Therefore, the Proposed Project/Action would not result in exceeding the capacity of existing or planned storm water drainage systems. No impacts would occur and no mitigation is necessary.

- (f) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action would not substantially affect water quality. As discussed earlier, the construction of the Proposed Project/Action could result in minor, temporary, and highly localized soil erosion and siltation issues. However, with the incorporation of **Mitigation Measure HWQ-1, HWQ-2, and HWQ-3** above, potential impacts to water quality would be reduced to less-than-significant levels.
- (g) **No Impact.** The Proposed Project/Action would not redirect flood flows or otherwise place housing within a 100-year flood hazard area. No impact is expected and no mitigation is required or necessary.
- (h) **No Impact.** The Proposed Project/Action would generally not place exposed structures within a 100-year flood hazard area. The pipeline facilities would be primarily located underground and the RWF would be located at the City's existing WPCF and out of the 100-year flood hazard area. City standards require floor elevations of new development within the floodplain to be at least one foot above the 100-year flood height and/or prohibit development within the floodway (generally, the stream channel required to carry the 100-year flood waters). No impact is expected and no mitigation is required or necessary.
- (i) **No Impact.** The Proposed Project/Action would not expose people or structures to a significant risk of loss, injury, or death involving flooding; including flooding as a result of a failure of a levee or dam. No impact is expected and no mitigation is required or necessary.
- (j) **No Impact.** The Proposed Project/Action would not expose people or structures to a significant risk of loss, injury, or death involving a seiche or tsunami. Tsunamis are a series of waves typically produced by an offshore earthquake, volcanic eruption, or landslide. A tsunami with a wave height of 20 feet at the Golden Gate Bridge, which is likely to occur approximately once every 200 years, would result in a run-up of less than 10 feet above sea level if it reached Hayward. Areas most likely to be inundated by tsunami run-up within the city are marshlands, tidal flats, and former bay margin lands that are now artificially filled but are still at sea level. As a result, the Proposed Project/Action does not expose people or structures to potential substantial adverse effects, including the risk of loss and injury due to a tsunami event over existing conditions. In addition, the Proposed Project/Action area is essentially level, with minimal to no potential hazards from mudflows. No impact is expected and no mitigation is required or necessary.

3.9 Land Use and Planning

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **No Impact.** The Proposed Project/Action would not physically divide an established community. The Proposed Project/Action would be primarily constructed within and under existing roadways within the City. The Proposed Project/Action would not result in a disruption, physical division, or isolation of existing residential or open space areas. As a result, no impact is expected and no mitigation is required or necessary.
- (b) **No Impact.** The Proposed Project/Action would be constructed within and under existing roadways within the City. The Proposed Project/Action would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project area. In fact, the City has developed strategic plans and policies to encourage the use of recycled water. Therefore, no impacts are anticipated and no mitigation is required.
- (c) **No Impact.** The Proposed Project/Action would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. As stated above, the Proposed Project/Action would be constructed within existing roadways within the City. For this reason, no impacts are expected and no mitigation is required or necessary.

3.10 Mineral Resources

<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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Would the Proposed Project/Action:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- (a) **No Impact.** The Proposed Project/Action site is not located on a site that is identified as a significant source of mineral resources. Specifically, the Proposed Project/Action is not located in an area identified as containing mineral resources classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state. The only designated "sector" of regional significance in Hayward meeting tests of economic feasibility and current compatible land use that is to be protected from land uses incompatible with mineral extraction is La Vista Quarry, located in the unincorporated area east of Mission Boulevard and Tennyson Road. "Probable" and "potential" resource zones have been designated in the vicinity of the quarry. No other significant aggregate or mineral resources are located in the City. The Proposed Project/Action is not located near this area and would not affect any sources of significant mineral resources. As a result, the Proposed Project/Action would not result in the loss of availability of known mineral resources; therefore, no impact is expected. No mitigation is required.
- (b) **No Impact.** The City's General Plan does not identify any locally important mineral resources or recovery sites in the Proposed Project/Action's area. Further, as discussed in (a), the Proposed Project/Action would be unlikely to result in the loss of availability of a mineral resource deposit that has been identified as a mineral resource of value. Therefore, no adverse impacts are anticipated and no mitigation is required.

3.11 Noise

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action result in:				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- (a) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action has the potential to generate noise during the construction phase through the use of equipment and construction vehicle trips. Construction of the Proposed Project/Action would generate temporary and intermittent noise. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Back-up beepers associated with trucks and equipment used for material loading and unloading at the staging areas and along the whole pipeline alignment would generate significantly increased noise levels over the ambient noise environment in order to be discernable and protect construction worker safety as required by OSHA (29 CFR 1926.601 and 29 CFR 1926.602). Residences and/or businesses in the vicinity of the staging areas and along the whole pipeline alignment would thus be exposed to these elevated noise levels.

Construction activities associated with the Proposed Project/Action would be temporary in nature and related noise impacts would be short-term. However, since construction activities could substantially increase ambient noise levels at noise-sensitive locations, construction noise could result in potentially significant, albeit temporary, impacts to sensitive receptors. Compliance with the City noise ordinance and implementation of the following mitigation measures is expected to reduce impacts related to construction noise, to a less-than-significant level. The following mitigation measures are proposed:

Mitigation Measure NOI-1: Limit Construction Hours. Construction activities will be limited to the least noise-sensitive times and will comply with the City's noise ordinances. Construction, alteration, and other related activities shall be allowed on weekdays between the hours of 7 a.m. and 7 p.m., and on Saturdays between the hours of 10 a.m. and 6 p.m. Construction activities shall not exceed the outdoor ambient sound level (dBA) of 86 dBA.

Mitigation Measure NOI-2: Locate Staging Areas away from Sensitive Receptors. The City's construction specification shall require that the contractor select staging areas as far as feasibly possible from sensitive receptors. Currently, planned staging areas are at the City's WPCF and the Hesperia Pump Station.

Mitigation Measure NOI-3: Maintain Mufflers on Equipment. The City's construction specifications shall require the contractor to maintain all construction equipment with manufacturer's specified noise-muffling devices.

Mitigation Measure NOI-4: Idling Prohibition and Enforcement. The City shall prohibit and enforce unnecessary idling of internal combustion engines. In practice, this would mean turning off equipment if it will not be used for five or more minutes.

Mitigation Measure NOI-5: Equipment Location and Shielding. Locate all stationary noise-generating construction equipment such as air compressors and standby power generators as far as possible from homes and businesses.

With the incorporation of the above mitigation measures, noise impacts as result of construction-related activities of the Proposed Project/Action would be considered less-than-significant.

Once constructed, the Proposed Project/Action would not create any new sources of operational noise. Therefore, operation of the pipeline would not result in any significant noise impacts. No mitigation is required.

- (b) **Less-than-Significant Impact with Mitigation.** Operation of the Proposed Project/Action would not result in exposing people to or generating excessive groundborne vibration or noise impacts. Construction of the Proposed Project/Action could likely result in minor and temporary increases in groundborne vibration or noise. However, construction activities would be temporary. With the incorporation of **Mitigation Measures NOI-1 through NOI-5** impacts associated with the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be reduced to a less-than-significant level.
- (c) **No Impact.** The operation of the Proposed Project/Action would not increase noise in and around the Project area. Once constructed, the operation of the pipeline facilities would not result in any noise. The Proposed Project/Action would not cause a permanent increase in ambient noise levels in the project vicinity above levels existing without the Project. Therefore, no impacts would occur and no mitigation is required.

- (d) **Less-than-Significant Impact with Mitigation.** Project construction activities may lead to a temporary increase in ambient noise levels in the project vicinity above levels existing without the project. With the implementation of **Mitigation Measures NOI-1 through NOI-5** impacts resulting in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project would be reduced to a less-than-significant level.
- (e) **Less-than-Significant Impact.** The Proposed Project/Action is located within two miles of the Hayward Executive Airport. However, construction and/or operation of the Proposed Project/Action would not adversely affect an airport or airport operations, including, noise, take-offs, landings, flight patterns, safety, light, navigation, or communications between aircraft and the control tower within the Project area. The Proposed Project/Action would not expose people residing or working in the Project area to excessive noise levels. Any potential impacts are considered to be less-than-significant. No specific mitigation is required.
- (f) **Less-than-Significant Impact.** The Proposed Project/Action is located within two miles of the Hayward Executive Airport. In addition, there might be private airstrips in the vicinity of the Proposed Project/Action. However, construction and/or operation of the Proposed Project/Action would not adversely affect an airport or airport operations, including, noise, take-offs, landings, flight patterns, safety, light, navigation, or communications between aircraft and the control tower within the Project area. The Proposed Project/Action would not expose people residing or working in the Project area to excessive noise levels. Any potential impacts are considered to be less-than-significant. No specific mitigation is required.

3.12 Population and Housing

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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Would the Proposed Project/Action:

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- (a) **No Impact.** The Proposed Project/Action would provide recycled water, making potable supplies more available, thus increasing the overall supply of water indirectly. However, as growth in the City of Hayward is controlled by the General Plan, the new use of a recycled water supply as a result of the Proposed Project/Action is not expected to result in increased development. Therefore, the Project is not anticipated to substantially change existing water demands and induce population growth in the area. The Proposed Project/Action would be to serve the City with up to 290 afy of tertiary treated recycled water for irrigation and industrial purposes. This would help supplement the City’s current water supplies and reduce reliance on SFPUC’s water deliveries, but would not be a sufficient supply to induce urban growth in the area. In addition, construction, operation, and maintenance would not result in any substantial increase in numbers of permanent workers/employees. Therefore, no impacts are anticipated and no mitigation is required.
- (b) **No Impact.** The Proposed Project/Action would not result in displacing substantial numbers of existing housing or necessitating the construction of replacement housing elsewhere. The Proposed Project/Action would be constructed within existing roadways and/or utility corridors within commercial, industrial, and residential zonings within the City. Construction of the Proposed Project/Action would avoid the need to demolish any existing houses and would not affect any other housing structures. As a result, the Proposed Project/Action would not displace existing housing, and therefore, no impacts are anticipated.
- (c) **No Impact.** The Proposed Project/Action would not displace substantial numbers of people necessitating the construction of replacement housing elsewhere. The Proposed Project/Action would be constructed within existing roadways within the City. Construction of the Proposed Project/Action would not result in the demolition of existing housing and other housing

structures. As a result, the Proposed Project/Action is not expected to displace people from their homes. Therefore, no impacts are anticipated and no mitigation is required.

3.13 Public Services

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **No Impact.** The Proposed Project/Action will not generate population growth and the operation and maintenance of the Proposed Project/Action would not be labor intensive, requiring significant numbers of temporary workers to relocate to the area. In addition, the Proposed Project/Action would not increase the demand for the kinds of public services that would support new residents, such as schools, parks, fire, police, or other public facilities. As a result, no impacts are anticipated and no mitigation is required.

3.14 Recreation

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **No Impact.** The Proposed Project/Action will not contribute to population growth. Therefore, the Proposed Project/Action will 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. As a result, no impact is expected and no mitigation is required.
- (b) **No Impact.** The Proposed Project/Action does not include or require construction or expansion of recreational facilities. Furthermore, as discussed in (a), the Proposed Project/Action will not increase the demand for recreational facilities. As a result, no impact is expected and no mitigation is required.

3.15 Socioeconomics

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Project/Action:				
a) Result in any adverse socioeconomic effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with Executive Order 12898 (Environmental Justice) policies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Affect Indian Trust Assets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- (a) **No Impact.** The Proposed Project/Action would not have any adverse socioeconomic effects. The Proposed Project/Action would involve the construction and operation of a recycled water system to supplement the City’s water supplies. This would ensure a reliable, long-term water supply that would help support the existing and future irrigation activities as well as industrial uses within the City and which would be considered a beneficial socioeconomic effect. The City is pursuing several funding mechanisms that would include applying for state and federal grants and loans to help reduce the cost of the project. In addition, the City would repay any loans by charging a fee to users for the use of the recycled water. It is assumed that the project costs would result in an increase in costs. However, the additional project costs would not adversely affect any minority or low-income populations and/or adversely alter the socioeconomic conditions of populations that reside within the City. As a result, the Proposed Project/Action would not have any adverse socioeconomic effects.
- (b) **No Impact.** Executive Order 12898 requires each federal agency to achieve environmental justice as part of its mission, by identifying and addressing disproportionately high and adverse human health or environmental effects, including social and economic effects of its programs, policies, and activities or minority populations and low-income populations of the United States. The Proposed Project/Action would involve the construction and operation of a recycled water system to deliver supplemental water to the region to help enhance the existing irrigation practices within the City and encourage the use of recycled water in industrial processes. The Proposed Project/Action would primarily occur in existing roadways in a highly urbanized area. The Proposed Project/Action does not propose any features that would result in disproportionate adverse human health or environmental effects, have any physical effects on minority or low-income populations, and/or alter socioeconomic conditions of populations that reside or work within the City and vicinity.
- (c) **No Impact.** The Proposed Project/Action would not have any adverse effects on Indian Trust Assets (ITA). ITAs are legal interests in property or rights held by the United States for Indian Tribes or individuals. Trust status originates from rights imparted by treaties, statutes, or executive orders. Examples of ITAs are lands, including reservations and public domain allotments, minerals, water rights, hunting and fishing rights, or other natural resources, money or claims. Assets can be real property, physical assets, or intangible property rights. ITAs cannot be

sold, leased, or otherwise alienated without federal approval. ITAs do not include things in which a tribe or individuals have no legal interest such as off-reservation sacred lands or archaeological sites in which a tribe has no legal property interest. No ITAs have been identified within the City and in the construction areas of the Proposed Project/Action. As a result, the Proposed/Action would have no adverse effects on ITAs.

3.16 Traffic and Transportation

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Proposed Project/Action:				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- (a) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action would be primarily constructed within existing roadways within the City. Construction would temporarily disrupt transportation and circulation patterns in the vicinity of the project thus disrupting local vehicle, bicycle, and pedestrian traffic along the haul routes and the planned pipeline alignment. Although construction-generated traffic would be temporary during peak excavation and earthwork activities, average daily truck trips would not likely exceed 40 round-trip truck trips per day. The primary impacts from the movement of trucks would include short-term and intermittent lessening of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles and temporary lane closures and possible detours during certain times. The following mitigation measures are proposed:

Mitigation Measure TRA-1: Prepare and Implement Traffic Control Plan. As is consistent with existing policy, the City shall require the contractor to prepare and implement effective traffic control plans to show specific methods for maintaining traffic flows. Examples of traffic control measures to be considered include: 1) use of flaggers to maintain alternating one-way traffic while working on one-half of the street; 2) use of advance construction signs and other public notices to alert drivers of activity in the area; 3) use of “positive guidance” detour signing on alternate access streets to minimize inconvenience to the driving public; 4) provisions for emergency access and passage; and 5) designated areas for construction worker parking.

Mitigation Measure TRA-2: Return Roads to Pre-construction Condition. Following construction, the City shall ensure that road surfaces that are damaged during construction are returned to their pre-construction condition or better.

With the incorporation of the above mitigation measures, potential temporary impacts are considered to be less-than-significant.

- (b) **Less-than-Significant Impact with Mitigation.** As discussed above in (a), construction activities of the Proposed Project/Action may result in increased vehicle trips. This could temporarily exceed, either individually or cumulatively, existing level of service standards. However, the Proposed Project/Action would not result in any long-term degradation in operating conditions or level of service on any project roadways. With the implementation of **Mitigation Measure TRA-1** impacts associated with exceeding level of service standards would be reduced to a less-than-significant level.
- (c) **No Impact.** The Proposed Project/Action does not involve use of air transit, nor is it expected to cause any change in air traffic patterns. No impact is expected and no mitigation is required.
- (d) **No Impact.** The Proposed Project/Action does not propose to make changes to roadways that would create road hazards or alter design features developed to mitigate such hazards. No impacts are expected and no mitigation is required.
- (e) **Less-than-Significant Impact with Mitigation.** The Proposed Project/Action would have temporary effects on traffic flow, due to added truck traffic during construction that could result in delays for emergency vehicle access in the vicinity of the project. Implementation of **Mitigation Measure TRA-1** would require the contractor to establish methods for maintaining traffic flow in the project vicinity and minimizing disruption to emergency vehicle access to land uses along the truck route and/or pipeline alignment. Implementation of **Mitigation Measure TRA-1** would also ensure potential impacts associated with temporary effects on emergency access would be mitigated to a less-than-significant level.
- (f) **Less-than-Significant Impact.** Project-related construction activities would require additional parking for workers and equipment on a temporary basis. However, sufficient space exists within the construction easement and/or staging areas to accommodate parking needs for construction workers and equipment. As a result, no impacts are anticipated and no mitigation is required.
- (g) **Less-than-Significant Impact.** The construction activities associated with the Proposed Project/Action would be short term and would not conflict with adopted policies, plans, or programs supporting alternative transportation. Also once constructed, the Proposed Project/Action would not conflict with adopted policies, plans, or programs supporting alternative transportation. Any short-term effects would be considered less-than-significant.

3.17 Utilities and Service Systems

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

Discussion

- (a) **No Impact.** The Proposed Project/Action would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board. Therefore, no impacts are anticipated and no mitigation is required.
- (b) **Less-than-Significant Impact.** The Proposed Project/Action would involve the construction of a water recycling system to serve the City. This would also include construction of the RWF (tertiary filtration system) at the City's existing WPCF. However, any impacts associated with

- the construction and/or operations are considered to be less-than-significant and no mitigation is required.
- (c) **No Impact.** The Proposed Project/Action would not require or result in the construction of additional off-site storm water drainage facilities. Therefore, no impacts are expected and no mitigation is required.
 - (d) **Less-than-Significant Impact.** Under the Proposed Project/Action the City will be receiving tertiary treated water from the proposed project/Action. This would be a new water supply, but would not require the City purchasing this new water supply. Any impacts are considered to be less-than-significant and no mitigation is required.
 - (e) **Less-than-significant Impact.** Under the Proposed Project/Action the City will be receiving tertiary treated water from the Proposed Project/Action. This would be a new water supply, but would not require the City purchasing this new water supply. The Proposed Project/Action will not result in any additional wastewater other than treating approximately 290 afy of tertiary waste streams from the RWF (typically $\leq 10\%$ of the treated water flow). Therefore, approximately 0.025 mgd of wastewater will be generated and treated at the WPCF as part of the Proposed Project/Action. This represents less than 1 percent of the average daily water flow of 11 mgd. Also, the WPCF is rated to treat up to 18.5 mgd. Therefore, this contribution to the overall treatment capacity is considered to be less-than-significant and no mitigation is required.
 - (f) **No Impact.** Construction and operation of the Proposed Project/Action would not generate a significant amount of solid wastes. No impacts are expected to existing landfills and no mitigation is required.
 - (g) **No Impact.** The Proposed Project/Action will comply with all relevant federal, state, and local statutes and regulations related to solid waste. Therefore, there are no anticipated impacts and no mitigation is required.

3.18 Mandatory Findings of Significance

<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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Would the Proposed Project/Action:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have impacts that would be individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- (a) **Less-than-Significant Impact with Mitigation.** With the incorporation of the previously identified mitigation measures, the Proposed Project/Action will not substantially degrade the quality of the environment, 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. Any impacts from the Proposed Project/Action in these areas are considered here to be less-than-significant with the implementation and incorporation of the above mentioned mitigation measures.
- (b) **Less-than-Significant Impact with Mitigation.** No direct project-specific significant effects were identified that could not be mitigated to a less-than-significant level. Mitigation Measures incorporated herein mitigate any potential contribution to cumulative (as well as direct) impacts associated with these environmental issues. Therefore, the Proposed Project/Action does not have impacts that are individually limited, but cumulatively considerable.

- (c) **Less-than-Significant Impact with Mitigation.** As a result of mitigation included in this environmental document, the Proposed Project/Action would not result in substantial adverse effects to humans, either directly or indirectly.

Chapter 4 Determination

On the basis of this initial evaluation for the City of Hayward's Recycled Water Project:

- I find that the Proposed Project/Action COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the Proposed Project/Action 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 City. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project/Action MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the Proposed Project/Action 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/Action 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/Action, nothing further is required.



Signature

Alex Ameri
Printed Name



Date

Director of Utilities and Environmental Services
Title

Chapter 5 Bibliography

Detailed below are the primary sources consulted and reviewed during the preparation of this environmental document.

- Bay Area Air Quality Management District. *CEQA Guidelines*. December 1999.
- California Department of Forestry and Fire Protection. *Fire Severity Mapping*. August 2014
- California Natural Diversity Database. 2014. <http://www.dfg.ca.gov/biogeodata/cnddb>
- California Regional Water Quality Control Board, ORDER NO. R2-2006-0053; NPDES NO. CA0037869, August 9, 2006.
- California Department of Toxic Substances. *Envirostor database and GIS System*. August 2014
- City of Hayward. *Updated Recycled Water Facility Plan, Recycled Water Project*. September 2013.
- City of Hayward. *General Plan EIR*. July 2014.
- Federal Emergency Management Agency 100-Year Flood Zone Maps. 2014
- U. S. Fish and Wildlife Service species list database and Wetland Tracker. 2014. <http://www.fws.gov/>

Appendix A

Air Quality Emissions Calculations

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> City of Hayward - Recycled Water Project											
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	8.1	36.2	38.9	3.4	2.4	1.0	2.4	2.2	0.2	5,367.3	
Grading/Excavation	15.0	71.2	113.2	7.1	6.1	1.0	5.7	5.5	0.2	12,809.7	
Drainage/Utilities/Sub-Grade	13.0	62.2	88.9	6.2	5.2	1.0	4.9	4.7	0.2	10,719.4	
Paving	8.5	41.9	45.3	3.1	3.1	-	2.8	2.8	-	6,486.6	
Maximum (pounds/day)	15.0	71.2	113.2	7.1	6.1	1.0	5.7	5.5	0.2	12,809.7	
Total (tons/construction project)	2.5	11.9	17.2	1.2	1.0	0.2	0.9	0.9	0.0	2,056.3	

Notes: Project Start Year -> 2016
 Project Length (months) -> 18
 Total Project Area (acres) -> 7
 Maximum Area Disturbed/Day (acres) -> 0.5
 Total Soil Imported/Exported (yd³/day) -> 4

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 -> City of Hayward - Recycled Water Project											
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	3.7	16.4	17.7	1.6	1.1	0.5	1.1	1.0	0.1	2,439.7	
Grading/Excavation	6.8	32.4	51.5	3.2	2.8	0.5	2.6	2.5	0.1	5,822.6	
Drainage/Utilities/Sub-Grade	5.9	28.3	40.4	2.8	2.4	0.5	2.2	2.1	0.1	4,872.4	
Paving	3.9	19.0	20.6	1.4	1.4	-	1.3	1.3	-	2,948.5	
Maximum (kilograms/day)	6.8	32.4	51.5	3.2	2.8	0.5	2.6	2.5	0.1	5,822.6	
Total (megagrams/construction project)	2.3	10.8	15.6	1.0	0.9	0.2	0.8	0.8	0.0	1,865.1	

Notes: Project Start Year -> 2016
 Project Length (months) -> 18
 Total Project Area (hectares) -> 3
 Maximum Area Disturbed/Day (hectares) -> 0.5
 Total Soil Imported/Exported (meters³/day) -> 3

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.

Appendix B

Potential for Special Status Species to Occur
in Project/Action Area

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
Plants				
<i>Amsinckia grandiflora</i> large-flowered fiddleneck	FE, FX, SE	The last remaining native populations are on the grasslands near Lawrence Livermore National Laboratory in Alameda County, California. Other populations have been established in nearby protected areas.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Arctostaphylos myrtifolia</i> lone manzanita	FT	It is endemic to the Sierra Nevada foothills of California. It grows in the chaparral and woodland plant community on a distinctive acidic soil series in western Amador and Calaveras Counties.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Arctostaphylos pallida</i> pallid manzanita (=Alameda or Oakland Hills manzanita)	FT, SE	The plants are found in manzanita chaparral habitat of the montane chaparral and woodlands ecosystem, and is frequently surrounded by oak woodlands and other chaparral shrubs.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Atriplex joaquinana</i> San Joaquin spearscale	1B.2	It is endemic to California, where it grows in alkaline soils in the Sacramento-San Joaquin River Delta and adjacent parts of the Central Valley and eastern Central Coast Ranges.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Castilleja campestris</i> Owl's-clover	FT	It is found only in vernal pools along the rolling lower foothills and valleys along the eastern San Joaquin Valley in the Southern Sierra Foothills Vernal Pool Region.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	FE	Known only from southern Santa Cruz and Monterey Counties.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Clarkia franciscana</i> Presidio clarkia	FE, SE	It is endemic to the San Francisco Bay Area of California, where it is known only from two populations at the Presidio of San Francisco and three occurrences in Oakland.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Cordylanthus palmatus</i> palmate-bracted bird's-beak	FE, SE	It is endemic to the Central Valley of California, where it is known from a few remaining occurrences in the rare alkali sink habitat	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		type. The plant is limited to seasonally-flooded flats with saline and alkaline soils, where it grows with other halophytes such as iodine bush and alkali heath.		
<i>Eriogonum apricum</i> lone Buckwheat	FE	lone buckwheat is only known to occur in Amador County. One occurrence is on Bureau of Land Management land, and one is on CDFW-owned Apricum Hill Ecological Reserve. The remaining occurrences are on privately owned land and are not afforded any permanent protections.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Eriogonum prostratum</i> Irish Hill Buckwheat	FE	Can be found on barren surfaces, and sometimes colonizes disturbed sites, often with little, if any other vegetation present. At the time of this webpage posting, the California Natural Diversity Database lists two occurrences of Irish Hill buckwheat, one at Irish Hill in Amador County and one to the north of Irish Hill. Both of these occurrences are on private property and their status is largely unknown.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT, FX, SE	Inhabits terraced locations of coastal or valley prairie grasslands with underlying sandy clay soils.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE, RP, List 1B	Mesic sites in cismontane woodland, alkaline playas, valley and foothill grassland. Vernal pools, swales, or low depressions. 1-445 m. Blooms March-June.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Layia carnosa</i> beach layia	FE, SE	It is endemic to California, where it lives in beach habitat.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Orcuttia viscida</i> Sacramento Orcutt grass	FE, FX	It is endemic to Sacramento County, California, where it grows only in vernal pools, a rare and declining type of habitat. As of 1997, two of the nine known	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		populations had been extirpated as habitat has been consumed for urban development, and it was federally listed as an endangered species. Since it's listing, one additional occurrence of the plant has been discovered, for a total of eight extant populations.		
<i>Plagiobothrys glaber</i> hairless popcornflower	1A	Presumed Extinct in California	Unlikely. Presumed extinct in California	No further actions are recommended for this species.
<i>Suaeda californica</i> California sea blite	FE	Confined to saline or alkaline soil habitats, such as coastal salt-flats and tidal wetlands.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Mammals				
<i>Martes pennanti</i> fisher	FC	The fisher is a forest-dwelling creature whose range covers much of the boreal forest in Canada to the northern fringes of the United States.	Unlikely. Site is regularly disturbed by human activity.	No further actions are recommended for this species.
<i>Reithrodontomys raviventris</i> Salt-marsh Harvest Mouse	FE, SE	Primary habitat in pickleweed dominated saline emergent marshes of San Francisco Bay. Require adjacent upland areas for escape from high tides.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE	Kit foxes favor arid climates, such as desert scrub, chaparral, and grasslands. Good examples of common habitats are sagebrush <i>Artemisia tridentata</i> and saltbrush <i>Atriplex polycarpa</i> . They can be found in urban and agricultural areas, too.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Birds				
<i>Athene cunicularia</i> burrowing owl	CSC	Burrowing Owls can be found in grasslands, rangelands, agricultural areas, deserts, or any other open dry area with low vegetation.	Moderate. Potential exists that they could be located in open spaces near construction activities.	Conduct Pre-construction nesting and breeding surveys.
<i>Charadrius alexandrinus nivosus</i> Western Snowy Plover	FT, CSC, BCC, RP	(Nesting) Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees and	Unlikely. Suitable open nesting habitat is not present in the Study Area.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.		
<i>Pelecanus occidentalis californicus</i> California Brown Pelican	FE, SE	Found in estuarine, marine subtidal, and marine pelagic waters along the coast. Nest on rocky or low brushy slopes of undisturbed islands.	Unlikely. Suitable estuarine and subtidal areas not present in the Study Area.	No further actions are recommended for this species.
<i>Rallus longirostris obsoletus</i> California Clapper Rail	FE, SE	Found in tidal salt marshes of the San Francisco Bay. Requires mudflats for foraging and dense vegetation on higher ground for nesting.	Moderate. Suitable habitat may be present near the Study Area and in the Hayward Regional Shoreline wildlife refuge.	Conduct Pre-construction surveys.
<i>Sternula antillarum</i> (=Sterna, =albifrons) <i>browni</i> California least tern	FE	The California Least Tern hunts primarily in shallow estuaries and lagoons, where smaller fishes are abundant.	Moderate. Suitable habitat may be present near the Study Area and in the Hayward Regional Shoreline wildlife refuge.	Conduct Pre-construction surveys.
<i>Strix occidentalis caurina</i> Northern spotted owl	FT	The northern spotted owl primarily inhabits old growth forests. The species' range is the Pacific coast from extreme southern British Columbia to Marin County in northern California.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Reptiles				
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT, ST, X	The California whipsnake, <i>Masticophis lateralis</i> , is known to utilize a wide range of habitat types including open desert, California oak woodland, pine forest, chaparral, and associated open landscape habitats.	Moderate. Suitable habitat may be present in the Study Area.	Conduct Pre-construction surveys.
<i>Thamnophis gigas</i> Giant garter snake	FT	Generally inhabits marshes, sloughs, ponds, slow moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation, open areas and high ground for hibernation and escape cover.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco garter	FE	It is endemic to San Mateo County and the extreme northern part of	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
snake		coastal Santa Cruz County in California.		
Amphibians				
<i>Ambystoma californiense</i> California Tiger Salamander	FT, FX, CSC	Inhabits annual grass habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding.	Unlikely. Annual grassland habitat is limited in the Study Area.	No further actions are recommended for this species.
<i>Anaxyrus canorus</i> Yosemite toad	FPX	Endemic to the Sierra Nevada of California, the species ranges from the montane forests of El Dorado County near Lake Tahoe south to subalpine Fresno County near Tehipite Valley in Kings Canyon. Yosemite toads show a narrow elevational distribution from 6,200 feet to 11,300 feet.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Rana aurora draytonii</i> California Red-legged Frog	FT, FX, CSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains.	Unlikely. Freshwater habitat in the Study Area is unlikely to provide suitable habitat for this species.	No further actions are recommended for this species
<i>Rana sierrae</i> Mountain yellow legged frog	FPX	Occurs in the mountain ranges of Southern California up to the southern Sierra Nevada.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Fish				
<i>Acipenser medirostris</i> Green sturgeon	FT, NMFS	Adults spawn in freshwater and then return to estuarine or marine environments. Preferred spawning habitat occurs in the lower reaches of large rivers with swift currents and large cobble.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Eucyclogobius newberryi</i> Tidewater goby	FE	Shallow waters of bays and estuaries.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Hypomesus transpacificus</i> Delta smelt	FT, FX	Found in large, main channels and open areas of the Bay. Occur from tidal freshwater reaches of the Delta west to eastern San Pablo Bay.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus clarki henshawi</i> Lahontan cutthroat trout	FT	The Lahontan cutthroat is native to the drainages of the Truckee River,	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		Humboldt River, Carson River, Walker River, Quinn River and several smaller rivers in the Great Basin of North America.		
<i>Oncorhynchus kisutch</i> Coho salmon - central CA coast	FE, NMFS	Central and northern Calif. Coastal rivers and drainages.	Unlikely. Believed to be extirpated from San Francisco Bay drainages.	No further actions are recommended for this species.
<i>Oncorhynchus mykiss</i> Steelhead, Central California Coast and Central Valley	FT, FX, CSC	Drainages of San Francisco and San Pablo bays, central Calif. Coastal rivers.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run chinook salmon	FT, FX NMFS	Spawns in the Sacramento and San Joaquin Rivers and their tributaries.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus tshawytscha</i> Winter-run chinook salmon, Sacramento River	CSC, FE, FX, NMFS	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
Invertebrates				
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE	Inhabit highly turbid water in vernal pools. Known from six populations in the northern central valley.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Branchinecta longiantenna</i> Longhorn pool fairy shrimp	FE, FX	Inhabit small, clear-water sandstone depression pools, grassy swales, slumps, or basalt-flow depression pools.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT	Inhabit small, clear-water sandstone depression pools, grassy swales, slumps, or basalt-flow depression pools.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT	Occurs in the Central Valley region in association with blue elderberry shrubs. Prefers to lay eggs in elderberry stems greater	Unlikely. No elderberry shrubs were identified in the Study Area and suitable habitat is not present.	No further actions are recommended for this species.

Appendix B Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		than 1" in diameter.		
<i>Euphydryas editha bayensis</i> bay checkerspot butterfly	FT	Today the only populations known inhabit areas of Santa Clara County.	Unlikely. Suitable habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Icaricia icarioides missionensis</i> Mission Blue butterfly	FE	The Mission Blue depends on a very specific host plant called the lupine.	Unlikely. Suitable habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE	Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mudbottomed and highly turbid.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Speyeria callippe callippe</i> Callippe silverspot butterfly	FE	Historically inhabited grasslands ranging over much of the northern San Francisco Bay region, but eventually was known to occur on the east and western sides of San Francisco Bay.	Unlikely. The only known colony now is on San Bruno Mountain on the San Francisco peninsula.	No further actions are recommended for this species.

Key to status codes:

FE Federal Endangered

FT Federal Threatened

FX Federal Critical Habitat

FC Federal Candidate

FD Federal De-listed

FPD Federal Proposed for De-listing

FPT Federal Proposed Threatened

FPX Federal Proposed Critical Habitat

NMFS Species under the Jurisdiction of the National Marine Fisheries Service

BCC USFWS Birds of Conservation Concern

RP Sensitive species included in a USFWS Recovery Plan or Draft Recovery Plan

SE State Endangered

ST State Threatened

SR State Rare

CSC CDFW Species of Special Concern

Draft CSC 4 April 2000 Draft CDFW Species of Special Concern

CFP CDFW Fully Protected Animal

WBWG Western Bat Working Group High Priority species

SLC Species of Local Concern

List 1A CNPS List 1A: Plants presumed extinct in California

List 1B CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere

List 2 CNPS List 2: Plants rare, threatened, or endangered in California, but more common elsewhere

List 3 CNPS List 3: Plants about which CNPS needs more information (a review list)

Appendix C

Federally-listed Biological Assessment Report

**Federally-Listed Biological Resources
Assessment Report**
City of Hayward Recycled Water Project

Prepared by:

SMB Environmental, Inc.

October 2014

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Section 1 - Introduction

This document describes the potential effects of the City of Hayward’s (City) proposed Recycled Water Project (Proposed Action) on those federally listed and proposed species that may occur in the Proposed Action Area. This section describes the purpose of this assessment and identifies potential federally-listed species and species of concern that could be affected by the implementation of the City’s Proposed Action.

1.1 Purpose of this Assessment

The purpose of this document is to describe potential effects of the City’s Proposed Action on those federally listed and proposed species that may occur in the Proposed Action Area. This document conforms to and with the legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C 1536(c) and 50 CFR 402). It is presumed that the U.S. Bureau of Reclamation (USBR) will be the lead agency under NEPA as the City is pursuing federal funding under the U.S. Department of the Interior’s Bureau of Reclamation Public Law 102-575, Title XVI Water Reclamation and Reuse Program. In addition, the City is also seeking funds from the State Revolving Fund (SRF) Loan Program that is administered by the State Water Resources Control Board (State Board) on behalf of the U.S. Environmental Protection Agency. This document evaluates the potential direct, indirect, and cumulative effects the Proposed Action may have on federally listed and proposed species, and outlines those potential effects as well as recommended mitigation to reduce potential adverse effects to a less than significant level.

1.2 Species of Concern

Pursuant to Section 7(c) (1) of the Endangered Species Act, SMB obtained a list of federally-listed species potentially found within the Proposed Action Area from the U.S. Fish and Wildlife Service (USFWS) – See Attachment A. This list was also updated using a list provided from the California Natural Diversity Database (April 2014). This document analyzes the potential effects of the Proposed Action upon the following federally-listed and proposed species.

Plant Species

- | | |
|---|-----------------------------|
| • <i>Amsinckia grandiflora</i> (E) (X) | large-flowered fiddleneck |
| • <i>Arctostaphylos</i> (T) | lone Manzanita |
| • <i>Arctostaphylos pallida</i> (T) | pallid manzanita |
| • <i>Castilleja campestris</i> (T) | owl’s-clover |
| • <i>Chorizanthe robusta var. robusta</i> (E) | robust spineflower |
| • <i>Clarkia franciscana</i> (E) | Presidio clarkia |
| • <i>Cordylanthus palmatus</i> (E) | palmate-bracted bird's-beak |
| • <i>Eriogonum apricum</i> (E) | lone buckwheat |
| • <i>Eriogonum prostratum</i> (E) | Irish Hill buckwheat |
| • <i>Holocarpha macradenia</i> (T) (X) | Santa Cruz tarplant |
| • <i>Lasthenia conjugens</i> (E) (X) | Contra Costa goldfields |
| • <i>Layia carnosa</i> (E) | beach layia |
| • <i>Orcuttia viscida</i> (E) (X) | Sacramento Orcutt |
| • <i>Suaeda californica</i> (E) | California sea blite |

Mammals

- *Reithrodontomys raviventris* (E) Salt-marsh Harvest Mouse
- *Martes pennant* (C) fisher
- *Vulpes macrotis mutica* (E) San Joaquin kit fox

Birds

- *Athene cunicularia* (T) Burrowing owl
- *Charadrius alexandrinus nivosus* (T) Western Snowy Plover
- *Coccyzus americanus occidentalis* (C) Western Yellow-billed Cuckoo
- *Pelecanus occidentalis californicus* (E) California Brown Pelican
- *Rallus longirostris obsoletus* (E) California Clapper Rail
- *Sternula antillarum* (E) California least tern
- *Strix occidentalis caurina* (T) Northern spotted owl

Reptiles

- *Masticophis lateralis euryxanthus* (T) (X) Alameda whipsnake
- *Thamnophis gigas* (E) Giant garter snake
- *Thamnophis sirtalis tetrataenia* (E) San Francisco garter snake

Amphibians

- *Ambystma californiense* (T) (X) California tiger salamander
- *Anaxyrus canorus* (P) (X) Yosemite toad
- *Rana aurora draytonii* (T) (X) California Red-legged frog
- *Rana muscosa* (C) mountain yellow-legged frog

Fish

- *Acipenser medirostris* (T) (NMFS) Green sturgeon
- *Eucyclogobius newberryi* (E) Tidewater goby
- *Hypomesus transpacificus* (T) (X) Delta smelt
- *Oncorhynchus kisutch* (E) (NMFS) Coho salmon - Central CA Coast
- *Oncorhynchus mykiss* (T) (X) (NMFS) Steelhead, Central CA Coast /Valley
- *Oncorhynchus tshawytscha* (T) (NMFS) Chinook salmon, Central Valley, spring-run
- *Oncorhynchus tshawytscha* (E) (X) Chinook salmon - Sacramento River, winter-run

Invertebrates

- *Branchinecta conservation* (E) Conservancy fairy shrimp
- *Branchinecta longiantenna* (E) (X) longhorn fairy shrimp
- *Branchinecta lynchi* (T)(X) Vernal pool fairy shrimp
- *Desmocerus californicus dimorphus* (T) Valley elderberry longhorn beetle
- *Euphydryas editha bayensis* (T) bay checkerspot butterfly
- *Icaricia icarioides missionensis* (E) Mission blue butterfly
- *Lepidurus packardi* (T) (X) Vernal pool tadpole shrimp

- *Speyeria callippe callippe* (E)

Callippe silverspot butterfly

E= Endangered
T=Threatened
P=Proposed
C=Candidate
X=Critical Habitat
PX-Proposed Critical Habitat

Section 2 - Description of Proposed Action

This section provides a description of the Proposed Action including the location and background, purpose and need, construction considerations, and operational considerations.

2.1 Project Location and Background

The City of Hayward is located in the San Francisco Bay Area in the southern portion of Alameda County. The City has approximately 150,000 residents. The City boundaries extend from the San Francisco Bay on the west to the East Bay hills on the east. Figure 1 illustrates the project location. The City has a Mediterranean coastal climate, with mild dry summers and cool winters. Temperatures vary from average highs in September of 73.5 degrees Fahrenheit (deg F) to average lows in January of 42 degree Fahrenheit. Rainfall averages 18 inches annually with most rain occurring between October and April.

There is a mixture of industrial parks, office parks, commercial areas, golf courses, recreational parks, residential areas, an airport, schools and open space throughout the City. The City has a large and diverse industrial section including food and beverage processors and high-technology manufacturing. Additionally, the City is home to two regional public post-secondary educational institutions - California State University, East Bay and Chabot Community College.

The City operates the City-owned utilities, including water distribution and wastewater collection and treatment services, within the City boundaries. In 1993, the City participated in the preparation of a Recycled Water Master Plan by East Bay Dischargers Authority (EBDA) to investigate potential recycled water projects. In 2007, the City completed a *Recycled Water Feasibility Study* (RMC 2007), including preliminary market and recycled water supply assessment and evaluation of two conceptual alternatives to serve recycled water customers to assess overall feasibility of expanding the City's water supply portfolio to include recycled water. As a result of the Feasibility Study, the City decided to prepare a *Recycled Water Facility Plan* in 2013 for treatment and distribution facilities to assist the City in making informed decisions about the use of recycled water in the City of Hayward. This *Recycled Water Facility Plan* is the basis for this environmental document.

2.2 Purpose and Need

The purpose of the Proposed Project/Action is to construct and operate a new recycled water system to allow the City to maximize recycled water to offset potable water sources. There are several drivers for the need to develop a recycled water resource including:

- Increases in San Francisco Public Utility Commission (SFPUC) water charges and potential decreases in SFPUC water availability at current reliability levels
- Potential for increasingly stringent discharge requirements to the San Francisco Bay
- City's desire to evaluate more sustainable alternatives to using potable water for certain applications

Figure 1
General Location Map



In addition, Calpine has constructed and is operating a power generation facility located on the property adjacent to the City’s Water Pollution Control Facility (WPCF). Calpine treats secondary effluent from the WPCF for use as tertiary treated recycled water at their power generation facility. The power generation facility has been operational since June 2013. Calpine has indicated that may agree to provide surplus tertiary treated recycled water to the City for reuse, but final agreement has not been reached. Therefore, the Proposed Project/Action assumes that the City will construct a tertiary treatment facility on the WPCF site.

2.3 Proposed Action Description

The City proposes to construct and operate a recycled water project located within the City of Hayward. The City has prepared a Recycled Water Facility Plan to identify potential users for recycled water within the City, including a conceptual distribution system and an estimate of project costs. Figure 2 provides a schematic of the overall project. As shown on Figure 3, the initial phase of the project consists of installing a new Recycled Water Facility (RWF) located at the City’s Water Pollution Control Facility (WPCF) at 3700 Enterprise Avenue, Hayward, California. As shown in Table 1, the RWF would deliver an estimated 290 acre-feet per year of recycled water to 24 customers within the City of Hayward. Table 2, provides a summary of the Proposed Project/Action facilities.

In addition and as shown in Figure 2, the RWF will be served by 1.5 miles of distribution lines (ranging in diameter from 6 to 8 inches) to the north and south of the WPCF, rehabilitation and connection to an existing and abandoned Shell Oil Pipeline, and over three miles of laterals to customers including installation of customer connections. The majority of recycled water customers will utilize the recycled water for irrigation, with some industrial uses for cooling towers and boilers. The City is pursuing an agreement with Shell Oil to purchase and use the existing abandoned 8-inch diameter pipeline that runs through the City. However, the environmental document assumes both the reuse of the existing abandoned 8-inch Shell Oil Pipeline as well as the construction of a new recycled water pipeline (in the event an agreement with Shell Oil is not reached or the use is otherwise determined infeasible. As a result, we have assumed a worst-case scenario and assumed approximately 3 miles of a new 8-inch pipeline paralleling portions of the Shell Oil Pipeline in existing roadways.

**Table 1
Proposed Project/Action Customers and Demands**

Customer No.	Customer Name	Type of Use	Average Demand (AFY) ^b	Average Demand (mgd) ^c	Peak Month Demand (mgd) ^c
1	Bottling Group LLC (Pepsi)	Combined ^a	31	0.03	0.04
4	Shasta Beverages	Industrial	8	0.01	0.01
5	Rohm & Haas	Industrial	22	0.02	0.02
8	Chabot-Las Positas Community College	Irrigation	6	0.005	0.01
29	Life Chiropractic College	Combined ^a	3	0.003	0.003

Customer No.	Customer Name	Type of Use	Average Demand (AFY)^b	Average Demand (mgd)^c	Peak Month Demand (mgd)^c
30	SCA Packaging	Industrial	2	0.001	0.001
40	Bay Center II	Irrigation	20	0.02	0.001
42	BB&K Franklin Township	Irrigation	13	0.01	0.03
72	Robert Chang & Associates	Irrigation	10	0.01	0.02
79	Caltrans D-4 HDWS	Irrigation	9	0.01	0.02
80	Caltrans D-4	Irrigation	8	0.01	0.02
91	Mt. Eden High School	Irrigation	43	0.04	0.09
98	Eden Garden School	Irrigation	3	0.003	0.01
105	Loren Eden High School	Irrigation	8	0.01	0.02
114	Oliver Sports Park	Irrigation	35	0.03	0.07
116	Mt. Eden Park	Irrigation	21	0.02	0.04
119	Eden Greenway – Part 1	Irrigation	10	0.01	0.02
129	Brenkwitz School	Irrigation	8	0.01	0.02
132	Christian Penke Park	Irrigation	7	0.01	0.01
135	Rancho Arroyo Park	Irrigation	7	0.01	0.01
160	Bay Center II	Irrigation	7	0.01	0.02
163	Winton Industrial Center	Irrigation	7	0.01	0.01
168	Hayward Executive Airport	Combined ^a	4	0.004	0.005
169	Fire Training Center	Combined ^a	1	0.001	0.001
	Total		290	0.3	0.5

Notes:

- a. Either has irrigation as a primary use and industrial as a secondary use, or vice-versa.
- b. Individual customers rounded to the nearest 1 AFY.
- c. Total rounded to the nearest 0.1 mgd.

Description	Units	Proposed
Customers		
Number of Customers	#	24
Annual Average Demand	AFY	290
Peak Month Demand	mgd	0.5
Peak Hour Demand	mgd	0.5
Treatment Facilities		
Influent Pump Station	hp	20
Flocculating Clarifiers ^a	mgd	0.5

Table 2 Proposed Project/Action Facilities		
Description	Units	Proposed
Granular Media Filters ^a	mgd	0.5
Chlorine Disinfection	mgd	0.5
Treated Recycled Water Storage		
Storage Tank ^b	MG	0.4
Distribution Pump Station(s)		
Calpine Pump Station ^c	hp	NA
Other Customers Pump Station ^{c, d}	hp	165
Distribution System		
Total Pipeline Length ^e	LF	23,900
14" Pipe	LF	0
8" Pipe	LF	7,100
6" Pipe	LF	16,800
Retrofit of Abandoned Shell Oil Pipeline for Conveyance	LF	7,460
Connections to Retrofitted Shell Oil Pipeline	#	11
New Pipeline Conveyance (If needed) ^f	LF	15,840

Notes:

- a. Facilities are oversized to account for 3-4% water consumption/loss through treatment processes.
- b. Storage tank was sized using the SWRCB Office of Water Recycling Storage Excel Workbook and maximum drawdown criteria of 2 feet.
- c. Pumps were sized based on peak hour flow, pipeline headloss, and downstream required pressures
- d. Summary of total distribution pumping needs for each alternative. One or more distribution pump stations maybe utilized.
- e. Pipelines were sized based on peak hour flow, pipeline headloss, and existing pipeline sizes (Shell Oil pipeline).
- f. To replace Shell Oil Pipeline if agreement is not reached.

2.4 Construction Considerations

Construction of the Proposed Project/Action facilities is expected to begin in the spring/summer of 2016 and will likely continue for 18 months into the summer of 2017. Construction work will typically be done within normal working hours, weekdays between the hours of 7 a.m. and 7 p.m., and possibly on Saturdays between the hours of 10 a.m. and 6 p.m. The Proposed Project/Action would be constructed primarily within existing roadways and any damages occurring during construction will be returned to the pre-construction condition or better. Detailed below is a summary of the construction techniques and activities.

- The new RWF system would involve installing a tertiary treatment filtration system within the City’s existing WPCF.
- Each customer location will require some level of work due to possible meter location changes and pressure differences affecting overspray requirements. On-site plumbing changes may be required to comply with cross connection requirements.

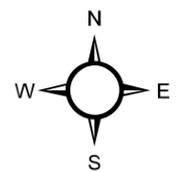
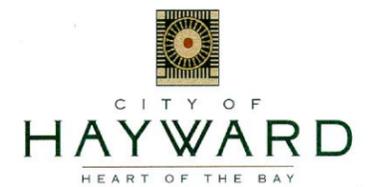
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Legend

- Target Users Parcel (with Customer Number)
- Distribution System**
- Main
- Lateral
- Existing Shell Pipeline/ Repurposed for Main
- Alternative Main
- Alternative Laterals

Figure 2 Proposed Project/ Action Facilities



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, /

Figure 3

Proposed Recycled Water Facility



- The majority of the pipelines would be installed in existing roadways using conventional cut and cover construction techniques and installing pipe in open trenches. It is assumed that up to a 50-foot wide construction corridor would be used to help maximize the efficiency during construction. However, in most places a 25-foot construction corridor could be realized, especially for the smaller diameter pipelines. It is anticipated that excavation would range from 2-5 feet wide and would typically be no more than 6-feet deep.
- Any and all creek or drainage crossings would be constructed using trenchless techniques and will be done in the dry season and will not occur during inclement weather or between October 15 and April 1. Specifically, the existing Shell Oil Pipeline crosses a designated wildlife refuge in the northwestern portion of the Proposed Project/Action area, near the intersection of Depot Road and West Winton Avenue. If a new pipeline is necessary, its alignment in that area would not be placed along the existing Shell Oil Pipeline, but rather along or within the roadway. A flood control channel crosses Depot Road where the road turns west south of the Winton Industrial Center, one of the City's potential recycled water customers. Because of its location, crossing of the flood control channel will likely require microtunneling rather than another trenchless method. As a result, the City proposes microtunneling under the flood channel and will stay out of all creeks, streams, wetlands and/or flood control channels to avoid any adverse environmental impacts to these resources.
- Dewatering of the pipeline as a result of hydrostatic testing during construction as well as any dewatering as a result of operations and maintenance activities shall be discharged to land and/or the sanitary sewer system and not into any creeks, drainages, or waterways and shall require prior approval from the San Francisco Bay Regional Water Quality Control Board.

Construction activities for this kind of project will typically occur with periodic activity peaks, requiring brief periods of significant effort followed by longer periods of reduced activities. In order to characterize and analyze potential construction impacts, the City has assumed that the project would be constructed by two (2) crews of 10-15 workers each and would proceed at a rate of approximately 500-1,000 feet per day. However, specific details may change or vary slightly. Staging areas for storage of pipe, construction equipment, and other materials would be placed at locations (primarily city owned empty lots at the WPCF and adjacent to the City's Hesperian Pump station) that would minimize hauling distances and long-term disruption.

Excavation and grading activities would be necessary for construction of the Proposed Project/Action. Excavated materials resulting from site preparation would either be used on-site during construction or disposed of at a fill area authorized by the City. It is not anticipated that any soils would be imported for this project. Additional truck trips would be necessary to deliver materials, equipment, and asphalt-concrete to the site. During peak excavation and earthwork activities, the Proposed Project/Action could generate up to 40 round-trip truck trips per day. In support of these activities and for the assumptions for this document, the types of equipment that may be used at any one time during construction may include, but not be limited to:

- Track-mounted excavator
- Backhoe

- Grader
- Crane
- Dozer
- Compactor
- Trencher/boring machine
- End and bottom dump truck
- Front-end loader
- Water truck
- Flat-bed delivery truck
- Forklift
- Compressor/jack hammer
- Asphalt paver & roller
- Street sweeper

It is recognized that details of the construction activities and methods may change slightly as the specific details will be developed during final design and by the selected contractor. However, this description provides sufficient information to base the conclusions to probable environmental impacts associated with construction activities for this kind of project. Therefore, as long as the construction methods are generally consistent with these methods and do not conflict with any of the City's design standards or established ordinances, and does not create any new potential environmental impacts that are not described within this document, then no new environmental analyses will likely be required for any minor change in construction activities, timing, and/or schedule.

2.5 Compliance with CCR Title 22 and State Board's Recycled Water Policy

The Proposed Project/Action will be designed and operated in accordance with the applicable requirements of CCR Title 22 and any other state or local legislation that is currently effective or may become effective as it pertains to recycled water. The State Board adopted a Recycled Water Policy (RW Policy) in 2009 to establish more uniform requirements for water recycling throughout the State and to streamline the permit application process in most instances. As part of that process, the State Board prepared an Initial Study and Mitigated Negative Declaration for the use of recycled water. The newly adopted RW Policy includes a mandate that the State increase the use of recycled water over 2002 levels by at least 1,000,000 AFY by 2020 and by at least 2,000,000 AFY by 2030. Also included are goals for storm water reuse, conservation and potable water offsets by recycled water. The onus for achieving these mandates and goals is placed both on recycled water purveyors and potential users. The State Board has designated the Regional Water Quality Control Boards as the regulating entities for the Recycled Water Policy. In this case, the San Francisco Bay Regional Water Quality Control Board (San Francisco RWQCB) is responsible for permitting recycled water projects throughout the San Francisco Bay Area, including the City of Hayward.

The Proposed Project/Action will provide high quality unrestricted use tertiary treated recycled water and make it available to users within the City. All irrigation systems will be operated in accordance with the requirements of Title 22 of the CCR, the State Board Recycled Water Policy, and any other local legislation that is effective or may become effective as it pertains to recycled water and any reclamation permits issued by the San Francisco RWQCB. Reclamation permits typically require the following:

- Irrigation rates will match the agronomic rates of the plants being irrigated;
- Control of incidental runoff through the proper design of irrigation facilities;
- Implementation of a leak detection program to correct problems within 72 hours or prior to the release of 1,000 gallons whichever occurs first;
- Management of ponds containing recycled water to ensure no discharges; and
- Irrigation will not occur within 50 feet of any domestic supply wells, unless certain conditions have been met as defined in Title 22.

2.6 Operational and Maintenance Plans

The City has existing qualified staff and will be responsible for the operations, maintenance, and support staff to distribute recycled water. The City will require and enforce an irrigation schedule among its users. The City will develop an irrigation schedule in a way that optimizes use of the distribution system. The irrigation schedule may be modified in the future, but the initial assumptions are outlined below.

- Landscaping Demand Factor - 2.5 AFY/acre
- Landscape Irrigation hours (Summer) 6pm – 6am
- Summer storage filling 6pm – 6am
- Winter storage filling 24 hours per day

By irrigating using the above scheduling, peak flows are reduced and pipe sizing is optimized.

Maintenance procedures will include 1 or 2 existing City workers who will routinely inspect the pipeline alignment and connections for leaks and repair facilities on an as needed basis as well as conduct scheduled preventative maintenance procedures to keep the facilities in good working order.

Section 3 – Environmental and Regulatory Setting

This section describes the existing environment within and around the Proposed Project/Action Study Area as it pertains to state and federally-listed species.

3.1 Regulatory Environment

The following discussion identifies federal, state, and local regulations that serve to protect sensitive biological resources relevant to the environmental review process.

3.1.1 Federal Regulations

The following discussion identifies federal regulations that serve to protect sensitive biological resources relevant to the environmental review process.

3.1.1.1 Federal Endangered Species Act

The Secretary of the Interior (represented by the USFWS) and the Secretary of Commerce (represented by the National Marine Fisheries Service, NMFS) have joint authority to list a species as threatened or endangered under the Federal Endangered Species Act (FESA) (United States Code [USC], Title 16, Section 1533[c]). FESA prohibits the “take” of endangered or threatened fish, wildlife, or plants species in areas under federal jurisdiction or in violation of state law, in addition to adverse modifications to their critical habitat. Under FESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS and NMFS also interpret the definition of “harm” to include significant habitat modification that could result in the take of a species.

If an activity would result in the take of a federally listed species, one of the following is required: an incidental take permit under Section 10(a) of FESA, or an incidental take statement issued pursuant to federal interagency consultation under Section 7 of FESA. Such authorization typically requires various measures to avoid and minimize species take, and to protect the species and avoid jeopardy to the species’ continued existence.

Pursuant to the requirements of Section 7 of FESA, a federal agency reviewing a proposed project which it may authorize, fund, or carry out must determine whether any federally listed threatened or endangered species, or species proposed for federal listing, may be present in the project area and determine whether implementation of the proposed project is likely to affect the species. In addition, the federal agency is required to determine whether a proposed project is likely to jeopardize the continued existence of a listed species or any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed or designated for such species (16 USC 1536[3], [4]).

Generally, the USFWS implements FESA for terrestrial and freshwater fish species and the NMFS implements FESA for marine and anadromous fish species. USFWS and/or NMFS must authorize projects

where a federally listed species is present and likely to be affected by an existing or proposed project. Authorization may involve a letter of concurrence that the project will not result in the potential take of a listed species, or may result in the issuance of a Biological Opinion that describes measures that must be undertaken to minimize the likelihood of an incidental take of a listed species. A project that is determined by USFWS or NMFS to jeopardize the continued existence of a listed species cannot be approved under a Biological Opinion.

Where a federal agency is not authorizing, funding, or carrying out a project, take that is incidental to the lawful operation of a project may be permitted pursuant to Section 10(a) of FESA through approval of a habitat conservation plan (HCP).

FESA requires the federal government to designate “critical habitat” for any species it lists under the Endangered Species Act. “Critical habitat” is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to the species conservation, and those features that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the regulatory agency determines that the area itself is essential for conservation.

3.1.1.2 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (16 USC, Section 703, Supp. I, 1989), as amended by the Migratory Bird Treaty Reform Act, prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. The act addresses whole birds, parts of birds, and bird nests and eggs. For projects that would not cause direct mortality of birds, the MBTA is generally interpreted in CEQA analyses as protecting active nests of all species of birds that are included in the “List of Migratory Birds” published in the Federal Register in 1995 and as amended in 2005. Though the MBTA allows permits to be issued for import and export, banding, scientific collecting, taxidermy, and rehabilitation, among other reasons, there is no provision in the MBTA that allows for species take related to creation or other development (Code of Federal Regulations, Title 50: Wildlife and fisheries Part 21; Migratory Bird Permits).

3.1.1.3 Federal Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 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.”

3.1.1.4 River and Harbor Act and Clean Water Act

The Secretary of the Army (represented by the Corps of Engineers [USACE]) has permitting authority over activities affecting waters of the United States under Section 10 of the River and Harbors Act (33 USC 403) and Section 404 of the Clean Water (33 USC 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. Section 10 of the River and Harbor Act requires a federal license or permit prior to accomplishing any work in, over, or under navigable waters of the United States, or which affects the course, location, condition or capacity of such waters. Section 404 of the Clean Water Act requires a federal license or permit prior to discharging dredged or fill material into waters of the United States, unless the activity is exempt (33 CFR 324.4) from Section 404 permit requirements (e.g., certain farming and forestry activities). To obtain a federal license or permit, project proponents must demonstrate that they have attempted to avoid the resource or minimize impacts on the resource; however, if it is not possible to avoid impacts or minimize impacts further, the project proponent is required to mitigate remaining project impacts on all federally-regulated waters of the United States.

Section 401 of the Act (33 USC 1341) requires any project proponents for a federal license or permit to conduct any activity including, but not limited to, the creation or operation of facilities, which may result in any discharge into navigable waters of the United States to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the creation of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its 9 Regional Water Quality Control Boards (RWQCBs).

3.2 Regional Setting

As Hayward is an urbanized area in Alameda County, California, vegetation cover in Hayward's remaining open spaces is critical to environmental issues of erosion, sedimentation, flooding, landsliding, groundwater percolation, and water quality. In addition, mature plants and moderate climatic conditions contribute significantly to the aesthetic quality of the city. The city's remaining riparian plant communities are important for their aesthetic quality and for the stream bank protection they provide. The city's shoreline plant communities are particularly valuable as wildlife habitat and are also particularly sensitive to environmental changes caused by development.

As with other urbanized areas in the East Bay, viable wildlife habitats are sensitive to development and are becoming scarce. Wildlife resources are located throughout the undeveloped portions of the eastern hill areas, along streams, in parklands, and in the shoreline marshes and salt evaporation ponds. In the shoreline areas, tidal flats and salt ponds of low salinity provide habitat for migratory waterfowl. In addition, a few species such as deer, many birds, and a few small

mammals are found in even the most urbanized residential zones of the city. Rare or sensitive species sometimes require much more effort in their management and protection than more common wildlife species.

3.2.1 Local Setting

The Proposed Project/Action is located entirely in the City of Hayward, California. Native vegetation and creeks have been modified over the past century to a degree that severely limits the value of the urban areas as habitat for special status plant and animal species. However, there are still some areas in the Hayward hills and the Hayward shoreline that provide grassland, woodland, and aquatic habitat, which are important for a number of protected species. In the hills, habitat areas may be present in large blocks of land that have not been systematically surveyed. This area is considered capable of supporting several special-status species and important habitat types generally associated with annual grasslands and coast live oak. In the shoreline area, which comprises over 8,500 acres, the Hayward Area Shoreline Planning Agency (HASPA) has prepared an Environmental Enhancement Program that identifies the various habitat types based on the geophysical and biophysical associations and makes recommendations for enhancements to each of the properties. In addition, provisions in several federal and state regulatory programs that address water quality concerns have also served to further protect wetland and riparian habitats. These regulations establish jurisdiction over those areas defined as “other waters of the United States”, which include several drainage channels in the Hayward area.

3.2.2 Wetlands and Other Waters of the U.S.

Based upon a literature search and a reconnaissance field study on August 7, 2014, there are no known wetlands or vernal pools that would be affected by the Proposed Project/Action Area. The Proposed Project/Action would not cross any local creeks/drainages that could be considered Other Waters of the U.S. In addition, as noted in Section 2 – Description of Proposed Action, any and all creeks, drainages, flood control channels and/or wetlands would be avoided and crossed using trenchless technologies to avoid any potential environmental impacts to these resources.

3.3 Potentially Affected Federal Species and Habitats

A record search of CDFW’s California Natural Diversity Database (CNDDDB) and USFWS’ Species List was conducted for the area within a five-mile radius of the Project area to identify previously reported occurrences of state and federal special-status plants and animals. In addition, a field visit of the pipeline alignment was conducted on August 7, 2014 to determine the potential for special-status species to occur within the general vicinity of the Proposed Project/Action Study Area (i.e. Construction Area) as described in Chapter 2 – Description of Proposed Action. These field visits were not intended to be protocol-level surveys to determine the actual absence or presence of special-status species, but were conducted to determine the potential for special-status species to occur within the Proposed Project/Action Area. No special-status species were observed during the field visits. Figure 4 – shows the

location of known state and federal listed species within the Project/Action Area. The potential for each special status species to occur in the Study Area was then evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded on the site recently.

Table 3 below lists the state and federally-listed species that have the potential to exist within the Proposed Project/Action Area, along with their preferred habitats, the potential to occur within the Action Study Area, and recommendations to avoid and minimize potential effects to these species.

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
Plants				
<i>Amsinckia grandiflora</i> large-flowered fiddleneck	FE, FX, SE	The last remaining native populations are on the grasslands near Lawrence Livermore National Laboratory in Alameda County, California. Other populations have been established in nearby protected areas.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Arctostaphylos myrtifolia</i> lone manzanita	FT	It is endemic to the Sierra Nevada foothills of California. It grows in the chaparral and woodland plant community on a distinctive acidic soil series in western Amador and Calaveras Counties.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Arctostaphylos pallida</i> pallid manzanita (=Alameda or Oakland Hills manzanita)	FT, SE	The plants are found in manzanita chaparral habitat of the montane chaparral and woodlands ecosystem, and is frequently surrounded by oak woodlands and other chaparral shrubs.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Atriplex joaquinana</i>	1B.2	It is endemic to California,	Unlikely. Suitable	No further actions

Species	Status	Habitat	Potential for Occurrence	Recommendations
San Joaquin spearscale		where it grows in alkaline soils in the Sacramento-San Joaquin River Delta and adjacent parts of the Central Valley and eastern Central Coast Ranges.	habitat not present in the Study Area.	are recommended for this species.
<i>Castilleja campestris</i> Owl's-clover	FT	It is found only in vernal pools along the rolling lower foothills and valleys along the eastern San Joaquin Valley in the Southern Sierra Foothills Vernal Pool Region.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	FE	Known only from southern Santa Cruz and Monterey Counties.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Clarkia franciscana</i> Presidio clarkia	FE, SE	It is endemic to the San Francisco Bay Area of California, where it is known only from two populations at the Presidio of San Francisco and three occurrences in Oakland.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Cordylanthus palmatus</i> palmate-bracted bird's-beak	FE, SE	It is endemic to the Central Valley of California, where it is known from a few remaining occurrences in the rare alkali sink habitat type. The plant is limited to seasonally-flooded flats with saline and alkaline soils, where it grows with other halophytes such as iodine bush and alkali heath.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Eriogonum apricum</i> lone Buckwheat	FE	lone buckwheat is only known to occur in Amador County. One occurrence is on Bureau of Land Management land, and one is on CDFW-owned Apricum Hill Ecological Reserve. The remaining occurrences are on privately owned land and are not afforded any permanent protections.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Eriogonum prostratum</i> Irish Hill Buckwheat	FE	Can be found on barren surfaces, and sometimes colonizes disturbed sites, often with little, if any other vegetation present. At the time of this webpage posting, the California Natural Diversity Database lists	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		two occurrences of Irish Hill buckwheat, one at Irish Hill in Amador County and one to the north of Irish Hill. Both of these occurrences are on private property and their status is largely unknown.		
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT, FX, SE	Inhabits terraced locations of coastal or valley prairie grasslands with underlying sandy clay soils.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE, RP, List 1B	Mesic sites in cismontane woodland, alkaline playas, valley and foothill grassland. Vernal pools, swales, or low depressions. 1-445 m. Blooms March-June.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Layia carnosa</i> beach layia	FE, SE	It is endemic to California, where it lives in beach habitat.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Orcuttia viscida</i> Sacramento Orcutt grass	FE, FX	It is endemic to Sacramento County, California, where it grows only in vernal pools, a rare and declining type of habitat. As of 1997, two of the nine known populations had been extirpated as habitat has been consumed for urban development, and it was federally listed as an endangered species. Since its listing, one additional occurrence of the plant has been discovered, for a total of eight extant populations.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Plagiobothrys glaber</i> hairless popcornflower	1A	Presumed Extinct in California	Unlikely. Presumed extinct in California	No further actions are recommended for this species.
<i>Suaeda californica</i> California sea blite	FE	Confined to saline or alkaline soil habitats, such as coastal salt-flats and tidal wetlands.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Mammals				
<i>Martes pennanti</i> fisher	FC	The fisher is a forest-dwelling creature whose range covers much of the boreal forest in Canada to the northern fringes of the United States.	Unlikely. Site is regularly disturbed by human activity.	No further actions are recommended for this species.
<i>Reithrodontomys</i>	FE, SE	Primary habitat in	Unlikely. Suitable	No further actions

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
<i>raviventris</i> Salt-marsh Harvest Mouse		pickleweed dominated saline emergent marshes of San Francisco Bay. Require adjacent upland areas for escape from high tides.	habitat not present in the Study Area.	are recommended for this species.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE	Kit foxes favor arid climates, such as desert scrub, chaparral, and grasslands. Good examples of common habitats are sagebrush <i>Artemisia tridentata</i> and saltbrush <i>Atriplex polycarpa</i> . They can be found in urban and agricultural areas, too.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Birds				
<i>Athene cunicularia</i> burrowing owl	CSC	Burrowing Owls can be found in grasslands, rangelands, agricultural areas, deserts, or any other open dry area with low vegetation.	Moderate. Potential exists that they could be located in open spaces near construction activities.	Conduct Pre-construction nesting and breeding surveys.
<i>Charadrius alexandrinus nivosus</i> Western Snowy Plover	FT, CSC, BCC, RP	(Nesting) Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees and shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.	Unlikely. Suitable open nesting habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Pelecanus occidentalis californicus</i> California Brown Pelican	FE, SE	Found in estuarine, marine subtidal, and marine pelagic waters along the coast. Nest on rocky or low brushy slopes of undisturbed islands.	Unlikely. Suitable estuarine and subtidal areas not present in the Study Area.	No further actions are recommended for this species.
<i>Rallus longirostris obsoletus</i> California Clapper Rail	FE, SE	Found in tidal salt marshes of the San Francisco Bay. Requires mudflats for foraging and dense vegetation on higher ground for nesting.	Moderate. Suitable habitat may be present near the Study Area and in the Hayward Regional Shoreline wildlife refuge.	Conduct Pre-construction surveys.
<i>Sternula antillarum</i> (=Sterna, =albifrons) <i>browni</i> California least tern	FE	The California Least Tern hunts primarily in shallow estuaries and lagoons, where smaller fishes are abundant.	Moderate. Suitable habitat may be present near the Study Area and in the Hayward Regional Shoreline wildlife refuge.	Conduct Pre-construction surveys.
<i>Strix occidentalis caurina</i> Northern spotted owl	FT	The northern spotted owl primarily inhabits old	Unlikely. Suitable habitat not present in	No further actions are recommended

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		growth forests. The species' range is the Pacific coast from extreme southern British Columbia to Marin County in northern California.	the Study Area.	for this species.
Reptiles				
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT, ST, X	The California whipsnake, <i>Masticophis lateralis</i> , is known to utilize a wide range of habitat types including open desert, California oak woodland, pine forest, chaparral, and associated open landscape habitats.	Moderate. Suitable habitat may be present in the Study Area.	Conduct Pre-construction surveys.
<i>Thamnophis gigas</i> Giant garter snake	FT	Generally inhabits marshes, sloughs, ponds, slow moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation, open areas and high ground for hibernation and escape cover.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco garter snake	FE	It is endemic to San Mateo County and the extreme northern part of coastal Santa Cruz County in California.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Amphibians				
<i>Ambystoma californiense</i> California Tiger Salamander	FT, FX, CSC	Inhabits annual grass habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding.	Unlikely. Annual grassland habitat is limited in the Study Area.	No further actions are recommended for this species.
<i>Anaxyrus canorus</i> Yosemite toad	FPX	Endemic to the Sierra Nevada of California, the species ranges from the montane forests of El Dorado County near Lake Tahoe south to subalpine Fresno County near Tehipite Valley in Kings Canyon. Yosemite toads show a narrow elevational distribution from 6,200 feet to 11,300 feet.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Rana aurora draytonii</i> California Red-legged Frog	FT, FX, CSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Documented	Unlikely. Freshwater habitat in the Study Area is unlikely to provide suitable habitat for this species.	No further actions are recommended for this species

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		to disperse through upland habitats after rains.		
<i>Rana sierrae</i> Mountain yellow legged frog	FPX	Occurs in the mountain ranges of Southern California up to the southern Sierra Nevada.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
Fish				
<i>Acipenser medirostris</i> Green sturgeon	FT, NMFS	Adults spawn in freshwater and then return to estuarine or marine environments. Preferred spawning habitat occurs in the lower reaches of large rivers with swift currents and large cobble.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Eucyclogobius newberryi</i> Tidewater goby	FE	Shallow waters of bays and estuaries.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Hypomesus transpacificus</i> Delta smelt	FT, FX	Found in large, main channels and open areas of the Bay. Occur from tidal freshwater reaches of the Delta west to eastern San Pablo Bay.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus clarki henshawi</i> Lahontan cutthroat trout	FT	The Lahontan cutthroat is native to the drainages of the Truckee River, Humboldt River, Carson River, Walker River, Quinn River and several smaller rivers in the Great Basin of North America.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus kisutch</i> Coho salmon - central CA coast	FE, NMFS	Central and northern Calif. Coastal rivers and drainages.	Unlikely. Believed to be extirpated from San Francisco Bay drainages.	No further actions are recommended for this species.
<i>Oncorhynchus mykiss</i> Steelhead, Central California Coast and Central Valley	FT, FX, CSC	Drainages of San Francisco and San Pablo bays, central Calif. Coastal rivers.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run chinook salmon	FT, FX NMFS	Spawns in the Sacramento and San Joaquin Rivers and their tributaries.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.
<i>Oncorhynchus tshawytscha</i> Winter-run chinook salmon, Sacramento River	CSC, FE, FX, NMFS	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams.	Unlikely. No suitable habitat occurs within the Study Area.	No further actions are recommended for this species.

Table 3 Potential for Special-Status Species to Occur in the Proposed Project/Action Study Area				
Species	Status	Habitat	Potential for Occurrence	Recommendations
		Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.		
Invertebrates				
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE	Inhabit highly turbid water in vernal pools. Known from six populations in the northern central valley.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Branchinecta longiantenna</i> Longhorn pool fairy shrimp	FE, FX	Inhabit small, clear-water sandstone depression pools, grassy swales, slumps, or basalt-flow depression pools.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT	Inhabit small, clear-water sandstone depression pools, grassy swales, slumps, or basalt-flow depression pools.	Unlikely. Suitable habitat not present in the Study Area.	No further actions are recommended for this species.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT	Occurs in the Central Valley region in association with blue elderberry shrubs. Prefers to lay eggs in elderberry stems greater than 1" in diameter.	Unlikely. No elderberry shrubs were identified in the Study Area and suitable habitat is not present.	No further actions are recommended for this species.
<i>Euphydryas editha bayensis</i> bay checkerspot butterfly	FT	Today the only populations known inhabit areas of Santa Clara County.	Unlikely. Suitable habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Icaricia icarioides missionensis</i> Mission Blue butterfly	FE	The Mission Blue depends on a very specific host plant called the lupine.	Unlikely. Suitable habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE	Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mudbottomed and highly turbid.	Unlikely. Suitable vernal pool habitat is not present in the Study Area.	No further actions are recommended for this species.
<i>Speyeria callippe callippe</i> Callippe silverspot butterfly	FE	Historically inhabited grasslands ranging over much of the northern San Francisco Bay region, but eventually was known to occur on the east and western sides of San Francisco Bay.	Unlikely. The only known colony now is on San Bruno Mountain on the San Francisco peninsula.	No further actions are recommended for this species.

Key to status codes:

FE Federal Endangered
FT Federal Threatened
FX Federal Critical Habitat
FC Federal Candidate
FD Federal De-listed
FPD Federal Proposed for De-listing
FPT Federal Proposed Threatened
FPX Federal Proposed Critical Habitat
NMFS Species under the Jurisdiction of the National Marine Fisheries Service
BCC USFWS Birds of Conservation Concern
RP Sensitive species included in a USFWS Recovery Plan or Draft Recovery Plan
SE State Endangered
ST State Threatened
SR State Rare
CSC CDFW Species of Special Concern
Draft CSC 4 April 2000 Draft CDFW Species of Special Concern
CFP CDFW Fully Protected Animal
WBWG Western Bat Working Group High Priority species
SLC Species of Local Concern
List 1A CNPS List 1A: Plants presumed extinct in California
List 1B CNPS List 1B: Plants rare, threatened or endangered in California and elsewhere
List 2 CNPS List 2: Plants rare, threatened, or endangered in California, but more common elsewhere
List 3 CNPS List 3: Plants about which CNPS needs more information (a review list)

Section 4 – Effects on Species and Habitat

This section describes the potential effects on federally-listed species and habitat as a result of implementing the Proposed Action.

4.1 General Effects

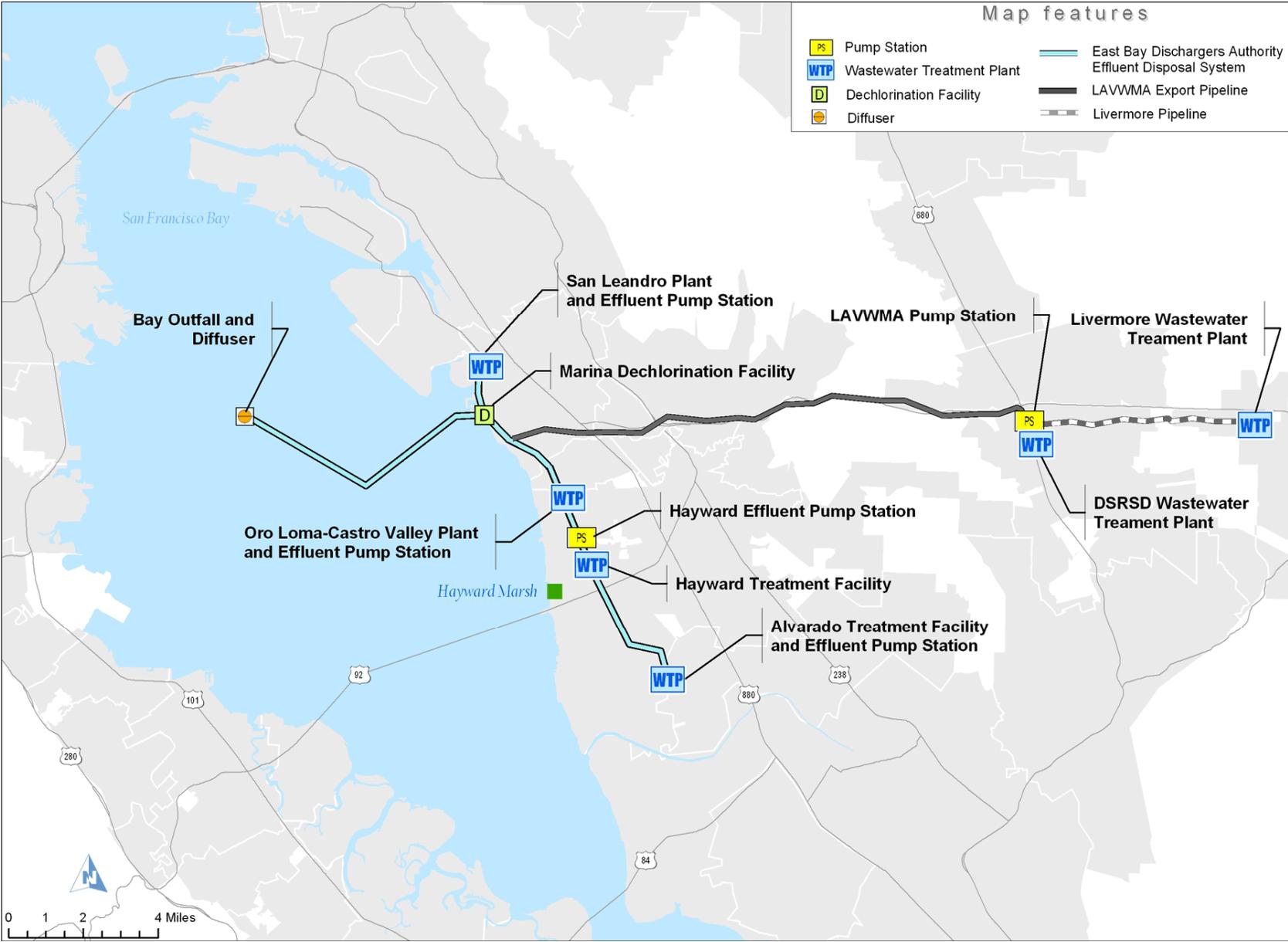
Implementation of the Proposed Action has the potential to cause the following general effects on federally listed species and habitat in the Action Area.

- Increase in Human Activity. The Proposed Action will require construction crews to be working in the Action Area for several months. In addition, construction activities will cause an increase in noise and vibration in the Action Area, thereby potentially disturbing fish and wildlife causing them to avoid the area. This may indirectly cause reduced viability, as foraging opportunities may temporarily become more limited and/or chances for predation increase.
- Increase in sedimentation and decrease in water quality. The Proposed Action may temporarily decrease water quality in the Action Area and immediately downstream if sediments or chemicals are discharged from the construction site. A decrease in water quality may cause a decline in preferred food sources or reduce concentrations of available oxygen for fish and/or amphibian eggs or yearlings.
- The Proposed Action would remove 290 afy or approximately 0.25 million gallons per day from being discharged to the San Francisco Bay. As shown on Figure 5, the City of Hayward discharges its wastewater (approximately 12 mgd) to the San Francisco Bay through the East Bay Dischargers Authority (EBDA) Common Outfall. The EBDA Outfall has an overall discharge capacity of an average dry water flow of 106 mgd and includes discharges from the City of Hayward, the City of San Leandro, the Oro Loma Sanitary District, the Castro Valley Sanitary District, the Union Sanitary District, and Livermore-Amador Valley Water Management Agency (LAVWMA). Current average dry weather discharge flows in the EBDA common outfall are approximately 74 mgd. To put this in perspective, the City would eliminate approximately 2% of its discharges of 12 mgd to the San Francisco Bay and overall this decrease would represent approximately 0.34% of the overall discharge to the San Francisco Bay of all of the EBDA member agencies (i.e. 74mgd). This reduction in discharge would generally represent a beneficial impact to the San Francisco Bay. However, the quantity of this reduction is so small in comparison to the total discharge and the San Francisco Bay, that it is essentially unnoticeable and not measureable by any practical standards. This reduction in flow would not have any adverse impacts to any federally listed species in the San Francisco Bay.

4.2 Effects to Federally Listed Species and Habitat

This section describes the potential direct, indirect, and cumulative effects the Proposed Action may have to those species identified in Section 3.0 as having a medium or higher potential to occur within

Figure 5 East Bay Dischargers Wastewater Common Outfall System



the Action Area. Potential species and habitats deemed to be absent or unlikely to occur are not discussed further below. Possible interrelated and interdependent actions to the Proposed Action are also discussed. Potential effects are defined as follows.

- **Direct Effect.** Those effects generated directly from the Proposed Action, such as an incidental take during construction and elimination of suitable habitat due to construction (50CFR 402.02)
- **Indirect Effect.** Those effects that are caused by the Proposed Action and are later in time, such as the discharge of sediment or chemicals that may adversely affect water quality downstream of the Action Area (50 CFR 402.02).
- **Cumulative Effect.** Effects of future state or private activities that are reasonably certain to occur within the Proposed Action Area (50 CFR 402.02).
- **Interrelated Actions.** Those actions that are part of, and dependent upon, a larger action (50 CFR 402.02).
- **Interdependent Actions.** Actions that have no independent utility apart from the Proposed Action (50 CFR 402.02).

Construction of the Proposed Action could likely have temporary direct effects to federal threatened and endangered species and habitat. The Proposed Action could also incidentally take listed species if they are present in the Action Area during construction activities. However, following construction, the Proposed Action would not have any adverse effects on federally listed species and habitats. Summarized below are the potential effects on federally listed species and recommended measures to reduce and/or avoid these potential adverse effects.

Birds

***Athene cunicularia* - burrowing owl**

Species Overview

The burrowing owl occurs in dry, open grasslands on flat or rolling terrain; desert; scrubland or any other terrain dominated by low-growing vegetation. Burrowing owls use the abandoned burrows of ground-dwelling mammals such as ground squirrels, badgers, prairie dogs or hares. The CNDDDB indicates an occurrence within the immediate vicinity of the project area. The burrowing owl is listed by the CDFW as a species of special concern and is also covered by the Federal Migratory Bird Treaty Act.

Direct and Indirect Effects

If construction is required to replace the Shell Oil Pipeline, construction activities could directly or indirectly impact owls or their burrows if they are near the site. The CDFW guidelines describe three types of impacts:

- Disturbance or harassment within 50 meters (approx. 160 ft.) of occupied burrows.
- Destruction of burrows and burrow entrances. Burrows include structures such as culverts, concrete slabs and debris piles that provide shelter to burrowing owls.
- Degradation of foraging habitat adjacent to occupied burrows.

To mitigate for potential impacts to burrowing owls, mitigation measures are presented below that would bring the potential impact to this species to a less-than-significant level.

- **Conduct Breeding Surveys.** For construction activities that occur between February 1 and August 31, preconstruction breeding bird surveys shall be conducted by a qualified biologist prior to and within 10 days of any initial ground-disturbance activities. Surveys shall be conducted within all suitable nesting habitat within 250 feet of the activity. All active, non-status passerine nests identified at that time should be protected by a 50-foot radius minimum exclusion zone. Active raptor or special-status species nests should be protected by a buffer with a minimum radius of 200 feet. CDFW and USFWS recommend that a minimum 500-foot exclusion buffer be established around active nests. The following considerations apply to this mitigation measure:
 - Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. If no breeding birds are encountered, then work may proceed as planned.
 - The non-breeding season is defined as September 1 to January 31. During this period, breeding is not occurring and surveys are not required. However, if nesting birds are encountered during work activities in the non-breeding season, disturbance activities within a minimum of 50 feet of the nest should be postponed until the nest is abandoned or young birds have fledged.
- **Conduct Nesting Surveys.** For any construction activities initiated between March 15 and September 1, surveys for nesting western burrowing owls and/or raptors are required within 250 feet of areas of disturbance. If an active nest is found, a qualified biologist shall monitor the nest during construction activities within 250 feet of the nest to determine whether project construction may result in abandonment. The monitor shall continue monitoring the nest until construction within 250 feet of the nest is completed, or until all chicks have completely fledged. If the monitor determines that construction may result in abandonment of the nest, all construction activities within 250 feet should be halted until the nest is abandoned or all young have fledged.

The implementation of the above mitigation measures would reduce impacts associated with the Proposed Action to a level of less-than-significant. No additional mitigation measures are required.

Cumulative Effects

Further, the Proposed Action is unlikely to have significant cumulative effects on this species or its supporting habitat. No other known development is currently planned in the Proposed Action Area that would remove or further degrade habitat in the vicinity of Proposed Action Area. In addition, the Proposed Action would not have any long-term effects to habitat quality in the region after construction is completed.

Interdependent and Interrelated Effects

The Proposed Action is considered to be an action that has independent utility apart from other Projects in the City and Alameda County and would not have any additional adverse interrelated effects on this species or its supporting habitat.

***Rallus longirostris obsoletus* - California Clapper Rail**

Species Overview

The California Clapper Rail is a federally endangered species and is covered by the Federal Migratory Bird Treaty Act. It is found in tidal salt marshes of the San Francisco Bay and requires mudflats for foraging and dense vegetation on higher ground for nesting. The species could be located within or adjacent to the Hayward Regional Shoreline wildlife refuge area.

Direct and Indirect Effects

If construction is required to replace the Shell Oil Pipeline and if construction activities are required along Depot Road and/or West Winton Avenue, this species could be adversely affected.

To mitigate for potential impacts, mitigation measures are presented below that would bring the potential impact to this species to a less-than-significant level.

- **Conduct Breeding Surveys.** For construction activities that occur between February 1 and August 31, preconstruction breeding bird surveys shall be conducted by a qualified biologist prior to and within 10 days of any initial ground-disturbance activities. Surveys shall be conducted within all suitable nesting habitat within 250 feet of the activity. All active, non-status passerine nests identified at that time should be protected by a 50-foot radius minimum exclusion zone. Active nests should be protected by a buffer with a minimum radius of 200 feet. CDFW and USFWS recommend that a minimum 500-foot exclusion buffer be established around active nests. The following considerations apply to this mitigation measure:
 - Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. If no breeding birds are encountered, then work may proceed as planned.
 - The non-breeding season is defined as September 1 to January 31. During this period, breeding is not occurring and surveys are not required. However, if nesting birds are encountered during work activities in the non-breeding season, disturbance activities within a minimum of 50 feet of the nest should be postponed until the nest is abandoned or young birds have fledged.
- **Conduct Nesting Surveys.** For any construction activities initiated between March 15 and September 1, surveys for nesting special status species birds are required within 250 feet of areas of disturbance. If an active nest is found, a qualified biologist shall monitor the nest during construction activities within 250 feet of the nest to determine whether project construction may result in abandonment. The monitor shall continue monitoring the nest

until construction within 250 feet of the nest is completed, or until all chicks have completely fledged. If the monitor determines that construction may result in abandonment of the nest, all construction activities within 250 feet should be halted until the nest is abandoned or all young have fledged.

The implementation of the above mitigation measures would reduce impacts associated with the Proposed Action to a level of less-than-significant. No additional mitigation measures are required.

Cumulative Effects

Further, the Proposed Action is unlikely to have significant cumulative effects on this species or its supporting habitat. No other known development is currently planned in the Proposed Action Area that would remove or further degrade habitat in the vicinity of Proposed Action Area. In addition, the Proposed Action would not have any long-term effects to habitat quality in the region after construction is completed.

Interdependent and Interrelated Effects

The Proposed Action is considered to be an action that has independent utility apart from other Projects in the City and Alameda County and would not have any additional adverse interrelated effects on this species or its supporting habitat.

***Sternula antillarum (=Sterna, =albifrons) browni* - California least tern**

Species Overview

The California least tern is a federally endangered species and is covered by the Federal Migratory Bird Treaty Act. It is found in tidal salt marshes of the San Francisco Bay. Requires mudflats for foraging and dense vegetation on higher ground for nesting. The species could be located with or adjacent to the Hayward Regional Shoreline wildlife refuge area.

Direct and Indirect Effects

If construction is required to replace the Shell Oil Pipeline and if construction activities are required along Depot Road and/or West Winton Avenue, this species could be adversely affected.

To mitigate for potential impacts, mitigation measures are presented below that would bring the potential impact to this species to a less-than-significant level.

- **Conduct Breeding Surveys.** For construction activities that occur between February 1 and August 31, preconstruction breeding bird surveys shall be conducted by a qualified biologist prior to and within 10 days of any initial ground-disturbance activities. Surveys shall be conducted within all suitable nesting habitat within 250 feet of the activity. All active, non-status passerine nests identified at that time should be protected by a 50-foot radius minimum exclusion zone. Active nests should be protected by a buffer with a minimum radius of 200 feet. CDFW and USFWS recommend that a minimum 500-foot exclusion buffer

be established around active nests. The following considerations apply to this mitigation measure:

- Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. If no breeding birds are encountered, then work may proceed as planned.
- The non-breeding season is defined as September 1 to January 31. During this period, breeding is not occurring and surveys are not required. However, if nesting birds are encountered during work activities in the non-breeding season, disturbance activities within a minimum of 50 feet of the nest should be postponed until the nest is abandoned or young birds have fledged.
- **Conduct Nesting Surveys.** For any construction activities initiated between March 15 and September 1, surveys for nesting special status species birds are required within 250 feet of areas of disturbance. If an active nest is found, a qualified biologist shall monitor the nest during construction activities within 250 feet of the nest to determine whether project construction may result in abandonment. The monitor shall continue monitoring the nest until construction within 250 feet of the nest is completed, or until all chicks have completely fledged. If the monitor determines that construction may result in abandonment of the nest, all construction activities within 250 feet should be halted until the nest is abandoned or all young have fledged.

The implementation of the above mitigation measures would reduce impacts associated with the Proposed Action to a level of less-than-significant. No additional mitigation measures are required.

Cumulative Effects

Further, the Proposed Action is unlikely to have significant cumulative effects on this species or its supporting habitat. No other known development is currently planned in the Proposed Action Area that would remove or further degrade habitat in the vicinity of Proposed Action Area. In addition, the Proposed Action would not have any long-term effects to habitat quality in the region after construction is completed.

Interdependent and Interrelated Effects

The Proposed Action is considered to be an action that has independent utility apart from other Projects in the City and Alameda County and would not have any additional adverse interrelated effects on this species or its supporting habitat.

Reptiles

Masticophis lateralis euryxanthus – Alameda whipsnake

Species Overview

The Alameda whipsnake (*Masticophis lateralis euryxanthus*) is a member of the family Colubridae, which

includes most of the species of snakes found in the western United States. It is a federally listed species. It is a slender, fast-moving, diurnally active snake with a slender neck, broad head and large eyes. Another common name for the Alameda whipsnake is the "Alameda striped racer." The Alameda whipsnake currently inhabits the inner coast range mostly in Contra Costa and Alameda counties, with additional occurrence records in San Joaquin and Santa Clara counties.

Direct and Indirect Effects

If construction is required to replace the Shell Oil Pipeline, construction activities of the Proposed Action have the potential to have direct and indirect adverse impacts to the Alameda whipsnake. However, these potential impacts to the Alameda whipsnake would be minimized to less-than-significant levels with the incorporation of the following mitigation measures and procedures:

- **Conduct Alameda whipsnake Pre-construction Surveys.** Prior to construction, the City shall conduct focused pre-construction surveys for the Alameda whipsnake at all project sites/areas within or directly adjacent to areas identified as having high potential for whipsnake occurrence. Project sites within high potential areas shall be fenced to exclude snakes prior to project implementation. Methods for pre-construction surveys, burrow excavation, and site fencing shall be developed prior to implementation of any project located within or adjacent to areas mapped as having high potential for whipsnake occurrence. Such methods would be developed in consultation or with approval of USFWS for any development taking place in USFWS officially designated Alameda whipsnake critical habitat. Pre-construction surveys of such project sites shall be carried out by a permitted biologist familiar with whipsnake identification and ecology (Swaim, 2002). These are not intended to be protocol-level surveys but designed to clear an area so that individual whipsnakes are not present within a given area prior to initiation of construction. At sites where the project footprint would not be contained entirely within an existing developed area footprint and natural vegetated areas would be disturbed any existing animal burrows shall be carefully hand-excavated to ensure that there are no whipsnakes within the project footprint. Any whipsnakes found during these surveys shall be relocated according to the Alameda Whipsnake Relocation Plan. Snakes of any other species found during these surveys shall also be relocated out of the project area. Once the site is cleared it shall then be fenced in such a way as to exclude snakes for the duration of the construction activities. Fencing shall be maintained intact throughout the duration of the construction activities. All construction activities shall be performed during daylight hours, or with suitable lighting so that snakes can be seen. Vehicle speed on the construction site shall not exceed 5 miles per hour.

Cumulative Effects

The Proposed Action is unlikely to have significant cumulative effects on this species or its supporting habitat. No other known development is currently planned in or near the Proposed Action Area that would remove or further degrade habitat. In addition, the Proposed Action would not have any long-term effects to habitat quality in the region once construction is complete.

Interdependent and Interrelated Effects

The Proposed Action is considered to be an action that has independent utility apart from other Projects in the City of Hayward and Alameda County and would not have any additional adverse interrelated effects on this species or its supporting habitat.

4.3 Waters of the United States, Including Wetlands

The following is a summary of the potential to affect water of the United States, including wetlands.

Overview

Seasonal Wetland/Vernal pools

The Proposed Action would be constructed on paved roads that are highly disturbed areas. As a result, there are no known seasonal wetlands and/or vernal pools that would be affected by the Proposed Action.

Other Waters of the U.S.

If construction is required to replace the Shell Oil Pipeline, construction activities of the Proposed Action could cross several local creeks/drainages that could be considered Other Waters of the U.S.

Direct and Indirect Effects

The Proposed Action could have an adverse effect on local creek/drainage crossings that may meet the USACE criteria for Waters of the U.S. and any fill or degradation to these channels could significantly impact water quality or habitat for protected species. Specifically, any activity which results in the deposit of dredge or fill material within the Ordinary High Water mark of Waters of the U.S. typically requires a permit from the USACE. In addition, the bed and banks of the creeks and drainage channels could also fall under the regulatory authority of the CDFW. However, as stated in Section 2 – Description of Proposed Action, all of the creek/drainage crossings will involve the use of trenchless construction techniques in the dry season and not involve cutting through or disturbing the creeks.

Excavation, grading, and other general construction activities associated with the Proposed Action could expose and disturb soils, resulting in potential increases in erosion and siltation in the Project area. Construction during the rainy season could result in increases in erosion, siltation, and water quality issues. Generally, excavation, grading, paving, and other construction activities could expose disturbed and loosened soils to erosion by wind and runoff. Construction activities could therefore result in increased erosion and siltation, including nutrient loading and increasing the total suspended solids concentration. Erosion and siltation from construction have the potential to impact the creeks and drainage crossings, therefore posing a potentially significant impact to wetlands and waters of the U.S.

Implementation of the following mitigation measures would reduce and minimize these impacts so as to not adversely affect.

- **Obtain all Required Authorizations.** Prior to issuance of encroachment permits for the Proposed Project, the City shall, as/if necessary, prepare a wetlands delineation and obtain all required authorization from agencies with jurisdiction over riparian habitats and jurisdictional wetlands in the area. Such agencies may include, but are not limited to, the United States Army Corps of Engineers, the California Department of Fish and Wildlife, and the San Francisco Regional Water Quality Control Board. Impacted habitat shall be offset through onsite restoration, offsite restoration, or purchase of credits at a CDFW and/or USFWS-approved mitigation bank in the region at no less than a 1:1 ratio. The requirements of this mitigation measure do not apply if pipeline installation activities completely avoid work within the bed, bank, or channel of the creeks and/or drainages.

- **Avoid cutting through the creeks.** As described in the Proposed Action description, all creek crossings will be crossed by installing the pipelines on the side of the bridge and above the channel and or crossed using trenchless technologies such as micro-tunneling or directional drilling construction methods. Construction crews shall avoid entering the stream channels during installation. With these mitigation measures in place, the Proposed Project/Action is unlikely to have a direct and/or indirect adverse effect on this species or its supporting habitat. Once constructed, the operation and maintenance of the Proposed Project/Action will not adversely affect this species.

- **Implement Best Management Practices.** To reduce potentially significant erosion and siltation, the City and/or its selected contractor(s) shall obtain a Stormwater Pollution Prevention Permit (SWPPP) and implement Best Management Practices and erosion control measures as required by the San Francisco RWQCB. Best Management Practices to reduce erosion and siltation shall include, at a minimum, the following measures: Avoidance of construction activities during inclement weather; limitation of construction access routes and stabilization of access points; stabilization of cleared, excavated areas by providing vegetative buffer strips, providing plastic coverings, and applying ground base on areas to be paved; protection of adjacent properties by installing sediment barriers or filters, or vegetative buffer strips; stabilization and prevention of sediments from surface runoff from discharging into storm drain outlets; use of sediment controls and filtration to remove sediment from water generated by dewatering; and returning all drainages to preconstruction conditions. Construction crews shall avoid entering the stream channels during installation.

Cumulative Effects

The Proposed Action is unlikely to have significant cumulative effects on riparian habitat and/or jurisdictional wetlands. No other known development is currently planned in the Proposed Action Area that would remove or further degrade riparian habitat and/or jurisdictional wetlands within the vicinity of Proposed Action Area. In addition, the Proposed Action would not have any long-term effects to riparian habitat and/or jurisdictional wetlands in the region as once construction is complete.

Interdependent and Interrelated Effects

The Proposed Action is considered to be an action that has independent utility apart from other Projects in the City and in Alameda County and would not have any adverse interdependent and/or interrelated effects on riparian habitat and/or jurisdictional wetlands.

Section 5 Determination of Effects

This section provides a summary and makes a determination as to the potential for the Proposed Action to affect the federally listed species identified in Section 1.

5.1 No Effect

Through the course of this study and analysis, it is our determination that the Proposed Action will not affect the following species:

Plant Species

- *Amsinckia grandiflora* (E) (X) large-flowered fiddleneck
- *Arctostaphylos* (T) lone Manzanita
- *Arctostaphylos pallida* (T) pallid manzanita
- *Castilleja campestris* (T) owl's-clover
- *Chorizanthe robusta var. robusta* (E) robust spineflower
- *Clarkia franciscana* (E) Presidio clarkia
- *Cordylanthus palmatus* (E) palmate-bracted bird's-beak
- *Eriogonum apricum* (E) lone buckwheat
- *Eriogonum prostratum* (E) Irish Hill buckwheat
- *Holocarpha macradenia* (T) (X) Santa Cruz tarplant
- *Lasthenia conjugens* (E) (X) Contra Costa goldfields
- *Layia carnosa* (E) beach layia
- *Orcuttia viscida* (E) (X) Sacramento Orcutt grass
- *Suaeda californica* (E) California sea blite

Mammals

- *Reithrodontomys raviventris* (E) Salt-marsh Harvest Mouse
- *Martes pennant* (C) fisher
- *Vulpes macrotis mutica* (E) San Joaquin kit fox

Birds

- *Charadrius alexandrinus nivosus* (T) Western Snowy Plover
- *Coccyzus americanus occidentalis* (C) Western Yellow-billed Cuckoo
- *Pelecanus occidentalis californicus* (E) California Brown Pelican
- *Strix occidentalis caurina* (T) Northern spotted owl

Reptile

- *Thamnophis gigas* (E) Giant garter snake
- *Thamnophis sirtalis tetrataenia* (E) San Francisco garter snake

Amphibians

- *Ambystma californiense* (T) (X) California tiger salamander
- *Anaxyrus canorus* (P) (X) Yosemite toad
- *Rana aurora draytonii* (T) (X) California Red-legged frog

- *Rana muscosa* (C) mountain yellow-legged frog

Fish

- *Acipenser medirostris* (T) (NMFS) Green sturgeon
- *Eucyclogobius newberryi* (E) Tidewater goby
- *Hypomesus transpacificus* (T) (X) Delta smelt
- *Oncorhynchus kisutch* (E) (NMFS) Coho salmon - Central CA Coast
- *Oncorhynchus mykiss* (T) (X) (NMFS) Steelhead, Central CA Coast /Valley
- *Oncorhynchus tshawytscha* (T) (NMFS) Chinook salmon, Central Valley, spring-run
- *Oncorhynchus tshawytscha* (E) (X) Chinook salmon - Sacramento River, winter-run

Invertebrates

- *Branchinecta conservation* (E) Conservancy fairy shrimp
- *Branchinecta longiantenna* (E) (X) longhorn fairy shrimp
- *Branchinecta lynchi* (T)(X) Vernal pool fairy shrimp
- *Desmocerus californicus dimorphus* (T) Valley elderberry longhorn beetle
- *Euphydryas editha bayensis* (T) bay checkerspot butterfly
- *Icaricia icarioides missionensis* (E) Mission blue butterfly
- *Lepidurus packardi* (T) (X) Vernal pool tadpole shrimp
- *Speyeria callippe callippe* (E) Callippe silverspot butterfly

5.2 Potential to Affect, But Not Likely to Adversely Affect

Through the course of this study and analysis, it is our determination that the Proposed Action could affect, but with the incorporation of the identified mitigation measures identified above, would not adversely affect the following species:

Reptiles

- *Masticophis lateralis euryxanthus* (T) (X) Alameda whipsnake

Birds

- *Athene cunicularia* (T) Burrowing owl
- *Rallus longirostris obsoletus* (E) California Clapper Rail
- *Sternula antillarum* (E) California least tern

Section 6 Bibliography

This section provides a listing of the references and resources used in this report.

- California Natural Diversity Database. 2014. <http://www.dfg.ca.gov/biogeodata/cnddb>
- California Regional Water Quality Control Board, ORDER NO. R2-2006-0053; NPDES NO. CA0037869, August 9, 2006.
- U. S. Fish and Wildlife Service species list database and Wetland Tracker. 2014. <http://www.fws.gov/>

Appendix D

Cultural Resources Investigation Report

Section 106
Cultural Resources Investigation Report
City of Hayward's Recycled Water Project

Prepared by:



SMB Environmental, Inc.

October 2014

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Section 1 - Introduction

This document is a cultural resources inventory study on the City of Hayward's proposed Recycled Water Project (Proposed Project/Action) in Alameda County, California. This report presents the project location and background, Proposed Description/Action, area of potential effect, environmental setting, regulatory framework, and the investigation methods and results of the cultural resources investigation for the Proposed Project/Action.

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

This study was conducted in order to identify cultural resources that include prehistoric and historic archeological resources, buildings, structures, and sites of religious or cultural significance for Native Americans within the proposed project area. Because the Proposed Project/Action may involve the use of State Revolving Loan Program and/or federal funds, this investigation was conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Register [CFR] Part 800).

1.1 Project Location and Background

The City of Hayward is located in the San Francisco Bay Area in the southern portion of Alameda County. The City has approximately 150,000 residents. The City boundaries extend from the San Francisco Bay on the west to the East Bay hills on the east. Figure 1 illustrates the project location. The City has a Mediterranean coastal climate, with mild dry summers and cool winters. Temperatures vary from average highs in September of 73.5 degrees Fahrenheit (deg F) to average lows in January of 42 degree Fahrenheit. Rainfall averages 18 inches annually with most rain occurring between October and April.

There is a mixture of industrial parks, office parks, commercial areas, golf courses, recreational parks, residential areas, an airport, schools and open space throughout the City. The City has a large and diverse industrial section including food and beverage processors and high-technology manufacturing. Additionally, the City is home to two regional public post-secondary educational institutions - California State University, East Bay and Chabot Community College.

The City operates the City-owned utilities, including water distribution and wastewater collection and

treatment services, within the City boundaries. In 1993, the City participated in the preparation of a Recycled Water Master Plan by East Bay Dischargers Authority (EBDA) to investigate potential recycled water projects. In 2007, the City completed a *Recycled Water Feasibility Study* (RMC 2007), including preliminary market and recycled water supply assessment and evaluation of two conceptual alternatives to serve recycled water customers to assess overall feasibility of expanding the City's water supply portfolio to include recycled water. As a result of the Feasibility Study, the City decided to prepare a *Recycled Water Facility Plan* in 2013 for treatment and distribution facilities to assist the City in making informed decisions about the use of recycled water in the City of Hayward. This *Recycled Water Facility Plan* is the basis for this environmental document.

1.2 Purpose and Need

The purpose of the Proposed Project/Action is to construct and operate a new recycled water system to allow the City to maximize recycled water to offset potable water sources. There are several drivers for the need to develop a recycled water resource including:

- Increases in San Francisco Public Utility Commission (SFPUC) water charges and potential decreases in SFPUC water availability at current reliability levels
- Potential for increasingly stringent discharge requirements to the San Francisco Bay
- City's desire to evaluate more sustainable alternatives to using potable water for certain applications

In addition, Calpine has constructed and is operating a power generation facility located on the property adjacent to the City's Water Pollution Control Facility (WPCF). Calpine treats secondary effluent from the WPCF for use as tertiary treated recycled water at their power generation facility. The power generation facility has been operational since June 2013. Calpine has indicated that may agree to provide surplus tertiary treated recycled water to the City for reuse, but final agreement has not been reached. Therefore, the Proposed Project/Action assumes that the City will construct a tertiary treatment facility on the WPCF site.

Figure 1
General Location Map



Section 2 - Proposed Action Description

The City proposes to construct and operate a recycled water project located within the City of Hayward. The City has prepared a Recycled Water Facility Plan to identify potential users for recycled water within the City, including a conceptual distribution system and an estimate of project costs. Figure 2 provides a schematic of the overall project. As shown on Figure 3, the initial phase of the project consists of installing a new Recycled Water Facility (RWF) located at the City's Water Pollution Control Facility (WPCF) at 3700 Enterprise Avenue, Hayward, California. As shown in Table 1, the RWF would deliver an estimated 290 acre-feet per year of recycled water to 24 customers within the City of Hayward. Table 2, provides a summary of the Proposed Project/Action facilities.

In addition and as shown in Figure 2, the RWF will be served by 1.5 miles of distribution lines (ranging in diameter from 6 to 8 inches) to the north and south of the WPCF, rehabilitation and connection to an existing and abandoned Shell Oil Pipeline, and over three miles of laterals to customers including installation of customer connections. The majority of recycled water customers will utilize the recycled water for irrigation, with some industrial uses for cooling towers and boilers. The City is pursuing an agreement with Shell Oil to purchase and use the existing abandoned 8-inch diameter pipeline that runs through the City. However, the environmental document assumes both the reuse of the existing abandoned 8-inch Shell Oil Pipeline as well as the construction of a new recycled water pipeline (in the event an agreement with Shell Oil is not reached or the use is otherwise determined infeasible). As a result, we have assumed a worst-case scenario and assumed approximately 3 miles of a new 8-inch pipeline paralleling portions of the Shell Oil Pipeline in existing roadways.

**Table 1
Proposed Project/Action Customers and Demands**

Customer No.	Customer Name	Type of Use	Average Demand (AFY) ^b	Average Demand (mgd) ^c	Peak Month Demand (mgd) ^c
1	Bottling Group LLC (Pepsi)	Combined ^a	31	0.03	0.04
4	Shasta Beverages	Industrial	8	0.01	0.01
5	Rohm & Haas	Industrial	22	0.02	0.02
8	Chabot-Las Positas Community College	Irrigation	6	0.005	0.01
29	Life Chiropractic College	Combined ^a	3	0.003	0.003
30	SCA Packaging	Industrial	2	0.001	0.001
40	Bay Center II	Irrigation	20	0.02	0.001
42	BB&K Franklin Township	Irrigation	13	0.01	0.03
72	Robert Chang & Associates	Irrigation	10	0.01	0.02
79	Caltrans D-4 HDWS	Irrigation	9	0.01	0.02
80	Caltrans D-4	Irrigation	8	0.01	0.02
91	Mt. Eden High School	Irrigation	43	0.04	0.09

**Table 1
Proposed Project/Action Customers and Demands**

Customer No.	Customer Name	Type of Use	Average Demand (AFY) ^b	Average Demand (mgd) ^c	Peak Month Demand (mgd) ^c
98	Eden Garden School	Irrigation	3	0.003	0.01
105	Loren Eden High School	Irrigation	8	0.01	0.02
114	Oliver Sports Park	Irrigation	35	0.03	0.07
116	Mt. Eden Park	Irrigation	21	0.02	0.04
119	Eden Greenway – Part 1	Irrigation	10	0.01	0.02
129	Brenkwitz School	Irrigation	8	0.01	0.02
132	Christian Penke Park	Irrigation	7	0.01	0.01
135	Rancho Arroyo Park	Irrigation	7	0.01	0.01
160	Bay Center II	Irrigation	7	0.01	0.02
163	Winton Industrial Center	Irrigation	7	0.01	0.01
168	Hayward Executive Airport	Combined ^a	4	0.004	0.005
169	Fire Training Center	Combined ^a	1	0.001	0.001
	Total		290	0.3	0.5

Notes:

- a. Either has irrigation as a primary use and industrial as a secondary use, or vice-versa.
b. Individual customers rounded to the nearest 1 AFY.
c. Total rounded to the nearest 0.1 mgd.

**Table 2
Proposed Project/Action Facilities**

Description	Units	Proposed
Customers		
Number of Customers	#	24
Annual Average Demand	AFY	290
Peak Month Demand	mgd	0.5
Peak Hour Demand	mgd	0.5
Treatment Facilities		
Influent Pump Station	hp	20
Flocculating Clarifiers ^a	mgd	0.5
Granular Media Filters ^a	mgd	0.5
Chlorine Disinfection	mgd	0.5
Treated Recycled Water Storage		
Storage Tank ^b	MG	0.4
Distribution Pump Station(s)		
Calpine Pump Station ^c	hp	NA
Other Customers Pump Station ^{c, d}	hp	165

Description	Units	Proposed
Distribution System		
Total Pipeline Length ^e	LF	23,900
14" Pipe	LF	0
8" Pipe	LF	7,100
6" Pipe	LF	16,800
Retrofit of Abandoned Shell Oil Pipeline for Conveyance	LF	7,460
Connections to Retrofitted Shell Oil Pipeline	#	11
New Pipeline Conveyance (If needed) ^f	LF	15,840

Notes:

- a. Facilities are oversized to account for 3-4% water consumption/loss through treatment processes.
- b. Storage tank was sized using the SWRCB Office of Water Recycling Storage Excel Workbook and maximum drawdown criteria of 2 feet.
- c. Pumps were sized based on peak hour flow, pipeline headloss, and downstream required pressures
- d. Summary of total distribution pumping needs for each alternative. One or more distribution pump stations maybe utilized.
- e. Pipelines were sized based on peak hour flow, pipeline headloss, and existing pipeline sizes (Shell Oil pipeline).
- f. To replace Shell Oil Pipeline if agreement is not reached.

2.1 Construction Considerations

Construction of the Proposed Project/Action facilities is expected to begin in the spring/summer of 2016 and will likely continue for 18 months into the summer of 2017. Construction work will typically be done within normal working hours, weekdays between the hours of 7 a.m. and 7 p.m., and possibly on Saturdays between the hours of 10 a.m. and 6 p.m. The Proposed Project/Action would be constructed primarily within existing roadways and any damages occurring during construction will be returned to the pre-construction condition or better. Detailed below is a summary of the construction techniques and activities.

- The new RWF system would involve installing a tertiary treatment filtration system within the City's existing WPCF.
- Each customer location will require some level of work due to possible meter location changes and pressure differences affecting overspray requirements. On-site plumbing changes may be required to comply with cross connection requirements.
- The majority of the pipelines would be installed in existing roadways using conventional cut and cover construction techniques and installing pipe in open trenches. It is assumed that up to a 50-foot wide construction corridor would be used to help maximize the efficiency during construction. However, in most places a 25-foot construction corridor could be realized, especially for the smaller diameter pipelines. It is anticipated that excavation would range from 2-5 feet wide and would typically be no more than 6-feet deep.

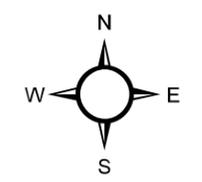
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Legend

- Target Users Parcel (with Customer Number)
- Distribution System**
- Main
- Lateral
- Existing Shell Pipeline/ Repurposed for Main
- Alternative Main
- Alternative Laterals

Figure 2 Proposed Project/ Action Facilities



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, /

Figure 3

Proposed Recycled Water Facility



- Any and all creek or drainage crossings would be constructed using trenchless techniques and will be done in the dry season and will not occur during inclement weather or between October 15 and April 1. Specifically, the existing Shell Oil Pipeline crosses a designated wildlife refuge in the northwestern portion of the Proposed Project/Action area, near the intersection of Depot Road and West Winton Avenue. If a new pipeline is necessary, its alignment in that area would not be placed along the existing Shell Oil Pipeline, but rather along or within the roadway. A flood control channel crosses Depot Road where the road turns west south of the Winton Industrial Center, one of the City's potential recycled water customers. Because of its location, crossing of the flood control channel will likely require microtunneling rather than another trenchless method. As a result, the City proposes microtunneling under the flood channel and will stay out of all creeks, streams, wetlands and/or flood control channels to avoid any adverse environmental impacts to these resources.
- Dewatering of the pipeline as a result of hydrostatic testing during construction as well as any dewatering as a result of operations and maintenance activities shall be discharged to land and/or the sanitary sewer system and not into any creeks, drainages, or waterways and shall require prior approval from the San Francisco Bay Regional Water Quality Control Board.

Construction activities for this kind of project will typically occur with periodic activity peaks, requiring brief periods of significant effort followed by longer periods of reduced activities. In order to characterize and analyze potential construction impacts, the City has assumed that the project would be constructed by two (2) crews of 10-15 workers each and would proceed at a rate of approximately 500-1,000 feet per day. However, specific details may change or vary slightly. Staging areas for storage of pipe, construction equipment, and other materials would be placed at locations (primarily city owned empty lots at the WPCF and adjacent to the City's Hesperian Pump station) that would minimize hauling distances and long-term disruption.

Excavation and grading activities would be necessary for construction of the Proposed Project/Action. Excavated materials resulting from site preparation would either be used on-site during construction or disposed of at a fill area authorized by the City. It is not anticipated that any soils would be imported for this project. Additional truck trips would be necessary to deliver materials, equipment, and asphalt-concrete to the site. During peak excavation and earthwork activities, the Proposed Project/Action could generate up to 40 round-trip truck trips per day. In support of these activities and for the assumptions for this document, the types of equipment that may be used at any one time during construction may include, but not be limited to:

- Track-mounted excavator
- Backhoe
- Grader
- Crane
- Dozer
- Compactor
- Trencher/boring machine

- End and bottom dump truck
- Front-end loader
- Water truck
- Flat-bed delivery truck
- Forklift
- Compressor/jack hammer
- Asphalt paver & roller
- Street sweeper

It is recognized that details of the construction activities and methods may change slightly as the specific details will be developed during final design and by the selected contractor. However, this description provides sufficient information to base the conclusions to probable environmental impacts associated with construction activities for this kind of project. Therefore, as long as the construction methods are generally consistent with these methods and do not conflict with any of the City's design standards or established ordinances, and does not create any new potential environmental impacts that are not described within this document, then no new environmental analyses will likely be required for any minor change in construction activities, timing, and/or schedule.

2.2 Compliance with CCR Title 22 and State Board's Recycled Water Policy

The Proposed Project/Action will be designed and operated in accordance with the applicable requirements of CCR Title 22 and any other state or local legislation that is currently effective or may become effective as it pertains to recycled water. The State Board adopted a Recycled Water Policy (RW Policy) in 2009 to establish more uniform requirements for water recycling throughout the State and to streamline the permit application process in most instances. As part of that process, the State Board prepared an Initial Study and Mitigated Negative Declaration for the use of recycled water. The newly adopted RW Policy includes a mandate that the State increase the use of recycled water over 2002 levels by at least 1,000,000 AFY by 2020 and by at least 2,000,000 AFY by 2030. Also included are goals for storm water reuse, conservation and potable water offsets by recycled water. The onus for achieving these mandates and goals is placed both on recycled water purveyors and potential users. The State Board has designated the Regional Water Quality Control Boards as the regulating entities for the Recycled Water Policy. In this case, the San Francisco Bay Regional Water Quality Control Board (San Francisco RWQCB) is responsible for permitting recycled water projects throughout the San Francisco Bay Area, including the City of Hayward.

The Proposed Project/Action will provide high quality unrestricted use tertiary treated recycled water and make it available to users within the City. All irrigation systems will be operated in accordance with the requirements of Title 22 of the CCR, the State Board Recycled Water Policy, and any other local legislation that is effective or may become effective as it pertains to recycled water and any reclamation permits issued by the San Francisco RWQCB. Reclamation permits typically require the following:

- Irrigation rates will match the agronomic rates of the plants being irrigated;

- Control of incidental runoff through the proper design of irrigation facilities;
- Implementation of a leak detection program to correct problems within 72 hours or prior to the release of 1,000 gallons whichever occurs first;
- Management of ponds containing recycled water to ensure no discharges; and
- Irrigation will not occur within 50 feet of any domestic supply wells, unless certain conditions have been met as defined in Title 22.

2.3 Operational and Maintenance Plans

The City has existing qualified staff and will be responsible for the operations, maintenance, and support staff to distribute recycled water. The City will require and enforce an irrigation schedule among its users. The City will develop an irrigation schedule in a way that optimizes use of the distribution system. The irrigation schedule may be modified in the future, but the initial assumptions are outlined below.

- Landscaping Demand Factor - 2.5 AFY/acre
- Landscape Irrigation hours (Summer) 6pm – 6am
- Summer storage filling 6pm – 6am
- Winter storage filling 24 hours per day

By irrigating using the above scheduling, peak flows are reduced and pipe sizing is optimized.

Maintenance procedures will include 1 or 2 existing City workers who will routinely inspect the pipeline alignment and connections for leaks and repair facilities on an as needed basis as well as conduct scheduled preventative maintenance procedures to keep the facilities in good working order.

2.4 Area of Potential Effect

The Area of Potential Effect (APE) for the Proposed Project/Action is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of cultural resources as defined above. Trenching for installing the recycled water pipelines would typically require a width of three feet and a vertical depth of approximately six feet; therefore the vertical APE would be typically six feet. For this Proposed Project/Action, an APE of 50-foot wide corridor (25-foot radius from centerline) would be assumed to accommodate for areas for staging and spoils. Depending upon the width of the roadway and the size of pipe, a narrower horizontal APE with an average width of 12.5 feet extending through the right-of-way could be realized.

Section 3 – Environmental Setting

This section presents the environmental setting and impact assessment for cultural resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community or scientific, traditional, religious, or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euro American occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources are standing structures of historic or aesthetic significance that are generally 50 years of age or older (i.e., anything built in the year 1955 or before). In California, historic resources considered for protection tend to focus on architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930). Historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values.

The following cultural, historical, and ethnographic baseline information is extracted from an overview document prepared by the Northwest Information Center at Sonoma State University, as well as information provided by the City of Pleasanton.

3.1 Regional Setting

This section summarizes the historical and archeological setting in Hayward, and provides the essential background pertaining to these resources.

Native American Resources

Prehistoric

In general, Alameda County had a favorable environment for prehistoric occupation. Upland areas near watercourses were favored locations for prehistoric occupation. In the San Francisco Bay Area the Bay margins are also high sensitivity areas for archeological resources, due to their proximity to fish and shellfish resources in the Bay. Prehistoric aboriginal use of the Hayward area was undoubtedly influenced by the presence of the San Francisco Bay Margin and seasonal and permanent water sources including San Lorenzo and Alameda Creeks, as well as Dry Creek and others in the hills such as Sulphur,

Ward, Zeile, Palomares, Dublin, Gold, and Sinbad Creeks.

Native American occupation and use of the area in the general area appears to extend over 5,000 to 7,000 years and possibly longer. Archaeological information suggests an increase in the prehistoric population over time with a focus on permanent settlements with large populations in later periods. This change from hunter-collectors to a more sedentary lifestyle is due to more efficient resource procurement, but with a focus on staple food exploitation, the increased ability to store food at village locations, and the development of increasing complex social and political systems including long-distance trade networks. The information obtained from archeological studies in the general area has played a key role in refining both the local and regional interpretations of Native American history for central California.

Ethnographic

The aboriginal inhabitants of the Hayward area belonged to a group known as the Costanoans (also known as the Ohlone) who occupied the central California coast as far east as the Diablo Range. The population was subdivided into tribelets, which were politically autonomous groups containing some 50 to 500 individuals, with an average population of 200. The tribelet territories, defined by physiographic features, usually had one or more permanent villages surrounded by several temporary camps. The camps were used to exploit seasonally available floral and faunal resources.

The city of Hayward is situated within the historic territory of the Chochenyo Tribelet of the Costanoan Indians. The nearest known tribelet settlement, Lisyán, was located at the mouth of San Lorenzo Creek. The exact location of this settlement is not known. The Yrgin Tribelet was also thought to be located in present-day Hayward and Castro Valley. Members of this group were both Costanoan and Bay Miwok language speakers and held the bayshore and watershed of San Lorenzo Creek. A major aboriginal trail passed through the Hayward area. Historic accounts of the distribution of the tribelets and villages in the 1770s to 1790s suggest that the Native Americans may have had a village site along San Lorenzo Creek as well as temporary camps in its vicinity.

The Costanoan aboriginal way of life disappeared by 1810 due to introduced diseases, a declining birth rate, and the impact of the Spanish mission system. These Native Americans were transformed from hunters and gatherers into agricultural laborers and craftsmen who lived at the missions and worked with former neighboring groups such as the Esselen, Yokuts, and Miwok. Later, because of the secularization of the missions by Mexico in 1834, most of the aboriginal population gradually moved to ranchos to work as manual laborers.

Historic Era

Recorded history in Alameda County can be divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1822 to 1848), and the American Period (1848 to present; Hart 1987).

Hispanic Period (Spanish/Mexican 1769 to 1848). Between 1769 and 1776 several Spanish expeditions passed through the San Francisco Bay region, including those led by Ortega, Fages, Crespi, and Anza. Even though the routes of the early explorers cannot be determined with complete accuracy, several are known to have traveled near the Hayward area. The San Lorenzo Creek was viewed by Father Juan

Crespi during the Pedro Fages expedition in 1772 and later in 1775/1776 by Father Pedro Font of the Juan Bautista de Anza expedition. The 1776 Juan Bautista de Anza National Historic Trail places the historic route along the foothills and would have proceeded through present-day Hayward. The "Spanish Camp Site-San Lorenzo Creek" is placed at Mattox Road on the north side of San Lorenzo Creek, just north of Hayward. This camp site has not been evaluated for the NRHP, but is on the California Inventory of Historic Resources under the theme of Exploration/Settlement. Portales and Ortega, Fages and Father Crespi (twice), and Anza and Font camped at this location. The Spanish philosophy of government was directed at the founding of presidios, missions, and secular towns with the land held by the Crown while the later Mexican Period (1821 to 1848) policy stressed individual ownership of the land. During the Hispanic Period cattle ranching for tallow and hides was the major economic pursuit in California.

The present-day Hayward area was part of four former ranchos as well as ungranted land along the San Francisco Bay Margin and inland in the East Bay Hills. These include the Rancho San Lorenzo (Castro) which included Castro Valley as well as the Town of Haywood (present-day downtown Hayward). This rancho was bounded on the west by part of the Rancho San Lorenzo (Soto), which also formed the western boundary of the Town of Haywood. The northern boundary of the third rancho, Rancho Arroyo de la Alameda, was bounded by Rancho San Lorenzo and a small portion of Rancho San Lorenzo on the north. The fourth and southernmost rancho, the Potrero de los Cerritos, was bounded on the northeast by the Rancho Arroyo de la Alameda Rancho. Each are discussed below.

Rancho San Lorenzo (Castro). Rancho San Lorenzo consisted of 26,722 acres granted to Castro by two governors: Juan B. Alvarado on February 23, 1841; and Manuel Micheltorena on October 25, 1843. The Rancho de San Lorenzo (Castro) grant was patented by Guillermo Castro on February 14, 1865. He was born in 1819, was a member of the San Jose militia in 1837, in 1838 was one of three men who measured the San Jose Pueblo Lands, and from 1841 to 1844 was the justice of the peace in "Contra Costa." He was married to Luisa Peralta, daughter of Luis M. Peralta, grantee of Rancho San Antonio, which included the present-day cities of Oakland, Alameda, Berkeley, Albany, Emeryville, Piedmont, and part of San Leandro.

The Castro Homestead extended for a two-block area from B Street to D Street between Castro Street (the present Mission Boulevard) and Main Street, and two dwellings in this rancho were situated in the present-day downtown area. The Castro Adobe Dwelling Site, dating to 1841, formerly located at 22738 Mission Boulevard between C and D streets on the site of the Old City Hall, has been evaluated as "appears eligible" for the NRHP (CAL/OHP 2001a: code 3S) and is also listed on the California Historic Plan under the theme of "domestic" and the California Inventory of Historic Resources under the theme of Exploration/Settlement.

The site of the Castro Plaza was located across from the Castro Adobe at the northwest corner of Mission Boulevard and D Street at the site of the present-day Hayward Library. The Plaza was part of the 1854 to 1856 plat of Hayward, originally known as "San Lorenzo." The Plaza has not yet been evaluated for the NRHP (CAL/OHP 2001a: code 7J), but has been listed on the California Inventory of Historic Resources under the theme of Economic/Industrial.

Rancho San Lorenzo (Soto). Rancho San Lorenzo, which extended from the salt marshes to the hills, was granted to Francisco Soto by Governor Juan B. Alvarado on October 10, 1842, and Governor Manuel Micheltoarena on February 20, 1844. The grant was patented to his widow, Barbara Soto, in April 1877 for 6,686 acres. Dwellings on this rancho included the Soto Palizada Dwelling Site, dating to about 1842, which was located about 600 feet east of the Hayward-Niles highway (present-day State Route 238/Mission Boulevard) and 0.55 miles south of its junction with Hayward-Mount Eden Road (present-day Jackson Street). Soto's adobe house, the Soto Adobe Dwelling Site, dating to the late 1840s, was 825 feet north of the old house, and less than a half-mile south of Castro's on the south bank of Ward Creek on the southwest side of Mission Boulevard opposite the tennis courts of Hayward Memorial Park.

Rancho Arroyo de la Alameda. Rancho Arroyo de la Alameda (ND #133), which covered 17,754 acres was granted by Governor Alvarado on August 8, 1842, to Jose de Jesus Vallejo, the older brother of Salvador and Mariano G. Vallejo. Vallejo received his patent on January 1, 1858, for 17,705 acres. Vallejo was born in San Jose in 1800, was a soldier in both Monterey and San Francisco, and was an administrator of Mission San Jose from 1837. He lived at Mission San Jose (now part of the City of Fremont) for most of his life and died in the 1880s.

Rancho Potrero de los Cerritos. A small part of the Rancho Potrero de los Cerritos is situated in the southwest portion of the present-day City of Hayward. Rancho Potrero de los Cerritos was a temporary grant by Governor Alvarado on November 29, 1842, and final grant in fee by Governor Micheltoarena on March 21, 1844, to Tomas Pacheco and his brother-in-law, Augustin Alviso. Litigation surrounding the grant included a United States Supreme Court decision dated February 20, 1860, upholding the confirmation of the grant to Pacheco and Alviso followed by disagreement over the patent survey by William J. Lewis in November that went to the Supreme Court. After the February 20, 1865, decision in favor of the original survey, the rancho was patented to them on February 21, 1866, for 10,610 acres.

Historic Roads. Mission Boulevard is the namesake and former road between the missions, ranchos, and pueblos. For example, the road appears as "Road from Alvarado to San Lorenzo" on Plat of the Rancho San Lorenzo (Soto); and as the "Road to Mission San Jose" on Stratton's 1864 to 1868 Town of Haywood map. It also appears as the "Road from Oakland to San Jose" on the west side of Guillermo Castro's adobe dwelling on the Plat of the Rancho San Lorenzo (Castro) and on the Government Land Office Map for Township 3 South, Range 2 West, Mount Diablo Meridian with Hayward Area Ranchos.

American Period. In the mid-nineteenth century most of the rancho and pueblo lands in California were subdivided as the result of population growth, the American takeover, and the confirmation of property titles. The initial explosion in population was associated with the Gold Rush (1848), followed later by the construction of the transcontinental railroad (1869). Later on, the development of the refrigerator railroad car (ca. 1880s) used for the transport of agricultural produce to distant markets had a major impact on population growth. The growth of the Hayward area was dependent on transportation, first by water and roads, and later by rail and then by air. Farming and salt production were the major economic foci of the area during this time.

Alameda County, named after Alameda Creek, the former boundary between Contra Costa and Santa Clara Counties, was created from portions of Santa Clara and Contra Costa Counties on March 25, 1853. The modern city of Hayward had its origins in the 1850s during the Gold Rush.

The city's site lay within the boundaries of Rancho San Lorenzo, a 17,000-acre estate granted in 1821 to the Mexican colonist Guillermo Castro. In 1854 Castro had a map surveyed for a town covering 28 blocks in the vicinity of his adobe (a site now occupied by Hayward's Historic City Hall) and began selling land to settlers. Castro also sold a large tract to William Hayward, who built a general store and lodging house at present-day A and Main Streets, near the intersection of the principal road from Oakland to San Jose and the road from the bayshore landings to the Castro and Livermore Valleys. The settlement that grew up around Hayward's Hotel became known as Haywards, later shortened to Hayward.

Rich soil and abundant water supported a prosperous farming and ranching culture in the area. Numerous farms and ranches spread across the flatlands and hills, producing grains, vegetables, fruits, dairy products, and meat. Most of these landholdings were large, ranging in size from 100 to 500 acres, with a few exceeding 1,000 acres. The premier agriculturist in the area was William Meek, who owned nearly 3,000 acres south and west of San Lorenzo Creek and Hayward, on which he pastured sheep and cultivated almonds, plums, oranges, lemons, limes, cherries, currants, wheat, oats, barley, and corn.

Railroads spurred urban and agricultural development. In 1865 a local line began service between Hayward and Alameda, where trains connected with ferries to San Francisco. This line was soon taken over by the Central Pacific, and in 1869 transcontinental trains began running through Hayward. In 1878 a second railroad began service along the bay-shore, with a station at the village of Mt. Eden. By 1870 Hayward had a population of 1,000 and a thriving commercial district. When Hayward was incorporated in 1876, the town plat extended east from the vicinity of present-day Mission Boulevard to Fourth Street. A Street marked the town's north boundary; E Street and Jackson Street made up the south boundary. This grid would change little over the next 30 or 40 years. During these years Hayward remained a small mercantile town with a cannery by the tracks and a couple of thousand residents. Roads radiated out from the town into the surrounding farmland. A Street ran east and west to Castro Valley and the bay-shore; Jackson Street headed southwest to the village of Mt. Eden; and Mission Boulevard ran north and south to nearby towns and cities.

The Hayward area entered a period of accelerated change in the early decades of the 20th century. A steady influx of farmers and townsmen resulted in the gradual expansion of the town grid and the cutting up of larger farms into smaller farms. The opening of the Hayward-San Mateo Bridge in 1919 brought new prominence to the town as burgeoning numbers of automobiles passed through the area on newly improved county roads. During the prosperous 1920s, Hayward's population surged to 5,000 and new tracts pushed out the boundaries of the grid. When the United States declared war in 1941, Hayward was still an agricultural town, with a population of about 7,000.

By 1950, with a population exceeding 14,000, the small town was well on its way to becoming a large city. Housing tracts had begun to appear around the fringes of the grid, and the city limits now stretched south to Tennyson Road and west to the Southern Pacific tracks, with an extension to the new municipal airport (established during the war as a military airbase).

Explosive growth in the 1950s, facilitated by the opening of the Nimitz Freeway (Interstate 880), brought about a five-fold increase in the city's population, which exceeded 72,000 by 1960. As vast tracts of agricultural land were annexed, pushing the city limits south to Union City and west to the bay, the farmland gave way to subdivisions, shopping centers, and industrial parks.

Historic Districts

Mark's Historic Rehabilitation District is the only historic district officially designated by the City of Hayward. The City adopted design guidelines for the B Street Historic Streetcar district as a result of the Burbank Neighborhood plan study of 1988; however, this district is not officially designated. Two other potential districts have been identified by this and other studies: the Prospect Hill Historic District and the Upper B Street Historic District. All of these districts are found to be locally significant.

Marks Historic Rehabilitation District

The Marks Historic Rehabilitation District (Marks District) was adopted by the City of Hayward in 1992, pursuant to the Marks Historic Rehabilitation Act of 1976. The designation was part of a larger effort aimed at downtown revitalization and historic preservation. At that time the City also initiated a Downtown Retrofit and Revitalization Program to upgrade historic buildings and revitalize the historic downtown core.

The Marks District is bounded on the east by Foothill Boulevard, from A Street south to Jackson Street. The western boundary is defined by Francisco and Atherton Streets, then extending westward across the Bart tracks to Grand Street to include a number of properties between A and B Streets. The northern boundary is irregular and includes properties on either side of Mission Boulevard up to McKeever Avenue. The boundary encompasses the historic commercial and civic core of Hayward and includes portions of downtown residential neighborhoods. The area contains over two hundred principal structures and various accessory buildings. Large portions of some commercial blocks have been cleared for parking uses.

Today, the city's historic retail core remains evident through historic commercial and mixed-use buildings along B Street between Mission Boulevard and Foothill. Early commercial buildings dominate the blocks between A and C Streets, and Mission and Foothill Boulevards. Later commercial buildings, constructed through the 1950s and 1960s, line Foothill Boulevard between Mission Boulevard and A Street. Historic civic buildings are located south of C Street, between Watkins and Main Street. Remnants of the B Street residential corridor are also contained within the district boundaries between Grand and roughly Atherton Streets. Mixed commercial and residential portions of the district are also found along Mission Boulevard and Prospect Terrace in the northern part of the district and south of D Street in the southern portion of the district.

Upper B Street Historic District

The boundaries of the proposed Upper B Street Historic District were originally defined as part of the Neighborhood Plan Study, completed with the assistance of the Hayward Area Historical Society in the early 1990s. The full Upper B Street Study Area boundary for that project encompassed a much larger area bordered roughly by E Street to the south, 2nd Street to the west, San Leandro Creek to the north, and the Upland Way and Marolyn Court subdivisions to the east.

There are several potentially historic properties within the area. The Upper B Street Historic District encompasses a notable concentration of late 19th and early 20th century residential properties in a variety of architectural styles representative of that period of development. The area contains some of the City's first residential tracts, and remains as a noteworthy example of residential development in pre-World War II Hayward. The neighborhood is also associated with Hayward's early Portuguese community, many of whose members settled in the neighborhood because of its proximity to All Saints Church, the IDES Hall, and the downtown commercial district.

Lands in the area of the proposed historic district are reflective of early residential development and were home to some of Hayward's initial settlers. Located near the emerging downtown core of Hayward, the neighborhood offered convenient proximity for residents to local shops and passenger rail lines.

The Upper B Street Neighborhood today is comprised primarily of residential and commercial uses. Small (mostly one-story) office buildings and neighborhood commercial businesses are concentrated primarily along B Street, and residential development (both single- and multifamily) dominates the remainder of the neighborhood. The blocks between downtown Hayward and Fourth Street contain some of the earliest residential development in the City.

Interspersed among the earlier residences are medium- to high-density residential uses and some commercial businesses. The portion of the neighborhood from Fourth Street to about Seventh Street also includes early single-family development. Over time many lots within the neighborhood have had additional dwelling units added in back.

Clusters of mature shade trees are located throughout the district and many individual properties feature mature shade trees, fruit trees, shrubs and other older plantings. Street trees create a notable canopy along B Street, especially between 4th Street and 6th Street. Other remnants of the district's earlier days can be seen in narrow sidewalks, portions of early fencing and older street signage. Despite physical changes to the district over time, the neighborhood retains a good degree of historic character, residential scale, and visual coherence. A variety of architectural styles are represented including Queen Anne cottages, Folk Victorian residences, Neoclassical rowhouses and cottages, modest workers cottages, one- and two-story Craftsman style dwellings and California bungalows.

B Street Historic Streetcar District

The proposed B Street Streetcar Historic District encompasses residential properties along B Street between Watkins Street to the east and Meekland Avenue to the west. Properties are located primarily along the north side of B Street, with exception of the blocks between Grand and Myrtle Streets where

properties on both sides of the street are included. The neighborhood is characterized by its linear arrangement, remarkable tree canopy, and by a variety of late 19th and early 20th century residences. Some notable ca.1940 and ca.1950 infill residences are also present. Most lots have had secondary residential units added in back, though overall the neighborhood retains a good degree of its historic residential character.

Construction on the Hayward Horse Car Transit Company line began in 1890 and was completed in February 1891. In 1902 it was absorbed, like many other local streetcar lines, into Borax Smith's Oakland Transit Consolidated (a.k.a. the Key System). By 1909 it was the last horse drawn line in the East Bay. It was abandoned in April of that year in favor of the electric streetcar. Today, modest houses from the late 19th and early 20th centuries line B Street between downtown and Cannery Park, marking the remnants of this early streetcar route.

The earliest residences are shown east of Soto Street (Montgomery Street today), along the north side of B Street in 1893. Residential development along lower B Street—stretching to the site of the Hunt Brothers' Cannery—is shown as early as 1899 on USGS maps of Hayward. The 1907 Sanborn map and a 1915 USGS map indicate that residential development was primarily concentrated along the north side of B Street for the first decade or so of the district's development. By 1923, however, one- and two-story single-family dwellings had been constructed along the both sides of B Street from Watkins Street to Front Street, though the area of primary concentration was between Grand and Myrtle Streets. The district was fully developed by the 1950s and served by the Luther Burbank Grammar School located on the block bound by Myrtle, Filbert, B, and C Streets.

Prospect Hill Historic District

The proposed Prospect Hill Historic District encompasses properties along both sides of Prospect Street from Rose Street at the north, and extends southeast to include a group of cottages along the north side of Hotel Avenue. This boundary then turns north again, running along the west side of Prospect Terrace to Warren Avenue, where it extends east to include properties along both sides of Main Street up to Hazel Avenue/Simon Street. The neighborhood is characterized by its hilltop location, with views overlooking the city in all directions; a variety of mature trees and other plantings; moderate setbacks and narrow sidewalks; and a variety of architectural styles including Victorian cottages and Shingle, Spanish Eclectic, Tudor, Craftsman, Mission Revival, Moderne, and Colonial Revival style residences. Some notable circa 1940 and circa 1950 modernist and ranch style residences are also present.

Officially Designated Architecturally and Historically Significant Buildings

The City of Hayward has a Historic Preservation Ordinance, which provides for designation of historic sites and structures. The City's official list of Historically or Architecturally Significant Buildings currently contains 20 structures that have been officially designated by the City. In addition, there is one structure listed on the national register of historic landmarks.

Various surveys and studies have been conducted over the years to determine what sites, buildings, and landmarks may be of local significance or be eligible for placement on national or State registers. In 2009 the City contracted with Circa: Historic Property Development to conduct a citywide reconnaissance-level survey and a downtown focus area survey. This survey provided a comprehensive record of historic resources within the city.

Section 4 - Regulatory Framework

Summarized below are the relevant federal and state regulations as well as local goals and policies related to cultural resources that are applicable to the Proposed Project/Action.

4.1 Federal

Summarized below are the relevant federal regulations related to cultural resources that are applicable to the Proposed Project/Action.

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria: It is associated with significant events in history, or broad patterns of events.

- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.
- Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

National Environmental Policy Act

NEPA's concern is with the "human environment," defined as including the natural and physical (e.g. built) environment and the relationships of people to that environment. A thorough environmental analysis under NEPA should systematically address the "human" -- social and cultural -- aspects of the environment as well as those that are more "natural," and should address the relationships between natural and cultural. Culturally valued aspects of the environment generally include historic properties, other culturally valued pieces of real property, cultural use of the biophysical environment, and such "intangible" sociocultural attributes as social cohesion, social institutions, lifeways, religious practices, and other cultural institutions.

4.2 State

Summarized below are the relevant state regulations related to cultural resources that are applicable to the Proposed Project/Action.

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CR). The California Register of Historical Resources and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or state level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the California Register. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the California Register, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource, but meets the definition of a “unique archeological resource” as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

4.3 Local

Summarized below are the relevant established goals and policies related to cultural resources in the City of Hayward that are applicable to the Proposed Project/Action.

City of Hayward General Plan

The City of Hayward has adopted policies and ordinances for the protection and preservation of cultural resources. The City’s preservation of cultural resources is accomplished through education, cooperation, and commitment to a program that make sense to the community. The City’s commitment is to maintain cultural resources as a link to past populations. Over the years, the importance of preserving cultural resources has been viewed as critical to maintaining history and the quality of life as well as hindering development. However, the City has adopted measures to protect cultural resources and preserving the past as well as accommodating the future. The City’s approach is to consider cultural resources as part of the permitting process. With early planning, the protection of cultural resources can usually be integrated into project designs in such a way as to avoid or minimize impacts. The City has developed a cultural resources inventory of known and likely known areas where cultural resources are or likely to be found. The Proposed Project/Action area would not conflict with, impact or be near any known cultural resources identified by the City. Prior to any proposed development, project proponents are required to identify areas of potential conflicts with known cultural resources. The City of Hayward’s General Plan established the following goals and policies related to cultural resources that are applicable to this project and development within the City.

- **Goal 8 - Land Use.** Preserve Hayward’s historic districts and resources to maintain a unique sense of place and to promote an understanding of the regional and community history.

- *Policy 8.1 - Value of Historic Preservation.* The City shall recognize the value and co - benefits of local historic preservation, including job creation, economic development, increased property values, and heritage tourism
- *Policy 8.2 - Local Preservation Programs.* The City shall strive to enhance its local historic preservation programs to qualify for additional preservation grants and financing programs
- *Policy 8.3 - Historic Preservation Ordinance.* The City shall maintain and implement its Historic Preservation Ordinance to safeguard the heritage of the City and to preserve historic resources.
- *Policy 8.4 - Survey and Historic Reports.* The City shall maintain and expand its records of reconnaissance surveys, evaluations, and historic reports completed for properties located within the city.
- *Policy 8.5 - Flexible Land Use Standards.* The City shall maintain flexible land use standards to allow the adaptive reuse of historic buildings with a variety of economically viable uses, while minimizing impacts to the historic value and character of sites and structures.
- *Policy 8.6 - Historic Preservation Standards and Guidelines.* The City shall consider The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings when evaluating development applications and City projects involving historic resources, or development applications that may affect scenic views or the historic context of nearby historic resources.
- *Policy 8.7 - Historic Districts.* The City shall encourage the establishment of National Park Service Certified Historic Districts to encourage the preservation of Hayward's historic neighborhoods and districts, and to qualify property owners for the Federal Preservation Tax Incentives Program.
- *Policy 8.8 - Marks Historic Rehabilitation District.* The City shall maintain the current Marks Historic Rehabilitation District for Downtown Hayward to issue tax - exempt revenue bonds for financing the rehabilitation of historic structures.
- *Policy 8.9 - State Historic Building Code.* The City shall promote the use of the State Historic Building Code to facilitate the reuse and conversion of historic buildings to alternative uses.
- *Policy 8.10 - Mills Act.* The City shall participate in the California Mills Act Property Tax Abatement Program to provide property owners of historic resources an economic incentive (property tax relief) to restore, preserve, and maintain qualified historic properties.
- **Historic Preservation Ordinance.** The care of historic structures in Hayward is guided by the Historic Preservation Ordinance of the Municipal Code. The Ordinance covers structures, districts, and neighborhoods that contribute to the cultural and aesthetic heritage of Hayward. It

also provides regulations regarding the alteration, demolition, and maintenance of significant historic structures. The Ordinance requires development projects and building permit applications involving structures that are at least 50 years old or are located within an historic district to follow certain steps in the development review process to determine if a historical alteration permit and/or historical resource demolition or relocation permit is required. Residential properties developed pursuant to a tentative tract map after 1946 are exempted from obtaining historical permits.

Section 5 - Investigation Methodology and Results

This section summarizes the investigation methods used to determine the potential for cultural resources to be affected by the Proposed Project/Action.

5.1 Northwest Information Center (NWIC) Record Search

On July 14, 2012, a records search was conducted by staff at the NWIC, Sonoma State University, Rohnert Park, California (NWIC File # 14-0048). The record search included the project Area of Potential Effect (APE) and a 0.50 -mile radius outside the project boundaries. The record search included reviewing pertinent NWIC base maps that reference cultural resources records and reports, historic period maps, and literature for Alameda County including current inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHP), the California Inventory of Historical Resources, California State Historic Landmarks, and the California Points of Historical Interest.

According to information provided by NWIC, there have been six cultural resource studies of the Recycled Water project area (Arrigoni et al. 2008, S-35644; Baker 2001, S-24379; Chavez 1979, S-1479; DeBaker et al. 2008, S-34825; Flynn 1988, S-11543; Sawyer et al. 1978, S-1743). However, due to the passage of time since three of the previous surveys (Chavez 1979, S-1479; Flynn 1988, S-11543; Sawyer et al. 1978, S-1743) and the changes in archaeological theory and method since that time, only 30% of the project area is considered to be previously surveyed.

The project area contains two recorded historic-period archaeological resources (P-01-001783, the Southern Pacific Railroad and P-01-002269, a transmission line). The State Office of Historic Preservation Historic Property Directory (OHP HPD) (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) lists one recorded building or structure adjacent to the proposed project area, the Herman Mohr house located at 2595 Depot Road (Property number 10182, status code 6Y: Determined ineligible for the National Register by consensus through Section 106 process – Not evaluated for the California Register or Local Listing). In addition to these inventories, the NWIC base maps show no recorded buildings or structures within the proposed project area.

At the time of Euroamerican contact the Native Americans that lived in the area were speakers of the Chochenyo language, part of the Costanoan language family (Levy 1978:485). There are no Native American resources in or adjacent to the proposed project area referenced in the ethnographic literature.

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Alameda County have been found along the general margins of the San Francisco Bay and associated wetlands, on the banks and mid-slope terraces above seasonal and perennial waterways and within Holocene age landforms. The Recycled Water project area is marginal to the San Francisco Bay and its associated wetlands, contains the area around Sulphur Creek, Alameda

Creek, Mt. Eden Creek and Word Creek, and is within a Holocene age landform. Given the similarity of one or more of these environmental factors, there is a high potential of identifying unrecorded Native American resources in the proposed Recycled Water project area.

Review of historical literature and maps indicated the possibility of historic-period archaeological resources within the Recycled Water project area. The 1899 and 1915 Hayward USGS 15-minute topographic quadrangle depicts one building or structure adjacent to the project area. With this in mind, there is a moderate potential of identifying unrecorded historic-period archaeological resources in the proposed Recycled Water project area.

The 1942 Hayward USGS 15-minute topographic quadrangle depicts several buildings or structures adjacent to the Recycled Water project area. These unrecorded buildings or structures meet the Office of Historic Preservation's minimum age standard that buildings, structures, and objects 45 years or older may be of historical value.

5.2 Survey Methods

The cultural resources investigation also included a field reconnaissance of the Project APE on August 9, 2014 and no cultural resources, including archeological resources were identified within the Proposed Project/Action's proposed alignment and construction corridor.

5.3 Native American Heritage Commission Record Search and Outreach

On July 8, 2014, a letter was sent to the Native American Heritage Commission (NAHC) in Sacramento, California in an effort to determine whether any sacred sites listed on its Sacred Lands File are within the current project APE. A response from the NAHC was received on July 23, 2014, stating that a search of its Sacred Land File failed to indicate the presence of Native American cultural resources in the immediate project APE. Included with the response was a list of 10 Native American representatives who may have further knowledge of Native American resources within or near the project APE. To ensure that all Native American concerns are adequately addressed, letters to each of the listed tribal contacts were sent on August 5, 2014, requesting any information about the project that these individuals may have. Follow-up contacts have been attempted. However, as of this date, no responses have been received.

5.4 Conclusions and Recommendations

This investigation was conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Register [CFR] Part 800). Based upon this investigation, the Proposed Project/Action would not have any significant impacts to cultural resources. Specifically, the proposed Project would have:

- ***No Effect on any known Historical Resources or Properties;***
- ***No Effect on any known Archeological Resources;***
- ***No Effect on any known Paleontological Resources; and/or***

- **No Effect on any known Burial Sites.**

However, the construction of the Proposed Project could uncover unidentified or known buried cultural resources (i.e. Historical, archeological, paleontological, and human remains). To further reduce the potential to affect any of these resources, the following recommendations and mitigation measures should be implemented to ensure that there are no significant impacts to cultural resources that may exist in the APE as direct and indirect result of the Proposed Project/Action.

- **Halt work if cultural resources are discovered.** In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 100 feet of the resources shall be halted and after notification, the City shall consult with a qualified archaeologist to assess the significance of the find. If any find is determined to be significant (CEQA Guidelines 15064.5[a][3] or as unique archaeological resources per Section 21083.2 of the California Public Resources Code), representatives of the City and a qualified archaeologist shall meet to determine the appropriate course of action. In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the lead agency shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.
- **Halt work if paleontological remains are discovered.** If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the City.
- **Halt work if human remains are found.** If human remains are encountered during excavation activities conducted for the Proposed Project/Action, all work in the adjacent area shall stop immediately and the Alameda County Coroner's office shall be notified. If the Coroner determines that the remains are Native American in origin, the Native American Heritage Commission shall be notified and will identify the Most Likely Descendent, who will be consulted for recommendations for treatment of the discovered human remains and any associated burial goods.

Section 6 - Bibliography

In addition to the archaeological maps and site records on file at the Northwest Information Center of the Historical Resources Information System, the following literature was reviewed and/or referenced:

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**Note that the Office of Historic Preservation's *Historic Properties Directory* includes National Register, State Registered Landmarks, California Points of Historical Interest, and the California Register of Historical Resources as well as Certified Local Government surveys that have undergone Section 106 review.

Attachment A

Native American Correspondence



July 8, 2014

Katy Sanchez
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 94612

Subject: Sacred Land Files and Native American Contact List Request for the City of Hayward's Proposed Recycled Water Project, Alameda County

Dear Katy:

SMB Environmental is assisting the City of Hayward (City) prepare environmental documentation for its proposed Recycled Water Project (Proposed Project). The Proposed Project consists of installing a new Recycled Water Facility (RWF) located at the City's Water Pollution Control Facility (WPCF), 3700 Enterprise Avenue, Hayward, California. The RWF would deliver an estimated 285 acre-feet per year of recycled water to approximately 20 customers within the City of Hayward. The RWF will be served by 1.5 miles of distribution lines to the north and south of the WPCF. In addition, the proposed Project will include the rehabilitation and connection to an existing Shell Oil pipeline and over three miles of laterals to customers including installation of customer connections. The majority of recycled water customers will utilize the recycled water for irrigation, with some industrial uses for cooling towers and boilers. The Proposed Project is located within the city limits of the City of Hayward and located within Alameda County, California at the following coordinates [37°40'08"N 122°04'51"W](#).

For purposes of Section 106 compliance, we would appreciate your checking of the Sacred Lands Files to see if there are any culturally sensitive areas within the immediate project vicinity. We would also like to receive a list of Native American organizations that may have knowledge or interest in the Proposed Project area and we will attempt to contact them to solicit their written input/concerns about the Proposed Project.

Thank you for your cooperation and assistance. I look forward to your earliest possible reply. If any questions, please feel free to contact me at 916-517-2189 or at steve@smbenvironmental.com.

Sincerely,

Steve Brown
Principal

Response From NAHC

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd.
West Sacramento, CA 95691
(916) 373-3710
Fax (916) 373-5471



July 23, 2014

Steve Brown
SMB Environmental
P.O. Box 381
Roseville, CA 95661

By Mail - *zps*

Recycled Water project, Alameda County

Mr. Brown,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,

Debbie Pilas-Treadway
Debbie Pilas-Treadway
Environmental Specialist III

**Native American Contacts
Alameda County
July 23, 2014**

Jakki Kehl
720 North 2nd Street
Patterson , CA 95363
(209) 892-1060

Ohlone/Costanoan

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
240 E. 1st Street
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081

Ohlone/Costanoan

Katherine Erolinda Perez
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Linden , CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
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(831) 637-4238

Ohlone/Costanoan

Linda G. Yamane
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Seaside , CA 93955
rumsien123@yahoo.com
(831) 394-5915

Ohlone/Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas , CA 95036
muvekma@muvekma.org
(408) 205-9714
(510) 581-5194

Ohlone / Costanoan

Amah MutsunTribal Band of Mission San Juan Bautista
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Ohlone/Costanoan

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Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah MutsunTribal Band of Mission San Juan Bautista
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Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City , CA 94587
soaprootmo@comcast.net
(510) 972-0645

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Recycled Water project, Alameda County

Example Letter to Distribution List From NAHC



August 5, 2014

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont, CA 94539

Subject: Request for Cultural Resources Sites Information for the Proposed City of Hayward's Recycled Water Pipeline Project, Alameda County

Dear Andrew Galvan:

SMB Environmental is assisting the City of Hayward (City) prepare environmental documentation for its proposed Recycled Water Project (Proposed Project). The Proposed Project consists of installing a new Recycled Water Facility (RWF) located at the City's Water Pollution Control Facility (WPCF), 3700 Enterprise Avenue, Hayward, California. The RWF would deliver an estimated 285 acre-feet per year of recycled water to approximately 20 customers within the City of Hayward. The RWF will be served by 1.5 miles of distribution lines to the north and south of the WPCF. In addition, the proposed Project will include the rehabilitation and connection to an existing Shell Oil pipeline and over three miles of laterals to customers including installation of customer connections. The majority of recycled water customers will utilize the recycled water for irrigation, with some industrial uses for cooling towers and boilers. The Proposed Project is located within the city limits of the City of Hayward and located within Alameda County, California. Please see attached Project map.

The Native American Heritage Commission was contacted about the Proposed Project and provided us with a list of Native American individuals and organizations that may have knowledge of cultural resources in the project area. Please provide us with any information you may have about cultural resources or sites in the project area so that we can determine ways to protect those sites, including archeological sites and other locations of special value to Native Americans.

Thank you for your cooperation and assistance. I look forward to your earliest possible reply. If any questions, please feel free to contact me at 916-517-2189 or at steve@smbenvironmental.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "SJB", with a long horizontal flourish extending to the right.

Steve Brown
Principal

\\rmc\projects\0198-City of Hayward\0198-002 Hayward RW Facilities Plan\GIS\Project\Hayward_Recommended_Project_rev72014



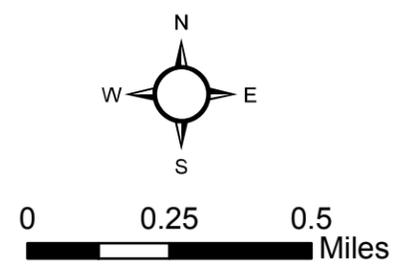
Legend

- Onsite Facilities (See Separate Figure for Layout)
- Hayward WPCF
- Calpine
- Target Users Parcel (with Customer Number)

Distribution System

- Main
- Lateral
- Existing Shell Pipeline

**Figure 2
Proposed Project**



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aero