RECLAMATION

Managing Water in the West

Environmental Assessment

Redwood City Recycled Water Project Phase II, California

17-04-MP

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

October 2017

Mission Statements

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Acronyms

µgm3 – micrograms per cubic meter

ACS – American Community Survey

ADWF – Average Dry Weather Flow

AFY – acre feet per year

APE – Area of Potential Effect

BAAQMD – Bay Area Air Quality Management District

BART – Bay Area Rapid Transit

BMPs – best management practices

Caltrans – California Department of Transportation

CAP – Bay Area Clean Air Plan

CARB – California Air Resources Board

C/CAG – San Mateo County City/County Association of Governments

CCR – California Code of Regulations

CDFW – California Department of Fish and Wildlife

CEQ – Council on Environmental Quality

CEQA – California Environmental Policy Act

CESA – California Endangered Species Act

CFGC – California Fish and Game Code

CFR – Code of Federal Regulations

CH_4 – methane

CNDDB – California Natural Diversity Database

CNEL – Community Noise Equivalent Level

CO – carbon monoxide

CO_2 – carbon dioxide

CO_{2e}– carbon dioxide equivalents

CVP – Central Valley Project

dB – decibel

dB(A) – A-weighted decibel

DPM – diesel particulate matter

EA – Environmental Assessment

EDD – Employment and Development Department

EIR – Environmental Impact Report

EPA – U.S. Environmental Protection Agency

ESA – Federal Endangered Species Act

FEMA – Federal Emergency Management Agency

FIRM – Flood Insurance Rate Map

GHG – greenhouse gases

HFC – hydrofluorocarbons

HSC – California Health and Safety Code

IPCC – Intergovernmental Panel on Climate Change

ITA – Indian Trust Asset

LOS – level of service

MBTA – Migratory Bird Treaty Act

mgd – millions gallons per day

mg/L – milligrams per liter

mmhos/cm – millimhos per centimeter

mph – miles per hour

MTC – Metropolitan Transportation Commission

$MTCO_{2e}$ – metric tons of CO2 equivalent

N_2O – nitrous oxide

NAHC – Native American Heritage Commission

NEPA – National Environmental Policy Act

NHPA– National Historic Preservation Act

NMFS – National Marine Fisheries Services

NO_2 – nitrogen dioxide

NO_x – nitrous oxides

NPDES – National Pollutant Discharge Elimination System

PFC – perfluorocarbons

PM_{10} – particulate matter less than 10 microns in diameter

$PM_{2.5}$ – particulate matter less than 2.5 microns in diameter

PRC – California Public Resources Code

RD – Regional Director

Reclamation – U.S. Bureau of Reclamation

ROG – reactive organic gases

ROW – right-of-way

RWQCB – Regional Water Quality Control Board

RWS – Regional Water System

SAFZ – San Andreas Fault Zone

SFPUC – San Francisco Public Utilities Commission

SAR – sodium adsorption ratio

SBTS – South Bayside Transfer Station

SCS – Soil Conservation Service

SCVW – Silicone Valley Clean Water

SF_6 – sulfur hexafluoride

SHPO – State Historic Preservation Officer

SWP – State Water Project

SWPPP – Stormwater Pollution Prevention Plan

SWRCB – State Water Resources Control Board

TAC – toxic air contaminants

USC – U.S. Code

USFWS – U.S. Fish and Wildlife Service

USGS – U.S. Geological Survey

VOC – volatile organic compounds

Chapter 1. Need for Action

1.1 Introduction

This environmental assessment (EA) was prepared by the U.S. Bureau of Reclamation (Reclamation) to evaluate the environmental effects of the Redwood City Recycled Water Project Phase II (proposed action). The proposed action would extend recycled water distribution pipelines to serve landscape irrigation demands at parks, streetscapes and medians, and for various Title 22 approved indoor uses (e.g., toilet and urinal flushing, make-up water in cooling towers, and commercial laundry) in both new buildings and existing buildings located in Central Redwood City, San Mateo County, California.

The project falls under Reclamation's Water Reclamation and Reuse Program, as authorized by the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992, or Title XVI of Public Law 102-575 (Title XVI). Title XVI provides a mechanism for Federal participation and cost-sharing in approved water reuse projects. As the agency with discretionary approval over the provision of this Federal funding, Reclamation is acting as the lead agency under the National Environmental Policy Act (NEPA) and has prepared this EA to evaluate the environmental effects of the proposed action.

1.2 Proposed Action Location

Under the proposed action, Redwood City would install new recycled water pipelines connecting to the existing recycled water pipeline west of U.S. Highway 101 in Central Redwood City (Figure 1). The facilities associated with the proposed action are generally bounded by U.S. 101 to the north, Fifth Avenue to the east, Bay Road and Broadway Street to the south, and El Camino Real/SR82 to the west. The proposed action consists of Phase II.A, Phase II.B and Phase II.C. Once implemented, the proposed action would expand Redwood City's existing recycled water system to serve planned new development and some existing irrigation sites as shown in Figure 2.

The new pipelines would be supplied from existing treatment, storage and pumping facilities located at SVCW. No new treatment, storage or pumping facilities are included in the project action. In addition to these new pipelines, the proposed action includes the connection of new customers to the recycled water system through smaller connecting pipelines (laterals) and the retrofit of customer water systems to convert to recycled water use.

For the purpose of this evaluation, the project action area includes sidewalk to sidewalk of each street with a 50-foot buffer, all lateral connection locations, and a construction equipment staging area located at Redwood City Public Works Corporation Yard. The action area is urban in nature consisting of existing commercial retail sites and sites for commercial and industrial use. Figure 3 provides photographs of the project action area.

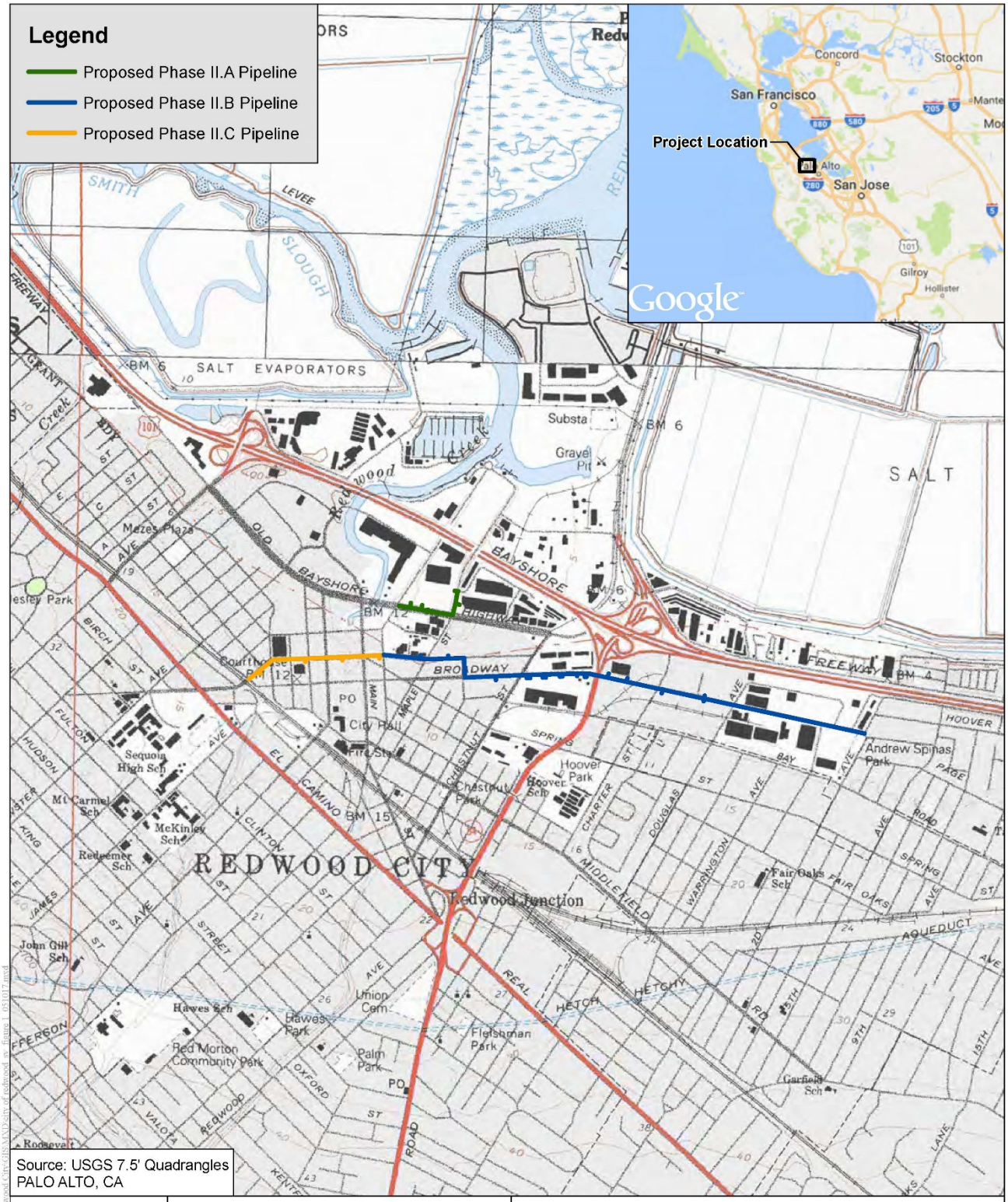


FIGURE 1 - PROJECT LOCATION AND VCINITY

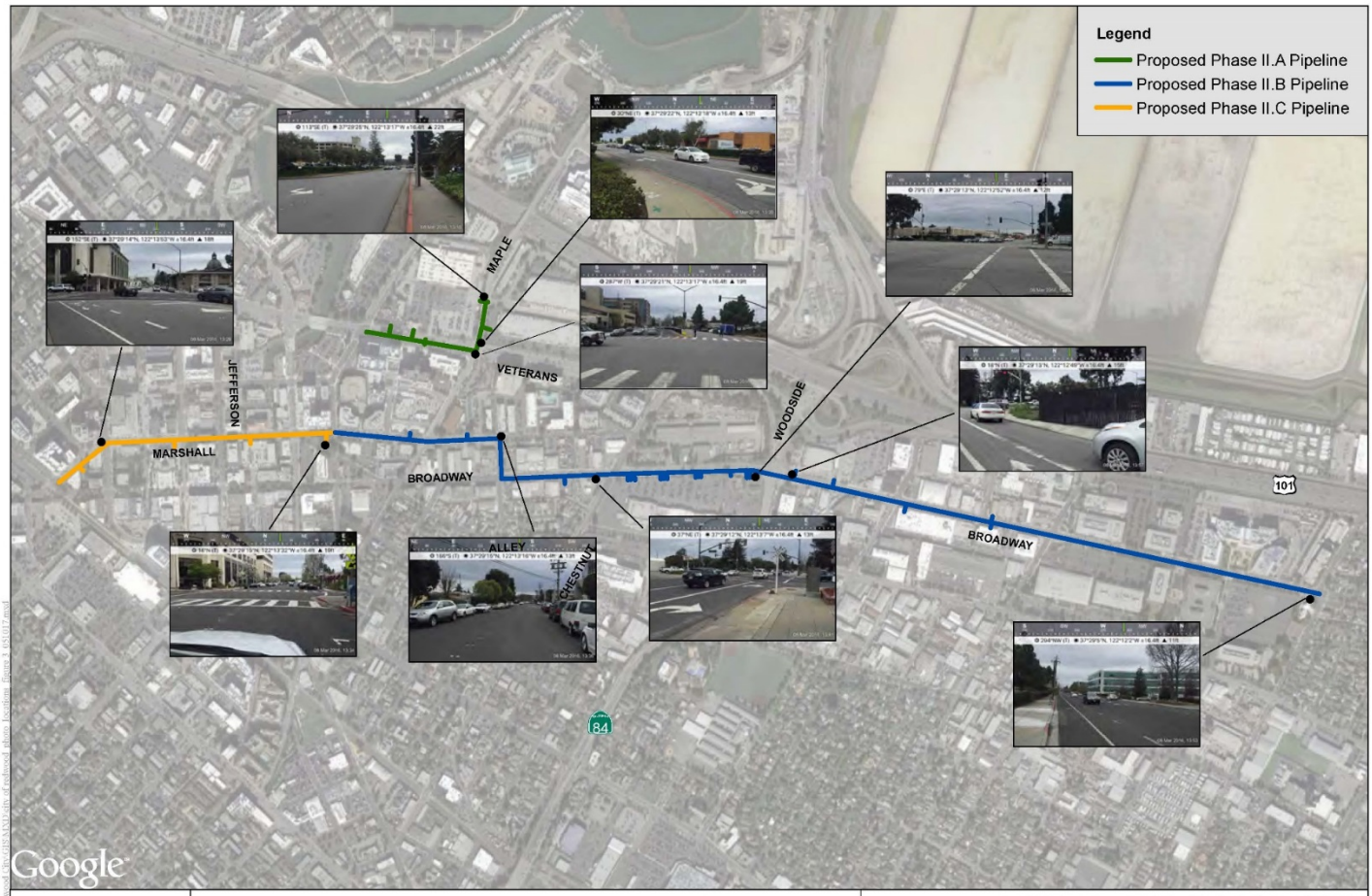
City of Redwood City
Recycled Water Project

City of Redwood City, San Mateo County, CA

FIGURE 2 - AERIAL

City of Redwood City
Recycled Water Project

City of Redwood City, San Mateo County, CA



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0 500 1,000
1 inch = 1,000 feet

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Aerial Source: Google Earth, 2016.
Photographs: Brook Vinnedge

FIGURE 3 - PHOTO LOCATIONS

City of Redwood City
Recycled Water Project

City of Redwood City, San Mateo County, CA

1.3 Need for Action

Redwood City has identified four primary objectives for the proposed action:

- Provide a new, local sustainable water supply of at least 227 acre-feet per year (AFY);
- Reduce reliance on potable water from the City and County of San Francisco's regional water system;
- Improve water supply reliability; and
- Reduce point pollutant discharge to the San Francisco Bay by reducing the volume of wastewater discharge.

Redwood City is committed to providing safe and reliable recycled water storage and distribution systems that would meet current and future needs (Redwood City 2010 Goal BE-40). The proposed facilities would provide water distribution pipelines in portions of Central Redwood City, expanding the use of recycled water by customers in the service area. The proposed action would reduce the demand for potable water from the City and County of San Francisco's Regional Water System (RWS), and would augment the state water supply by at least 227 AFY by replacing potable water with recycled water for irrigation or industrial uses. Recycled water can be stored and is exempt from watering restrictions, and as such is available year-round to assist with water needs even in times of drought.

The use of recycled water also reduces the quantity of treated water discharged to the San Francisco Bay, which is highly sensitive to the discharge of fresh water. Additionally, the proposed action would help to meet the anticipated demands of new development approved by the City Council, while maintaining compliance with State requirements for water use reduction. Redwood City is committed to sustainable growth in the community and protecting and preserving its limited natural resources. The expanded use of recycled water in the community achieved through new infrastructure is essential to Redwood City's sustainability goals (Redwood City 2010).

1.4 Background

The Redwood City (City) water service area covers approximately 17 square miles. The City purchases its entire supply of potable water from the San Francisco Public Utilities Commission (SFPUC) and distributes it through the City-owned distribution system, which includes water retail services to Redwood City and portions of San Mateo County outside the corporate limits, including Canada College and the Emerald Lake Hills area. The City augments its potable water supply with recycled water for nonpotable uses. Recycled water is produced by Silicon Valley Clean Water (SVCW, formerly South Bayside System Authority) for the City and distributed by the City to its customers through the City-owned recycled water distribution system.

The Recycled Water Project consists of two phases: Phase I includes construction of treatment, storage and pumping facilities and a portion of the distribution system (completed); and Phase II

(proposed action) consists of extending the recycled water distribution into Central Redwood City.

The Phase I distribution system conveys recycled water from the storage facilities through Redwood Shores and to the Greater Bayfront area of Redwood City, including laterals to serve customers in Redwood Shores and the Greater Bayfront. Recycled water in the Phase I distribution area is largely used for landscape irrigation, with some other uses such as dust control, commercial window washing, and mobile car washing. The Redwood City Recycled Water Project previously received Title XVI funding for a portion of the transmission main in the Phase I area in 2005. This project was called “Redwood City Recycled Water Project Bid Packages 5 and 6.” Reclamation prepared a Categorical Exclusion in accordance with the NEPA for that project in August 2008. Redwood City received notification from Reclamation of compliance with NEPA for that Title XVI project by letter dated October 6, 2008.

Implementation of Phase II supports the planned development and is consistent with the City's General Plan. The proposed project would expand the City's recycled water system thus increasing the City's locally controlled water supply, improving the City's water supply reliability, and reducing its demand on imported water from the RWS.

The purpose of this EA is to evaluate the potential environmental impacts of the proposed action, in accordance with NEPA, to allow Reclamation to consider the discretionary allocation of Title XVI funds to support implementation of the proposed action.

Chapter 2. Proposed Action and Alternatives

2.1 Proposed Action

Under the proposed action, Reclamation would provide Title XVI funding to Redwood City to fund extending recycled water distribution pipelines within the City for landscape irrigation and for a variety of industrial uses including construction, dust control, wash- down, cooling, commercial window washing and commercial car washing. Recycled water would also be used indoors for toilet and urinal flushing in newly constructed commercial buildings. This Project would primarily serve future planned development as well as some existing customers. As part of redevelopment and new development agreements, the City requires customers to maximize the use of recycled water when feasible in accordance with the City's 2003 Recycled Water Use Ordinance.

The proposed action is divided into three components or phases: Phase II.A, Phase II.B and Phase II.C. Each component of the proposed action would be constructed in a separate construction contract that would be scheduled as planned development is implemented and funding is available. If there is a delay or change in implementation of development or lack of funding, it is possible that only a portion of the project would be constructed.

Table 2-1 provides a summary of facilities included in Phase II.A, II.B and II.C of the proposed action.

Table 2-1 Summary of New Facilities

Phase	Pipeline Length (linear feet)	Pipeline Size (diameter)	Crossing by Jack and Bore
Phase II.A	1,150 LF	8-inch	None
Phase II.B	7,740 LF	14-inch	2
Phase II.C	290 LF	30-inch	None
	2,040 LF	12-inch	None

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- The Phase II.A the pipeline is comprised of 1,150-lineal feet of 8-inch diameter pipeline. The new pipeline will connect to the existing Phase II.A pipeline at the intersection of Veterans Blvd. and Walnut St. east along Veterans Boulevard and then terminates at the intersection of Maple Street and Oddstad Drive. Phase II.A pipeline will be installed using standard cut and cover trenching techniques.
- Phase II.B pipeline is comprised of approximately 7,740 lineal feet of 14-inch diameter pipeline. The new pipeline would connect to the terminus of an existing pipeline (Phase II.A), which is located at the intersection of Walnut and Marshall Streets, and travel easterly through existing City streets to its termination at the intersection of Broadway Street and Second Avenue. The Phase II.B pipeline would be installed using standard cut and cover trenching techniques, except for two jack and bore crossings under the light

rail track at the intersection of Broadway and Chestnut Street (approximately 115 feet), and under the high-traffic intersection of Broadway and Woodside Road (approximately 225 feet).

- Phase II.C pipeline is comprised of approximately 2,330 lineal feet of new pipeline. A new 30-inch-diameter pipeline would connect to the existing terminus of the Phase II.A pipeline at the intersection of Walnut Street and Marshall Street and travel west along Marshall Street to Main Street. A 12-inch-diameter pipeline would extend from the intersection of Marshall and Main Street west along Marshall Street and terminate at the intersection of Marshall Street and Broadway Street. The City would install the Phase II.C pipeline using standard cut and cover trenching techniques.

In addition to these new pipelines, the proposed action includes the connection of new customers to the recycled water system through smaller connecting pipelines (laterals) and the retrofit of customer water systems to convert to recycled water use. Figure 2 presents the location of each proposed lateral. Construction of the laterals involves minor modifications to underground pipes located at the existing buildings. Construction of the lateral tie-ins would not alter the exterior of buildings and therefore would not change the aesthetic character of existing buildings.

Table 2-2 Potential New Customers

Phase	Customer	Use	Estimated Demand AF/Year
Phase II.A	Veterans Blvd Median*	Existing City Irrigation	<1
	Applebees*	Existing Commercial Irrigation	<1
	Kmart*	Existing Commercial Irrigation	<1
Phase II.B	Redwood City Public Works Services	Existing City Irrigation	4
	Stanford Hospital and University	Existing Commercial Irrigation	28
	Stanford	Future Development, Indoor	89
		Future Development, Outdoor	52
Phase II.C	Marshall Square Investment Group	Existing Commercial Irrigation	3
	Jack-in-the-Box*	Existing Commercial Irrigation	<1
	Caltrans D-4*	Existing Commercial Irrigation	<1
	Summit Prep Charter School*	Existing City Irrigation	<1
	General Plan Development/Redevelopment	Future Development, Indoor	TBD
		Future Development, Outdoor	

*City records indicate that these sites utilize a negligible amount of water for irrigation. However, service laterals are proposed to provide flexibility to service potential demands in the future.

2.1.1 Proposed Action Construction

2.1.1.1 Construction Methodology

Installation of recycled water pipelines associated with the proposed action would consist of cut-and-cover trenching techniques and two jack and bore locations (or "trenchless technology").

Cut-and-cover trenching requires excavating an open trench to allow placement of the recycled water pipeline and associated infrastructure, and backfilling that trench. The open trench would be 4 to 8 feet deep and approximately 3 feet wide. The precise depth of the trench depends on the presence of underground utilities and the size of pipe installed. Restoration of the ground surface following construction would include returning the roadways to their paved, pre-project conditions.

Excavated material not needed for trench backfill would be removed and disposed of at an approved site in the general vicinity of the proposed action. Large diameter pipe would be pre-positioned along the alignment during construction to avoid multiple handlings; smaller diameter pipe may be temporarily stored at a suitable construction yard.

Construction activities also include jack and bore crossings under the light rail track at the intersection of Broadway Street and Chestnut Street, and under the high-traffic intersection of Broadway and Woodside Road. Bore pits would be located in the street and pipe depths would be 8 feet below the deepest known utility. Proposed bore pit locations are depicted in Figure 4. All disturbance in the vicinity of these crossings would be temporary, and there would be no changes to the size, location, grade, or configuration of the intersections.

Construction Sequence

Sequence of the construction is as follows:

- Construction contractor mobilizes and prepares the staging area.
- Trenches to accommodate pipeline excavated.
- Pipeline assembled.
- Pipeline trenches backfilled (excess materials removed from site).
- Area revegetated and/or repaved.

Construction Equipment

Potential construction equipment may include an excavator, backhoe loader, bulldozer, dump truck, roller, track loader, vibratory compactor, concrete truck, street sweeper, and a dust control water hog/tank.

Construction Staging

Approximately 10 workers would be on-site for the duration of construction. The City identified their public works corporation yard located at 1400 Broadway (between Chestnut Street and Woodside Road) as the location for construction equipment and vehicle staging. This staging area consists of a completely paved lot adjacent to the proposed action alignment, and is used for vehicles and/or construction equipment.

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1 inch = 200 feet

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Aerial Source: NAIP, 2016.
Data Source: Kennedy/Jenks Consultants

FIGURE 4 - BORE PIT LOCATIONS

City of Redwood City
Recycled Water Project

City of Redwood City, San Mateo County, CA

Construction Schedule

Construction of the proposed action is anticipated to occur in 2018 and 2019 between the months of June through October. Different segments of a single phase may be constructed simultaneously at up to three locations on any given day. The rate of construction is expected to be between 300-500 feet per day per location. Approximately 200 feet of existing roadway would be disturbed at any given time at each location. No more than 100 feet of that distance would be associated with an open trench; the remaining 100 feet would be associated with active pipe laying and paving activities.

2.1.2 Proposed Action Operation

The City obtains 100 percent of its potable water supply from the SFPUC's RWS. The RWS supply consists primarily of water from the Sierra Nevada delivered via Hetch Hetchy aqueducts and includes runoff water from local watersheds collected, stored and treated by the SFPUC. Imported water from the Sierra Nevada is limited by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolomne River. On average 15 percent of the water delivered by SFPUC's RWS is from local reservoirs, the remaining 85 percent is from the Hetch Hetchy system. Redwood City supplements its potable water supply with recycled water to replace potable water for non-potable uses.

The City's contractual SFPUC water supply allocation is 12,243 AFY through 2035. The SFPUC supply and the City's recycled water supply are currently the City's only supply sources. The City has all water rights to its SFPUC allocation and to its recycled water. The City does not have plans for new water supply facilities other than the proposed recycled water project.

Once installed, operation of the proposed action would be similar to operation of the existing recycled water and potable water distribution systems. Consistent with Title 22 regulations, signs would be posted to notify the public of areas where recycled water is being used and recycled pipes, valves and sprinkler heads would be easily recognizable by their purple color.

Redwood City would continue to provide information and assistance to eligible recycled water customers. This assistance is in the form of:

- Site evaluations.
- Soil and plant tissue analysis and recommendations.
- Water quality information.
- Irrigation system evaluation.
- Training for site landscape/irrigation supervisors.
- Workshops in successful landscape management with specific suggestions on using recycled water more effectively.

In addition, Redwood City would develop educational assistance programs for industrial and other customers.

2.2 No Action Alternative

Under the No-Action Alternative, Reclamation would not provide partial funding to Redwood City for the proposed action. If Title XVI funds are not available, the City may construct some portion of the proposed action using local funds, if they are available. If funds are not available

then the only feasible alternative is the No-Action Alternative, which would mean continued reliance on potable supply from SFPUC. Deliveries from SFPUC would be either within the City's current water supply allotment, through the purchase of additional supply from other SFPUC retailers, or a water transfer. As such, in this EA, the No-Action Alternative evaluates the future if the proposed action is not implemented.

Chapter 3. Affected Environment & Environmental Consequences

This chapter describes existing conditions within the action area and the environmental consequences of implementing the proposed action and No-Action Alternative. The action area considered in this assessment includes the proposed distribution pipeline alignments and an adjacent 50-foot buffer, all access roads necessary for construction, potential construction staging areas, and other areas that may be temporarily disturbed during construction (e.g., bore pit locations). For some resource areas (e.g., air quality), the action area has been expanded to represent a larger area where the effects of the proposed action may be realized. In those cases, the larger action area boundary is defined within the resource area discussion.

The following resource areas are not considered further in this EA because the proposed action would have no potential to affect them.

- **Agricultural Resources.** The proposed action is located entirely within an urban area. No agricultural resources are located within or near the proposed action footprint, and reuse of recycled water associated with the proposed action would have no impact on the availability of irrigation water for agricultural activities.
- **Mineral Resources.** No mineral deposits or mineral extraction areas are located in the action area or identified in Redwood City's General Plan (Redwood City 2010).
- **Groundwater Supplies.** No elements of the proposed action would deplete groundwater supplies, and installation of the pipelines would not prevent percolation of water into the underlying groundwater table. An analysis of the effects of the application of recycled water delivered by the proposed action pipelines was considered in the 2002 Initial Study for this project.

3.1 Biological Resources

3.1.1 Affected Environment

The action area is located in the Redwood City, San Mateo County, California, on the Palo Alto U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, near the eastern boundary of the Redwood Creek Watershed.

Biologists conducted a survey on March 7, 2016. The results of that survey and searches of the U.S. Fish and Wildlife (USFWS) database (USFWS 2016) and the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2016) provide the basis for this discussion. Photographs taken during the site visit are provided in Figure 3 of this assessment.

The action area is completely developed and consists of paved roads with adjacent ornamental landscaping. Vegetation within and adjacent to the action area consists of street trees, landscaped

areas, ruderal vegetation, and ornamental vegetation. There are no natural habitats located within the action area.

The action area is located within the Redwood Creek watershed. Redwood creek flows south of Interstate 280 and spans east through underground culverts eventually becoming a tidal channel near the intersection of Bradford St. and Main St., draining into South San Francisco Bay (South Bay). The project action area is not located in Critical Habitat for USFWS listed species nor does the project study area provide high quality habitat to support listed species.

Though the action area is fully developed, just east of downtown Redwood City is the West Bay Unit of the 30,000-acre Don Edwards National Wildlife Refuge (USFWS 2012). This refuge consists of large areas of restored tidal marsh habitat. Two tracts in the West Bay Unit (Faber Tract and Laumeister Tract) provide tidal marsh habitat for the federally endangered California clapper rail (*Rallus longirostris obsoletus*). Mudflats and marsh habitat at the mouth of Redwood Creek and in side channel sloughs that connect to Redwood Creek provide suitable habitat for this and other tidal marsh dependent species.

3.1.1.1 Special-Status Species

For the purposes of this assessment, special-status plant and wildlife species are defined as those species listed as endangered, threatened, or proposed for listing under the Federal Endangered Species Act (ESA), as amended (Code of Federal Regulations [CFR], Title 50, Section 17), and/or birds protected under the Migratory Bird Treaty Act (MBTA) (16 U.S. Code [USC] 703-712). As summarized below, a limited number of special-status plants and wildlife species have the potential to occur within the action area, due to the developed nature of Downtown Redwood City. No suitable habitat for special-status species occurs within the existing roads where the recycled water pipelines would be located; however high quality tidal marsh habitat is located approximately 1 mile east of the action area, in the South Bay.

Tables 3-1 and Table 3-2 provide a summary of the status and habitat requirements for each of the federally listed, special-status species with potential to occur in or adjacent to the action area. Species only protected under the MBTA (i.e., not federally listed under the ESA) are not listed in Table 3 because most bird species occurring in California fall under the protection of the MBTA. The lists are a compilation of species obtained from database searches, relevant literature, knowledge of regional biota, existing data from regional experts, and observations made during field investigations. The potential for each species to occur in the action area was evaluated in consideration of site-specific conditions. Based on that evaluation, each species was placed into one of four categories, as defined below and indicated in Table 3-1 and Table 3-2.

- **None** indicates that the action area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.
- **Not Expected** indicates situations where suitable habitat or key habitat elements may be present but may be of poor quality or isolated from the nearest extant occurrences.
- **Possible** indicates the presence of suitable habitat or key habitat elements that potentially support the species.
- **Present** indicates the target species was either observed directly or its presence was confirmed by diagnostic signs during field investigations.

Table 3-1 Federally Listed Plant Species with Potential to Occur in the Action Area

Scientific Name / Common Name	Listing Status[a]	Land Cover Type	Potential for Occurrence
Lasthenia conjugens Contra Costa goldfields	Fed: FE State: None	alkali wetland alkali sink non-native annual grassland vernal pools	None
Suaeda californica California seablite	Fed: FE State: None	Coastal salt marsh, wetland-riparian	None
Cirsium fontinale var. *fontinale* Crystal Springs fountain thistle	Fed: FE State: None	Serpentine seeps, openings, and drainages within chaparral, valley grassland and wetland riparian communities	None
Hesperolinon congestum Marin western flax	Fed: FT State: CT	Chaparral and valley grassland on serpentine soils	None
Acanthomintha duttonii San Mateo thorn mint	Fed: FE State: CE	Chaparral and valley grassland on serpentine soils	None
Eriophyllum latiobum *San Mateo wooly sunflower*	Fed: FE State: CE	Foothill woodland on serpentine soils	None
Trifolium amoenum *Two-forked clover*	Fed: FE State: None	Valley grassland, wetland-riparian weak serpentine affinity	None
Pentachaeta bellidiflora *White-rayed pentachaeta*	Fed: FE State: CE	Valley grassland sometimes on serpentine soils	None

[a] Explanation of State and Federal Listing Codes
Federal
FE = Listed as Endangered by the USFWS
State
CT = Listed as Threatened by the State of California
CE = Listed as Endangered by the State of California

Special-Status Plants

There is no suitable habitat for federally listed plants within the action area (Table 3-1). The roadways and shoulders associated with the action area are completely developed, routinely disturbed, or landscaped and do not provide conditions to support native plants. The six potential bore pit locations and single proposed staging area are all completely paved and do not provide habitat for special-status plants. Vegetation within the action area is completely ornamental and routinely pruned, irrigated, etc.

Special-Status Fish

The action area does not contain suitable habitat for special-status fish species (Table 3-2). There are no occurrences of sensitive or locally rare fish species within 1-mile of the action area (CDFW 2016). Redwood Creek flows through Central Redwood City in an underground culvert. This creek is not known to support special status fish (Leidy et al. 2005).

Table 3-2 Federally Listed Wildlife Species with Potential to Occur in the Action Area

Scientific Name / Common Name	Listing Status[a]	Habitat Requirements	Habitat Suitability and Local Distribution	Potential for Occurrence
Invertebrates				
Euphydryas editha bayensis Bay checkerspot butterfly	Fed: FT, CH State: none	Native grasslands in serpentine outcrops in the San Francisco Bay Area. Host plant is *Plantago erecta*. Also occurs on *Orthocarpus densiflorus* and *O. purpurscens*.	No suitable habitat within action area. No documented occurrences of this species from within 1-mile of action area.	None
Fish				
Hypomesus Transpacificus Delta smelt	Fed: FT, CH State: SE	Inhabits brackish water in the Sacramento-San Joaquin Delta. Delta smelt have been documented as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River and downstream as far as San Pablo Bay. Breeds in freshwater habitat during winter and spring.	Project action area is outside the current range of this species.	None
Oncorhynchus mykiss irideus Steelhead Central California Coast DPS	Fed: FT, CH State: none	From Russian River, south to Soquel Creek and to, but not including, Pajaro River, also San Francisco and San Pablo Bay basins. Spawning occurs in cool streams with low turbidity, and suitable sites for egg deposition. Spawning in spring. Fry emerge from gravel spawning beds 5 to 7 weeks later.	No suitable habitat or critical habitat within action area. No documented occurrences of this species from within 1-mile of action area.	None
Amphibians				
Ambystoma californiense California tiger salamander Central California DPS	Fed: FT, CH State: SSC	A large terrestrial salamander that inhabits seasonal/semi-permanent water sources (3-4 months in duration) and adjacent upland habitat with small fossorial mammal activity in lowland grasslands, oak savannah and mixed woodlands.	No suitable aquatic or adjacent upland habitat within action area. No documented occurrences of this species from within 1-mile of action area.	None
Rana aurora draytonii California red-legged frog	Fed: FT, CH State: SSC	A medium-sized frog that inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation up to 1,500 meters in elevation.	No suitable breeding or aquatic habitat within action area. No documented occurrences of this species from within 1-mile of action area.	None

Scientific Name / Common Name	Listing Status[a]	Habitat Requirements	Habitat Suitability and Local Distribution	Potential for Occurrence
Reptiles				
Thamnophis sirtalis tetrataenia San Francisco garter snake	Fed: FE State: SE, FP	Vicinity of freshwater marshes, ponds, and slow moving streams in San Mateo County and extreme northern Santa Cruz County, prefers dense cover and water depths of at least 1 foot. Upland areas near water are also very important.	One record of this species collected at Searsville Lake in 1922 (CDFW 2016). No suitable habitat or documented occurrences from action area.	None
Birds				
Rallus longirostris obsoletus California clapper rail	Fed: FE State: SE, FP	Salt to brackish-water marshes with tidal sloughs in San Francisco Bay Area. Found in dense pickleweed.	One occurrence of this species from CNDDB located 1-mile north of project site in tidal marsh habitat (CDFW 2016).	None
Brachyramphus marmoratus Marbled murrelet (nesting)	Fed: FT, CH State: ST	Mature, coastal coniferous forests for nesting; nearby coastal water for foraging; nests in conifer stands greater than 150 years old and may be found up to 35 miles inland; winters on subtidal and pelagic waters often well offshore. Nests from mid-April to late September.	No suitable nesting habitat present in action area. No documented nesting occurrences from action area.	None
Charadrius alexandrinus nivosus Western snowy plover	Fed: FT, CH State: SSC	Sandy beaches, salt pond levees, shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	One occurrence in CNDDB located approximately .8 mile north of project in tidal marsh habitat.	None
Sterna antillarum browni California least tern (nesting colony)	Fed: FE State: SE, FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	One CNDDB occurrence located in salt evaporation ponds approximately 0.9 mile NE of project.	None
Coccyzus Americanus Yellow-billed cuckoo (Western U.S. DPS)	Fed: FT, CH State: SSC	Wide, dense riparian forests with a thick understory of wouldows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant.	No suitable riparian habitat present in or adjacent to the action area. No documented occurrences from action area.	None

Scientific Name / Common Name	Listing Status[a]	Habitat Requirements	Habitat Suitability and Local Distribution	Potential for Occurrence
Mammals				
Reithrodontomys raviventris Salt-Marsh harvest mouse	Fed: FE State: SE, FP	Middle marsh habitat dominated by pickleweed. Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Do not burrow, build loosely organized nests. Require higher areas for flood escape.	Two CNDDB occurrences located just over 1 mile away from project in tidal marsh habitats (CDFW 2016). No tidal marsh habitat within project to support this species.	None

Note: DPS – Distinct Population Segment

[a] Explanation of State and Federal Listing Codes:

Federal listing codes:	California listing codes:
FE – Federally listed as Endangered	SE – State listed as Endangered
FT – Federally listed as Threatened	ST– State listed as Threatened
FD – Federally delisted	SSC – California Species of Special Concern
CH – Critical Habitat (Proposed or Final) is designated	FP – Fully Protected

Special-Status Wildlife

The developed roads, medians, and road shoulders within the action area do not provide habitat suitable to support federally listed wildlife species. No federally listed wildlife species were observed during the field surveys and the action area is not located within federally designated critical habitat.

As described below, suitable nesting habitat for birds protected under the MBTA is present in ornamental trees and shrubs.

Special-Status Reptiles

The action area does not contain suitable habitat for special-status reptile species (Table 3-2). There is a 1922 occurrence of the federally endangered San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), located between 2 and 3 miles south of the project (CDFW 2016). This species inhabits freshwater marshes, ponds and slow moving streams in San Mateo County. There is no suitable habitat to support this species within the project action area.

Special-Status Birds

There are several species of birds protected under the ESA with potential to occur adjacent to the action area, within the wildlife refuge (Table 3-2). Three federally listed species have been documented within 1 mile of the project in the Don Edwards Wildlife Refuge located in the South Bay. These include California clapper rail, Western snowy plover (*Charadrius alexandrinus nivosus*), and California least tern (*Sterna antillarum browni*) (CDFW 2016). Several species of birds protected under the MBTA also have potential to occur in the action area, including white-throated swift and swallow species. The buildings and overpasses in Redwood City provide suitable nesting habitat for these species, though none were detected during the field survey in 2016.

3.1.2 Environmental Consequences

3.1.2.1 Proposed Action

Construction noise and temporary ground disturbing activities have the potential to impact wildlife and their habitat within the action area. Operation of the proposed action could also modify soil salinity and effect existing vegetative communities, as described below. The Proposed Action would not affect any listed or proposed federally threatened or endangered species as discussed below.

Impact BIO-1 – Disturbance to Nesting Birds during Construction

Suitable nesting habitat for migratory birds is present in the ornamental or landscaped vegetation within and adjacent to the action area. Implementation of the proposed action could temporarily affect common bird species and/or their nests through noise disturbance during construction activities. Implementation of Mitigation Measure BIO-1, below, would reduce the potential for construction-related effects on nesting birds.

Mitigation Measure BIO-1 – Conduct Preconstruction Nesting Bird Surveys and Establish No-Disturbance Buffers

The following measures would be implemented by Redwood City or their contractors prior to construction of the proposed action.

- If construction of the proposed action begins during the bird nesting season (February 1st to August 31st), preconstruction nesting bird surveys would be conducted within suitable habitat by a qualified biologist no more than two weeks prior to equipment or material staging, pruning/grubbing, or surface-disturbing activities. If no active nests are found within the action area, no further mitigation is necessary.
- If active nests (i.e., nests in the egg laying, incubating, nestling or fledgling stages) are found within 300 feet of the proposed action footprint for raptor (birds of prey) species or 100 feet of the proposed action footprint for all other bird species, no-disturbance buffers should be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the nesting pair's tolerance to disturbance, and the type/duration of potential disturbance. Work within no-disturbance buffers should be rescheduled to occur after the young have fledged as determined by a qualified biologist. Buffer size should be determined in cooperation with CDFW and USFWS.
- If rescheduling of work is infeasible and no-disturbance buffers cannot be maintained, a qualified biologist should be on-site to monitor active nests for signs of disturbance. If it is determined that proposed action-related activities are resulting in nest disturbance, work should cease immediately and CDFW and USFWS should be contacted for further guidance.
- Excavation, grading, or other construction activities conducted outside of the breeding season (i.e., September 1st to January 29th do not require preconstruction surveys for nesting birds.
- If ornamental or landscaped vegetation is disturbed or removed during construction activities, it shall be replaced in kind at a 1:1 ratio with appropriate landscaping species.

3.1.2.2 No-Action Alternative
There would be no potential impacts on biological resources under the No-Action Alternative because the construction-related impacts would not be realized.

3.2 Surface Water and Drainage

3.2.1 Affected Environment

3.2.1.1 Surface Hydrology
The action area lies within the Redwood Creek watershed, which is approximately 11.8 square miles in area and generally defined to include portions of Redwood City and the Town of Woodside, as well as land in unincorporated San Mateo County. The major tributary of Redwood Creek is Arroyo Ojo de Agua. The surface water bodies in this watershed are Redwood and Cordillas Creeks and their tributaries as well as bay channels, including Westpoint Slough, Corkscrew Slough, northerly reaches of Redwood Creek, Smith Slough and Steinberger Slough, the Atherton Channel (Marsh Creek) and the Bay Front Canal. In the northern portion of the watershed, which encompasses the proposed facilities, Redwood Creek is channeled underground, then crosses below Highway 101 where it widens into a small-craft navigable bay channel and flows into the San Francisco Bay.

3.2.1.2 Flood Zones

All of the proposed facilities would be located in the 100-year and 500-year floodplain as defined by the FEMA and mapped on the 2012 Flood Zones provided in the Redwood City General Plan (Redwood City 2010). In August 2015, FEMA issued new preliminary Flood Insurance Rate Maps (FIRM) for Redwood City. The majority of the proposed facilities would be located in Zone AE (Special Flood Hazard Area (SFHA)), defined as an area that is at risk of being inundated by a 100-year flood (Redwood City Community GIS).

3.2.1.3 Surface Water Quality
The Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for surface water and groundwater resources in the basin, including Redwood Creek (RWQCB 2013). The Basin Plan contains specific numeric water quality objectives that apply to certain water bodies or portions of water bodies in the basin, including objectives for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements. The Basin Plan also contains narrative water quality objectives generally intended to specify broad goals and minimum acceptable conditions (RWQCB 2013).

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action
Construction of the proposed action would not affect existing drainage patterns within the action area. All pipeline trenches and areas of ground disturbance would be restored to original grade, maintaining preconstruction drainage characteristics. In areas where the pipeline would be located under pavement, the pavement would be replaced as part of the construction process. In

areas where the pipeline would traverse vegetated areas, those areas would be re-vegetated as necessary to prevent erosion. No additional impermeable surfaces that could contribute to area flooding are proposed. Temporary construction-related impacts on water quality are described below.

From an operational perspective, the potential exists for recycled water to contact surface water bodies in one of two ways: 1) application rates to irrigated areas that are too high, and 2) mixing with stormwater runoff. Because of the high quality of the recycled water being produced surface water runoff would not be detrimental to existing surface water quality of adjacent streams and sloughs. However, recycled water may contain sufficient nutrients to promote algae growth so excessive runoff to surface waterbodies shall be avoided. Recycled water is not used for irrigation during wet weather, to prevent potential for surface water runoff to migrate into neighboring creeks and sloughs. Additionally, application rates are monitored by users during dry weather so that surface runoff due to excessive irrigation is avoided.

Impact HYD-1 – Construction-Related Water Quality Impacts

Construction of the proposed action could leave soils exposed to rain or surface water runoff that may carry soil contaminants (e.g., nutrients, metals, hydrocarbons, or other pollutants) into waterways adjacent to the action area, degrading water quality and potentially resulting in a violation of water quality standards.

Mitigation Measure HYD-1 – Irrigation Water Application Best Management Practices

The following irrigation water application best management practices (BMPs) shall be implemented at customer sites under the supervision of Redwood City:

- All site managers shall be properly trained in the use of recycled water for landscape irrigation. Training shall include instruction on the appropriate quantity of irrigation water to apply to ensure adequate leaching of accumulated salts from the root zone during times when precipitation is below average.
- All customer sites shall be maintained to allow adequate surface drainage without allowing excess quantities of recycled water to drain offsite.
- Site managers shall be required to monitor the health and appearance of vegetation being irrigated with recycled water and identify any adverse effects, including a substantial reduction in growth or plant mortality.

In addition, Redwood City and their contractors would implement BMPs in accordance with the Construction General Permit administered by the SWRCB and San Mateo County Stormwater Pollution Prevention Program. Examples of construction BMPs include the following and would be documented in an approved Storm Water Pollution Prevention Plan (SWPPP):

- Place temporary devices, such as straw, biodegradable fiber, or sandbags to intercept sheet flow runoff and settle sediment through the barriers.
- Implement dust control measures to keep the amount of airborne dust particles to a minimum and to reduce erosion and airborne pollutants during the time between site disturbance and paving or re-vegetation.
- Implement measures to prevent construction equipment or vehicles from tracking sediments out of a work site onto paved roadways.

- Conduct all maintenance activities in a designated area designed to contain spills and prevent run-on or run-off.

3.2.2.2 No-Action Alternative

There would be no potential impacts on surface water or drainage under the No-Action Alternative because no construction activities would occur.

3.3 Geology, Soils and Seismicity

3.3.1 Affected Environment

The most recent soil survey for San Mateo County was the 1991 USDA Soil Survey of San Mateo County, Eastern Part, and San Francisco County, completed in 1991. Soils in the action area are classified as Urban Land Orthents on nearly level to gently sloping land. These clay and silty clay soils can be poorly drained to well-drained, and may exhibit a high shrink-swell potential. These soils are present on alluvial fans, flood plains, and stream terraces. All of the soils within the action area are mapped by the SCS as "Group D" soils, or soils that have a very slow infiltration rate resulting in a slow rate of water transmission. This characteristic generally indicates a higher potential for surface water runoff. Since these surveys, extensive urban development of the action area has occurred, with some importation of fill material and/or redistribution of soil, but the underlying soils are generally accurately mapped.

Redwood City is located in the seismically active San Francisco Bay Area. Due to its proximity to the San Andreas Fault Zone (SAFZ), a tectonic plate boundary between the North American and Pacific plates, the action area is exposed to geologic and seismic hazards, including rupture, ground shaking, and liquefaction. The SAFZ includes active faults including the Hayward, Rodgers Creek, Calaveras, and San Gregorio-Seal Cove fault identified by the California Geological Survey under the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA 1972). The San Andreas Fault is the closest active fault to the action area, located about 2,000 feet southwest of Redwood City, and the inactive Pilarcitos Fault runs parallel to the San Andreas Fault approximately two miles west of this same boundary. There are multiple Quaternary-era faults classified as inactive under APEFZA that cross the plan area (active between 11,000 and 1.6 million years ago).

The Seismic Hazards Mapping Act directs the US Department of Conservation to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground-shaking. It requires site-specific geotechnical studies to identify seismic hazards and formulate mitigation measures prior to permitting developments designed for human occupancy with the zones. The Seismic Hazard map for Palo Alto Quadrangle, including the action area, were completed in 2009.

The current version of the Alquist-Priolo mapping indicates that an APEFZA zone does not cross under the proposed facilities, nor are there any active faults crossing under the proposed facilities that could pose the risk of rupture (Redwood City 2010). The Seismic Hazards Zones map (San Mateo County Hazards Mitigation Maps 2005) indicate that proposed facilities are sited within a Zone of Required Investigation due to a moderate to high potential for liquefaction (Redwood

City 2010). Given the soil types underlying the action area, liquefaction investigations would be required for most development projects in low-level areas (Redwood City 2010).

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

Construction-related impacts on soils under the proposed action are described below. Please refer to Section 3.2, Surface Water and Drainage, Impact HYD-1 Construction-Related Water Quality Impacts for a discussion of the effect of potential changes in soil salinity associated with the application of recycled water.

Impact GEO-1 – Earthquake Damage to Facilities

Facilities associated with the proposed action could be affected by moderate to strong ground shaking from major earthquakes during the life of the proposed action. Due to the close proximity of the San Andreas Fault, a major earthquake along this fault (or currently inactive or active faults in the general vicinity) could produce severe ground shaking and liquefaction at sites within the action area.

Mitigation Measure GEO-1 – Design Proposed Action to Meet Seismic Requirements

Redwood City would ensure that all facilities associated with the proposed action conform to the most recent editions of the Uniform Building Code, the California Building Code, and the Seismic Safety element of the Redwood City's General Plan and grading ordinance. Redwood City would design proposed facilities in accordance with seismic standards that limit the risk of liquefaction from seismic activity. In addition, detailed geotechnical analyses would be prepared for the proposed action and the recommendations of the analyses would be incorporated into the project design.

3.3.2.2 No-Action Alternative

There would be no potential impacts on geology or soils under the No-Action Alternative because no new infrastructure would be constructed. Similar to the proposed action, existing infrastructure delivering potable water to customer sites would also be subject to ground shaking should it occur.

3.4 Air Quality

The action area is located in the Bay Area's "Peninsula" climatic sub-region, which includes all of San Francisco and San Mateo counties and a portion of northwestern Santa Clara County. The Santa Cruz Mountains, which run up the center of the Peninsula, have a major effect on this region's climate and air quality. Areas along the Pacific coast experience a much higher incidence of cool, windy, foggy weather, while areas along the San Francisco Bay front, especially in the southeast (including the action area), experience warmer temperatures, lower wind speeds, and fewer foggy days due to the blockage of marine air intrusions by the Santa Cruz Mountains. The Peninsula's air pollution potential is highest in the Bay-fronting areas of the southeast, where air pollutant emissions from many motor vehicles and a multitude of stationary sources are high, and climatic and geographic factors limit their dispersion.

In the summer and fall, high temperatures and low wind speeds in southeastern San Mateo County increase the potential for local ozone formation and build up, and for the wind-transport of ozone and its chemical precursors from sources in San Francisco to the north and Santa Clara County to the south. During the winter, surface-based temperature inversions (i.e., colder air near the ground, capped by warmer air aloft, which limits the vertical dispersion of air pollutants) often occur. Then pollutants such as carbon monoxide and particulate matter generated by motor vehicles, fireplaces/woodstoves, etc. can become concentrated.

Air pollutant emissions and ambient levels are regulated at the national, state, and local levels by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Bay Area Air Quality Management District (BAAQMD), respectively.

3.4.1 Affected Environment

3.4.1.1 Regional and Local Ambient Air Quality

Ambient air quality standards for the most important air pollutants have been established nationally and for California to protect the public from their adverse health effects. They specify a maximum concentration for each pollutant before adverse health effects become apparent. They are designed to protect those segments of the population most susceptible to adverse health impacts (i.e., sensitive receptors), including children, the elderly, people weak from illness or disease, and people engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above the ambient air quality standards before adverse health effects are observed.

The BAAQMD operates numerous air monitoring stations distributed throughout the Bay Area that measure the ambient concentrations of five major air pollutants: ozone, small-diameter particulate matter, carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). The types of airborne particulate matter of most concern come in two size ranges: particles less than 10 microns in diameter (PM_{10}) and particles less than 2.5 microns in diameter ($PM_{2.5}$).

The Bay Area is currently designated "nonattainment" for the national and state ozone standards, for the state PM_{10} standard, for national and state $PM_{2.5}$ standards, and "attainment" or "unclassifiable" with respect to standards for the other major pollutants.

Existing local air quality in the project site vicinity can be inferred from ambient air quality data taken at the nearest BAAQMD site, which is in Redwood City at 897 Barron Avenue, only about 800 feet south of the eastern terminus of the Phase II.B corridor at Broadway Street and Second Avenue. Table 3-3 presents a 3-year summary of the most recent monitoring data taken there in the years 2013–2015. Violations of ozone and $PM_{2.5}$ standards have registered occasionally at the Redwood City monitoring station over the last three years.

3.4.1.2 Clean Air Act – General Conformity Rule

The General Conformity Rule of the Federal Clean Air Act (42 USC 7401) requires that Federal agencies ensure that their actions do not cause or contribute to a violation of national ambient air quality standards and that they are consistent with the State Implementation Plan to meet those national standards. The General Conformity Rule specifies *de minimis* thresholds for ozone precursors, volatile organic compounds (VOC) and nitrogen oxides (NO_x), and for CO and other regulated pollutants based on the severity of an area's nonattainment designation, as shown in Table 3-4. For the Bay Area, the de minimis thresholds are 50 tons per year of VOC, 100 tons

per year of NO_x, and 100 tons per year of CO. If project emissions are less than de minimis thresholds, additional analysis regarding conformity is not required in a project's Environmental Assessment.

Table 3-3 Redwood City Station Ambient Air Quality Monitoring Summary (2013–2015)

Pollutant	Air Quality Standard	Maximum Concentrations/ Number of Days Standards Exceeded? 2013	2014	2015
Ozone				
Maximum 8-hour concentration (ppm)		75	65	71
# Days 8-hour national and California standard exceeded	70 ppb	1	0	1
Nitrogen Dioxide				
Maximum 1-hour concentration (ppb)		54	55	48
# Days 1-hour California standard exceeded	180 ppb	0	0	0
# Days 8-hour national standard exceeded	100 ppb	0	0	0
Suspended Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/^{m3})		39.0	35.0	34.6
# Days national 24-hour standard exceeded	35 µg/m^3	3	0	0

Notes: µg/m^3 = micrograms per cubic meter, ppb = parts per billion, N/A = indicates that data are not available
Source: BAAQMD Annual Bay Area Air Quality Summaries, http://www.baaqmd.gov/about-air-quality/air-quality-summaries.

3.4.1.3 Greenhouse Gases and Climate Change

Greenhouse gases (GHGs) are atmospheric gases that capture and retain a portion of the heat radiated from the earth after it has been heated by the sun. The primary GHGs are (in the order of importance) carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor. While these GHGs are natural components of the atmosphere, they are also emitted from human activities and their accumulation in the atmosphere over the past 200 years has substantially increased their concentrations. This accumulation of GHGs has been implicated as the driving force behind global climate change. Human emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with organic decay processes in agriculture. The global warming potential of GHGs are typically reported in comparison to that of CO_2, the most common and influential GHG, in units of "carbon dioxide-equivalents" (CO_2e).

There is international scientific consensus that human-caused increases in GHGs have and would continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity (California Climate Change Center 2012).

Table 3-4 Federal General Conformity De Minimis Levels

Pollutant	Area Type	Tons/Year
Ozone (VOC or NO_x)	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region	100
Ozone (NO_x)	Marginal and moderate nonattainment inside an ozone transport region	100
	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
	Maintenance within an ozone transport region	50
	Maintenance outside an ozone transport region	100
Carbon monoxide, SO_2 and NO_2	All nonattainment & maintenance	100
PM_{10}	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
$PM_{2.5}$	All nonattainment & maintenance	100

In December 2009, EPA adopted two distinct findings regarding GHG under Section 202(a) of the Clean Air Act (Findings). The Findings state that the current and projected concentrations of the GHGs in the atmosphere threaten the public health and welfare of current and future generations. The Findings state that the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key GHGs and hence represent a threat to public health and welfare. The Findings do not impose any requirements on industry or other entities, but demonstrate EPA's authority to regulate GHGs under the Clean Air Act.

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Project construction would generate temporary emissions of air pollutants from diesel-powered equipment, and fugitive dust emissions from equipment movement over unpaved ground. After the recycled water pipeline is installed, there would be no permanent new air pollutant emissions from its operation, as it would require no additional pollutant-generating equipment and no additional motor vehicle use. The proposed action would reduce GHG emissions by replacing water now transported long distances to Redwood City before being used for irrigation with locally produced recycled water, thereby reducing the energy expenditures needed for water transport.

Impact AQ-1 – Construction-Generated Air Pollutants from Diesel-Powered Equipment and On-Road Motor Vehicles

Project construction for each of the two pipeline segments (Phases II.A, II.B and II.C) would proceed in three stages: mobilization/site preparation, trenching/pipe installation, and backfill/paving/demobilization. Construction equipment would typically include two backhoes, a dump truck and water truck, a few utility pickup trucks, and an excavator, loader, and street sweeper during trenching/pipeline installation phases; paving would be accomplished with lesser numbers of equipment, typically with only a truck to distribute the paving materials and a roller. The number of workers on-site would peak during trenching/pipe installation phase, averaging about 10 workers, with lesser numbers needed for mobilization/demobilization and paving phases. Construction of the proposed action would occur in 3- to 4-month periods, most likely during the late spring and summer in each of the next 2 years.

Using the above-mentioned project-specific specifications for construction equipment and schedule, pollutant emissions were calculated using the using statewide construction fleet average emission rates (CalEEMod User's Guide) and emission rates provided by the CARB's EMFAC2014 model for on-road material haul/delivery trucks and worker commute vehicles. Table 3-5 summarizes the proposed action's total annual construction pollutant emissions in each of the two years when the construction activities would occur.

Table 3-5 Construction Air Pollutant Emissions under the Proposed Action

Pollutant	Bay Area Attainment Status[a]	De Minimis Threshold for the Bay Area (Tons/Year) [b]	Construction Emissions Year 2018/2019 (Tons/Year)[c]	Operational Emissions (Tons/Year)[d]
Carbon Monoxide (CO)	Unclassified/Attainment	100	0.54/0.26	----
Ozone (O_3)	Nonattainment[e]	50	----[e]	----
Oxides of Nitrogen (NO_x)	Unclassified/Attainment[f]	100	0.92/0.43	----
Particulate Matter (PM_{10})	Unclassified	100	0.05/0.02	----
Reactive Organic Gases (ROG)	----[f]	----[g]	0.09/0.04	----
Sulfur Dioxide (SO_2)	Attainment	100	<0.01/<0.01	----
Volatile Organics (VOCs)	----[f,h]	50	0.09/0.04[h]	----
Particulate Matter ($PM_{2.5}$)	Nonattainment	100	0.04/0.02	----

Note: Estimates assume project construction equipment have California-average pollutant-emitting engines.

[a] Source: CARB, www.arb.ca.gov/desig/adm/adm.htm

[b] Source: U.S. EPA, www.epa.gov/oar/genconform/deminimis.htm and www.epa.gov/air/genconform/documents/Jul06/EPA-HQ-OAR-2004-0491-0026.pdf

[c] Emissions were calculated using the CalEEMod Model, Version 2013.2.2. Calculations include emissions from construction equipment, delivery trucks, and construction worker commute vehicles.

[d] Operational emissions are not expected to increase because no new pollutant-emitting sources would be installed as part of the proposed action, nor would it generate additional motor vehicle traffic.

[e] Ozone is not directly emitted and is formed from its precursors, NOx and ROG.

[f] This pollutant is considered an ozone precursor.

[g] There is no federal de minimis level for ROGs.

[h] VOCs are similar to ROGs but are not estimated by CalEEMod. VOC emissions are assumed to be equal to ROG emissions.

Impact AQ-2 – Construction-Generated Fugitive Dust

Project construction would generate fugitive dust, which consists mostly of larger diameter particulates, but also includes a smaller component of PM_{10} and $PM_{2.5}$, during site preparation, trenching, and backfill.

Implementation of Mitigation Measures AQ-1 would reduce the potential for adverse localized dust impacts during construction.

Mitigation Measure AQ-1 – Implement Air Quality Best Management Practices in Accordance with BAAQMD Guidance

The following air quality BMPs would be implemented by the construction contractor:

- 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 tracked 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 vehicles speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Impact AQ-3 – Construction-Related Greenhouse Gas Emissions

Construction of the proposed action would contribute to climate change impacts through its emission of GHG from construction equipment, delivery/haul trucks and worker commute vehicles. Project construction would emit 81.7 metric tons of GHG during Phase II.C construction in 2018, and 187.7 metric tons of GHG during Phase II.A and Phase II.B construction in 2019. These emissions of GHG would be offset by on-going GHG emission reductions after the pipelines are operational, as detailed below.

Impact AQ-4 – Operational Greenhouse Gas Emission Reductions (Beneficial)

Temporary GHG emissions associated with project construction activities would be offset by permanent GHG emissions reductions from the use of locally produced recycled water for local irrigation by avoiding the energy use associated with bringing an equal amount of imported water from distant surface/ground water reservoirs.

Based on CalEEMod's water supply electricity use factors (in kWhr of electricity used per million gallons of water) and the Pacific Gas & Electric GHG intensity factor (in metric tons of CO2e emitted per kWhr of electricity generated), the local use of increased amounts of recycled water would reduce GHG emissions by 0.6 metric ton/day (237 metric tons/year) for each additional million gallons of recycled water per day provided by the expanded pipeline system.

Impact AQ-5 – General Conformity

Total air pollutant emissions from construction of the proposed action, as shown in Table 3-4, would be far below the annual de minimis thresholds (i.e., 50 tons for ROG/VOC, and 100 tons for NO_x and CO). Therefore, no further conformity analysis with respect to the Clean Air Act is required.

3.4.2.2 No-Action Alternative

As described above, continued use of potable water within the action area would result in more substantial GHG emissions when compared to the use of recycled water for the same purposes, as prescribed under the proposed action. An additional 237 metric tons of GHG would be emitted per year per million gallons per day of potable water for irrigation purposes under the No-Action Alternative.

No construction-related air pollutant emissions would be associated with the No-Action Alternative.

3.5 Noise

Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The more powerful the pressure variations, the louder the sound perceived by a listener. The decibel (dB) is the standard measure of loudness relative to the human threshold of perception. Noise is a sound or series of sounds that are intrusive, objectionable or disruptive to daily life. Many factors influence how a sound is perceived and whether it is considered disturbing to a listener; these include the physical characteristics of sound (e.g., loudness, pitch, duration, etc.) and other factors relating to the situation of the listener (e.g., the time of day when it occurs, the acuity of a listener's hearing, the activity of the listener during exposure, etc.). Environmental noise has many documented undesirable effects on human health and welfare both psychological (e.g., annoyance and speech interference) and physiological (e.g., hearing impairment and sleep disturbance).

3.5.1 Affected Environment

3.5.1.1 Ambient Noise Levels

Motor vehicles and trains are the primary sources of noise in Redwood City. Commuter trains produce the highest regularly occurring maximum noise levels in the action area, while noise from aircraft operations associated with San Carlos Airport have a substantial influence on the Redwood Shores neighborhood north of the action area. Noise from industrial activities/ processes, rooftop heating ventilation and air conditioning (HVAC) equipment, and outdoor recreational activities can have adverse effects on nearby noise-sensitive receptors.

The noise analysis in this EA relies on ambient noise measurements taken for the Redwood City General Plan in July 2008. These noise measurement locations were selected to provide information on the noise level variations along streets and highways, to determine baseline ambient noise levels in quiet residential neighborhoods, and to measure noise levels generated by trains and important stationary sources. The General Plan uses the Community Noise Equivalent Level (CNEL), measured in A-weighted decibels (dB(A)), as the primary metric for determining

the compatibility of noise-sensitive land uses with current or expected future noise exposure levels.[1]

The majority of the action area is located within some of the noisier areas of Redwood City, as shown on *Figure PS-11: 2010 Existing Noise Contours* in the Redwood City General Plan. Noise profiles of the proposed pipeline construction sites are as follows:

- Phase II.B – The intersection of Walnut Street and Marshall Street is located within the 60-65 dB(A) CNEL range. As the project proceeds east on Marshall Street, it enters a quieter (i.e., 55-60 dB(A)) area until just east of Marshall Court. From there, the CNEL rises again to 60-65 dB(A) until the intersection of Broadway and Beech. From Broadway and Beech to Broadway and Second, the CNEL range is 70-75 dB(A), with the exception of the intersection of Broadway and Woodside Road (>75 dB(A)).
- Phase II.C – CNEL ranges from 60-65 dB(A) at Marshall and Walnut to 70-75 dB(A) at Marshall and Broadway. CNEL rises to 70-75 dB(A) at each of the following intersections: Main Street, Jefferson Avenue, Middlefield Road, and Winslow Street. CNEL then drops to 60-65 dB(A) between Main Street and Jefferson Avenue and also between Middlefield Road and Winslow Street.

Redwood City establishes specific hours during which construction noise is permitted. The hours depend in part on proximity to residential areas and are included as part of the City's conditions of approval for development. Noise levels generated by construction are prohibited between the hours of 8:00 p.m. and 7:00 a.m. weekdays, and at any time on Saturdays, Sundays, and holidays.

3.5.1.2 Sensitive Receptors

Noise-sensitive receptors include single-family and multi-family residential uses, schools, hospitals, churches, rest homes, cemeteries, and public libraries, particularly those located along existing roadways where new recycled water pipelines would be installed. Sensitive noise receptors within the action area include:

- Phase II.B – Courtyard Apartments (north side of Marshall at intersection with Beech), Visio Mundial Ministries church (north side of Broadway just east of Beech), Summit Preparatory Charter High School (northeast corner of Broadway Street and Charter Street), Stanford University Medical Center (on north side of Broadway between Douglas and Second), Avenue 2 Apartments – a high density residential facility (on northwest corner of Broadway Street and Second Avenue), and duplex residential community east of 2nd on the north and south side of Broadway.
- Phase II.C – 201 Marshall Apartment complex on Marshall between Broadway and Warren Street. It should be noted that there are plans (Redwood City GIS) for a residential project on Marshall between Walnut and Main.

[1] An **A–weighted decibel**, dB(A), includes adjustments made to each of the many different frequency components of a sound to reflect the varying sensitivity of the human ear to the different frequencies. The **Equivalent Sound Level**, L_{eq}, is a constant sound level that carries the same sound energy as the actual time-varying sound over the measurement period. The **Community Equivalent Noise Level**, CNEL, is a 24-hour average L_{eq} with a 5-decibel penalty added to sound levels occurring in the evening between 8:00 p.m. and 10:00 p.m. and a 10–decibel penalty added to sound levels occurring at night between 10:00 p.m. and 7:00 a.m.

There are no known libraries or community centers near the project site locations. There is one park adjacent to the Phase II.B site location, east of Second between Broadway and Bay.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

Operation of the proposed action would not result in increased traffic or other noise-generating activities in the action area. Noise impacts associated with construction of the proposed action are described below.

Impact NOISE-1 – Construction Noise

Table 3-6 summarizes typical construction equipment noise levels. The proposed action would only produce noise during the construction phase and would not expose sensitive receptors to permanent, excessive noise levels. In addition, because construction activities would occur in a linear fashion, any one receptor would only be exposed to construction-generated noise for a short duration prior to activities continuing down the pipeline. Implementation of Mitigation Measure NOISE-1 would reduce construction-related noise impacts in and around sensitive noise receptors.

Table 3-6 Construction Equipment Noise Levels (Measured at 50 feet)

Construction Equipment	Maximum Noise Level (dBA)
Backhoe	78
Concrete Truck	79
Excavator	81
Front End Loader	79
Pickup Truck	75
Roller	80
Sweeper	82

Source: Federal Highway Administration. 2008. *Roadway Construction Noise Model User's Guide*. January.

Mitigation Measure NOISE-1 – Limit Construction Equipment Noise Intensity and Times of Use

- The construction contractor shall adhere to all local ordinances regulating hours of construction to minimize the potential for sleep disturbance and annoyance to sensitive noise receptors in the action area. As noted above, Redwood City typically requires that construction be limited to daytime hours (between 7:00 a.m. and 8:00 p.m.). If roadway closure is required, construction would only take place at night in non-residential areas.
- To minimize construction noise generation, all equipment operated at the project site shall be equipped with manufacturer's standard noise control devices (i.e., mufflers, engine enclosures, etc.). All construction equipment should be inspected by the contractor at periodic intervals to ensure proper maintenance and hence, lower noise levels.

- Wherever feasible, pipeline construction activities adjacent to any schools would be coordinated so that all construction, or at least the noisier phases of construction occur when schools are not in session (e.g., during school vacations). At a minimum, project scheduling should be coordinated with schools that have any classrooms within 50 feet of proposed construction activities. Alternatively, it may be possible for schools to temporarily relocate classes held in affected buildings to other buildings on campus.
- Pipeline construction activities adjacent to public uses other than schools (libraries or community centers) should be coordinated with schedules of affected uses.

Impact NOISE-2 – Operational Noise

There would no operational noise sources associated with project pipelines or storage reservoirs. Pipelines would be underground and pressurized. The recycled water pump stations would be housed within a structure designed with acoustical treatment to minimize pump noise to the exterior. No mitigation is required.

Impact NOISE-3 – Airport Noise

The Redwood Shores and Greater Bayfront areas are within proximity of the flight paths of the San Francisco International Airport and are also overflown by aircraft approaching/departing San Carlos Airport. Therefore, for brief periods of time, the noise of large and small aircraft is noticeable by persons living and working in those areas. Aircraft noise is not expected to effect construction workers who would install the recycled water facilities, and no mitigation is discussed.

3.5.2.2 No-Action Alternative

There would be no noise impacts under the No-Action Alternative because no construction-related noise would be generated.

3.6 Transportation / Traffic

3.6.1 Affected Environment

The action area is located within an existing developed community, primarily along roadways. Regional access is provided by Highway 101 (U.S. 101), I-280, Woodside Road, and El Camino Real.

U.S. 101 is a major north-south regional route; however, U.S. 101 travels in an east-west direction through Redwood City, and is located north of Downtown and south of the Bayfront areas. I-280 is a major north-south freeway that connects the cities of San Jose and San Francisco; however, I-280 travels in an east-west direction near Redwood City. I-280 is located south of Redwood City, and its interchanges at Woodside Road, Farm Hill Boulevard, Edgewood Road, and Ralston Avenue provide access to the City. Woodside Road (SR 84) is a four- to six-lane north-south arterial and a designated state highway through Redwood City between I-280 and U.S. 101. El Camino Real (SR 82) is an east-west intraregional arterial and a designated state highway with two to three lanes in each direction through the plan area. Other arterials include Middlefield Road, Broadway, Veterans Boulevard, Industrial Way, Whipple Avenue, Jefferson Avenue, Farm Hill Boulevard, Edgewood Road (between Alameda De Las Pulgas and I-280), Redwood Shores Parkway, Marine Parkway, and Seaport Boulevard. These roads include

one to three lanes in each direction within the plan area and speeds limits ranging from 25 to 35 mph.

The Redwood City General Plan (EIR Transportation Section, Table 4.14-2 – Existing (2008) Roadway Segment Levels of Service Summary) details the existing level of service on existing roadways. The level of service standard (i.e., minimum acceptable operations) for roadways in the City is Level of Service (LOS) D. Therefore, facilities registering LOS E or LOS F would be considered to operate at an unacceptable level. The majority of roadways within the City operate at LOS C or better during the AM and PM peak hours. Major arterials, such as El Camino Real, Edgewood Road, Whipple Avenue, and Woodside Road, operate at LOS D during both peak hours. The segment of Woodside Road between El Camino Real and Middlefield Road operates at LOS E during the morning and LOS F during the evening peak periods.

There are minimal existing bicycle facilities in the action area. Bicycle facilities are designated as Class I, Class II, or Class III bikeways, with Class I providing the most separation of cyclists from vehicular traffic and Class III providing the least. Existing bikeways involved in the project sites are as follows:

- Phase II.B – Broadway on the stretch from around 420 Broadway until its intersection with Second (Class II), Broadway from Charter to Woodside (shared lane, with Class II starting mid-block when heading west on Broadway from Charter), Broadway heading west from Woodside to Chestnut (Class III for first half-block, then turning into Class II). It should be noted that the 2010 Redwood City General Plan includes plans for a Class I bikeway running the entire length of Broadway.
- Phase II.C – Marshall from Main to Broadway (Class II).

A number of bus routes serve Redwood City, as follows:

- Phase II.B – Broadway, an AC Transit Bus and Shuttles run the length of the project site.
- Phase II.C – Marshall between Main Street and Jefferson Avenue, a SamTrans bus route.

A mid-day on-demand community shuttle service, funded by Metropolitan Transportation Commission (MTC), San Mateo County City/County Association of Governments (C/CAG), and City of Redwood City operates in eastern part of the City. The shuttle is free and open to general public. The service area is bound by El Camino Real, Marsh Road, U.S. 101, and Whipple Avenue.

Caltrain offers commuter rail service between Gilroy and San Francisco and is operated by the Joint Powers Board (JPB). Within the City, the rail line is parallel to and north of El Camino Real. The Redwood City Station is located Downtown, between Jefferson Avenue and Broadway. Currently, only three of the roadways within the plan area that cross the Caltrain tracks are grade separated (Woodside Road, Jefferson Avenue, and 5th Avenue). All other roadways intersecting Caltrain tracks in the plan area are at-grade.

3.6.1.1 Traffic Flow Requirements during Construction

Redwood City generally permits construction on roadways to occur between 7:00 am and 8:00 pm. The number of travel lanes during peak hours would not be reduced below what is required to meet expected traffic volumes at a construction site. Mid-block construction sites can have lane closures that exceed these time limits where adequate capacity exists, except that a prohibition on night construction exists in residential areas. During all other times, pipeline

construction trenches would be plated over to permit the use of all travel lanes. The construction contractor would keep access to intersecting streets open at all times.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

The proposed action would not result in increased or additional traffic through the action area after construction is complete. Potential construction-related traffic and transportation service impacts are described below.

Impact TRANS-1 – Construction-Related Traffic/Circulation Impacts

The proposed action would result in construction activities within existing roadways, thereby temporarily reducing the capacity of those roadway segments during construction. Construction in existing roadways may also result in temporary closure of bike lanes and disruption of public transit services. Redwood City would develop a traffic management plan that closely adheres to Redwood City's guidelines, which generally permit construction on roadways to occur between 7:00 a.m. and 8:00 p.m.. If roadway closures are required, construction would only take place at night in non-residential areas, with a detour route clearly marked. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes.

Implementation of Mitigation Measures TRANS-1 and TRANS-3 would minimize temporary, construction-related impacts on traffic and transportation resources.

Mitigation Measure TRANS-1 - Prepare Traffic Management Plan

Redwood City or its contractor shall prepare a traffic management plan for review and approval by Redwood City. The plan would provide a detailed approach for detours and to control traffic through the construction zone. The TMP would conform to Caltrans and City standards, and be filed with the City (and Caltrans, if necessary) before construction begins. The TMP may include the following items, depending on the specific characteristics of each construction zone:

1) The number of travel lanes during off peak hours would not be reduced below what is required to meet expected traffic volumes at a construction site. Mid-block construction sites can have lane closures that exceed these time limits where adequate capacity exists, except that a prohibition on night construction exists in residential areas. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes.
2) If roadway closures are required, construction would only take place at night in non-residential areas, with a detour route clearly marked. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes.
3) Emergency response service providers would be notified at least one week in advance of planned roadway closures, and provided a copy of the detour plans filed with the City. These providers include police and fire departments, and ambulance companies.
4) Local businesses/offices and residents would be notified at least one week in advance prior to planned street closures with the detour plan noticed in the local newspaper, and posted along the street closure route.
5) The construction contractor would keep access to intersecting streets open at all times.

6) If a required lane closure creates a single lane of traffic during construction, the remaining lane would be a 12-foot lane, or otherwise conform to standards described in A Policy on Geometric Design for Streets and Highways, published by the American Association of State Highway and Transportation Officials (AASHTO). Two flaggers would be stationed at both ends of the construction zone to safely direct two-way traffic over this temporary one-lane street.

7) Construction activities would not block access to emergency service provider locations such as police stations, fire stations, or ambulance companies.

8) Construction activities would not totally block business/office/residential parking lots and access points. Access to these facilities would be kept open.

9) Along streets in which parking would be temporarily lost, construction contractor would be required to post impacted streets one week prior to construction, notifying motorists that parking would be removed during the construction period and the duration of the construction period.

10) The traffic management plan shall address bike and vehicle travel through construction zones and the use of flaggers and off-peak construction hours. Cones and/or other similar temporary traffic flow control devices would be used where necessary to establish bike and/or vehicle lanes through construction zones to protect bicyclists from construction activities and vehicle traffic, and to provide for adequate vehicle movement.

Impact TRANS-2 – Construction Trip Generation

Daily pipeline construction site trip generation estimates include construction worker, inspector, and pipeline material supply truck trips. It is estimated that approximately 10 workers may arrive at the site each day, generating 20 vehicle trips per day, with 10 trips occurring during the AM peak hour and 10 trips during the PM peak hour. In addition, it is estimates that one equipment supply truck may deliver materials to the site each day, generating two truck trips per day, one in the AM peak hour and one in the PM peak hour. It is also estimate that one inspector would visit the site each day, arriving and departing outside the traffic peak hours. Pipeline construction equipment, which includes a backhoe, boom truck with crane and compactor, haul truck and paver, would remain parked at the site, so trip generation do not include trips for equipment. Therefore, each pipeline construction site is expected to generate approximately 24 vehicle trips per day, with about half the trips in the AM peak hours, and half in the PM peak hours.

Mitigation Measure TRANS-2 – Construction Trip Generation

Even if two construction zones were operated simultaneously, there would be a low number of construction-related vehicle trips; no mitigation is discussed.

Impact TRANS-3 – Bus Transit Service

The project area is services by multiple transit services. Some transit routes run along proposed pipeline routes. Bus stops may occasionally be unavailable during construction activity, and coordination with transit providers would be required if temporary detours and/or stop relocations are required.

Mitigation Measure TRANS-3 – Bus Transit Service

Redwood City shall coordinate with transit providers in Redwood City, including San Mateo County Transit District (SamTrans), Alameda-Contra Costa Transit (AC Transit), Caltrain (shuttle service) the Peninsula Traffic Congestion Relief Alliances (shuttle service), and other shuttle service providers to temporarily relocate bus and shuttle stops along roadways during construction and ensure uninterrupted service, as required.

Impact TRANS-4 – Rail Transit

The plan (Phase II.C) site ends directly adjacent to the Caltrans rail at Broadway and Marshall. It is not anticipated that a rail crossing would be involved in this project.

Mitigation Measure TRANS-5 – Rail Transit

Should a crossing be required, this crossing would be constructed using the bore-and-jack method, to avoid surface disruption of rail service.

Impact TRANS-5 – Bicycle and Pedestrian Circulation

Many bicycle routes/lanes and pedestrian sidewalks run along proposed pipeline construction routes. These facilities may need to be temporarily close or rerouted during construction.

Mitigation Measure TRANS-5 – Bicycle and Pedestrian Circulation

Routes would be posted 1 week in advance notifying of the temporary removal of the bike lane/route and/or closure of the sidewalk, notice the closure with on-street signs, and clearly signing a detour route. Where the sidewalks are on a walk-to-school route, signing would be provided to guide students along a detour route. Mitigation measure TRANS-1 (TMP) would address bicycle and pedestrian circulation plans.

3.6.2.2 No-Action Alternative

There would be no potential impacts to roadways or pedestrian or bicycle infrastructure under the No-Action Alternative because no construction would occur.

3.7 Hazardous Materials

3.7.1 Affected Environment

A material is considered hazardous if it appears on a list of hazardous materials prepared by a Federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Chemical and physical properties such as toxicity, ignitability, corrosivity, and reactivity may cause a substance to be considered hazardous. These properties are defined in 22 CCR 6621.20-6621.24. A “hazardous waste” is any hazardous material that is discarded, abandoned, or to be recycled. The criteria that render a material hazardous also make a waste hazardous (California Health and Safety Code, Section 25117).

According to this definition, fuels, motor oil, and lubricants typical at a construction site, as well as lead built up along roadways could be considered hazardous. Excavation and trenching to install irrigation pipelines may expose buried hazardous materials resulting from prior use of the proposed site or adjacent property. In addition, in some instances, untreated wastewater could contain constituents that could be considered hazardous to public health.

A search of the California Department of Toxic Substances Control EnviroStor Database revealed that there are no toxic waste sites within the action area. The closest site is the Wouldard Products State Response site located at 70 Chemical Way, about 0.3 miles from the intersection of Maple and Oddstad. Another State Response site (Eichrome) is located at 2480 Middlefield Road, which is about 0.7 miles from the intersection of Broadway and Charter in Phase II.B, and about 1.0 miles from the intersection of Marshall and Main in Phase II.C.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

Construction of the proposed action has the potential to expose construction personnel and/or the public to unknown hazardous materials or contaminated soils, as described below. Potential human health risks associated with exposure to recycled water are also described below.

Impact HAZMAT-1 – Hazardous Materials Storage and Use

During construction activities, hazardous materials such as vehicle fuels and lubricants may be used. While these are commonly used materials, if used improperly, could endanger workers and the public.

Mitigation Measure HAZMAT-1 – Hazardous Materials Storage and Use

Compliance with Federal, State, and San Mateo County hazardous materials laws and regulations would minimize the risk to the public presented by these potential hazards. Implementation of these standard measures as part of the project would reduce potential impacts from the storage and use of hazardous materials.

Impact HAZMAT-2 – Hazardous Materials Use Near Schools

Minor amounts of hazardous materials would be used during the construction of the pipelines.

Mitigation Measure HAZMAT-2 – Hazardous Materials Use Near Schools

Compliance with Federal, State, and San Mateo County hazardous materials laws and regulations would minimize the risk to the public presented by these potential hazards.

Impact HAZMAT-3 – Airport Safety

The San Carlos Airport is not located within the project area. No mitigation required.

Impact HAZMAT-4 – Hazardous Waste Release Sites

Although not known to exist in the action area, it is possible that the public or construction personnel could be exposed to unknown hazardous materials or contaminated soils during construction of the proposed action. Implementation of Mitigation Measure HAZMAT-1 would reduce the potential for this impact to occur.

Implementation of Mitigation Measure HYD-1 (see Section 3.2, Surface Water and Drainage) would minimize the potential for hazardous waste materials to be introduced inadvertently into sensitive areas, or to be abandoned within construction areas, and would reduce the potential for exposure of construction workers to construction-related hazardous materials (e.g., oils and lubricants).

Mitigation Measure HAZMAT-4 – Hazardous Waste Release Sites

The construction contractor shall develop site safety plans to address the potential for encountering hazardous materials during construction activities, including trenching. The site safety plans would also identify protocols for employing personal protective equipment to prevent exposure to unknown hazardous materials. The geotechnical analyses required for the project would identify whether potential locations are located along the pipeline routes. Special construction and soil removal methods may be incorporated into the project, as necessary, if soil contamination is encountered.

Impact HAZMAT-5 – Emergency Response and Evacuation Plans

Pipelines would be installed within trenches dug in existing roadways. Installation of pipeline would require temporary road closure or lane reductions.

Mitigation Measure HAZMAT-5 – Emergency Response and Evacuation Plans

Encroachment permits from the appropriate agency would be obtained for this work. These permits are designed to protect the public by providing a system of notification to providers of emergency or other important services of road closures. Compliance with these requirements minimizes the safety and health hazards associated with construction activities.

Impact HAZMAT-6 – Wildland Fires

The project would not be constructed in a wildland area. Pipelines would be constructed along streets in urban and suburban areas away from areas subject to wildland fires. No mitigation required.

Impact HAZMAT-7 – Recycled Water Effects on Human Health

Recycled water is derived from wastewater. Untreated wastewater can result in human health risks associated with exposure to pathogens or other potentially dangerous constituents, such as heavy metals, nitrates, and salts. Redwood City recycled water is produced by Silicon Valley Clean Water (SCVW; formerly South Bayside System Authority) and distributed by the City to its customers through the City-owned recycled water distribution system. The Redwood City recycled water meets the stringent Title 22 requirements for unrestricted use. This level of treatment has proven to be fully protective of human health with regard to microbial pathogens. Because of the extensive level of treatment required, recycled water can be safely used for a variety of uses, including landscape irrigation. As noted in Section 2.1.2, Proposed Action Operation, the following precautions would be taken to ensure safety of the recycled water use:

- Signs would be posted in areas where recycled water is used to indicate that it is not safe to drink.
- Recycled pipes, valves and sprinkler heads would be easily recognizable by their purple color.
- Recycled water runoff into storm drains would be prohibited.
- Cross connection to the potable water system would be prohibited.

For these reasons, use of recycled water for landscape irrigation at proposed action facilities would not pose a threat to public health.

3.7.2.2 No-Action Alternative

There would be no potential impacts to the public, construction workers, or the environment from exposure to hazardous materials under the No-Action Alternative because no construction would occur.

3.8 Land Use

3.8.1 Affected Environment

The action area is predominantly urban in character and consists primarily of retail, light commercial / industrial land uses. The proposed pipeline corridors would be completely in existing roadways adjacent to retail, light industrial and commercial uses. The sites served by the proposed action facilities are zoned as follows (Redwood City Community GIS):

- Phase II.B – Planned Community, Mixed Use, Residential HD, Municipal, Light Industrial Incubator, and Professional Office
- Phase II.C – Planned Community

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action

None of the proposed action facilities would be incompatible with current or planned land uses in or adjacent to the action area once they are installed and operational. This Project Action would expand the City's recycled water system thus increasing the City's locally controlled water supply, improving the City's water supply reliability, and reducing its demand on imported water from the Regional Water System. Implementation of the Project Action supports the planned development and is consistent with the City's General Plan.

The proposed pipeline corridors would follow existing streets to minimize disruption to the environment adjacent to these routes, and would not result in any long-term land use impacts. Construction-related land use impacts are described below.

Impact LU-1 – Temporary Disruption of Land Uses by Facilities Construction

Construction of the proposed action could result in short-term, construction-related disruption to land uses adjacent to the construction zone, including residences, hospitals, churches and school / recreation sites being serviced by proposed action facilities. These impacts could include increases in airborne dust, noise levels, and traffic congestion, as described in the Air Quality, Noise, and Traffic and Transportation sections of this EA, respectively. In addition, temporary staging areas for the storage of equipment, pipe, and other construction materials could result in temporary disruption of some land uses. These construction-related impacts would be short-term and would not affect current planned land uses within or in close proximity to the action area.

Implementation of Mitigation Measure LU-1 would ensure that all land owners are aware of potential temporary construction-related disruptions prior to implementation of the proposed action.

Mitigation Measure LU-1 – Notification of Temporary Disruption

Redwood City would provide advance notification to all land uses adjacent to construction zones.

3.8.2.2 No-Action Alternative

There would be no impacts to land uses within the action area under the No-Action Alternative because no construction-related temporary disruptions would occur.

3.9 Recreation

3.9.1 Affected Environment

Within Redwood City, there are approximately 26.7 acres of neighborhood parks, 94.7 acres of community parks and facilities, and 700 acres of open space (Redwood City General Plan 2010). Redwood City maintains several bicycle paths and routes, which are discussed in section 3.6 Transportation/Traffic. Additional, proposed bicycle routes and support facilities both within and in the general vicinity of the action area are identified in the Redwood City General Plan (2010). Other trails serving the area include the San Francisco Bay Trail (Bay Trail), Edgewood Trail, the Bair Island Trail, and a comprehensive network of urban and nature trails that link neighborhoods in the Redwood Shores master-planned community. The closest park is the Andrew Spinas Park, which is located near the far east end of the Phase II.B construction site, on Second St., between Broadway and Rd.

The proposed action would provide irrigation water to multiple users as provided in Table 2-2 including Potential New Customers, some of which would be used for recreation within the action area.

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action

The proposed action would not cause an increase in population or in the use of existing neighborhood or regional parks or recreational facilities, nor result in substantial physical deterioration to any existing recreational facilities. It would also not result in the construction or expansion of recreational facilities. Short-term construction-related impacts on recreational use and/or access are described below.

Impact REC-1 – Temporary Disruption of Recreational Access and Use

The proposed action may temporarily disturb access to limited portions of some of the recreational areas served by facilities associated with the proposed action, and/or the bikeways and trails that traverse the action area. These temporary disturbances would be limited in duration and would not result in the permanent displacement of recreational use or access at any location. Implementation of Mitigation Measure TRANS-1 (see Section 3.6, Transportation/ Traffic) would reduce temporary impacts to bicycle lanes within the action area. Implementation of Mitigation Measure LU-1 (see Section 3.8, Land Use) would ensure that affected land owners are aware of potential temporary construction-related disruptions prior to implementation of the proposed action.

3.9.2.2 No-Action Alternative
There would be no potential impacts to recreation facilities or recreational use under the No-Action Alternative because construction activities would not occur.

3.10 Visual Resources

3.10.1 Affected Environment
The action area is generally residential, commercial and industrial in character. Visual characteristics are typical of residential, commercial, and/or open space uses. Due to the generally flat terrain, views are limited in distance. The Broadway (Phase II.B) corridor is comprised primarily of low commercial structures with linear street landscaping and mature trees lining the commercial roadway south of Downtown. Similar to the Broadway corridor, the Marshall St. (Phase II.C) corridor is lined with mature trees.

No officially designated or any eligible state scenic highways traverse the plan area. The closest state scenic highway to the plan area is I-280, which is located just to the west of Redwood City.

3.10.2 Environmental Consequences

3.10.2.1 Proposed Action
Impact VIS-1 – Temporary Impacts to Visual Quality

Overall, the proposed action would not result in a long-term aesthetic impact. No new above-ground infrastructure, such as booster pump stations or water meters, would be constructed. Construction-related disturbance has the potential to temporarily alter short-range (10 to 20 feet) and medium range (more than 20 feet away) views of the construction area; however, those impacts would be short-term and unlikely to affect sensitive viewsheds or viewers within the action area. No mitigation is required.

3.10.2.2 No-Action Alternative
Under the No-Action Alternative, there would be no impacts on visual resources within the action area because no construction activities would occur.

3.11 Utilities and Public Services

3.11.1 Affected Environment

3.11.1.1 Fire Protection Services
The Redwood City Fire Department (Fire Department) is responsible for fire prevention and suppression, medical response, and property protection within the City's borders. In case of a large-scale emergency or area-wide disaster, the Fire Department is responsible for direct intervention and to be on the front lines to help maintain public safety and provide infrastructure repair, alongside the Redwood City Police Department, Redwood City Public Works Department, and the San Mateo County Office of Emergency Services. There are five fire stations in Redwood City. The closest station to the project sites are:

- Phase II.B – 1091 Second Avenue, approximately 0.5 block south of the intersection of Broadway Street and Second Avenue.
- Phase II.C – 755 Marshall Street, about 0.5-block west of the Phase II.C action area.

3.11.1.2 Police Services

The Redwood City Police Department (Police Department), headquartered at 1301 Maple Street, provides police protection service for the plan area. The Redwood City Police Headquarters is approximately 0.5 miles from the Phase II.C action area, and 1.5 miles from the far east end of the Phase II.B action area.

3.11.1.3 Energy

Pacific Gas & Electric (PG&E) provides natural gas and electricity service to the action area.

3.11.1.4 Wastewater and Sewage Treatment

Wastewater treatment for Redwood City is provided by the Silicon Valley Clean Water (formerly the South Bayside System Authority) treatment plant, located at the northeastern end of the Redwood Shores peninsula. After processing, the wastewater is released into the San Francisco Bay through a submarine diffuser located roughly 2 miles south of the San Mateo Bridge

3.11.1.5 Water Supply

Redwood City's potable municipal water supply is provided by the Hetch Hetchy regional water system operated by the San Francisco Public Utilities Commission (SFPUC). Potable water lines are generally located below ground in public rights of way and in easements.

The City augments its potable water supply with recycled water for nonpotable uses. Recycled water is produced by Silicon Valley Clean Water (SCVW; formerly South Bayside System authority) for the City and distributed by the City to its customers through the City-owned recycled water distribution system The facilities include water disinfection facilities, two 2-million-gallon storage reservoirs, and a pump station. The SVCW treatment plant has an operating capacity of 29 million gallons per day (mgd) average dry weather flow (ADWF). The plant is permitted by the RWQCB to discharge 29 mgd ADWF into San Francisco Bay. The current permitted peak wet weather capacity of the SVCW facility is 71 mgd.

Local groundwater is not used by the City as a source of municipal supply, but there are a limited number of private well owners who use groundwater primarily for irrigation purposes. There is no groundwater withdrawal associated with the project nor would the project affect groundwater levels.

3.11.1.6 Solid Waste

As of April 2010, Allied Waste Industries Incorporated provides solid waste collection, recycling, transportation, and disposal services to plan area customers under a franchise agreement. Collected waste is transported to the South Bayside Transfer Station (SBTS), located in the City of San Carlos.

3.11.2 Environmental Consequences

3.11.2.1 Proposed Action

Construction of the proposed action has the potential to result in temporary disruptions of access to various public services and utilities, and may require the relocation of existing utility infrastructure.

Impact UPS-1 – Interruption of Services and Utilities

Municipal and utility services could be delayed or interrupted by construction activities associated with the proposed action. This could include re-routing of emergency services, difficulty in reaching service locations, and interruption of gas, electric, water, and other utility services provided to properties along the pipeline alignments. Prior to construction, Redwood City would coordinate utility providers to determine the most appropriate way to avoid service delays and utility interruptions. No mitigation is required.

Impact UPS-2 – Potential Relocation of Infrastructure

Construction within easements and right-of-ways (ROWs) that are used by other agencies or utilities may create situations where pipes, cables, and related appurtenances may need to be temporarily or permanently relocated. Redwood City would coordinate with and seek approval from necessary utility providers and/or other agencies if it is determined during final design that any utility infrastructure would need to be relocated to implement the proposed action. No mitigation is required.

Impact UPS-3 –Energy Use

Construction of the proposed action would require the use of energy resources, mostly derived from non-renewable sources. However, it is anticipated that operation related energy use would be reduced as a result of the proposed action because recycled water, which would require less pumping and associated energy cost, would be used for irrigation purposes. No mitigation is required.

3.11.2.2 No-Action Alternative

The purposes of the proposed action are to expand utilization of available recycled water to customers that are currently using potable water for irrigation, and to reduce energy consumption associated with the delivery of irrigation water to proposed action customer sites. Under the No-Action Alternative, Redwood City would continue to use potable water for irrigation purposes at the proposed action customer sites (Table 2-2). This continued use of potable water from the SFPUC would adversely impact already limited water supplies in the Bay Area. In addition, energy usage would be higher under the No-Action Alternative because, rather than utilizing recycled water for irrigation purposes, potable water would be pumped at a higher energy cost to its San Francisco Bay disposal site.

3.12 Socioeconomics and Environmental Justice

3.12.1 Affected Environment

Information on the population in the State of California, San Mateo County, and Redwood City, including ethnic composition and income levels, is based on data provided by the American

Community Survey (ACS), a nationwide survey by the U.S. Census Bureau to provide communities with updated trend information between official Census data collection periods. The data presented in this section is based on information collected between 2010 and 2014.

3.12.1.1 Population

The estimated population of Redwood City in 2014 was 79,736 which, at that time, was about 3 percent of the population of San Mateo County and about 1 percent of the total population of the State of California (U.S. Census Bureau 2014a). According to the U.S. Census Bureau, between 2010 and 2014, the population of Redwood City grew by 13.2 percent, which was substantially higher than the state-wide population growth rate of 2.9 percent (U.S. Census Bureau 2014b).

Environmental Justice Populations

Title VI of the Civil Rights Act and Executive Order 12898, Environmental Justice, requires Federal agencies to identify minority and low income populations in areas where the effects of a proposed action on human health and the environment would be disproportionately high or adverse. The following sections describe the ethnic composition and income characteristics of the Redwood City, which encompasses the action area, as well as San Mateo County and the State of California.

Ethnic Composition

Table 3-7 summarizes population composition by ethnic group for the State, San Mateo County, and Redwood City. About 42.5 percent of the population in Redwood City identified themselves as White in the 2010-2014 ACS, which was larger than the percentage of persons in San Mateo County (41.2 percent) or the State (39.2 percent). The populations of Black and Asian persons in the City were lower than in the County and State; while the populations of Hispanic and Latino populations were higher (U.S. Census Bureau 2014).

Table 3-7 Population Compositions by Ethnic Group

Ethnic Group	Redwood City (Percent)	San Mateo County (Percent)	State or California (Percent)
White	42.5	41.2	39.2
Hispanic or Latino	40.5	25.4	38.2
Black	1.9	2.5	5.7
Asian	11.6	25.7	13.3
All Other Races[a]	3.6	5.3	3.7

[a] Includes persons that identified themselves in the census as American Indian and Alaskan Native; Native Hawaiian and Other Pacific Island; two or more races; or “some other race”.

Source: U.S. Census Bureau 2014a.

Income

Table 3-8 summarizes the median household income and number of households in poverty in San Mateo County and the State in 2013, as estimated by the Small Area Income and Poverty Estimates program of the U.S. Census Bureau (U.S. Census Bureau 2014). Poverty status is

determined by comparing an income threshold to specific characteristics of a given family (i.e., number of people, number of related children under 18, whether or not the primary householder is over age 65). If a family's income is below that threshold, the family is considered to be in poverty.

Table 3-8 Median Household Income and Population in Poverty in 2013

Area	Median Household Income (Dollars)	Population in Poverty	
		Individuals	Percent
Redwood City	81,955	4,385	8.6
San Mateo County	91,421	56,228	7.6
State of California	61,094	6,242,975	16.4

Note: Small Area Income and Poverty Estimates are model based estimates. The limitations of the model estimates are described in detail at http://www.census.gov/did/www/saipe/about/index.html.

Source: U.S. Census Bureau 2014b.

The median household income in San Mateo County ($81,955) in 2014 was higher than that for the State ($70,187). The percentage of individuals in poverty in Redwood City (8.6 percent) was higher than the percentage in the County (7.6 percent) and was lower than the percentage in the State (16.4 percent) (U.S. Census Bureau 2014).

The 2010-2014 ACS also provided an estimate of number of families in poverty. The ACS found that 5.5 percent of the population in Redwood City met the definition of a family in poverty, compared to 4.7 percent in the County and 12.3 percent in the State (U.S. Census Bureau 2014).

3.12.1.2 Employment

Of the nine counties that comprise the Bay Area (i.e., Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties), San Mateo County is the fifth largest, with a population in 2014 of 739,837 (U.S. Census Bureau 2014). The Bay Area is considered one of the busiest urban centers in California and employment growth for San Mateo County is driven in large part by the need to provide services to an increasing Bay Area population.

The California Employment and Development Department estimated the total labor force in San Mateo County in March of 2016 to be 446,100, reflecting an unemployment rate of 3.0 percent. This unemployment rate has decreased from its recent high of 8.8 percent recorded in March 2010 and is lower than the State average unemployment rate of 5.4 percent (EDD 2016).

3.12.2 Environmental Consequences

3.12.2.1 Proposed Action

Population trends in the action area would not be affected by implementation of the proposed action because the proposed action is not anticipated to create any additional long-term employment opportunities. It is also unlikely that the proposed action would have a different or disproportionate effect on minority or low income populations. None of the potential effects identified in this EA (e.g., construction-related air quality, noise, and traffic impacts) would be realized exclusively by a minority or low-income population, or in a way that would result in a

disproportionate effect on a minority or low income community, either as a result of the nature or location of the specific impact.

3.12.2.2 No-Action Alternative

The No-Action Alternative would not impact low income or minority populations, or affect population trends in the action area because it would not create any new employment opportunities, or require construction activities with a potential to affect low income or minority populations.

3.13 Cultural Resources

3.13.1 Affected Environment

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Title 54 U.S.C. 300101 et seq., formerly and commonly known as the National Historic Preservation Act (NHPA) is the primary legislation for Federal historic preservation. Section 106 of the NHPA (54 U.S.C. 306108) requires Federal agencies to take into consideration the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment. Historic properties are those cultural resources that are listed in or are eligible for inclusion in the National Register of Historic Places (National Register). The Section 106 regulations at 36 CFR 800 outline the process the Federal agency takes to identify historic properties within the area of potential effects (APE), and to assess the effects the proposed undertaking will have on those historic properties. The Section 106 process involves consultations with the State Historic Preservation Officer, Indian tribes, and other identified consulting and interested parties. The APD for the current undertaking consists of approximately 12.6 acres and includes 11,932 lineal feet of pipeline within existing paved city streets. In an effort to identify historic properties in the APE, Origer (Franco and Origer, 2016) conducted a records search of the California Historical Records System (CHRIS) and a pedestrian survey of the APE in March 2016. No historic properties were identified within the APE.

Reclamation sent letterd to the Indian Canyon Mutsun Band of Costanoan Indians, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, and Ohlone Indian Tribe, on April 1, 2016, to invite their participation in the Section 106 process and request their assistance in the identification of sites of religious and cultural significance or historic properties that may be affected by the proposed undertaking, pursuant to 36 CFR § 800.4(a)(4). To date, Reclamation has not received a response from these tribes.

Reclamation applied the criteria of adverse effect [36 CFR § 800.5(a)] for the Proposed Action and determined that it would result in no adverse effect to historic properties. Utilizing these identification efforts, Reclamation entered into consultation with the California State Historic Preservation Officer (SHPO) in July 2017, seeking their concurrence on a finding of “no historic properties affected pursuant to 36 CFR § 800.4(d)(1).” Reclamation received concurrence from SHPO on 22 August 2017 and the Section 106 process is complete. A copy of the response letter detailing SHPO’s findings is included in Appendix B.

3.13.2 Environmental Consequences

3.13.2.1 Proposed Action

The proposed action would be constructed primarily within existing roadways in an urban, developed environment, in areas where soils have generally been previously disturbed, and which do not coincide with locations of known prehistoric, archaeological, and/or historic sites, including Native American sites. However, construction activities have the potential to impact cultural resources not currently known to the action area, as described below.

Impact CUL-1 –Discovery of Unknown Human Remains

Ground disturbing activities associated with the proposed action may uncover previously unknown human remains. These resources are protected under a variety of state and local laws, including but not limited to the California Public Resources Code (PRC), and California Health and Safety Code (HSC). Implementation of Mitigation Measure CUL-1 would minimize potential impacts to human remains should they be discovered during construction of the proposed action.

Mitigation Measure CUL-1 – Protect Human Remains

The following procedures, as outlined in PRC Section 5097.98 and HSC Section 7050.5, shall be implemented by Redwood City in the event of an accidental discovery or recognition of human remains within the action area.

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or within the action area, in a location not subject to further subsurface disturbance:
    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
    - The descendent identified fails to make a recommendation; or
    - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

    In addition, upon discovery of unanticipated human remains Reclamation Title XVI Manager from the Mid-Pacific Regional Office (2800 Cottage Way, Sacramento, CA) and Reclamation's Regional Archaeologist from the Mid-Pacific Regional Office (2800

Cottage Way, Sacramento, CA) shall be notified of the discovery. If human remains are associated with an archaeological site, Reclamation shall be notified in a timely manner so that the federal agency can implement 36 CFR Part 800.13.

Impact CUL-2 – Discovery of Previously Unknown Archaeological Resources

As mandated by Section 106 of the NHPA, Federal agencies must take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate adverse effects on such properties (36 CFR 800.1[a]). Although no cultural resources were discovered during the field survey of the APE (Tom Origer & Associates 2016), there is a possibility for previously unknown, buried resources to be uncovered during ground disturbing activities associated with construction of the proposed action. Implementation of Mitigation Measure CUL-2 would ensure protection of previously unknown and sensitive archaeological resources.

Mitigation Measure CUL-2 Post Review Discovery Process for Cultural Resources

Prior to beginning ground disturbing work for the project construction personnel would be required to receive training regarding the types of archaeological resources that could be present within the project area. In the event that buried cultural resources are discovered during construction, the construction contractor shall immediately stop all operations in the vicinity (ca. 100 feet) of the find until the Reclamation Title XVI Manager from the Mid-Pacific Regional Office (2800 Cottage Way, Sacramento, CA) and Reclamation's Regional Archaeologist from the Mid-Pacific Regional Office (2800 Cottage Way, Sacramento, CA) are notified and given the opportunity to determine if the resource requires further study and what steps are necessary to comply with 36 CFR 800.13 (b)(3).

3.13.2.2 No-Action Alternative

The No-Action Alternative would have no effect on cultural resources because no ground-disturbing activities would occur.

3.14 Indian Trust Assets

3.14.1 Affected Environment

Indian Trust Assets (ITA) are legal interests in property held in trust for Indian tribes or individuals by the United States. It is Reclamation's policy to protect ITAs from adverse impacts resulting from its programs or activities. There are no ITAs located within the action area. The nearest ITA is Lytton Rancheria, which is located approximately 32.89 miles north from the action area.

3.14.2 Environmental Consequences

3.14.2.1 Proposed Action

The proposed action would have no effect on ITAs because no construction activities would occur within designated ITAs (Appendix C).

3.14.2.2 No-Action Alternative

The No-Action Alternative would have no effect on ITAs because no construction activities would occur within designated ITAs.

3.15 Cumulative Effects

The Council on Environmental Quality's NEPA regulations (40 CFR 1508.25) requires a reasonable analysis of the cumulative impacts of a proposed action. Cumulative impacts refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Given that all of the potential adverse impacts identified in this EA would be associated with construction of the proposed action (e.g., construction-related air quality and noise impacts), the cumulative effects analysis is focused on other projects that (1) would be constructed at approximately the same time as the proposed action (i.e., in 2018); and (2) would occur in the general vicinity of the action area, or the area generally bounded by US 101 on the north, Fifth Avenue on the east, Bay Road/Broadway Street on the south, and El Camino Real/SR 82 on the west. Other projects that meet these criteria and that have the potential to affect one or more of the resource areas impacted by the proposed action are summarized below.

3.15.1 Analysis of Cumulative Effects

The following resource areas are not discussed in this section because it was determined the proposed action would have no adverse effect on them; therefore, the proposed action has no potential to contribute to a cumulative impact.

- Geology, Soils, and Seismicity
- Visual Resources
- Socioeconomics and Environmental Justice
- Indian Trust Assets

The following provides a discussion of potential cumulative effects of the proposed action for the remaining resource areas considered in this EA. Based on the analysis below, the proposed action, when considered in combination with the effects of the other projects listed in Table 3-9, would not contribute to cumulatively considerable effects.

3.15.1.1 Biological Resources

Continued and persistent development pressures within the region have resulted in cumulative effects to natural communities and special-status species. Construction of the proposed action would have the potential to contribute to those cumulative impacts by temporarily disturbing non-native habitats during ground-disturbing activities. Implementation of Mitigation Measure BIO-1 would reduce these potential construction-related effects and ensure that the proposed action would not result in a cumulative impact. Proposed extensions of the existing recycled water system under the proposed action would not facilitate increased development in the region, or subsequently result in additional growth-related cumulative impacts on biological resources.

3.15.1.2 Surface Water and Drainage

Construction of the proposed action concurrent with other projects in the general vicinity of the action area could result in temporary impacts to water quality. Construction activities could result in increased erosion and subsequent sedimentation, which, in turn, could affect surface water quality. Additionally, surface water quality could be affected by construction activities that result in the release of fuels or other hazardous materials to stream channels or storm drains.

Table 3-9 Projects Considered in the Cumulative Effects Analysis

Name of Project	Location	Brief Description	Construction Start	Construction Complete
Stanford in Redwood City	425 Broadway	Construction of four office buildings totaling 580,000 square feet (sf), a 6-level parking structure, other facilities and 2.4 acres of publicly-accessible open space.	Late 2016	Mid-2019
Stanford Medical Clinics	450 Broadway	Construction of a new two-level 103,000 sf. parking garage along Highway 101 with 362 parking spaces.	Early 2017	Mid-2018
851 Main St	851 Main St	Construction of a 4-story mixed-use building and two levels of underground parking.	Unknown	Unknown
2075 Broadway	2075 Broadway	Demolition of an existing 25,560 sf commercial building and construction of a new 4-story, 93,515 sf mixed-use building.	Q3 2016	Late 2017
815 Hamilton Street	815 Hamilton Street	Demolition of an existing surface parking lot at 815 Hamilton St. and an existing 1-story building at 840 Middlefield Rd. Construction of a 5-story, 95-foot-tall mixed-use office and retail building.	Q4 2015	Mid-2018
Starbucks	801 Hamilton	An application for a Downtown Planned Community Permit and Sign Permit to modify a designated historic resource at 801 Hamilton Street to operate a restaurant.	Q2 2016	Q4 2016
601 Marshall St	601 Marshall St	Replacement of 12,821 sf of existing, older commercial buildings and private surface parking with a new 8-story, 105-foot tall, 124,220 sf office building and 255 on-site share public parking spaces.	Q2 2016	Late 2017
849 Veterans Boulevard	849 Veterans Boulevard	Application to construct a new six-story, residential project located with 90 units and two floors of parking. The parking garage contains 142 parking stalls and frontages on Veterans Boulevard and Main Street.	Q3 2016	Early 2018
603 Jefferson Boulevard	603 Jefferson Boulevard	Eight-story multifamily residential building featuring 91 condominium units with three levels of underground parking and one level of above ground parking.	Q4 2016	Mid-2018
Broadway Plaza	1401 Broadway	Replacement of an existing retail strip mall with a mixed-use project consisting of approx. 400 multi-family residential units, approx. 420,000 sf of office space within three 5-story buildings approx. 19,000 sf of retail space including a CVS pharmacy, public and private open space, and shared underground parking for the residential and office uses.	Unknown (project is in conceptual design phase)	Unknown

Source: Redwood City Community GIS 2016.

Implementation of Mitigation Measures HYD-1 would minimize the potential for construction-related water quality impacts from the proposed action, and would ensure that the proposed action's contribution to water quality impacts would not be cumulatively considerable.

3.15.1.3 Air Quality

Concurrent construction of the proposed action with the other projects listed in Table 3-9 would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter, equipment exhaust emissions, and GHG. Implementation of Mitigation Measures AQ-1 and AQ-2 would minimize the potential effects of construction-related emissions. As such, the proposed action's contribution to air quality impacts would not significantly contribute to a cumulative impact within the Air Basin.

3.15.1.4 Noise

Concurrent construction of the proposed action with the other projects listed in 3-9 could result in temporary, construction-related noise impacts to sensitive noise receptors in the general vicinity of the action area. Implementation of Mitigation Measure NOISE-1 would minimize noise impacts and ensure that the proposed action would not contribute to a cumulatively considerable noise impact.

3.15.1.5 Transportation and Traffic

Construction of the proposed action concurrent with the projects listed in Table 3-9 could temporarily increase traffic volumes (due to increased construction worker and vehicle trips); result in short-term delays to vehicle traffic in the action area; affect access to local businesses and residences; and cause potential traffic safety hazards for vehicles and bicycle traffic. Implementation of Mitigation Measures TRANS-1 and TRANS-2 would provide for consistent traffic management measures and appropriate timing and routing of traffic flows through construction zones. With these measures in place, the proposed action would not contribute to a considerable cumulative impact on transportation or traffic patterns in the action area.

3.15.1.6 Hazardous Materials

Similar to the proposed action, construction of other projects in the general vicinity of the action area may result in the inadvertent exposure of construction workers or the public to unknown hazardous materials. Implementation of the site safety plan associated with Mitigation Measure HAZMAT-1 would minimize the potential for adverse impacts from such an exposure during construction of the proposed action. As such, the proposed action's contribution to impacts associated with exposure to hazardous materials would not contribute to a cumulative impact.

3.15.1.7 Land Use

As described in Section 3.8, Land Use, the proposed action has the potential to result in short-term construction-related disruption to land uses adjacent to the construction zone, which, when considered in combination with the other projects listed in Table 3-9, may result in a cumulative effect. Implementation of Mitigation Measure LU-1 would ensure that land uses adjacent to the construction zone have an opportunity to provide input into the construction process, and would minimize potential short term impacts. With this mitigation measure in place, and in consideration of the temporary nature of the proposed action's impacts on land use, the proposed action would not contribute to a considerable cumulative impact to land uses in the action area.

3.15.1.8 Recreation

Potential impacts to recreational facilities associated with the proposed action could include temporary disruption of the recreational facilities (i.e., sidewalks, schools and parks) that would be served by the proposed action facilities, as well as bicycle lanes that traverse the action area. Construction of the proposed action concurrent with the projects listed in Table 3-9 could further impact access to bicycle lanes and/or result in potential safety hazards for bicycle traffic. Implementation of Mitigation Measure TRANS-1 would provide for consistent traffic management measures, including safe and continued access to bike lanes in the action area. With these measures in place, the proposed action would not contribute to a considerable cumulative impact on recreation resources.

3.15.1.9 Utilities and Public Services

Construction of the proposed action could temporarily interrupt municipal and utility services within the action area, either during construction, or as a result of relocation of utility infrastructure to install proposed action facilities. Similar utility impacts could be realized during construction of any of the projects listed in Table 3-9. Prior to construction of the proposed action, Redwood City would coordinate with utility providers to determine the most appropriate way to avoid service delays and utility interruptions. Other project proponents would be required to do the same. No cumulative impact on utilities and public services is anticipated.

3.15.1.10 Cultural Resources

As described in Section 3.13, Cultural Resources, there are no known cultural resources in the action area; however, there is the potential to encounter previously unidentified resources during construction activities. Similarly, there is the potential to encounter cultural resources during construction of the other projects listed in Table 3-9. Implementation of Mitigation Measures CUL-1 and CUL-2 would ensure that impacts to previously unknown, sensitive cultural resources within the action area would be minimized, and that a potentially cumulative considerable effect on cultural resources would be avoided.

Chapter 4. Consultation and Coordination with the Public and Other Agencies

4.1 Public Review Period

Reclamation is making this EA available to the public for a two-week comment period to provide the public with an opportunity to comment on this EA.

4.2 Agencies and Persons Consulted

Redwood City and the State Historic Preservation Officer were consulted during preparation of the EA.

4.3 State Historic Preservation Officer

The purpose of the NHPA is to protect, preserve, rehabilitate, or restore significant historical, archaeological, and cultural resources. Based on the results of the cultural inventory report prepared in support of the proposed action (Tom Origer & Associates 2016), and the unlikelihood that the proposed action would disturb intact soils or features, the proposed action would have no effect on historic properties, pursuant to 36 CFR Part 800.4 (d)(1).

On July 21, 2017, Reclamation entered into consultation with the State Historic Preservation Officer (SHPO) under Title 54 USC Section 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800, seeking concurrence with the APE delineation the identification efforts, as well as notifying them regarding a finding of "no historic properties affected pursuant to 36 CFR § 800.4(d)(1)." SHPO responded on August 18, 2017 with no objections to Reclamations' findings and determination.

4.3.1 Native American Tribes

A request was sent to the NAHC on December 30, 2015 to determine whether any sacred sites listed on its Sacred Lands File are within the APE for the proposed action. A response from the NAHC was received January 6, 2016 stating that a search of it Sacred Lands File failed to indicate the presence of Native American cultural resources in the immediate action area. But that is the potential for resources within the project vicinity. Included with the response was a list of eight Native American representatives who may have further knowledge of Native America resources within or near the APE.

On January 8, 2016, letters were sent to each of the listed tribal contacts discussing the proposed action. No response has been received to date from the Native American representatives contacted about the proposed action.

Pursuant to 36 CFR Section 800.3(f)(2) Reclamation would identify Indian tribes likely to have knowledge of historic properties or attach religious and cultural significance to historic properties within the APE. Reclamation would initiate consultation with the tribes requesting their participation in the 106 process and request their assistance in identifying sites of religious and cultural significance of historic properties pursuant to 36 CFR Section 800.4(a)(4).

4.4 Related Actions by Other Agencies

The following permits, approvals, and actions would be required for the proposed action to be implemented. Redwood City would be responsible for obtaining each of these permits prior to construction of the proposed action.

- Construction General Permit, California State Water Resources Control Board (SWRCB) – A National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) is required any time construction-related activities would disturb 1 or more acres, and may result in a discharge to a surface water or conveyance system that leads directly to a surface water of the State. The Construction General Permit is administered by the SWRCB.

Chapter 5. References Cited

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Appendix A: Summary of Impacts and Mitigation Measures

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Biological Resources		
Impact BIO-1 – Disturbance to Nesting Birds During Construction. Construction noise has the potential to disturb nesting birds in and adjacent to the action area. In addition, nesting bird habitat could be temporarily disturbed by construction activities.	No impact.	Mitigation Measure BIO-1 – Conduct Preconstruction Nesting Bird Surveys, Establish No-disturbance Disturbance Buffers, and Revegetate Disturbed Areas. The following measures would be implemented by Redwood City or their contractors prior to, during, and after construction of the proposed action. 1. If construction of the proposed action begins during the breeding season (February 1st to August 31st), preconstruction nesting bird surveys would be conducted within suitable habitat by a qualified biologist no more than two weeks prior to equipment or material staging, pruning/grubbing, or surface-disturbing activities. If no active nests are found within the action area, no further mitigation is necessary. 2. If active nests (i.e. nests in the egg laying, incubating, nestling or fledgling stages) are found within 300 feet of the proposed action footprint for raptor (birds of prey) species or 100 feet of the proposed action footprint for all other bird species, no-disturbance buffers should be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the nesting pair's tolerance to disturbance and the type/duration of potential disturbance. Work within non-disturbance buffers should be rescheduled to occur after the young have fledged as determined by a qualified biologist. Buffer size should be determined in cooperation with CDFW and USFWS. 3. If rescheduling of work is infeasible and no-disturbance buffers cannot be maintained, a qualified biologist should be on-site to monitor active nests for signs of disturbance. If it is determined that proposed action related activities are resulting in nest disturbance, work should cease immediately, and CDFW and USFWS should be contacted for further guidance. 4. Tree removal, pruning, grubbing, grading, or other construction activities conducted outside of the breeding season (i.e. September 1st to January 29th) do not require preconstruction surveys. 5. All areas along the proposed alignment disturbed by construction shall be reseeded as a soon as possible after construction (but before fall rains) with a grass and forb mixture to reduce erosion hazards. All reseeding should be completed with a native grass and forb mixture. If landscaped vegetation is removed along existing roads or residences, it shall be replaced in kind at a 1:1 ratio with appropriate landscaping species.

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Surface Water and Drainage		
Impact HYD-1 – Construction-Related Water Quality Impacts. Construction of the proposed action could leave soils exposed to rain or surface water runoff that may carry soil contaminants (e.g., nutrients, metals, hydrocarbons, or other pollutants) into waterways adjacent to the action area, degrading water quality and potentially resulting in a violation of water quality standards.	No impact.	Mitigation Measure HYD -1 – Implement Best Management Practices. To minimize construction-related water quality impacts, Redwood City and their contractors would implement the following BMPs: • All site managers shall be properly trained in the use of recycled water for landscape irrigation. Training shall include instruction on the appropriate quantity of irrigation water to apply to ensure adequate leaching of accumulated salts from the root zone during times when precipitation is below average. • All customer sites shall be maintained to allow adequate surface drainage without allowing excess quantities of recycled water to drain offsite. In accordance with the Construction General Permit administered by the SWRCB. Examples of construction BMPs include the following and would be documented in an approved SWPPP: • Place temporary devices, such as straw, biodegradable fiber, or sandbags to intercept sheet flow runoff and settle sediment through the barriers. • Implement dust control measures to keep the amount of airborne dust particles to a minimum and to reduce erosion and airborne pollutants during the time between site disturbance and paving or revegetation. • Implement measures to prevent construction equipment or vehicles from tracking sediments out of a work site onto paved roadways. • Conduct all maintenance activities in a designated area designed to contain spills and prevent run-on or run-off.
Geology, Soils, and Seismicity		
Impact GEO-1 – Earthquake Damage to Facilities. Facilities associated with the proposed action could be affected by moderate to strong ground shaking from major earthquakes during the life of the proposed action. Due to the close proximity of the Calaveras Fault, a major earthquake along this fault (or other currently inactive faults in general vicinity) could produce severe ground shaking at sites within the action area.	There would be no potential impacts on geology or soils under the No-Action Alternative because no new infrastructure would be constructed. Similar to the proposed action, existing infrastructure delivering potable to water to customer sites would also be subject to ground shaking should it occur.	Mitigation Measure GEO-1 – Design Proposed Action to Meet Seismic Requirements. Redwood City would ensure that all facilities associated with the proposed action conform to the most recent editions of the Uniform Building Code, the California Building Code, and the Seismic Safety element of the City of Dublin's General Plan and grading ordinance.

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Air Quality		
Impact AQ-1 – Construction-Generated Air Pollutants in Diesel-Powered Equipment Exhaust. Construction of proposed action would generate temporary emissions of criteria pollutants from diesel-powered equipment exhaust, including ROG, NO_x, PM_{10}, and $PM_{2.5}$.	No construction-related air pollutant emissions would be associated with the No-Action Alternative.	Mitigation Measure AQ-1 – Implement Air Quality Best Management Practices in Accordance with BAAQMD Guidance. The following air quality BMPs would be implemented by the construction contractor in accordance with BAAQMD guidance: • 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 tracked 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 vehicles 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. • A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
Impact AQ-2 – Construction-Generated Fugitive Dust. Project construction would generate fugitive dust, which consists mostly of larger diameter particulates, but also includes a smaller component of PM_{10} and $PM_{2.5}$, during site preparation, trenching, and backfill.		Implementation of Mitigation Measures AQ-1 would reduce the potential for adverse localized dust impacts during construction.
Impact AQ-3 – Construction-Related Greenhouse Gas Generation. Construction of the proposed action would contribute to climate change impacts through its emission of GHG from construction equipment, delivery/haul trucks and vehicles. Project construction would emit not more than 81.7 metric tons of GHG during Phase II.C construction and 187.7 metric tons of GHG during Phase II.A and Phase II.B.		No mitigation required.

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Impact AQ-4 – Operational Greenhouse Gas Emission Reductions. It is anticipated that operation related air pollutant and GHG emissions would be reduced as a result of the proposed action. This reduction would be attributable to the reduced distance both potable and recycled water would need to be pumped to meet ongoing demand. Based on CalEEMod's water supply electricity use factors (in kWhr of electricity used per million gallons of water) and the Pacific Gas & Electric GHG intensity factor (in metric tons of CO2e emitted per kWhr of electricity generated), the local use of increased amounts of recycled water would reduce GHG emissions by 0.6 metric ton/day (237 metric tons/year) for each additional million gallons of recycled water per day provided by the expanded pipeline system.	An additional 237 metric tons of GHG would be emitted per year per million gallons per day of potable water for irrigation purposes under the No-Action Alternative.	Beneficial Impact. No mitigation required.
Impact AQ-5 – General Conformity. Total air pollutant emissions from construction of the proposed action would be far below the annual de minimis thresholds (i.e., 50 tons for ROG/VOC, and 100 tons for NO_x and CO). Therefore, no further conformity analysis with respect to the Clean Air Act is required.	No Impact.	No mitigation required.
Noise		
Impact NOISE-1 – Construction Noise. The proposed action would only produce noise during the construction phase and would not expose sensitive receptors to permanent, excessive noise levels. In addition, because construction activities would occur in a linear fashion, any one receptor would only be exposed to construction-generated noise for a short duration prior to activities continuing down the pipeline. Implementation of Mitigation Measure NOISE-1 would reduce construction-related noise impacts in and around sensitive noise receptors.	No impact.	Mitigation Measure NOISE-1 – Limit Timing and Equipment Used During Construction. The construction contractor would adhere to all local ordinances regulating hours of construction to minimize the potential for sleep disturbance and annoyance to sensitive noise receptors in the action area. As noted above, Redwood City typically requires that construction be limited to daytime hours (between 7:00 a.m. and 8:00 p.m.). If roadway closure is required, construction would only take place at night in non-residential areas. To minimize construction noise generation, all equipment operated at the project site shall be equipped with manufacturer's standard noise control devices (i.e. mufflers, engine enclosures, etc.). Vibration/sonic-type pile drivers, rather than impact-type drivers, should be used with acoustically-treated engine enclosures and mufflers, wherever feasible. All construction equipment should be inspected by the

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
		contractor at periodic intervals to ensure proper maintenance and hence, lower noise levels. Wherever feasible, pipeline construction activities adjacent to any schools would be coordinated so that all construction, or at least the noisier phases of construction occur when schools are not in session (e.g., during school vacations). At a minimum, project scheduling should be coordinated with schools that have any classrooms within 50 feet of proposed construction activities. Alternatively, it may be possible for schools to temporarily relocate classes held in affected buildings to other buildings on campus. Pipeline construction activities adjacent to public uses other than schools (libraries or community centers) should be coordinated with schedules of affected uses. Off-site pump stations shall be enclosed within acoustically-treated structures to minimize pump station operational noise.
Impact NOISE-2 – Operational Noise. There would no source of noise associated with project pipelines. Pipelines are proposed to be underground and pressurized. No mitigation is required.	No impact.	No Mitigation Required.
Impact NOISE-3 – Airport Noise. The Redwood Shores and Greater Bayfront areas are within proximity of the flight paths of the San Francisco International Airport, and is also overflown by airport approaching and departing San Carlos Airport. Therefore, for brief periods of time, the noise of large and small aircraft is noticeable by persons living and working in those areas. Aircraft noise is not expected to effect construction workers who would install the recycled water facilities, and no mitigation is discussed.	No impact.	No Mitigation Required.
Transportation/Traffic		
Impact TRANS-1 – Construction-Related Traffic/Circulation Impacts. The proposed action would result in construction activities within existing roadways, thereby temporarily reducing the capacity of those roadway segments during construction. Construction in existing roadways may also result in temporary closure of bike lanes and disruption of public transit services. Redwood City would develop	No Impact.	Mitigation Measure TRANS-1 – Prepare Traffic Management Plan. Redwood City or its contractor shall prepare a traffic management plan for review and approval by Redwood City. The plan would provide a detailed approach for detours and to control traffic through the construction zone. The TMP would conform to Caltrans and City standards, and be filed with the City (and Caltrans, if necessary) before construction begins. The TMP may include the following items, depending on the specific characteristics of each construction zone:

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
a traffic management plan that closely adheres to Redwood City's guidelines, which generally permit construction on roadways to occur between 7:00 am and 8:00 pm. If roadway closures are required, construction would only take place at night in non-residential areas, with a detour route clearly marked. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes. Implementation of Mitigation Measures TRANS-1 and TRANS-3 would minimize temporary, construction-related impacts on traffic and transportation resources.		1) The number of travel lanes during off peak hours would not be reduced below what is required to meet expected traffic volumes at a construction site. Mid-block construction sites can have lane closures that exceed these time limits where adequate capacity exists, except that a prohibition on night construction exists in residential areas. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes. 2) If roadway closures are required, construction would only take place at night in non-residential areas, with a detour route clearly marked. During all other times, pipeline construction trenches would be plated over to permit the use of all travel lanes. 3) Emergency response service providers would be notified at least one week in advance of planned roadway closures, and provided a copy of the detour plans filed with the City. These providers include police and fire departments, and ambulance companies. 4) Local businesses/offices and residents would be notified at least one week in advance prior to planned street closures with the detour plan noticed in the local newspaper, and posted along the street closure route. 5) The construction contractor would keep access to intersecting streets open at all times. 6) If a required lane closure creates a single lane of traffic during construction, the remaining lane would be a 12-foot lane, or otherwise conform to standards described in A Policy on Geometric Design for Streets and Highways, published by the American Association of State Highway and Transportation Officials (AASHTO). Two flaggers would be stationed at both ends of the construction zone to safely direct two-way traffic over this temporary one-lane street. 7) Construction activities would not block access to emergency service provider locations such as police stations, fire stations, or ambulance companies. 8) Construction activities would not totally block business/office/residential parking lots and access points. Access to these facilities would be kept open. 9) Along streets in which parking would be temporarily lost, construction contractor would be required to post impacted streets one week prior to construction, notifying motorists that parking would be removed during the construction period and the duration of the construction period.10) The traffic management plan shall address bike and vehicle travel through construction zones and the use of flaggers and off-peak construction hours. Cones and/or other similar temporary traffic flow control devices would be used where necessary to establish bike and/or vehicle lanes through construction zones to protect bicyclists from construction activities and vehicle traffic, and to provide for adequate vehicle movement.
Impact TRANS-2 – Construction Trip Generation. Daily pipeline construction site trip generation	No Impact.	Mitigation Measure TRANS-2 – Construction Trip Generation: Even if two construction zones were operated simultaneously, there would be a low number

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
estimates include construction worker, inspector, and pipeline material supply truck trips. It is estimated that approximately 10 workers may arrive at the site each day, generating 20 vehicle trips per day, with 10 trips occurring during the a.m. peak hour and 10 trips during the p.m. peak hour. In addition, it is estimates that one equipment supply truck may deliver materials to the site each day, generating two truck trips per day, one in the a.m. peak hour and one in the p.m. peak hour. It is also estimate that one inspector would visit the site each day, arriving and departing outside the traffic peak hours. Pipeline construction equipment, which includes a backhoe, boom truck with crane and compactor, haul truck and paver, would remain parked at the site, so trip generation do not include trips for equipment. Therefore, each pipeline construction site is expected to generate approximately 24 vehicle trips per day, with about half the trips in the a.m. peak hours, and half in the p.m. peak hours.		of construction-related vehicle trips, and no mitigation is discussed.
Impact TRANS-3 – Bus Transit Service. The project area is services by multiple transit services. Some transit routes run along proposed pipeline routes. Bus stops may occasionally be unavailable during construction activity, and coordination with transit providers would be required if temporary detours and/or stop relocations are required.	No Impact.	Mitigation Measure TRANS-3 – Bus Transit Service: Redwood City shall coordinate with transit providers in Redwood City, including San Mateo County Transit District (SamTrans), Alameda-Contra Costa Transit (AC Transit), Caltrain (shuttle service) the Peninsula Traffic Congestion Relief Alliances (shuttle service), and other shuttle service providers to temporarily relocate bus and shuttle stops along roadways during construction and ensure uninterrupted service, as required.
Impact TRANS-4 – Rail Transit. The plan (Phase II.C) site ends directly adjacent to the Caltrans rail at Broadway and Marshall. It is not anticipated that a rail crossing would be involved in this project.	No Impact.	Mitigation Measure TRANS-5 – Rail Transit: Should a crossing be required, this crossing would be constructed using the bore-and-jack method, to avoid surface disruption of rail service

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Impact TRANS-5 – Bicycle and Pedestrian Circulation. Many bicycle routes/lanes and pedestrian sidewalks run along proposed pipeline construction routes. These facilities may need to be temporarily close or rerouted during construction.	No Impact.	Mitigation Measure TRANS-5 – Bicycle and Pedestrian Circulation. Routes would be posted 1 week in advance notifying of the temporary removal of the bike lane/route and/or closure of the sidewalk, notice the closure with on-street signs, and clearly signing a detour route. Where the sidewalks are on a walk-to-school route, signing would be provided to guide students along a detour route. Mitigation measure TRANS-1 (TMP) would address bicycle and pedestrian circulation plans.
Hazardous Materials		
Impact HAZMAT-1 – Hazardous Materials Storage and Use. During construction activities, hazardous materials such as vehicle fuels and lubricants may be used. While these are commonly used materials, if used improperly, could endanger workers and the public.	No impact.	Mitigation Measure HAZMAT-1 – Hazardous Materials Storage and Use. Compliance with Federal, State, and San Mateo County hazardous materials laws and regulations would minimize the risk to the public presented by these potential hazards. Implementation of these standard measures as part of the project would reduce potential impacts from storing and using hazardous materials. Site safety plans shall be prepared by the construction contractor to address the potential for encountering hazardous materials during construction, including trenching. The site safety plans would identify protocols for employing personal protective equipment to prevent exposure to unknown hazardous materials or contaminated soils. Implementation of Mitigation Measure HYD-1 would minimize the potential for hazardous waste materials to be introduced inadvertently into sensitive areas, or to be abandoned within construction areas, and would reduce the potential for exposure of construction workers to construction-related hazardous materials (e.g., oils and lubricants).
Impact HAZMAT-2 – Hazardous Materials Use Near Schools. Minor amounts of hazardous materials would be used during the construction of the pipelines.	No Impact.	Mitigation Measure HAZMAT-2 – Hazardous Materials Use Near Schools. Compliance with Federal, State, and San Mateo County hazardous materials laws and regulations would minimize the risk to the public presented by these potential hazards. Site safety plans shall be prepared by the construction contractor to address the potential for encountering hazardous materials during construction, including trenching. The site safety plans would identify protocols for employing personal protective equipment to prevent exposure to unknown hazardous materials or contaminated soils. Implementation of Mitigation Measure HYD-1 would minimize the potential for hazardous waste materials to be introduced inadvertently into sensitive areas, or to be abandoned within construction areas, and would reduce the potential for exposure of construction workers to construction-related hazardous materials (e.g., oils and lubricants).

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Impact HAZMAT-3 – Airport Safety. The San Carlos Airport is not located within the project area. No mitigation required.	No impact.	No Mitigation Required.
Impact HAZMAT-4 – Hazardous Waste Release Sites. Although not known to exist in the action area, it is possible that the public or construction personnel could be exposed to unknown hazardous materials or contaminated soils during construction of the proposed action. Implementation of Mitigation Measure HAZMAT-1 would reduce the potential for this impact to occur. Implementation of Mitigation Measure HYD-1 (see Section 3.3, Surface Water and Drainage) would minimize the potential for hazardous waste materials to be introduced inadvertently into sensitive areas, or to be abandoned within construction areas, and would reduce the potential for exposure of construction workers to construction-related hazardous materials (e.g., oils and lubricants).	No Impact.	Mitigation Measure HAZMAT-4 – Hazardous Waste Release Sites. The construction contractor shall develop site safety plans to address the potential for encountering hazardous materials during construction activities, including trenching. The site safety plans would also identify protocols for employing personal protective equipment to prevent exposure to unknown hazardous materials. The geotechnical analyses required for the project would identify whether potential locations are located along the pipeline routes. Special construction and soil removal methods may be incorporated into the project, as necessary, if soil contamination is encountered.
Impact HAZMAT-5 – Emergency Response and Evacuation Plans. Pipelines would be installed within trenches dug in existing roadways. Installation of pipeline would require temporary road closure or lane reductions.	No Impact.	Mitigation Measure HAZMAT-5 – Emergency Response and Evacuation Plans. Encroachment permits from the appropriate agency would be obtained for this work. These permits are designed to protect the public by providing a system of notification to providers of emergency or other important services of road closures. Compliance with these requirements minimizes the safety and health hazards associated with construction activities.
Impact HAZMAT-6 – Wildland Fires. The project would not be constructed in a wildland area. Pipelines would be constructed along streets in urban and suburban areas away from areas subject to wildland fires.	No Impact	No mitigation required.
Impact HAZMAT-7 – Recycled Water Effects on Human Health. Recycled water is derived from treated wastewater. Untreated wastewater can result in human health risks associated with exposure to pathogens or other potentially dangerous constituents, such as heavy metals, nitrates, and salts. However, the recycled water	No impact.	No mitigation required.

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
produced by the SCVW treatment plant would meet the stringent Title 22 requirements for unrestricted use. This level of treatment has proven to be fully protective of human health with regard to microbial pathogens. Because of the extensive level of treatment required, recycled water can be safely used for a variety of uses, including landscape irrigation. Signs would be posted in areas where recycled water is used to indicate that it is not safe to drink. Recycled pipes, valves and sprinkler heads would be easily recognizable by their purple color. Recycled water runoff into stormdrains would be prohibited. Cross connection to the potable water system would be prohibited. For these reasons, use of recycled water for landscape irrigation at proposed action facilities would not pose a threat to public health.		
Land Use		
Impact LU-1 – Temporary Disruption of Land Uses by Facilities Construction. Construction of the proposed action could result in short-term, construction-related disruption to land uses, residents and businesses adjacent to the construction zone. These impacts could include increases in airborne dust, noise levels, and traffic congestion. In addition, temporary staging areas for the storage of equipment, pipe, and other construction materials could result in temporary disruption of some land uses. These construction-related impacts would be short-term and would not affect current planned land uses within or in close proximity to the action area.	No impact.	Mitigation Measure LU-1 – Notification of Temporary Disruption. Redwood City would provide advance notification to all land uses adjacent to construction zones.
Recreation		
Impact REC-1 – Temporary Disruption of Recreational Access and Use. The proposed action may temporarily disturb access to limited portions of	No impact.	Implementation of Mitigation Measure TRANS-1 would reduce temporary impacts to bicycle lanes within the action area. Implementation of Mitigation Measure LU-1 would ensure that affected land owners are aware of potential

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
some of the recreational areas served by facilities associated with the proposed action, and/or the bikeways and trails that traverse the action area. This temporary disturbance would be limited in duration and would not result in the permanent displacement of recreational use or access at any location.		temporary construction-related disruptions prior to implementation of the proposed action.
Visual Resources		
Impact VIS-1 – Temporary Impacts to Visual Quality. Construction-related disturbance has the potential to temporarily alter short-range (10 to 20 feet) and medium range (more than 20 feet away) views of the construction area; however, those impacts would be short-term and unlikely to affect sensitive viewsheds or viewers within the action area.	No impact.	No mitigation required.
Utilities and Public Services		
Impact UPS-1 – Interruption of Services and Utilities. Municipal and utility services could be delayed or interrupted by construction activities associated with the proposed action. This could include re-routing of emergency services, difficulty in reaching service locations, and interruption of gas, electric, water, and other utility services provided to properties along the pipeline alignments. Prior to construction, Redwood City or its contractor would coordinate with Redwood City and utility providers to determine the most appropriate way to avoid service delays and utility interruptions.	Under the No-Action Alternative, Redwood City would continue to utilize potable water for irrigation purposes at the proposed action customer sites. This continued use of potable water from the San Francisco Bay Delta and the SWP would adversely impact the already limited water supplies in the Bay Area. In addition, energy usage would be higher under the No-	No mitigation required.

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
Impact UPS-2 – Potential Relocation of Infrastructure. Construction within easements and ROWs that are used by other agencies or utilities may create situations where pipes, cables, and related appurtenances may need to be temporarily or permanently relocated. Redwood City would coordinate with and seek approval from necessary utility providers and/or other agencies if it is determined during final design that any utility infrastructure would need to be relocated to implement the proposed action.		No mitigation required.
Impact UPS-3 – Energy Use. Construction of the proposed action would require the use of energy resources, mostly derived from non-renewable sources. However, it is anticipated that operation related energy use would be reduced as a result of the proposed action because recycled water, which would require less pumping and associated energy cost, would be used for irrigation purposes.		No mitigation required.
Socioeconomics and Environmental Justice		
No Impact.	No impact.	No mitigation required.
Cultural Resources		
Impact CUL-1 – Discovery of Unknown Human Remains. Ground disturbing activities associated with construction of the proposed action may uncover previously unknown human remains.	No impact.	Mitigation Measure CUL-1 – Protect Human Remains. The following procedures, as outlined in PRC Section 5097.98 and HSC Section 7050.5, shall be implemented by DSRSD in the event of an accidental discovery or recognition of human remains within the action area. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
		responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or within the action area, in a location not subject to further subsurface disturbance: The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission; • The descendent identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner. If human remains are associated with an archaeological site, Reclamation shall also be notified in a timely manner so that the federal agency can implement 36 CFR Part 800.13. In addition, if applicable, Reclamation's Directives and Standards for the Inadvertent Discovery of Human Remains shall be followed as outlined below. If human remains are encountered during earth-disturbing activities within the APE, all work in the adjacent area shall stop immediately and the discoverer shall immediately provide verbal notification to Reclamation's authorized official, the Regional Director (RD) or the RD's designee, of the discovery of human remains. Within 48 hours of the verbal notification, the RD or RD's designee would confirm the discovery with a written confirmation. In addition, the RD/RD designee would: 1. Immediately provide protection and security for the human remains; 2. Immediately notify the appropriate cultural resources professional; 3. Immediately notify the appropriate law enforcement agency; 4. Notify and consult with lineal descendants and tribal officials, immediately if Native American; 5. Immediately comply with appropriate laws; and 6. Within 5 working days of the written notification, establish a record of discovery including discovery circumstances, protection steps taken, names of

Impact		
Proposed Action	**No-Action Alternative**	**Mitigation Measures**
		persons notified and recommendations for further actions (Directives and Standards LND07-01[5]).
Impact CUL-2 – Discovery of Previously Unknown Archaeological Resources. Although no cultural resources were discovered during the field survey of the APE, there is a possibility for previously unknown, buried resources to be uncovered during ground disturbing activities associated with construction of the proposed action.		Mitigation Measure CUL-2 – Post Review Discovery Process for Cultural Resources. Prior to beginning ground disturbing work for the project construction personnel would be required to receive training regarding the types of archaeological resources that could be present within the project area. In the event that buried cultural resources are discovered during construction, the construction contractor shall immediately stop all operations in the vicinity (ca. 100 feet) of the find until the Reclamation Title XVI Manager from the Mid-Pacific Regional Office (2800 Cottage Way, Sacramento, CA) and Reclamation's Regional Archaeologist from the Mid-Pacific Regional Office (2800 Cottage Way, Sacramento, CA) are notified and given the opportunity to determine if the resource requires further study and what steps are necessary to comply with 36 CFR 800.13 (b)(3).
Indian Trust Assets		
No Impact.	No impact.	No mitigation required.

Appendix B: California State Historic Preservation Officer Findings

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 16-SCAO-070

Project Name: Central Redwood City Recycled Water Project

NEPA Document: 15-11-MP

MP 153 Cultural Resources Reviewer: Lex Palmer

Date: August 22, 2017

Reclamation proposes to issue partial grant funding under the Title XVI Water Reclamation and Reuse Program to the City for their Central Redwood City Recycled Water Project in San Mateo County, California. Reclamation determined that the issuance of the grant is an undertaking as defined in 36 CFR § 800.16(y) and involves the type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a).

Reclamation consulted with, and received concurrence from, the State Historic Preservation Officer (SHPO) on a finding of no historic properties affected, pursuant to 36 CFR § 800.4(d)(1). Consultation correspondence between Reclamation and the SHPO has been provided with this cultural resources compliance document for inclusion in the administrative record for this action.

Reclamation has no further obligations under Section 106 implementing regulations at 36 CFR Part 800.3(a)(1) of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108). This document conveys the completion of the cultural resources review and NHPA Section 106 process for this undertaking. Please retain a copy with the administrative record for this action. Should the proposed action change, additional review under Section 106, possibly including consultation with the State Historic Preservation Officer, may be required. Thank you for providing the opportunity to comment.

Attachments: SHPO to Reclamation letter dated August 22, 2017

State of California • Natural Resources Agency Edmund G. Brown Jr., *Governor*

OFFICE OF HISTORIC PRESERVATION Julianne Polanco, *State Historic Preservation Officer*
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
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calshpo@parks.ca.gov www.ohp.parks.ca.gov

August 18, 2017

In reply refer to: BUR_2017_0721_001

Ms. Anastasia T. Leigh, Regional Environmental Officer
U.S. Bureau of Reclamation, Mid-Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825-1898

Subject: Section 106 Consultation for the Central Redwood City (City) Recycled Water Project, San Mateo County, California (Project # 16-SCAO-070)

Dear Ms. Leigh:

The Office of Historic Preservation (OHP) received on July 21, 2017 your letter initiating consultation on the above referenced undertaking under Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. Reclamation proposes to issue a grant under the Title XVI Water Reclamation and Reuse Program to the City for their Central Redwood City Recycled Water Project in San Mateo County, California. Reclamation is seeking comments on its finding of no historic properties affected. Documents included are:

- *Enclosure 1: Figure 1: Project Location (USGS Quad); Figure 2: Area of Potential Effects (aerial photo map).*
- *A Cultural Resources Study for the Redwood City Recycled Water Project Redwood City, San Mateo County, California; October 04, 2016 [By: J. Franco & J. Origer, Tom Origer & Associates, Rohnert Park, CA] [For: B. Vinnedge, Vinnedge Environmental Consulting, Berkeley, CA]*

The City has been provisionally awarded funding to construct about 11,935 feet of pipelines, in three segments, from its Bayfront area to portions of Central Redwood City. The project is proposed to provide 274 acre feet per year of recycled water that will offset the region's imported water demand by an equivalent amount. Pipeline diameters will be from 8 to 30 inches within a 3-foot wide corridor. All of the pipelines will be installed within existing paved city streets and connected to existing recycled water pipelines, and all disturbance will be limited to existing roadways. Staging and materials storage will take place on existing paved roads. Excavation depths of about 4-8 feet for the 2.5 miles of pipelines will be required.

The area of potential effects (APE) consists of about 12.6 acres with a maximum vertical depth of 8 feet for the proposed pipeline installation (Figure 2). All segments of the APE are located in a highly developed urban area with residential and commercial buildings.

Historic properties ideintification efforts were conducted by Tom Origer & Associates on behalf of the City (Origer 2016). Identification efforts included background research; a records search at the Northwest Information Center at California State University, Sonoma; and a field survey of the APE on March 15, 2016. Results indicate that the majority of the APE study area has been previoulsy surveyed with about 40 studies on file and no cultural resources have been

previously recorded. Twenty cultural resources were recorded within a quarter mile of the APE, inlcuding several districts, but none of these extend into any part of the APE as defined. No new cultural resources were noted during the pedestrian field survey. Soil studies indicate the location is mixed and filled lands that extend into the bay margin and given the level of previous development, the potential to encounter intact buried resources appears to be low.

On February 26, 2016, Reclamation contacted the Native American Heritage Commission requesting a sacred lands file search and project contact list; no sacred lands were identified. Reclamation sent letters to the Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, Coastanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, Coastanoan Rumsen Carmel Tribe, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Ohlone Indian Tribe, and the Ohlone Indian Tribe, to request assistance in identifying historic properties which may be affected by the proposed undertaking. To date, Reclamation has received no responses. Should Native American concerns be subsequently raised, Reclamation will work to address them and make notifications as required.

Based on the records review, the pedestrian survey, and the tribal consultation, Reclamation has determined that a finding of No Historic Properties Affected is appropriate for this proposed undertaking and requests comments.

After OHP staff review of the documentation, the following comments are offered:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the APE as defined in the text and illustrated in Figure 2;
- Pursuant to 36 CFR 800.4(b), Reclamation has documented a reasonable and good faith effort to identify historic properties within the area of potential effects.
- Reclamation has determined that the proposed undertaking will result in no historic properties affected. Pursuant to 36 CFR 800.4(d)(1), **I do not object**.

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800 (as amended). Should you require further information, please contact Jeanette Schulz at Jeanette.Schulz@parks.ca.gov or (916) 445-7031.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

Appendix C: Indian Trust Assets

Indian Trust Assets
Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Kevin Clancy.

Date: 2/29/16

Requested by (office/program)	Doug Kleinsmith, MP-152
Fund	XXXR0687NA
WBS	RY.18527938.3001300
Fund Cost Center	2015000
Region # (if other than MP)	
Project Name	Central Redwood City Recycled Water Project
CEC or EA Number	
Project Description (attach additional sheets if needed and include photos if appropriate)	Reclamation proposes to give the City Redwood City a Title XVI Program grant to help fund the Phase 2 expansion of its existing recycled water project specifically consisting of Phases IIA, IIB and IIC. The Project will extend the existing recycled water distribution system from the Bayfront area of Redwood City into Central Redwood City. The Project entails of construction of 2.5 miles of pipelines ranging in diameter from 8 to 30 inches. This Project will deliver 274 acre-feet per year of recycled water offsetting the region's imported water demand by an equivalent amount.
***Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)**	--122.22 longitude, 37.48 latitude See below map

/s/ Doug Kleinsmith	Doug Kleinsmith	2/29/16
Signature	Printed name of preparer	Date

ITA Determination:

The closest ITA to the proposed Central Redwood City Recycled Water Project is the Lytton Rancheria which 32.89 miles to the north. (see attached image).
Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.

K. Clancy	Kevin Clancy	March 14, 2016
Signature	Printed name of approver	Date