

Revised Environmental Assessment

Recycled Water System Expansion Project



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Bureau of Reclamation**

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Environmental Assessment for the Delta Diablo Sanitation District Recycled Water System Expansion Project

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Acronym List

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AF	Acre-feet
APE	Area of Potential Effect
BAAQMD	Bay Area Air Quality Management District
BA	Biological Assessment
BMPs	Best Management Practices
BNSF	Burlington Northern and Santa Fe
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CCWD	Contra Costa Water District
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
Caltrans	California Department of Transportation
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO _{2e}	Equivalent carbon dioxide
CRLF	California red-legged frog
CSCRM	Columbia Steel Company Rolling Mills
CTS	California tiger salamander
CWA	Clean Water Act
dBA	A-weighted decibel scale
DDSD	Delta Diablo Sanitation District
DEC	Delta Energy Center
DTSC	(California) Department of Toxic Substances Control
DVGC	Delta View Golf Course

EA	Environmental Assessment
EPA	United States Environmental Protection Agency
GGs	Giant garter snake
GHG	Greenhouse Gas
gpm	Gallons per minute
HCP	Habitat Conservation Plan
HPWTF	High Purity Water Treatment Facility
HMBP	Hazardous Materials Business Plan
IS/MND	Initial Study/Mitigated Negative Declaration
Ldn	Day-night average sound levels
LF	Linear Feet
LMEC	Los Medanos Energy Center
LUST	Leaking underground storage tank
LTGC	Lone Tree Golf Course
MBTA	Migratory Bird Treaty Act
MF/RO	Microfiltration pretreatment and a reverse osmosis
MG	Million gallons
MGD	Million gallons per day
MT	Metric tons
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen oxides
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NIC	Northwest Information Center at Sonoma State University
NEPA	National Environmental Policy Act
O ₃	Ozone
Pb	Lead
PG&E	Pacific Gas & Electric
PM	Particulate matter
PPV	Peak particle velocity
RCRA	Resource Conservation and Recovery Act
ROG	Reactive Organic Gases
ROW	Right(s) of Way

RWQCB	Regional Water Quality Control Board
RWF	Recycled Water Facility
SAA	Streambed Alteration Agreement
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations, and Clean-up
SO _x	sulfur oxides
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TMDL	Total Maximum Daily Load
TSDTF	A Treatment, Storage, Disposal or Transfer Facility
UBC	Uniform Building Code
URBEMIS model	Urban Emissions (URBEMIS) model
USACE	US Army Corps of Engineers
USBR	United States Bureau of Reclamation
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
WWTP	Wastewater Treatment Plant

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Chapter 1 Introduction

1.1 Proposed Project/Action

Delta Diablo Sanitation District (DDSD) is proposing to expand and upgrade its existing recycled water system. The new recycled water infrastructure would include new and rehabilitated pipelines, a storage tank, a pump station, and wastewater treatment improvements at the Recycled Water Facility (RWF). The Proposed Project includes the following two stages:

1. Near-Term Project (estimated to be operational in 2018) and
2. Buildout Project (Long Term)

Reclamation has provided partial funding for planning the near-term component through Section 1604 of the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of Public Law 102-575, as amended). Section 1604 authorizes federal cost-sharing in water reuse projects up to 50 percent of the total eligible pre-construction planning costs. If the Proposed Project is authorized for construction, Reclamation may provide a portion of the funds to design and construct the Proposed Project. Reclamation's purpose is to facilitate water recycling projects within the Mid-Pacific Region to extend the beneficial use of existing water supplies. The Near Term Project and the Buildout Project are eligible for construction funding if authorized under the Title XVI Program.

Because the Proposed Project and the Proposed Action are the same, they are referred throughout this document as the proposed Project/Action.

1.2 Need for Project

DDSD has implemented a recycled water system that has delivered disinfected tertiary-treated recycled water to users since 2001. The recycled water system was originally designed primarily to produce and deliver a recycled water supply for two Calpine power plants, Delta Energy Center (DEC) and Los Medanos Energy Center (LMEC), but has been incrementally expanded in the intervening years to serve several landscape irrigation customers within the DDSD service area, including golf courses and parks. In total, DDSD has produced and delivered approximately 25,000 million gallons (MG), or 76,800 acre-feet (AF), of recycled water to 20 different use sites since the system was established in 2001.

The incremental nature of past system expansion has resulted in a functional, but not optimal, recycled water system. Multiple opportunities remain both to improve its operations and to expand the system. Currently, DDSD can serve all existing users under all demand conditions, but adding new users would cause capacity deficiencies during peak periods (hour and day) in summer. Thus, it is necessary to implement improvements that would smooth the demand curve on peak days, alleviate conveyance deficiencies, avoid treatment capacity limits, and enable more users to be served.

In addition to providing better service to existing customers and connecting new customers, DDSD needs to reduce its wastewater discharges. DDSD currently discharges its wastewater effluent into the New York Slough. With the advent of Total Maximum Daily Load (TMDL) requirements for mercury and other constituents of concern, wastewater dischargers are facing increasingly stringent regulations. Increasing the production of recycled water would help DDSD to comply with these future regulations by reducing the amount of effluent discharged.

1.3 Purpose of this EA

The proposed Project/Action is a discretionary action under the California Environmental Quality Act (CEQA) Guidelines Section 15357 and could be partially funded by federal grants (under Title XVI), if authorized. As such, it is subject to the requirements of CEQA and National Environmental Policy Act (NEPA). Therefore, a joint draft initial study/mitigated negative declaration (IS/MND) and environmental

assessment (EA) was prepared in accordance with both CEQA and NEPA requirements. DDSD adopted the IS/MND for the project in October 2013.

DDSD was the lead agency for CEQA compliance in the preparation of the expanded Initial Study and Mitigated Negative Declaration (IS/MND), and the United States Bureau of Reclamation (USBR or Reclamation) is the lead agency for NEPA compliance in the preparation of this Environmental Assessment (EA). The lead agencies determined that an IS/MND and EA were the appropriate CEQA/NEPA compliance documents for each agency's proposed Project/Action because all potentially significant impacts described would be reduced to a less-than-significant level with the implementation of the proposed Project/Action's mitigation measures/environmental commitments.

The joint environmental document was prepared pursuant to CEQA Public Resources Code, Division 13, Environmental Protection; the CEQA Guidelines; the Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (Parts 1500 to 1508). The environmental documents serve to publicly disclose the environmental consequences and potential impacts/effects of the proposed Project/Action, the alternative to the proposed Project/Action, and ways to minimize adverse effects. The environmental documents also provide the public, responsible, and trustee agencies¹ with information about the potential effects on the local and regional environment associated with implementation of the proposed Project/Action. The purpose of this EA is to allow Reclamation to determine whether or not to approve the proposed Project/Action, based on the understanding of the associated environmental consequences and impacts/effects.

Reclamation has made some revisions to the original IS/MND after DDSD adopted it. Therefore, Reclamation is publishing a separate final EA. These revisions have not changed the conclusions to the impact analysis.

1.4 Organization of this Report

1.4.1 Project- and Program-Level Evaluations

This environmental document is both a project-level and program-level environmental document. Where site-specific information is available to facilitate determination of impacts (*i.e.*, Near-Term components), a project-level analysis is provided. However, where such site-specific information is not available (*i.e.*, Buildout components), impacts are evaluated at a program level of detail. The proposed facilities are described further in Chapter 2, Project Description. Construction of the Build-out components would be subject to supplemental CEQA environmental review. No additional NEPA documentation is anticipated at this time because no Federal funding is planned at this time for the Build-out facilities.

¹ A responsible agency is an agency other than the lead agency that has a legal responsibility for also carrying out or approving a project; a responsible agency must actively participate in the lead agency's environmental process, review the lead agency's environmental document, and use that document when making a decision on the project. Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out a project.

	Near-Term Components	Build-Out Components
Project-Level NEPA	The subject of this EA	NA; project proponent not actively seeking federal funding for build-out components at this time
Program-Level NEPA	NA	NA; project proponent not actively seeking federal funding for build-out components at this time
Project-Level CEQA	Completed in 2013 by project proponent	Project proponent to complete at a later date tiering to the Program-Level CEQA
Program-Level CEQA	NA	Completed in 2013 by project proponent

1.4.2 Report Structure

This document was prepared to provide a comprehensive analysis of the proposed Project/Action. Chapter 2 describes the No Action Alternative (*i.e.*, no federal funding) and the proposed Project (made up of the proposed Project [DDSD-sponsored facilities and improvements] and the proposed Action [federal funding for a portion of the costs of implementing the Near-Term Components]). Chapter 3 describes the environmental setting/affected environment and the environmental impacts/environmental consequences (effects) associated with implementation of the proposed Project/Action. The issue areas that are examined, based on the Appendix G (Environmental Checklist Form) of the CEQA Guidelines, are as follows:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation

- Transportation/Traffic
- Utilities and Service Systems
- Environmental Justice
- Mandatory Findings of Significance

Chapter 4 includes other sections required by NEPA, including effects on wetlands and Indian trust assets, irreversible and irretrievable commitment of resources, and consultation and coordination requirements. Chapter 5 provides references and identifies the report preparers.

Chapter 2 Project Description

2.1 Project Overview

DDSD proposes to expand and optimize its existing recycled water system to meet buildout demands. Specifically, DDSD proposes to install new pipelines, rehabilitate existing pipelines, construct a new storage tank and conduct other improvements at the RWF to meet the demands of existing and potential new customers. In addition, the project includes future construction of a high-purity water treatment facility to treat secondary effluent for use by industrial customers that require high purity water.

2.2 Purpose for Project

The Project/Action would serve several purposes, which include the following:

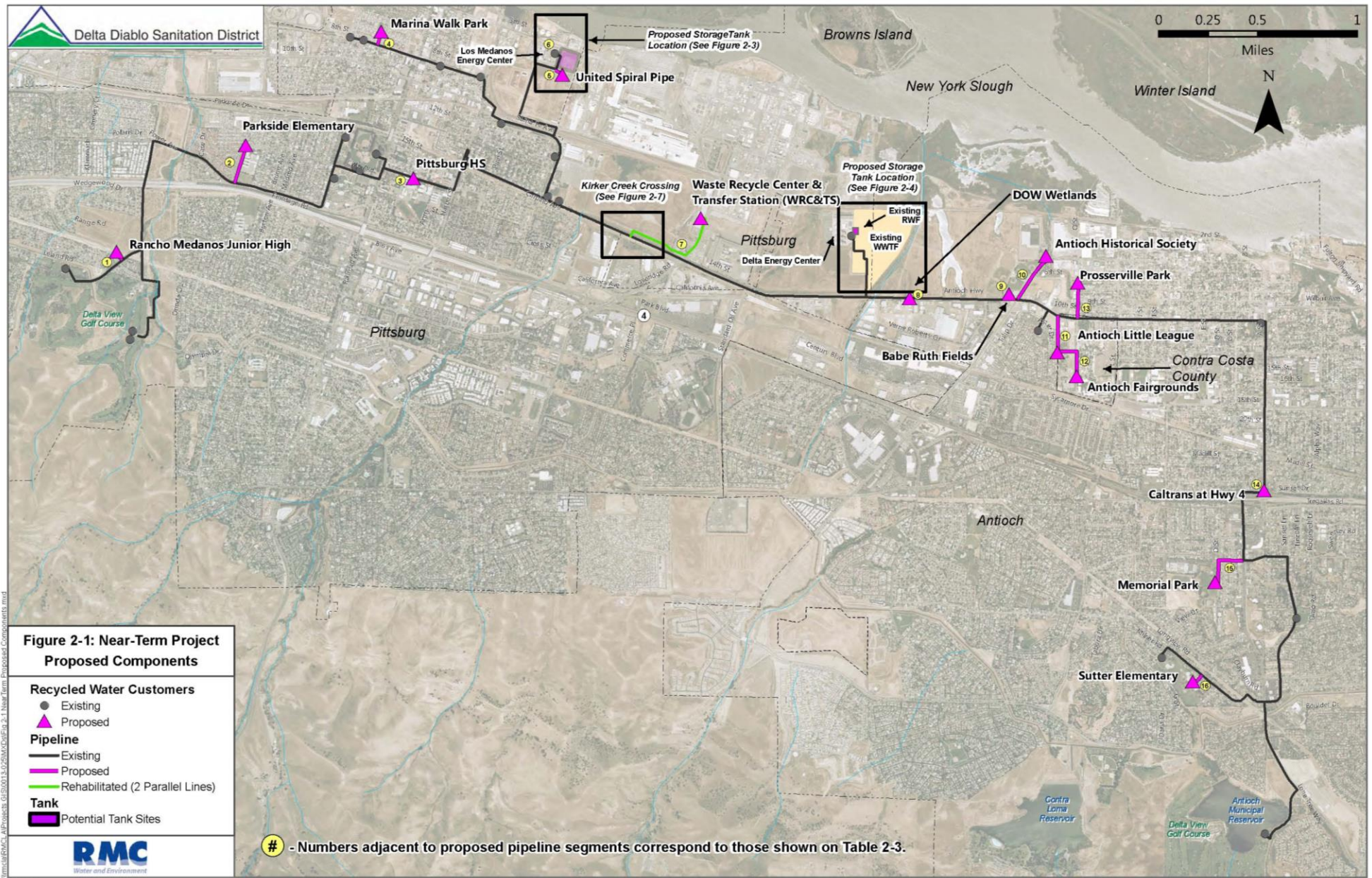
- **Improve Water Supply Reliability.** Recycled water availability is less influenced by climatic or year-to-year changes to hydrologic conditions than surface water, and therefore provides additional dry-year reliability for users.
- **Preserve Potable Water Supplies.** Using recycled water to serve non-potable demands such as irrigation could preserve high-quality drinking water supplies for potable needs. This project would ensure that all local water resources are being used to their highest and best use.
- **Better Utilize Existing Recycled Water Facilities.** Currently, DDSD's existing recycled water facilities are operated at maximum capacity only a few days out of the year, and are underutilized during non-peak demand periods. Expanded recycled water use would make use of available capacity during the winter and non-peak summer months.

2.3 Existing Facilities and Existing Customers

2.3.1 DDSD Recycled Water Facility and Wastewater Treatment Plant

The RWF is located off of the Pittsburg-Antioch Highway on the north side of Highway 4 (see **Figure 2-1**). The RWF receives non-chlorinated secondary effluent from its Wastewater Treatment Plant (WWTP) (see **Figure 2-1**). The WWTP provides secondary treatment, disinfection, and dechlorination prior to discharging effluent to the New York Slough. The plant's treatment process consists of primary clarifiers followed by tower trickling filters and aeration basins for secondary treatment. From the aeration basins, the flow passes through secondary clarifiers followed by chlorine contact tanks, dechlorination, and discharge. A portion of the effluent is diverted to the RWF prior to chlorination at a varying rate depending on recycled water demands.

Influent to the RWF is fed to flocculating clarifiers, then to filters, and finally to the hypochlorite disinfection process. Coagulant and flocculant are fed to the flocculating clarifiers to reduce suspended sediments and turbidity. From the flocculating clarifiers, the flow passes upward through filters due to influent head, and empties into effluent weirs. Finally the filter effluent flows to chlorine contact basins for disinfection.



2.3.2 Existing Recycled Water Customers

Following treatment at the plant, the recycled water is conveyed to the two Calpine power generating plants (LMEC and DEC), the Delta View Golf Course (DVGC), and the Lone Tree Golf Course (LTGC), and to various landscape irrigation users; the locations of the existing customers are shown in **Figure 2-1**. DEC is located immediately adjacent to the RWF, while LMEC receives recycled water via a pipeline extending three miles from the RWF. DVGC in Pittsburg is served by approximately four miles of pipeline to the west of the RWF, and LTGC in Antioch is served by approximately four miles of pipeline to the southeast of the RWF. Twelve parks that are located adjacent to the existing recycled water pipeline currently receive recycled water for irrigation. Landscaping surrounding the RWF and City Hall is also irrigated with recycled water from the plant. Lastly, recycled water is used as irrigation and service water² at the RWF.

2.4 No Project/Action

A “no action alternative” is evaluated in this document to provide an appropriate basis by which other alternatives are compared. For the purposes of this project, because Reclamation is providing funding for the project, the No Project/Action would consist of Reclamation not funding the proposed Action. Without funding by Reclamation, it is expected that DDS D would still move forward with the proposed Project as described above, through other budgetary arrangements. The effects of the proposed Project/Action would be the same as the No Project/Action, and thus no further analysis is necessary in this document.

2.5 Proposed Project/Action

The Proposed Project/Action would include construction of recycled water infrastructure and rehabilitation of existing infrastructure. The new recycled water infrastructure would include pipelines, a storage tank, and pump stations; existing pipelines would be rehabilitated. The Proposed Project/Action is divided into two stages:

- Near-Term: operational in 2018
- Buildout³ (long Term)

Figure 2-1 and **Figure 2-2** illustrate the locations of the proposed facilities for both the Near-Term and Buildout projects. **Table 2-1** provides a summary of proposed components for both the Near-Term and Buildout projects. With these improvements, DDS D would ultimately increase its RWF capacity from 12.8 million gallons per day (MGD) to 22.5 MGD, and the number of customers served by DDS D would increase from 18 to 31.

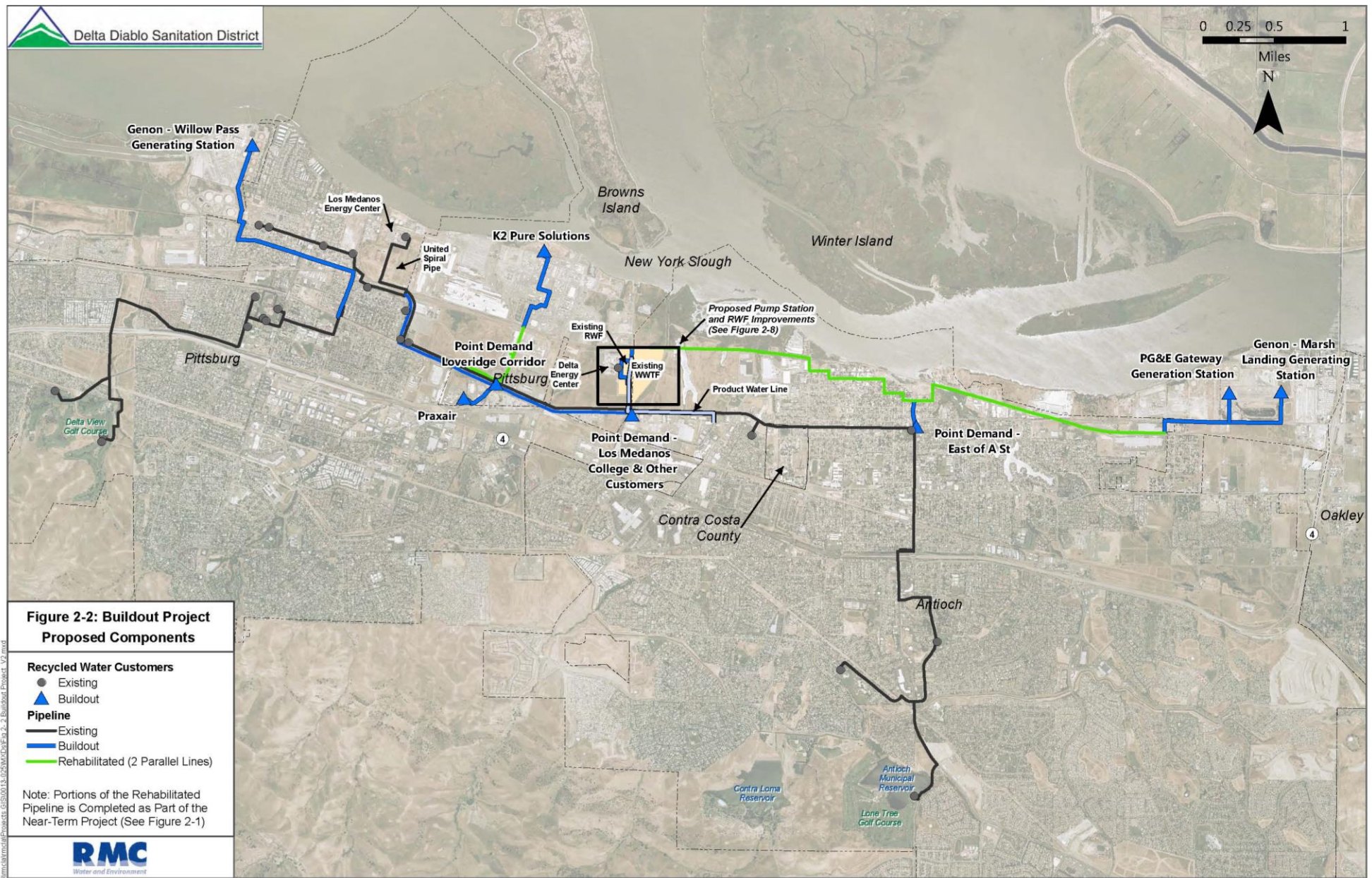
Table 2-1: Proposed Project/Action Components

Project	New Pipe Length (LF)	New Pipe Diameter (inches)	Rehabilitated Pipe Length (LF)	Storage Tank	Pump Station	RWF Improvements
Near-Term	6,600	2-18	3,090	0.9 MG	--	--
Buildout	40,400	2-20	45,000	--	1,200hp	New treatment process / HPWTF

Notes: LF = Linear Feet; hp = horsepower; HPWTF = High Purity Water Treatment Facility

² Service water is used for wash down, spray nozzles, and other process needs.

³ A specific buildout date cannot be determined at this time. It is defined by the timing of buildout development in the affected jurisdictions within DDS D’s service area.



2.5.1 Near-Term Project

The Near-Term project includes construction of a storage tank located either adjacent to LMEC or at the RWF to smooth the demand curve on peak days, alleviate conveyance deficiencies and avoid treatment capacity limits. The Near-Term Project would enable DDS D to serve recycled water to new users. With the addition of the storage tank, all users can be served with recycled water, even on peak days. In conjunction with the storage tank, several new service laterals would be constructed to connect new users. The Near-Term Project would consist of the following components:

- 6,600 linear feet (LF) of new recycled water pipeline;
- 0.9-MG storage tank adjacent to LMEC (including land purchase) or at the RWF;
- Tank flow control valve, tank pad, and other tank-related appurtenances;
- Testing and rehabilitation of 45,100 LF of two existing and parallel 8-inch pipelines;
- 15 new customer meters;
- Isolation valves; and
- High purity water treatment facility and other related piping and appurtenances.

Each of these components is described below. The new users that would be served in the near-term are all located in the vicinity of existing recycled water mains, and are listed in **Table 2-2** and shown on **Figure 2-1**. The table also shows the current average annual and peak demands that would need to be met with recycled water. In addition, as of August 2015, some components of the Build-out Project are now being considered for the Near-Term Project: the High Purity Water Treatment Facility and product water line, and rehabilitation of additional pipelines. These facilities are described under the Buildout Project.

Table 2-2: New User Demand Summary for the Near-Term Project

User	Average Annual Demand (AFY)	Peak Day Demand (MGD)	Peak Hour Demand (gpm)
Babe Ruth Fields	14.7	0.03	72
Antioch Little League	11.4	0.03	56
Memorial Park	18.7	0.04	91
Sutter Elementary School	23.8	0.13	267
Antioch Fairgrounds	37.6	0.09	184
Prosserville Park (On 6th St between M&O)	2.3	0.01	17
Caltrans (Hwy 4 at RW pipeline crossing)	16.0	0.04	78
Antioch Historical Society	2.7	0.01	17
DOW Wetlands	0.6	0.0007	1.4
Pittsburg High School	18.5	0.02	45
Parkside Elementary School	13.9	0.02	35
Marina Walk Park	3.2	0.01	16
Rancho Medanos Junior High School	1.8	0.00	8.6
United Spiral Pipe	11.0	0.03	54
Waste Recycle Center and Transfer Station (WRC&TS)	4.2	0.03	21
Total	180	0.48	889

Note: gpm = Gallons per minute

Conveyance Pipelines

The Near-Term Project would install nine new pipeline segments, shown with corresponding length, diameter and locations in **Table 2-3**.

All segments would be installed or rehabilitated within roadways and areas that have been previously disturbed. The construction zone for all segments would be approximately 25-30 feet in width. Construction methods are presented in Section 2.4.5.

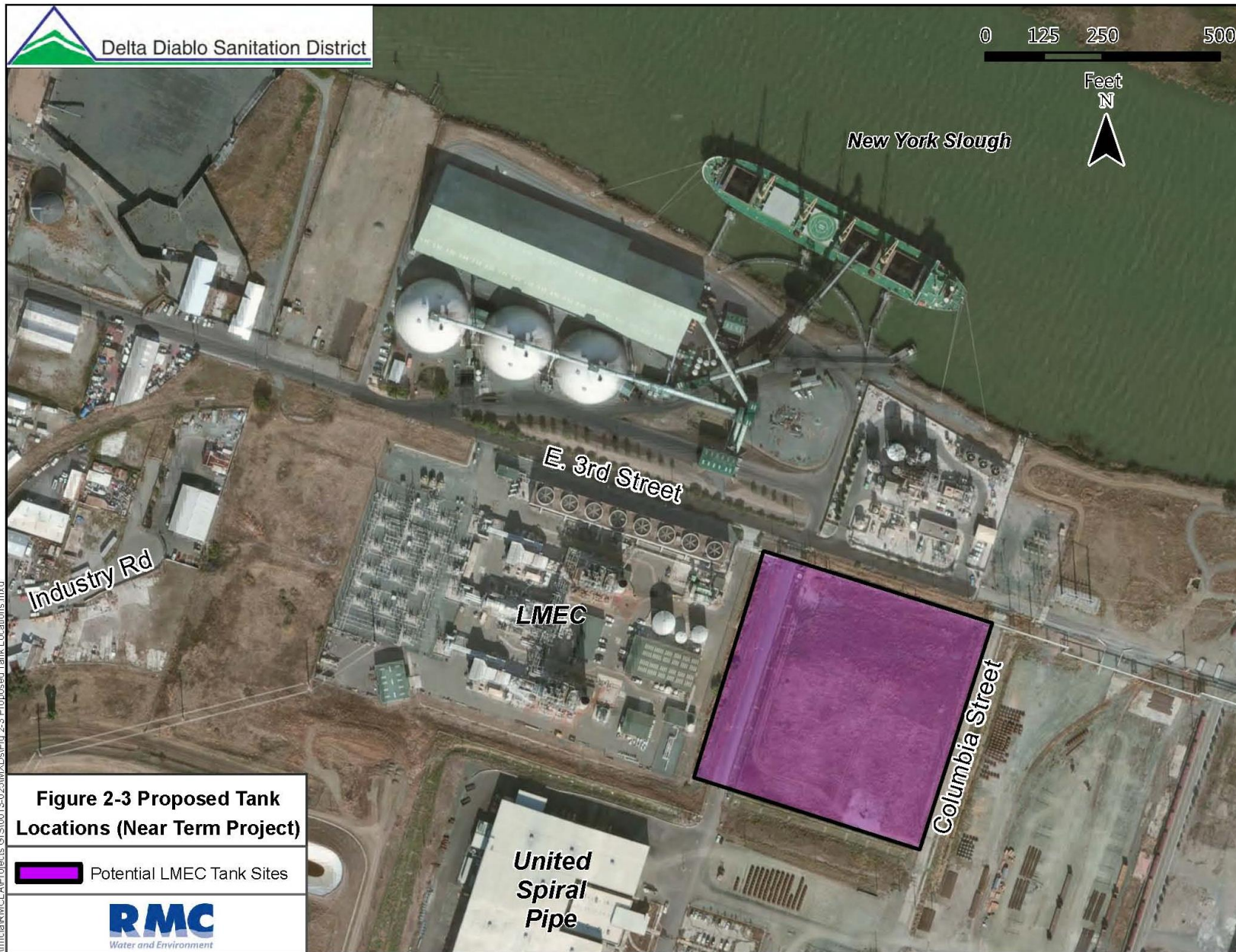
Table 2-3: Near-Term Project Pipeline Segment Locations

#	User Name	Diameter (in)	Type	Jurisdiction	Approx Length (ft)	Related Road Names
1	Rancho Medanos Junior High School	1.5	New	Pittsburg	200	Adjacent to West Leland Road
2	Parkside Elementary School	4	New	Pittsburg	1,050	Unpaved footpath on school grounds
3	Pittsburg High School	6	New	Pittsburg	<50	Adjacent to School Street
4	Marina Walk Park	2	New	Pittsburg	400	Cutter Street
5	United Spiral Pipe	2	New	Pittsburg	200	Unnamed access road on United Spiral Pipe property
6	LMEC Tank Pipe Connection	18	New	Pittsburg	100	Unnamed access road on LMEC property
7	WRC&TS	8	Rehab	Pittsburg	3,090	Loveridge Road to unpaved access road to Pittsburg Antioch Highway
8	Dow Wetlands	1.5	New	Antioch	<50	Adjacent to Pittsburg Antioch Highway
9	Babe Ruth Fields	4	New	Antioch	<50	Adjacent to West 4 th Street
10	Antioch Historical Society	2.5	New	Antioch	1500	West 4th Street
11	Antioch Little League	8	New	Antioch	900	Paved foot path adjacent to West 10th Street, unpaved parking lot to Antioch Little League
12	Antioch Fairgrounds	4	New	Antioch	1200	Little League parking lot to unnamed street adjacent to Antioch Fairgrounds
13	Prosserville Park	2.5	New	Antioch	1000	O Street
14	Highway 4 medians	2	New	Antioch	50	Highway 4 on-ramp
15	Memorial Park	6	New	Antioch	1370	Putnam Street to Elizabeth Lane
16	Sutter Elementary	2	New	Antioch	200	School parking lot entrance road

Note: The segment numbers in the table correspond to the numbers identified in Figure 2-1.

Storage Tank

The Near-Term Project would include the construction of a new recycled water storage tank with an estimated capacity of 0.9 MG. The storage tank would be located adjacent to the LMEC facilities or at the RWF. The possible tank siting area is shown on **Figure 2-1**, **Figure 2-3**, and **Figure 2-4**. The proposed tank would be similar to the tank shown in **Figure 2-5**. Construction would include new piping,



\\mcl\RM\CL\Projects\GIS\00113-025\MXDs\Fig 2-3_Proposed Tank Locations.mxd

Sources:

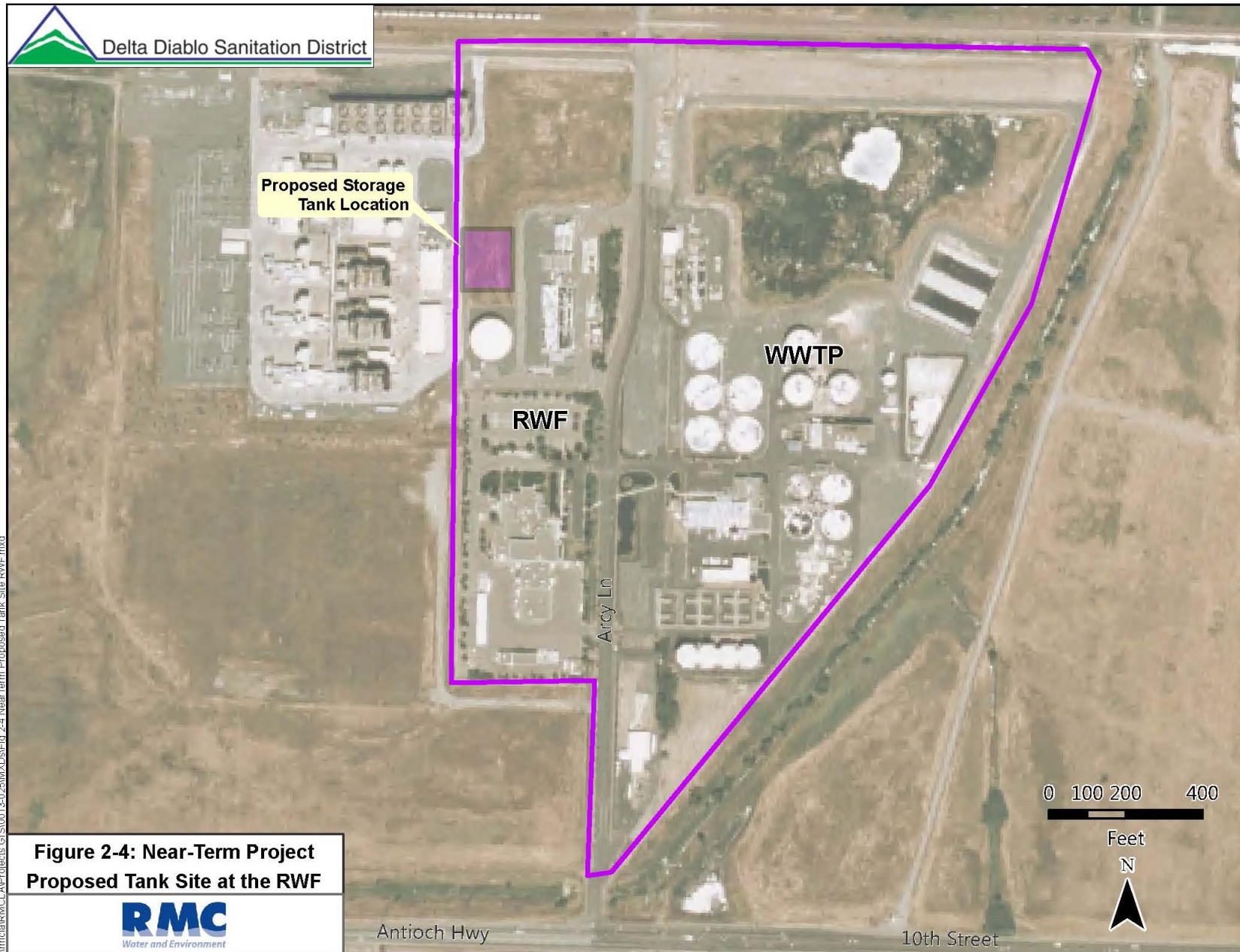


Figure 2-4: Near-Term Project
Proposed Tank Site at the RWF



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Sources:

Figure 2-5: Example of a Recycled Water Storage Tank



Figure 2-6: Example of a Radio Tower



connections to the existing recycled water system, an impervious tank pad (and associated drainage modifications), and a tank flow control valve. The aboveground steel tank would be up to 90 feet in diameter and up to 30 feet tall at the center. At the potential site adjacent to LMEC, it is assumed that the entire graded area (up to one acre) would be disturbed during construction to accommodate staging and ultimately the proposed tank. At the RWF, the tank would be located north of an existing tank (see **Figure 2-4**); staging would occur on vacant locations within the plant property.

DDSD would own and maintain the new recycled water storage tank. The tank emergency overflow would discharge to the sanitary sewer at the site. Telemetry would transmit the tank levels to the pump stations and control center. Electrical service would be required and is available at both sites. The tank flow control valve would be located in a below grade vault on or adjacent to the tank pad. Electrical service and telemetry components of the new recycled water tank would also require construction of a radio tower that would be used to transmit data. The radio tower would be up to 30 feet in height (about the same height as the tank), and would be similar to that shown in **Figure 2-6**. Lighting would be installed at the site to provide security and for maintenance purposes.

Pipeline Testing and Rehabilitation

The Near-Term Project would involve testing and rehabilitation of 45,100 LF of two existing and parallel 8-inch pipelines (see **Figure 2-1**). These pipelines, owned and operated by Praxair and used in the past for the conveyance of oxygen and nitrogen, are located on an existing unnamed roadway between Pittsburg-Antioch Highway and the Waste Recycle Center Transfer Station. As the pipelines are no longer in use and are in good condition, they would be transferred to DDSD and rehabilitated for conveyance of

recycled water. Rehabilitation would consist of lining the existing uncoated steel pipe. The existing pipeline crosses Kirker Creek as shown in **Figure 2-7**. Testing and rehabilitation activities would not involve any in-channel activities, but would occur exclusively from pits at either side of the creek.

Other Facilities

Other facilities, including customer meters and isolation valves, would be installed as part of the Near-Term Project. Customer meters to monitor usage levels would be located at the new user hook-ups (*i.e.*, at the end of the new pipeline segments), which are required at new user turnouts. Both meters and valves vary in size based on the customer demand and pipe sizing, and would be located below grade in standard-sized vaults and valve boxes. Maximum footprint of the meter and valve vaults would be approximately 10 feet by 6 feet.

High Purity Water Treatment Facility

The high purity water treatment facility would involve the construction of a separate treatment system that further improves water quality to accommodate a niche (*i.e.*, high-purity water quality) demand. Originally a component of the Buildout Project, this facility is now proposed to be included in the Near-Term Project, and would involve construction of an up to 5.0-MGD HPWTF, which would be built initially at 1.0 MGD and subsequently expanded in phases as demand for high purity water increases. The HPWTF would provide a higher level of water treatment than used currently, and would include microfiltration pretreatment and a reverse osmosis (MF/RO) system. RO is an advanced treatment process that purifies water by forcing it through a semipermeable membrane under pressure to remove dissolved solids, viruses, and bacteria. Recycled water generated by this treatment process would result in total dissolved solids (TDS) levels less than 30 mg/L and can be used for demands that require a high level of purity, including: boiler feed, semiconductor manufacturing, cooling towers, food processing, and other industrial process water needs. The HPWTF, which would contain the treatment processes as well as associated pumps, tanks, and chemical storage units, would be housed in a structure with lighting installed for the purposes of security and maintenance; the building material as well as the actual size of the structure would be determined upon design of the project. The facility would be located on a vacant lot at the RWF. **Figure 2-8** shows the anticipated location of the HPWTF. To provide power to the HPWTF in the event of an emergency electrical power outage, backup diesel generators, located on site, would be used.

The RO process produces brine (*i.e.*, high salinity rejected water not passing through the treatment system), which would be discharged to the DDSD wastewater effluent outfall to New York Slough. DDSD would discharge brine in accordance with RWQCB permit requirements.

To maintain the purity of the product water, a separate conveyance system would need to be constructed to deliver product water from the HPWTF to potential customers. The proposed pipeline alignment is shown in **Figure 2-8**. It is likely that such customers would be located in the light industrial area south of the DDSD WWTP across the Pittsburg-Antioch Highway.

2.5.2 Buildout Project

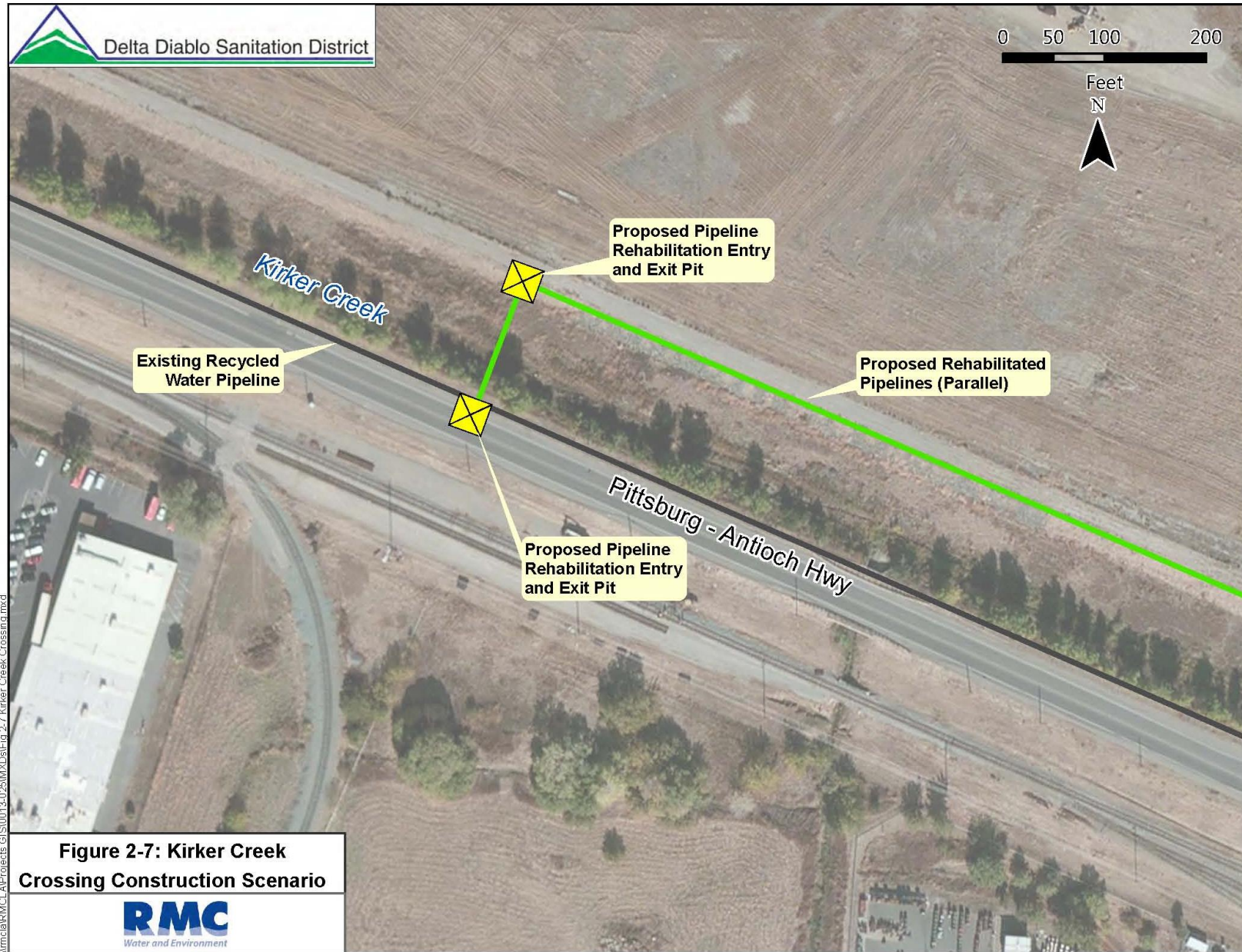
The Buildout Project consists of foreseeable activities that would be implemented to meet buildout development demands within DDSD's service area. These components are analyzed in this document on a general, programmatic level because the details of the components are only conceptual and speculative in nature at this time. Any actual future project approval and implementation of programmatic components proposed by DDSD would require subsequent environmental documentation (following project-specific engineering and siting) to address site-specific environmental issues.

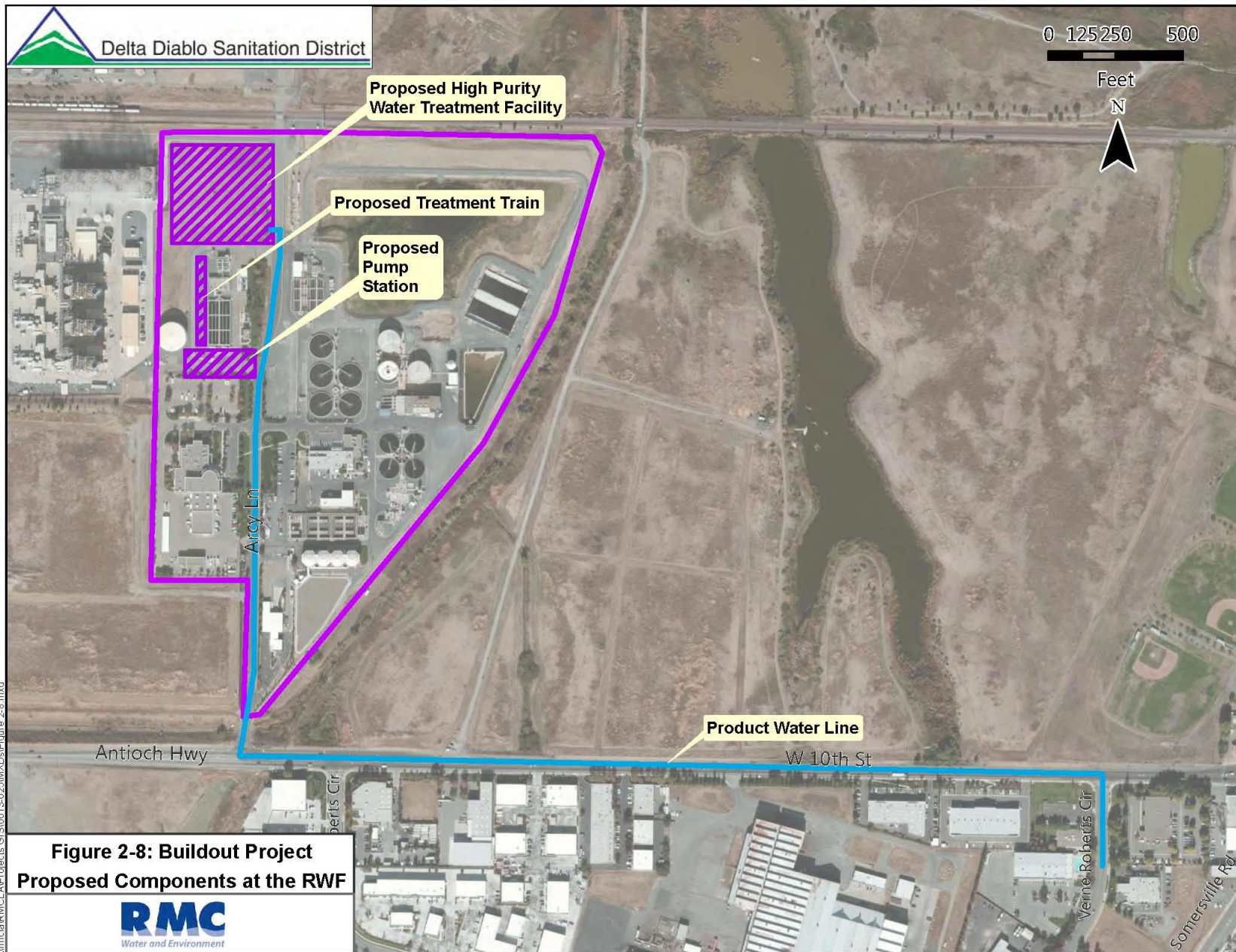
Recycled Water System Expansion

One component of the Buildout Project would create a new, separate industrial recycled water distribution system to meet the recycled water demand. These improvements would be implemented as buildout development occurs and actual demands materialize. DDSD's approach is to proactively encourage and appeal to potential customers through early planning. The purpose of implementing a separate system is to:

- Free up capacity in the existing pipeline distribution system to expand service to additional users beyond those identified for the Near-Term Project; and
- Reduce delivery pressures to nearby industrial users (to reduce energy demands);

The Buildout Project would consist of the components identified on **Figure 2-2** and **Figure 2-8**. They are described below. As of August 2015, some of the facilities that were originally proposed for buildout implementation are now being proposed for near-term implementation; facilities proposed for buildout implementation are indicated below.





- 40,400 LF of new recycled water pipeline.
- 1,200-hp pump station located at the RWF for the separate distribution system to serve nearby industrial users. The pumps would be located both above and below ground. Above-ground components include the vertical turbine pump and motor. The maximum footprint would be approximately 50 feet by 25 feet.
- A third tertiary treatment process located at the RWF, identical to the existing two processes, with the following additions:
 - 1 new influent pump
 - 1 new process of high-rate clarifiers
 - 1 new process of continuous-backwash sand filters
 - 1 new process of chlorine contact tanks

An additional treatment process would require the use of chemicals similar to those already used at the site.

- Eight customer meters

The timing and precise locations of the above improvements would depend on when new users are identified. New users to be added to the distribution system as part of Buildout Project would be a combination of specific users and point demands. Point demands have not been identified as specific users, but rather as a location where future users are likely to be established, according to future land use planning and zoning categories. The new users that would be served in the long-term are shown in **Table 2-4** and **Figure 2-2**. The table also shows current and estimated average annual and peak demands that might be met with recycled water. However, the timing, quantity, type of use, and likelihood of implementation of these “long-term” customers are subject to change as those projects are planned and implemented.

Table 2-4: New User Demand Summary for Buildout

User	Average Annual Demand (AFY)	Peak Day Demand (MGD)	Peak Hour Demand (gpm)
Praxair	130	0.25	173
Genon-Willow Pass Generating Station	50 - 500	0.72	500
Genon-Marsh Landing Generating Station	50 - 500	0.72	500
PG&E Gateway Generating Station	80 - 500	1.15	800
K2 Pure Solutions	30	0.43	300
Loveridge Corridor (Point Demand)	378	2.72	3,778
East of A St. (Point Demand)	20	0.29	200
Los Medanos College (Point Demand)	30	0.43	300
Total	768 – 2,088	6.71	6,551

2.5.3 Construction Methods

New Pipeline Installation

All pipelines proposed under both the Near-Term and Buildout Projects would be constructed on public roadways owned by the cities of Pittsburg and Antioch and Contra Costa County, or private roadways associated with the water users' facilities and plants. Pipeline installation for all new pipelines would use standard open-cut trenching techniques, except where necessary to avoid surface features (as discussed below). For all work activities, prior to the start of construction, the construction boundary and the locations of all underground utilities would be identified through field survey (potholing) and the use of Underground Service Alert. For open-cut trenching, the maximum trench width (for an 18-inch pipeline) would be approximately 6 feet, and trench depth would average approximately 8 feet. The active work areas would be about 10 feet on one side of the trench and about 10 to 15 feet on the other side for access by trucks and loaders. For the purpose of this analysis, a construction easement of 30 feet is assumed. Standard installation of the pipeline would proceed at the rate of approximately 100 feet per day with an overall work zone length of about 200 feet.

Trenchless construction methods would be needed where open cuts are not acceptable or practical, such as across busy intersections, limited easement locations, congested utilities, railroad tracks or flood control facilities. Trenchless methods include jack-and-bore or directional drilling. Jack-and-bore involves use of a horizontal boring machine or auger to drill a hole, and a hydraulic jack to push a casing through the hole; the pipeline is then installed in the casing. The casing is jacked using a large hydraulic jack in a pit located at one end of the crossing. The jacking pit is excavated (and shored) with typical dimensions of 12 to 15 feet wide, 30 to 35 feet long, and 8 to 10 feet deep. An additional area of 2,000 square feet would be needed around the pit for temporary storage of pipe sections and for loading material removed from the bore. The receiving pit at the other end of the pit is smaller, encompassing approximately 1,000 square feet.

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

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

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

For directional drilling, pits would be needed approximately every 500 to 1,000 feet for large pipes and less frequently for small pipes. Pipes would be installed at a depth of approximately 8 to 10 feet, dependent on existing underlying utilities, soil types, environmental constraints, entry and exit constraints, and bend radius of the installed product and drill pipe. Other pit depths vary depending on the feature being avoided as well as the presence of any existing utilities underground.

For open-cut construction, soil and pavement would be removed to the required depth and the bottom of the trench would be compacted. A crushed rock layer would be placed at the base of the trench after the compaction process has been completed. After placement of the crushed rock layer, the new pipeline would be installed and the pipe segments connected, and the trench would be backfilled with imported sand or native soil. The backfill would be compacted, and the disturbed surface over the trench would be restored to pre-construction conditions.

Where needed, the walls of trenches and pits would be shored to prevent cave-ins, as required by federal Occupational Safety and Health Administration Title 8 regulations pertaining to excavations. The sides would be shored using soldier piles or sheet piles, depending on soil conditions. Vibratory drivers would be used to install sheet piles and soldier piles.

Pipeline installation and connection to the potential customer “Dow Wetlands” would occur at the Pittsburg-Antioch Highway, and would not require activities near or within the wetlands.

Pipeline Rehabilitation

Rehabilitation of existing pipelines would involve cleaning, inspecting, lining, and testing the pipeline. Several methods can be employed to line the pipeline, but regardless of the method, access pits would be needed every 1,000 to 2,000 feet along straight lengths of pipe, and at every pipe bend greater than or equal to 22.5 degrees. The pits would be up to approximately 30 by 30 by 20 feet (width, length, and depth, respectively), with the pipeline centered in the pit except where the pits are located at the bends of the pipeline alignment. It is expected that 5 pits would be needed during rehabilitation of the existing pipeline under the Near-Term Project and 25 pits would be needed during rehabilitation of the existing pipeline under the Buildout Project, some of which is not included in the Near-Term Project.

Construction of Structures

Construction of the storage tank, pump station, and HPWTF would involve site grading and excavation, shoring of excavations, placement of compacted base rock, forming and pouring of concrete structures, installation of mechanical equipment, trenching for installation of connecting pipelines, connection of electrical supplies and controls, and backfill and restoration. Shallow excavations would be shored using driven or vibrated steel sheet piles. Deep excavations may require use of soldier piles and lagging⁴.

General Construction Requirements

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

Spoil (soil and rock) that is excavated during construction activities would be reused on site for backfilling or disposed of properly per requirements of the Cities of Pittsburg and Antioch, and the County of Contra Costa. Spoil would be analyzed to confirm that hazardous materials are not present

⁴ Soldier piles and lagging is an earth retention technique that retains soil, using vertical steel piles with horizontal lagging. Typically, H-piles are drilled or driven at regular intervals along the planned excavation perimeter. Lagging consisting of wood, steel or precast concrete panels, is inserted behind the front pile flanges as the excavation proceeds. The lagging effectively resists the load of the retained soil and transfers it to the piles. The walls can be designed as cantilever walls, or receive additional lateral support from anchors or bracing. The technique has been used to provide support for many excavations in environments similar to that present in the Project area.

before the spoil could be used as backfill. Any material that would not be reused as backfill would be stored temporarily at the construction staging area until characterized and then hauled away to a permitted disposal site. All backfill that is imported will be delivered to stockpiles near the open trench.

The amount of spoil generated would depend on the construction methods selected and the amount of material reused on site. For the Near-Term Project, a maximum of approximately 66 cubic yards⁵ of spoil would be generated from excavation activities per day. Assuming a dump truck capacity of 10 cubic yards per truckload, and that all material would be hauled off-site for disposal, approximately 7 round trips (14 one-way truck trips) would be generated per day over the course of the 3.5-month period. It is assumed that an additional 10 one-way truck trips would occur to deliver equipment and other materials. In addition to the truck haul trips, up to 15 workers would be accessing each site daily. Assuming three crews of 15 members each would be working on the project per day and each individual drives separately, 45 worker round trips would be generated per day.

For all trenches and pits, once filled and compacted, the area would be resurfaced to match the surrounding material. In addition, damage to all roads and unpaved areas would be repaired. Unpaved areas would be revegetated with native grasses indigenous to the disturbed area. Revegetation would occur after construction and prior to winter rains to stabilize disturbed areas against erosion.

2.5.4 Equipment / Staging / Workers

Installation of all project components would use equipment including, but not limited to: crane, excavators, backhoes, front-end loaders, dump trucks, diesel generator, water tank, flat-bed trucks, compactors, double transfer trucks for soil hauling, concrete trucks, paving equipment, dewatering pumps (as needed), and baker tanks (as needed). Equipment and vehicle staging would be accommodated either at each construction site (pipeline, storage tank and pump station), or at a centralized staging area (such as the RWF or WWTP)⁶. Staging would be avoided at sensitive areas such as riparian or other habitat.

The typical crew size for construction of the proposed facilities is 10 to 15 people, plus inspectors. It is expected that two crews would be working at any point in time at different locations along the pipeline. An additional crew may be working at the tank, pump station, and HPWTF sites during pipeline installation and rehabilitation. All construction activities within residential areas, including work hours, would be governed by permits issued by the jurisdictional agencies, but generally would be limited to weekdays from 7 a.m. to 7 p.m. However, nighttime construction and weekend construction may be necessary for certain pipeline connections; nighttime construction would be restricted to non-residential areas only.

2.5.5 Schedule

Construction and rehabilitation of the pipeline is planned to start in 2017. At a pace of 100 feet per day, the approximately 10,000 feet of pipeline installation and rehabilitation would take approximately 3.5 months. The construction of the storage tank would occur concurrently with pipeline construction.

The Buildout Project would consist of construction of approximately 40,400 feet of new pipeline, a pump station, and improvements at the RWF and WWTP, as well as rehabilitation of 45,100 feet of existing pipeline. The initiation of the Buildout Project has not yet been determined but it is estimated that construction of the Buildout Project would take 18 months.

⁵ 66 CY is a realistic assumption based on daily activities involving construction of a 200-foot segment of pipeline and the tank. Pipeline trench width would be 2 feet for pipelines that are less than 8 inches in diameter or smaller and the trench depth would be up to 5 feet (only 2 feet is filled with imported material; the rest would be backfilled with native soil). Although the tank would excavate more than 2,000 feet, only the ring around the tank would require importation of approximately 400 CY total; the rest of the foundation would be backfilled using native materials.

⁶ Appropriate environmental review would be conducted if the contractor proposes additional staging areas not foreseen and evaluated by this IS/EA. Staging would be avoided at sensitive areas such as riparian or other habitat.

2.5.6 Proposed Project/Action Operation and Maintenance

DDSD is currently operating and maintaining recycled water conveyance and storage facilities similar to those proposed. Facilities at the Recycled Water Facility and Wastewater Treatment Plant would be operated and maintained consistent with existing practices at those facilities. Operations would involve conveyance of recycled water through new pipelines, which would operate in the same way as existing infrastructure that conveys recycled and potable water in the project area. Maintenance of proposed facilities (for both the Near-Term Project and Buildout Project) would typically consist of existing DDSD staff making inspections approximately four times a year. Staff would periodically operate vacuum /air release valves, blowoffs, and exercise valves along the pipeline.

2.6 Right-of-Way Issues / Permits Required

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

- Cities of Pittsburg and Antioch: Encroachment and Excavation Permit, Street Work Permit
- California Department of Transportation (Caltrans): Encroachment Permit
- San Francisco Bay Area Air Quality Management District (BAAQMD): General Permit to Construct
- RWQCB Amended National Pollutant Discharge Elimination System (NPDES) Permit
- California Department of Fish and Wildlife (CDFW⁷) Section 1602 Streambed Alteration Agreement

The Project has been sited to avoid direct impact on wetlands and sensitive habitats, including those that could support special status species. In addition, mitigation would be incorporated into the Project to avoid or minimize the potential indirect effects on habitat or sensitive species, such as erosion or noise. Therefore, no impact or significant impact is expected to these resources and no permits from the US Army Corps of Engineers (USACE), US Fish and Wildlife Service (USFWS), or National Marine Fisheries Service (NMFS), or CDFW are expected to be required for wetlands or endangered species at this time. These agencies received the Draft IS/MND for review. DDSD would continue to coordinate with these agencies to confirm that no permits are required.

⁷ Formerly the California Department of Fish and Game (CDFG)

Chapter 3 Environmental Checklist

1. **Project Title:** DDSD Recycled Water System Expansion Project
2. **Lead Agency Name:** Delta Diablo Sanitation District (DDSD)
3. **Contact Person and Phone Number:** Thanh Vo
Delta Diablo Sanitation District
2500 Pittsburg-Antioch Highway
Antioch, CA 94509
(925) 756-1949
4. **Project Location:** The project encompasses portions of the cities of Antioch and Pittsburg, and unincorporated Contra Costa County
5. **Project Sponsor's Name:** Delta Diablo Sanitation District
6. **General Plan Designation:** Storage Tank sites are designated Industrial; pipelines are located in streets.
7. **Zoning:** Storage Tank sites are zoned General Industrial (IG); pipelines are located in streets.
8. **Description of Project:** The proposed project would expand and optimize DDSD's existing recycled water system, and would include installation of new pipelines, rehabilitation of existing pipelines, construction of a new storage tank, and other improvements at the existing Recycled Water Facility.
9. **Surrounding Land Uses and Setting.** The storage tanks would be located in an industrial area. Pipelines in City streets traverse residential, commercial, public/institutional (including parks and schools) and industrial uses.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**
 - California Department of Fish and Wildlife: Section 1602 Streambed Alteration Agreement
 - California Department of Transportation: Encroachment Permit
 - Regional Water Quality Control Board: NOI for coverage under National Pollutant Discharge Elimination System (NPDES) General Permit; Amended NPDES Permit
 - San Francisco Bay Area Air Quality Management District (BAAQMD): General Permit to Construct
 - Cities of Pittsburg and Antioch: Encroachment and Excavation Permit, Street Work Permit

Environmental Factors Potentially Affected

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

- | | | |
|---|--|---|
| <input type="checkbox"/> Land Use | <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Wind and Shadow | <input checked="" type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Population and Housing | <input checked="" type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Hazards/Hazardous Materials |
| <input checked="" type="checkbox"/> Cultural and Paleo. Resources | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mineral/Energy Resources |
| <input type="checkbox"/> Transportation and Circulation | <input type="checkbox"/> Public Services | <input type="checkbox"/> Agricultural and Forestry Resources |
| <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Greenhouse Gas Emissions |
| <input type="checkbox"/> Environmental Justice | <input type="checkbox"/> Indian Trust Assets | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

 Signature

 Date

 Printed Name

 For

3.1 Introduction

Using a modified CEQA Environmental Checklist Form as presented in Appendix G of the CEQA Guidelines (14 CCR §15000 et seq.) as a framework, with the addition of “Environmental Justice,” which is required in the NEPA analysis pursuant to Presidential Executive Order (EO) 12898, this section identifies the potential environmental impacts of the Proposed Project/Action. Furthermore, the analysis includes federal “cross-cutting regulations” in compliance with State Water Resources Control Board (SWRCB) and U.S. Environmental Protection Agency (USEPA) guidance for federal environmental review (“CEQA-Plus”). Each environmental issue analyzed in this document provides brief background information and discussion of the environmental setting or “affected environment” to help the reader understand the conditions present prior to the implementation of the Proposed Project/Action. The effects of the proposed Project/Action are defined as changes to the environmental setting or “affected environment” attributable to individual project components or operations. The terms “effect” and “impact” are synonymous as used herein (40 CFR 1508.8).

This document evaluates both the project-level (Near-Term Project) and program-level (Buildout Project) components. Where there are differences in impacts, they are separately discussed under different headings. However, where the environmental impacts are similar, the discussions of effects have been combined. For most of the environmental resource topics, particularly as they relate to construction effects, the discussions of impacts under the Near-Term Project and Buildout Project have been combined.

3.2 Environmental Impact Designations

The draft environmental document is intended to inform the public of the potential impacts or benefits that would result from implementation of the proposed Project/Action. Therefore, this document applies a set of significance criteria for each issue area to determine potential effects and appropriate mitigation measures/environmental commitments. For this checklist, the following designations are used to distinguish between levels of significance of potential impacts to each resource area in accordance with CEQA Guidelines:

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

3.3 Mitigation Measures / Environmental Commitments

CEQA and NEPA require that a distinction be made between mitigation measures that are included in the proposed Project/Action and other measures proposed by the lead, responsible, or trustee agencies, or other persons that are not included but that the lead agency determines could reasonably be expected to

reduce adverse impacts if required as conditions of project approval. Mitigation measures presented in this environmental document, proposed by the lead agencies, would be implemented to reduce potential impacts to less-than-significant levels. Compliance would occur through implementation of a Mitigation Monitoring and Reporting Program. These mitigation measures are also considered environmental commitments, as discussed further in Section 3.23.5.

The following sections provide analyses of potential impacts for each resource area, determine the levels of potential environmental impact for each area, and present mitigation measures/environmental commitments, where needed, to reduce potential environmental impacts to less than significant.

3.4 Aesthetics

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

Discussion

Setting/Affected Environment

The proposed Project/Action is located in Contra Costa County, within the cities of Pittsburg and Antioch and a portion of unincorporated County. The visual quality of the proposed Project/Action area is defined by an urban setting consisting of residential, commercial, and industrial uses bounded by the Delta to the north and hills to the south. There are no designated scenic vistas or scenic highways located within the Project/Action area. Highway 160, east of the Project/Action area, is considered an Eligible State Scenic Highway (not officially designated). The nearest proposed above-ground facilities from this highway are located more 4.5 miles to the west (*i.e.*, proposed improvements at the RWF).

Figure 3-1 and **Figure 3-2** show the existing visual character of the RWF site, and the site adjacent to LMEC where the proposed storage tank would be located, respectively. The visual quality is defined by industrial uses in the vicinity of the site, including facilities related to a power plant and an existing storage tank.

Figure 3-1: Proposed Storage Tank Site Option 1 – RWF



View looking south at an existing storage tank. The DEC is to the right (west)

Figure 3-2: Proposed Storage Tank Site Option 2 – Adjacent to LMEC



View looking south from E. 3rd Street.

Structures associated with industrial facilities are located to the left and right (east and west)

Impacts/Environmental Consequences

a, b) *Near-Term Project*

The proposed components under the Near-Term Project consist of underground pipelines and vaults located beneath roadways/disturbed areas and above-ground structures located within

industrial areas. Once constructed, buried pipelines would not be visible. Above-ground facilities would be visible once constructed, but they would integrate visually with the surrounding industrial uses. Specifically, the proposed 90-foot diameter, 30-foot, steel storage tank would be located either on vacant parcels immediately adjacent to the LMEC (see **Figure 2-3**) or within the RWF (see **Figure 2-4**). The tank would integrate visually with other surrounding facilities (*i.e.*, buildings and tank) that already exist at the LMEC and RWF (see **Figure 3-1** and **Figure 3-2**). Similarly, the up to 30-foot radio tower would blend in with the tank and surrounding uses. As there are no scenic vistas or scenic highways in the vicinity of the proposed Project/Action area, and the Near-Term Project would either be buried underground or integrated with surrounding industrial uses, the proposed Project/Action would not have any adverse effect on a scenic vista or substantially damage scenic resources within a state scenic highway. Thus, no impact would occur.

Buildout Project

The underground pipelines under the Buildout Project would be similar to the Near-Term Project. Above-ground structures for the Buildout Project would consist of a pump station, facilities associated with the additional treatment process, and a HPWTF located on currently vacant land within the RWF. Similar to the above-ground facilities under the Near-Term Project, these above-ground structures would integrate with the existing industrial uses at the site. As there are no scenic vistas or scenic highways in the vicinity of the proposed Project/Action area, and the Buildout Project would either be buried underground or integrated with surrounding industrial uses, no impact would occur.

c) *Near-Term Project and Buildout Project*

Construction of the proposed Project/Action would be visible from surrounding land uses and would temporarily alter the existing visual character and quality of the proposed Project/Action area and vicinity, particularly where the proposed facilities are located within residential and commercial land uses. Specifically, the visual character in and around the proposed and rehabilitated pipelines would be temporarily modified due to the presence of construction equipment and material, stockpiles of soil, and construction-related vehicles. The underground components would not be visible to the public once they have been installed. As such, the alteration of visual quality would be short term and intermittent, lasting the duration of construction activities (up to 3.5 months for the Near-Term Project and 18 months for the Buildout Project). The actual pipeline installation at any one segment would be even shorter, depending on the length of the pipeline (pipeline installation would occur at a rate of approximately 100 feet per day). Due to the temporary nature of construction, pipeline installation would not substantially degrade the existing visual character or quality of the sites and their surroundings.

Where above-ground facilities are proposed, the visual character would be permanently altered. Temporary modifications of the visual quality during construction are similar to those described above for pipeline component. Permanent alteration is associated with the inclusion of structures that were not present before the proposed Project/Action. However, as these facilities (*i.e.*, storage tank, pump station, additional treatment process, and HPWTF) would be located in an area with similar structures, they would integrate visually with surrounding land uses. Thus, the placement of above-ground facilities would not substantially degrade the existing visual character or quality of the sites and their surroundings.

The use of recycled water by potential customers for non-potable uses, specifically landscape irrigation, would not degrade the visual character of the site or surrounding environment. Because recycled water would replace existing potable water to meet customers' irrigation needs, the visual quality of the irrigated lands would remain the same.

d) *Near-Term Project*

Construction of the proposed Project/Action would occur primarily during the daytime hours, although nighttime construction may be necessary for pipeline connections or other work activities. The presence of exterior lights would create a new temporary light source that would otherwise not be present. This light may be visible from surrounding roadways and residential land uses. The creation of a new, temporary light source would be considered significant, but impacts would be reduced to a less-than-significant level with the implementation of **Mitigation Measure AES-1**, which would require all exterior, construction-related lights to be directed downward and oriented away from sensitive uses and from drivers on adjacent roadways.

The proposed Project/Action would involve the construction of a new above-ground storage tank that would be located adjacent to the LMEC or within the RWF. The tank would require permanent exterior lighting for security and facility maintenance purposes. Depending on the building materials and the orientation of the exterior lighting, a new source of light and glare may be created. However, neither of the proposed tank locations is located in areas where the new source of light and glare would have an adverse effect. The site adjacent to LMEC is located in an industrial area surrounded by heavy industrial facilities, include the LMEC power plant; it is located more than 2,000 feet from residences to the south. The RWF is also located in an industrial area adjacent to the DEC power plant; the nearest residences are located more than 4,000 feet to the south. Although the Pittsburg-Antioch Highway, a major thoroughfare, is located south of the RWF, views of the proposed storage tank would be blocked by the existing tank. As such, the potential for light and glare created by the above-ground structures would be less than significant. However, **Recommended Measure AES-2** is recommended to ensure that all light is directed downward and building materials and/or finishes would minimize light and glare effects.

Buildout Project

Impacts associated with nighttime construction would be similar to that described under the Near-Term Project. **Mitigation Measure AES-1** would be required to reduce impacts to a less-than-significant level. Impacts associated with implementation of above-ground structures at the RWF would be similar to that described above for the storage tank. While lighting would be needed for security and maintenance purposes, due to its location within an industrial area far away from residences and blocked from nearby roadways by existing facilities, impacts would be considered less than significant. However, **Recommended Measure AES-2** is recommended.

Mitigation Measures

Mitigation Measure AES-1: Construction Lighting. The bid specifications for this Project shall include provisions regarding the installation of exterior lights for construction activities within residential areas or near major roadways. All exterior light used during construction shall be directed downward and oriented to ensure that no light source is directly visible from surrounding uses.

Recommended Measure AES-2: Facility Lighting. To the extent possible, DDSD shall ensure that all permanent exterior lighting is directed downward and oriented away from roadways. In addition, highly reflective building materials and/or finishes shall not be used in the designs for proposed above-ground structures.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.5 Agriculture and Forestry Resources

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

Discussion

Setting/Affected Environment

The proposed Project/Action is located within built-up lands that are not designated Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Agricultural resources are located south and east of the proposed Project/Action area. There are no forestry resources in the vicinity of the proposed Project/Action area.

Impacts/Environmental Consequences

a-e) *Near-Term Project and Buildout Project*

As the proposed Project/Action does not occur within agricultural or forest lands, it would not convert farmland, conflict with existing zoning for agricultural use/forest land, result in the loss/conversion of forest land, or involve other changes in the existing environment which could result in the conversion of Farmland or forest land. No impacts would occur.

Mitigation Measures

None required or recommended.

3.6 Air Quality

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

Discussion

Setting/Affected Environment

The proposed Project/Action area lies within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the local agency responsible for developing and implementing the clean air plan (CAP) for attainment and maintenance of the ambient air quality standards for SFBAAB. The BAAQMD regulates most air pollutant sources, except for motor vehicles, marine vessels, aircraft, and construction equipment, which are regulated by the California Air Resources Board (CARB) or the U.S. Environmental Protection Agency (EPA). State and local government projects are subject to BAAQMD requirements if the sources are regulated by the BAAQMD.

The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required USEPA to establish National Ambient Air Quality Standards (NAAQS), and CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) through the California CAA of 1988. Areas that do not meet the CAAQS for a particular pollutant are considered to be “non-attainment areas” for that pollutant. The SFBAAB is currently designated as an attainment area for carbon monoxide (CO), nitrogen oxides (NO₂), lead (Pb), and sulfur oxides (SO_x), but is a non-attainment area for O₃ and particulate matter (PM₁₀ and PM_{2.5}). The Bay Area Air Quality Management District (BAAQMD) has adopted State and Federal attainment plans for the proposed Project/Action area in the 2010 Clean Air Plan (BAAQMD, 2010). The BAAQMD has also developed the air basin’s input to the State Implementation Plan (SIP), which is required under the CAA for areas that are out of attainment of air quality standards.

CARB implements SIPs for criteria air quality pollutants within the SFBAAB and other air basins throughout California. These implementation plans are based on local General Plan buildout projections. The most current SIP, the 2005 Ozone Strategy, is a comprehensive document that describes how the SFBAAB will achieve compliance with the state one-hour air quality standards for ozone and how the region will reduce transport of ozone and ozone precursors to neighboring air basins.

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

BAAQMD developed the 1999 CEQA Guidelines to assist local jurisdictions and lead agencies in complying with the requirements of CEQA. The CEQA Guidelines were updated in June 2010 to include reference to thresholds of significance adopted by the BAAQMD Board on June 2, 2010, and further updated in May 2011 (BAAQMD 2012). On March 5, 2012, the Alameda County Superior Court issued a writ of mandate ordering the BAAQMD to set aside the criteria pollutant thresholds in its most recent CEQA Guidelines. In view of the court's order, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts and is relying on individual lead agencies to determine the appropriate air quality thresholds of significance to use in its CEQA analysis.

An air quality model was run for the facilities proposed under the Near-Term Project⁸. For the purposes of quantifying emissions, the methodology identified in the 2011 CEQA Guidelines was used. However, the determination of impacts is based on the 1999 CEQA Guidelines. The Roadway Construction Emissions Model (Version 7.1.2, 2012) and CARB Urban Emissions (URBEMIS) model (Version 9.2.4, 2007) were used to quantify construction and operational emissions associated with proposed facilities. The assumptions used for the model run are as follows:

- The estimated acreage disturbed for construction of the proposed Near-Term facilities is 6 acres. Construction of the high purity water treatment facility would not require grading and is thus not included in the acreage of disturbance.
- Consistent with the URBEMIS User's Guide, 25 percent of the total acres disturbed for each construction phase would represent the maximum daily acres disturbed.
- For operations, it was assumed that power for storage tank operation would come from the electrical grid. Only O&M truck trips (less than four times a year) are included in the model run.
- Although the proposed Project/Action includes the use of diesel equipment during the construction phase, it does not include substantial queuing or congregation of diesel-powered vehicles.

Emissions calculated for the Proposed Project/Action were compared to BAAQMD's mass daily thresholds for construction and operational activities for reactive organic gases (ROG), NO_x, SO₂, CO, PM₁₀, and PM_{2.5}. **Table 3-1** provides a summary of the maximum daily air emissions that would be generated from construction and operation of the Proposed Project/Action, assuming the incorporation of basin control measures. The model results are included in **Appendix A**.

⁸ An air quality model was not run for the Buildout Project as the proposed components are being evaluated at a programmatic level because the details of the components are only conceptual and speculative in nature at this time.

Table 3-1: Maximum Daily Air Emissions Generated for Near-Term Project

Project Component	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Construction Emission (pounds/day)						
Storage Tank ¹	2.62	21.25	12.22	0.00	5.01	1.98
Pipeline ²	4.0	46.8	19.1	0.00	3.1	2.1
Total ⁴	6.62	68.5	31.32	0.00	8.11	4.08
BAAQMD Thresholds	None					
Significant Construction Emissions ³	No	No	No	No	No	No
Annual Operation Emission (tons/year)						
Storage Tank ¹	0.01	0.02	0.13	0.00	0.03	0.00
Pipeline	0.00	0.00	0.00	0.00	0.00	0.00
Total ⁴	0.01	0.02	0.13	0.00	0.03	0.00
BAAQMD Thresholds	15	15	N/A	N/A	15	N/A
Significant Construction Emissions ³	No	No	No	No	No	No

Notes: ¹ Assumes incorporation of basic control measures per URBEMIS model.

² RoadMod was used for estimating construction emissions from the proposed pipeline

³ Please see discussion item b) below.

⁴ The High Purity Water Treatment Facility is now proposed to be included as a Near-Term project. Installation of the treatment facility is not expected to increase construction emissions because no grading would be required and no heavy construction is needed. The facility would be installed as a package plant with modules installed and connected with minimal effort. Operation of the facility would not generate additional operational emissions.

Impacts/Environmental Consequences

This analysis was based upon modeling that was completed for the Proposed Project/Action to assess conformity with the Clean Air Act, the BAAQMD’s air quality significance thresholds, and other air quality regulations as required under CEQA. The model results are included as **Appendix A** of this document.

a) *Near-Term and Buildout Projects*

General estimated basin-wide construction-related emissions are included in the BAAQMD emission inventory and are not expected to prevent attainment or maintenance of the ozone, particulate matter, and carbon monoxide standards within the Bay Area. Therefore, construction of the project would not be inconsistent with air quality plans, impacts from the proposed Project/Action would be less than significant, and no mitigation would be required.

With respect to conformity with the Federal CAA, the proposed Project/Action’s potential emissions are below minimum thresholds and are well below 10 percent of the area’s inventory specified for each criteria pollutant designated non-attainment or maintenance for the Bay Area. As such, further general conformity analysis is not required.

b) *Near-Term Project*

Project construction would generate fugitive dust and other criteria pollutant, primarily through excavation activities, construction equipment exhaust and haul truck trips, and related construction worker commute trips. This impact would be temporary on a local level, proceeding

at a rate of approximately 200 feet per day. Regionally, construction would occur over an approximately 3.5-month period. **Table 3-1** shows anticipated criteria pollutant emissions that would be generated from implementation of the Near-Term Project, with basic control measures implemented. Because residential uses occur along the proposed pipeline alignments, unmitigated construction dust emissions could result in significant local effects. According to the 1999 CEQA Guidelines, BAAQMD recommends that determination of significance with respect to construction impacts be based not on quantification of emissions and comparison to thresholds, but upon inclusion of feasible control measures for PM₁₀. Thus, to reduce potentially significant local effects to less-than-significant levels, **Mitigation Measure AIR-1**, which includes the BAAQMD basic control measures, would be required. Implementation of these measures would ensure that violations of air quality standards or substantial contribution to an existing or projected air quality violation would be reduced to a less-than-significant level.

Operation of the proposed pipelines and storage tank would not generate any criteria pollutant emissions. Operation of the storage tank would require minimal energy (for instrumentation) supplied by the electric grid. Truck travel associated with O&M of the facilities would generate minimal criteria pollutant emissions, as shown in **Table 3-1** above. As such, operations of the Buildout Project would not result in the violation of any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

Buildout Project

Modeling of the construction- and operation- related criteria pollutant emissions was not performed for the Buildout Project. Similar to the discussion above for the Near-Term Project, construction would generate fugitive dust in the vicinity of residential uses. Although construction activities would extend for longer periods of time (18 months), construction near residential uses would be spread out over the proposed Project/Action area, and generally occur at the same rate (approximately 200 feet per day). Impacts would be considered potentially significant, and **Mitigation Measure AIR-1** would be required to reduce these impacts to a less-than-significant level.

With respect to operation, the proposed pump station, tertiary treatment process, and the HPWTF would operate by electricity. Because they are powered electrically, they would not emit localized emissions. However, in the event of a power outage, proposed backup generators would be used. Given the short-term nature of such operation, the Buildout Project is not expected to result in violation of any air quality standard or to contribute substantially to an existing or projected air quality violation. Thus, impacts would be less than significant.

c) *Near-Term and Buildout Projects*

The SFBAAB, within which the Proposed Project/Action would be located, is currently designated as a non-attainment area for O₃ and particulate matter. As described above, basic control measures recommended by BAAQMD (see **Mitigation Measure AIR-1**) would be implemented to reduce fugitive dust generation and associated impacts to sensitive receptors. Therefore, PM₁₀ and NO_x emissions associated with operation and construction of the proposed Project/Action would not be considered significant. In this context, the proposed Project/Action would not result in a cumulatively considerable net increase of any criteria air pollutants for which the SFBAAB is in non-attainment. Impacts are considered less than significant and no mitigation is required.

d) *Near-Term Project*

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Some population groups, such as children, the elderly, and acutely ill and

chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than others. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units.

The proposed Project/Action is located within 0.25 miles of residences, schools, and potentially other sensitive receptors, as described in Section 3.13, Land Use. The exhaust of large, heavy-duty diesel-powered equipment, which would be used during construction, is known to contain PM10. PM10 is a reference pollutant used to correlate with carcinogenic risk. Because the proposed Project/Action includes installation of proposed pipelines near residential neighborhoods and other sensitive receptors, the proposed Project/Action could potentially expose sensitive receptors to PM10 and NOx emissions. However, as construction would be limited in duration and scale, the proposed work would be distributed in a manner that reduces substantial queuing or congregation of diesel-powered vehicles, and implementation of standard dust control measures would be required (see **Mitigation Measure AIR-1**), criteria pollutant emissions and associated impacts to sensitive receptors would be reduced. Thus, the proposed Project/Action is not anticipated to emit carcinogenic or toxic air contaminants (TAC) that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million. Therefore, impacts would be less than significant.

Buildout Project

Proposed pipelines are located in the vicinity of sensitive receptors. Potential impacts would be considered less than significant for similar reasons described for the Near-Term Project. In addition, the use of a backup generator would occur only during an emergency. Given its distance from sensitive receptors and the infrequency of use, its use would result in a less-than-significant air quality impact on sensitive receptors.

e) *Near-Term and Buildout Projects*

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

Due to the nature of the construction activities and the relatively small footprint of the various construction sites for the proposed Project/Action, there would be few pieces of diesel-powered equipment operating simultaneously during construction. Further, operations would not be anticipated to require the use of diesel-powered equipment, except for the use of gas-powered generators during short-term emergency situations under the Buildout Project. The RWF is located more than 4,000 feet from the nearest sensitive receptors.

Thus, construction of the proposed Project/Action would create a less than significant impact with respect to objectionable odors, and no mitigation is required.

Mitigation Measure

Mitigation Measure AIR-1: Dust Abatement Program (Near-Term and Buildout Projects)

The bid specifications for this Project shall include provisions regarding dust control. Specifically, a dust abatement program shall be implemented to reduce fugitive dust generation. The program shall include the following basic control measures:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access road, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.7 Biological Resources

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

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community | | | | |

Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Discussion

Setting/Affected Environment

The proposed Project/Action area is mainly located in developed areas of Antioch and Pittsburg, and is surrounded by residential, commercial, industrial, and recreational (parks, golf course) uses. A majority of the proposed new pipelines would be constructed within existing paved roadways. Other facilities would be constructed in already disturbed areas at the RWF. The proposed storage tank would either be constructed in a previously disturbed area at the RWF or in annual grassland adjacent to the LMEC site. Land cover types in the vicinity of the proposed Project/Action area consist of annual grassland, freshwater marsh, willow riparian woodland, canal, perennial drainage, intermittent drainage, landscaped areas, and urban.

Because of its developed condition, the proposed Project/Action area contains limited amounts of native habitat. Much of the proposed Project/Action area is devoid of natural vegetation communities and does not support high integrity wildlife habitat. In addition, the majority of the proposed Project/Action area supports landscaping plants and other urbanized species of plants (including many non-native plants) and animals. However, three of the proposed components are located along the western portion of West 10th Street (Pittsburg/Antioch Highway) adjacent to large areas of undeveloped grassland, freshwater marsh, willow riparian woodland, and several waterways (Kirker Creek/Dowest Slough, Contra Costa Canal, and an unnamed tributary of the Contra Costa Canal). Additionally, an unnamed canal is located at the Antioch Little League and Antioch Fairgrounds sites, and a manmade intermittent drainage is located at the Rancho Medanos Junior High site. The waterways, and possibly the unnamed canal, would be considered waters of the U.S., under the jurisdiction of the USACE.

A Biological Assessment (BA) prepared for the proposed Project/Action (ICFI 2013a) determined that while there are a number of federal and state-listed species in the general vicinity, only three species have the potential to occur in the proposed Project/Action area and could be affected by the proposed Project/Action:

- California tiger salamander (CTS) – a federally listed threatened species
- California red-legged frog (CRLF) – a federally listed threatened species and a California species of special concern
- Giant garter snake (GGS) – a federally and state listed threatened species

The proposed Project/Action area does not fall within USFWS-designated critical habitat for California tiger salamander or CRLF. USFWS has not designated critical habitat for GGS.

California Tiger Salamander

Inside the proposed Project/Action area, suitable upland dispersal habitat is present within the RWF tank site. Suitable aquatic habitat for California tiger salamander is located outside of the proposed Project/Action area, within the RWF pond.

California Red-Legged Frog

Inside the proposed Project/Action area, suitable aquatic habitat for California red-legged frog is present within Kirker Creek and the unnamed tributary of the Contra Costa Canal. Suitable habitat also occurs within the pond at the RWF site, which is outside but near the proposed Project/Action area. Suitable upland habitat is present in grassland areas surrounding and between these sites.

Giant Garter Snake

Suitable aquatic habitat for giant garter snake inside the proposed Project/Action area includes Kirker Creek at the pipeline rehabilitation site, the unnamed tributary of the Contra Costa Canal near the DOW wetlands site, and the canal at the Antioch Little League and Antioch Fairgrounds sites. Grassland areas surrounding these sites provide suitable upland habitat for GGS.

Other Sensitive Species

The annual grasslands within and adjacent to the proposed Project/Action area also provide potential nesting habitat for special status bird species such as burrowing owl (*Athene cunicularia*, a state species of special concern). Small and large trees, mostly horticultural varieties, provide nesting habitat for common bird species along most of the pipeline route. Other special status birds, including ferruginous hawk (*Buteo regalis*, Federal species of concern) and white-tailed kite (*Elanus leucurus*, Federal protected species) may forage in or near the project site.

Antioch Dunes National Wildlife Refuge

The Antioch Dunes National Wildlife Refuge is located along the southern shore of the San Joaquin River north of Wilbur Road in Antioch. The Refuge provides protection for three endangered species: Lange's Metalmark butterfly, Antioch Dunes evening primrose and Contra Costa wallflower (USFWS, No date). The refuge and a few acres of surrounding lands contain most of the remaining habitat for these three species and are all that remain of a nine kilometer stretch of sand dunes formed during the glaciation periods.

East Contra Costa Habitat Conservation Plan

The City of Pittsburg is one of several agencies involved in the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan). The Plan is intended to provide an effective framework to protect natural resources in eastern Contra Costa County, and streamline the environmental permitting process for impacts on endangered species. The city of Antioch is not a participant to the HCP/NCCP. All ground-disturbing activities within the urban development area, which includes Pittsburg, are intended to be covered by this Plan.

Impacts/Environmental Consequences

a) *Near-Term Project*

The proposed Project/Action includes facilities that would be constructed within the vicinity of habitat that could support listed species: CTS, CRLF, and GGS. **Table 3-2** summarizes potential impacts to areas that could provide habitat for listed species. In addition to the listed species shown in **Table 3-2**, annual grassland can support burrowing owl. Large trees that may provide nesting habitat for other sensitive bird species, (e.g., raptors such as the white-tailed kite or ferruginous hawk) are located along busy urban and suburban streets and, therefore, current noise and disturbance by human activities are likely frequent enough that any birds nesting in such trees would be acclimated to such disturbances and are not likely to be affected by the proposed work activities. No tree removal is proposed as part of the propose Project/Action so there would be no direct disturbance to nesting birds,

In most cases, habitat is adjacent to the proposed Project/Action construction area and would not be directly affected by proposed facilities, so there is no acreage affected. However, there is a potential for presence of sensitive species in close proximity to the construction area.

Table 3-2: Effects of the Proposed Action on Habitat for Federally Listed Species

Species ¹	Suitable Habitats	Site	Temporary Effects (acres)	Permanent Effects (acres)
Aquatic				
CRLF	Kirker Creek Unnamed Tributary of Contra Costa Canal	Pipeline Rehab ²	0	0
		DOW wetlands	0	0
GGS	Kirker Creek Unnamed Tributary of Contra Costa Canal Unnamed canal	Pipeline Rehab	0	0
		DOW wetlands	0	0
		Antioch Little League and Fairgrounds	0	0
Upland				
CTS (dispersal)	Annual grassland	Storage tank ³	0.45	0.55
CRLF	Annual grassland	Pipeline Rehabilitation	1.0	0
		Storage tank	0.45	0.55
GGS	Annual grassland	Pipeline Rehab	0.45	0.55
		DOW wetlands	0	0
		Antioch Little League and Fairgrounds	0	0

Notes: ¹CTS = California tiger salamander; CRLF = California red-legged frog; GGS = Giant garter snake

² Pipeline Rehab = Pipeline Rehabilitation

³The storage tank would be constructed either at the site adjacent to LMEC or at the RWF site. The largest site is at the one adjacent to LMEC, where the possible area of disturbance would total up to 1 acre, of which 0.45 acre would be temporary construction area, and 0.55 acre would be permanently covered by the storage tank and surrounding pad. Construction of the HPWTF at the RWF site, could be combined with the potential storage tank at that site so that the acreage of affected habitat would not increase.

Source: ICFI 2012a

CTS

Construction of the new storage tank at the RWF has the potential to affect dispersing CTS. Although construction may occur beyond the dry season at the RWF, the installation of sediment and construction barrier fencing (**Mitigation Measure BIO-3**), locating staging areas away from aquatic habitat (**Mitigation Measure BIO-4**), implementing sediment and contaminant best management practices (BMPs) as required by NPDES permit, preparing a Construction Risk Management Plan (**Mitigation Measure BIO-5**), and monitoring construction at the RWF during the rainy season (**Mitigation Measure BIO-7**) would reduce the potential for impacts to occur at this location.

Effects on dispersing CTS would be avoided at Kirker Creek by conducting pipeline rehabilitation activities during the dry season (May 1–October 1) (**Mitigation Measure BIO-2**). Approximately 0.45 acre and 0.55 acre of upland dispersal habitat would be temporarily and permanently affected, respectively, at the RWF tank site. Because there is a low potential for CTS to occur in the proposed Project/Action area, and the effects on upland dispersal habitat are small, no compensation is proposed. No other direct effects on CTS salamander are expected.

CRLF

Based on the quality of habitat present, there is a low potential for injury or mortality of CRLF at the Kirker Creek pipeline rehabilitation site. All work at the DOW wetlands site would be within the paved roadway; consequently there would be no direct effects on the unnamed tributary of the Contra Costa Canal or CRLF at this site. Rehabilitation of the pipeline along Kirker Creek and construction of the new storage tank at the RWF have the potential to affect dispersing CRLF. Although construction may occur beyond the dry season at the RWF, the installation of sediment and construction barrier fencing (**Mitigation Measure BIO-3**), locating staging areas away from aquatic habitat (**Mitigation Measure BIO-4**), implementing sediment and contaminant best management practices (BMPs) as required by NPDES permit, preparing a Construction Risk Management Plan (**Mitigation Measure BIO-5**), and monitoring construction at the RWF during the rainy season (**Mitigation Measure BIO-7**) would reduce the potential for impacts to occur at this location.

Potential injury or mortality of CRLF would be avoided by conducting all construction activities at the Kirker Creek pipeline rehabilitation site during the dry season (May 1–October 1) (**Mitigation Measure BIO-2**).

Because no work would occur within the creek, there would be no loss of aquatic habitat from rehabilitation of the pipeline along Kirker Creek.

Rehabilitation of the pipeline along Kirker Creek has the potential to result in disturbance or degradation of the creek if soil or other materials are sidecast or fall into the creek. Fuel or oil leaks or spills adjacent to aquatic habitat could also cause degradation of habitat. These potential effects would be avoided by installing sediment and construction barrier fencing (**Mitigation Measure BIO-3**), locating staging areas away from aquatic habitat (**Mitigation Measure BIO-4**), implementing sediment and contaminant best management practices (BMPs) as required by NPDES permit, and preparing a Construction Risk Management Plan (**Mitigation Measure BIO-5**).

Approximately 0.45 acre and 0.55 acre of upland dispersal habitat would be temporarily and permanently affected at the RWF tank site. Approximately 1.0 acre of upland habitat along Kirker Creek would be temporarily disturbed during pipeline installation. Disturbed areas would be returned to pre-project or better conditions (**Mitigation Measure BIO-9**). Because there is a low potential for CRLF to occur in the proposed Project/Action area, and permanent effects on upland dispersal habitat are small, no compensation is proposed.

Implementation of **Mitigation Measure BIO-1** (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel and Implement General Requirements), **Mitigation Measure BIO-6** (Conduct Preconstruction Surveys for CRLF and GGS), and **Mitigation Measure BIO-8** (Provide Escape Ramps or Cover Open Trenches at the End of Each Day to Avoid Entrapment of Listed Species) would further reduce and avoid potential effects on California red-legged frog.

GGS

Based on the quality of habitat present, there is a low potential for injury or mortality of GGS at the Kirker Creek pipeline rehabilitation site or at the unnamed canal at the Antioch Little League and Antioch Fairgrounds sites. All work at the DOW wetlands site would be within the paved roadway; consequently there would be no direct effects on GGS or the unnamed tributary of the Contra Costa Canal. Potential injury or mortality of GGS would be avoided by conducting all construction activities at the Kirker Creek pipeline rehabilitation site and the Antioch Little League and Antioch Fairgrounds sites during the dry season (May 1–October 1) (**Mitigation Measure BIO-2**).

Because no work would occur within the creek or canal channels, there would be no loss of aquatic habitat from rehabilitation of the pipeline along Kirker Creek or from new pipeline construction at the Antioch Little League and Antioch Fairgrounds sites.

Rehabilitation of the pipeline along Kirker Creek and new pipeline construction at the Antioch Little League and Antioch Fairgrounds sites has the potential to result in disturbance or degradation of the creek or canal if soil or other materials are sidecast or fall into the creek. Fuel or oil leaks or spills adjacent to aquatic habitat could also cause degradation of habitat. These potential effects would be avoided by installing sediment and construction barrier fencing (**Mitigation Measure BIO-3**), locating staging areas away from aquatic habitat (**Mitigation Measure BIO-4**), implementing sediment and contaminant BMPs as required by NPDES permit, and preparing a Construction Risk Management Plan (**Mitigation Measure BIO-5**).

Approximately 1.0 acre of upland habitat along Kirker Creek would be temporarily disturbed during pipeline installation. There would be no permanent or temporary effects on upland habitat for GGS at either the DOW wetlands site or the Antioch Little League and Antioch Fairgrounds sites because all work would occur within paved, graveled, or landscaped areas. Disturbed areas at the Kirker creek pipeline rehabilitation site would be returned to pre-project or better conditions (**Mitigation Measure BIO-8**).

Implementation of **Mitigation Measure BIO-1** (Conduct Mandatory Biological Resources Awareness Training for All Project Personnel and Implement General Requirements), **Mitigation Measure BIO-6** (Conduct Preconstruction Surveys for CRLF and GGS), and **Mitigation Measure BIO-8** (Provide Escape Ramps or Cover Open Trenches at the End of Each Day to Avoid Entrapment of Listed Species) would further reduce and avoid potential effects on giant garter snake.

Burrowing Owl

Although the annual grassland in the proposed Project/Action area appears to be of limited value as a potential nesting site for burrowing owl, there is a potential that construction of proposed elements within annual grassland, such as the storage tank, could adversely affect burrowing owls, if they establish nests within the construction zone. Project activities, such as earthmoving, grading, and trenching, during the bird nesting season (February 1 and August 31) affect burrowing owls if any are present within the construction zone. If Project/Action implementation occurs between February 1 and August 31, then the measures listed under **Mitigation Measure BIO-10** should be executed to reduce potential impacts to burrowing owls to a less-than-significant level. If possible, ground-disturbance activities (such as trenching) should begin before February 1 in areas near undeveloped grassland and should occur continuously throughout the construction period or at least through the nesting season (August 31) to prevent bird species from establishing nests within the work area.

With implementation of mitigation measures identified above, impacts to CTS, CRLF, GGS, and burrowing owl would be less than significant.

Buildout Project

Buildout facilities would also be located at the existing WWTP, and thus would be constructed in proximity to the pond at the RWF site. Buildout pipelines would be located within city streets, but would also include one crossing of Kirker Creek, where the creek crosses the Pittsburg-Antioch Highway. Buildout components would thus have impacts similar to the Near-Term Project, and could potentially affect CTS, CRLF, and GGS. Buildout components would be subject to the same mitigation as the Near-Term Project, and impacts are thus expected to be less than significant. In addition, the rehabilitated pipeline under the Buildout Project would be located along the railroad ROW in the vicinity of the Antioch Dunes National Wildlife Refuge.

The Refuge protects three endangered species (Lange's Metalmark butterfly, Antioch Dunes evening primrose and Contra Costa wallflower) that inhabit the dunes. Rehabilitation activities would require construction pits every 1,000 to 2,000 feet along the alignment. While it is highly unlikely the plants would occur along the alignment due to the absence of dunes, to ensure impacts to these species are less than significant, a preconstruction survey for these species would be required (see **Mitigation Measure BIO-11**). In addition, the mitigation measure would also require avoidance of any areas that could potentially support these species.

b, c) *Near-Term Project*

No work would occur within creek or canal channels; thus, there would be no loss of riparian habitat or waters of the U.S. from rehabilitation of the pipeline along Kirker Creek or from new pipeline construction at the Antioch Little League and Antioch Fairgrounds sites. No facilities would be constructed in critical habitat for any species of concern.

Rehabilitation of the pipeline along Kirker Creek and new pipeline construction at the Antioch Little League and Antioch Fairgrounds sites has the potential to result in disturbance or degradation of the creek or canal if soil or other materials are sidecast or fall into the creek. Fuel or oil leaks or spills adjacent to aquatic habitat could also cause degradation of habitat. These potential effects would be avoided by installing sediment and construction barrier fencing (**Mitigation Measure BIO-3**), locating staging areas away from aquatic habitat (**Mitigation Measure BIO-4**), implementing sediment and contaminant BMPs as required by NPDES permit, and preparing a Construction Risk Management Plan (**Mitigation Measure BIO-5**). With implementation of mitigation, impacts would be less than significant.

Buildout Project

Although no facilities would be constructed in critical habitat for any species of concern, construction of the pipeline crossing Kirker Creek has the potential to affect riparian habitat and jurisdictional waters of the U.S. To ensure that impacts to riparian habitat are less than significant, the crossing would be constructed in such a way as to avoid work within the riparian zone of the creek (**Mitigation Measure BIO-12**). With avoidance of jurisdictional areas and associated riparian habitat through implementation of mitigation, impacts would be reduced to a less-than-significant level.

d) *Near-Term and Buildout Projects*

The majority of the proposed facilities consist of pipelines which would be buried within existing roadways; the remainder of the facilities would be constructed in developed areas either at the RWF or near LMEC. Neither type of facility would be expected to affect migratory fish or wildlife species. No migratory corridors for terrestrial species have been identified in the proposed Project/Action area, and the Project/Action would not impede migration of fish within Kirker Creek. There would be no impact.

e) *Near-Term and Buildout Projects*

The City of Antioch has a tree protection ordinance, but no trees are expected to be removed, so there would be no impact. The City of Pittsburg does not have a tree protection ordinance. No other local policies or ordinances would be applicable to the proposed Project/Action.

f) *Near-Term and Buildout Projects*

The proposed Project/Action area is within the area covered by the East Contra Costa County HCP/NCCP, but is not within an area identified for habitat preservation. There would be no conflict with the provisions of the HCP/NCCP.

Mitigation Measures

Mitigation Measure BIO-1: Conduct Mandatory Biological Resources Awareness Training for All Project Personnel and Implement General Requirements (Near-Term and Buildout Projects).

Before any ground disturbing work (including vegetation clearing and grading) occurs in the construction area, a USFWS approved biologist shall conduct a mandatory biological resources awareness training for all construction personnel about federally listed species that could potentially occur on site (California tiger salamander, California red-legged frog, and giant garter snake). The training shall include the natural history, representative photographs, and legal status of each federally listed species and avoidance and minimization measures to be implemented. Proof of personnel attendance shall be provided to USFWS upon request. If new construction personnel are added to the proposed Project/Action, the contractor shall ensure that the new personnel receive the mandatory training before starting work. The subsequent training of personnel can include videotape of the initial training and/or the use of written materials rather than in-person training by a biologist. Requirements that shall be followed by construction personnel are listed below.

- Where suitable habitat is present for listed species, DDSD shall clearly delineate the construction limits through the use of survey tape, pin flags, orange barrier fencing, or other means, and prohibit any construction-related traffic outside these boundaries.
- Project-related vehicles shall observe a 15-mile-per-hour speed limit on unpaved roads within the limits of construction.
- Project-related vehicles and construction equipment shall restrict off-road travel to the designated construction areas.
- The contractor shall provide closed garbage containers for the disposal of all food-related trash items (*e.g.*, wrappers, cans, bottles, food scraps). All garbage shall be collected daily from the proposed Project/Action area and placed in a closed container that will be emptied weekly at an approved offsite location. Construction personnel shall not feed or otherwise attract fish or wildlife.
- No pets will be allowed in the proposed Project/Action area.
- No firearms will be allowed in the proposed Project/Action area.
- If vehicle or equipment maintenance is necessary, it will be performed in the designated staging areas.
- Any worker who inadvertently injures or kills a federally listed species or finds one dead, injured, or entrapped shall immediately report the incident to the construction manager. The construction manager shall immediately notify the DDSD Project Manager, Dean Eckerson, who will provide verbal notification to the USFWS Endangered Species Office in Sacramento, California within 1 working day of the incident. DDSD shall follow up with written notification to USFWS within 5 working days of the incident. All observations of federally listed species shall be recorded on CNDDDB field sheets and sent to CDFW by DDSD.

Mitigation Measure BIO-2: Conduct Construction Activities during the Dry Season (Near-Term and Buildout Projects).

To avoid potential construction impacts to dispersing California tiger salamanders and California red-legged frogs, work at the Kirker Creek pipeline rehabilitation site shall be conducted during the dry season, between May 1 and October 1. To avoid potential impacts to giant garter snake, work at the Kirker Creek pipeline rehabilitation site, Antioch Little League and Antioch Fairground sites shall also be conducted during the May 1–October 1 timeframe. This is the active period for giant garter snakes, when mortality is less likely to occur. This measure does not apply to the RWF

tank site as work may go beyond October 1 at this site (see **Mitigation Measure BIO-7** below, which applies to this site).

Mitigation Measure BIO-3: Install Sediment Fencing and Construction Barrier Fencing around Aquatic Habitats for Federally Listed Species (Near-Term and Buildout Projects)

DDSD shall install sediment fencing and construction barrier fencing between the work areas and Kirker Creek and the canal at the Antioch Little League and Antioch Fairground sites to protect aquatic habitat for California red-legged frog and giant garter snake, respectively. Sediment and barrier fencing will also be placed along the perimeter of the RWF tank site to prevent California tiger salamanders or California red-legged frogs from entering the work area, particularly for work occurring after October 1. The construction specifications shall require that DDSD retain a qualified biologist to identify the areas that are to be avoided during construction. Before work begins at these four sites, DDSD shall work with a qualified biologist to identify the locations for the sediment and barrier fencing and will place flags or flagging around the areas to be protected to indicate the locations of the barrier fences. The protected area shall be clearly identified on the construction specifications and shall be in place before construction activities are initiated. The construction barrier fencing shall be commercial-quality, woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing shall be tightly strung on posts with a maximum of 10-foot spacing. The fencing shall be maintained throughout the duration of the construction period.

Mitigation Measure BIO-4: Locate Staging Areas Away from Aquatic Habitats for Federally Listed Species (Near-Term and Buildout Projects). To minimize effects on suitable aquatic habitats for California red-legged frog and giant garter snake, staging areas shall be located a minimum of 100 feet from Kirker Creek, the unnamed tributary of the Contra Costa Canal at the DOW wetlands site, and the canal at the Antioch Little League and Antioch Fairgrounds sites.

Mitigation Measure BIO-5: Prepare and Implement a Construction Risk Management Plan (Near-Term and Buildout Projects). Because the proposed Project/Action would result in the disturbance of at least 1 acre, it would require coverage under the SWRCB's National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges Associated with Construction Activity (General Construction Permit). Pursuant to the requisite NPDES General Construction Permit, a project Construction Risk Management Plan, which will include the typical information in a Hazardous Material Spill Prevention Control and Countermeasure Plan, shall be prepared and implemented to establish procedures for transporting, handling, and storing hazardous materials used or encountered and for responding to inadvertent spills to minimize the potential for, and the effects of, spills of hazardous, toxic, or petroleum substances during construction that could affect habitat used by federally listed species. The plan shall describe handling, transporting, and storage procedures for hazardous materials, including any existing contamination encountered in spoil or groundwater; construction site housekeeping practices; and shall identify the parties responsible for inspecting, spill response, and regulatory notifications, as applicable.

Mitigation Measure BIO-6: Conduct Preconstruction Surveys for California Tiger Salamander, California Red-Legged Frog, and Giant Garter Snake (Near-Term and Buildout Projects). To avoid and minimize injury and mortality of California tiger salamander, California red-legged frogs and giant garter snake, DDSD shall retain a qualified wildlife biologist to conduct preconstruction clearance surveys no more than 24 hours before ground disturbance at the RWF tank site (California tiger salamander and California red-legged frog), near Kirker Creek (California red-legged frog) and the Antioch Little League and Fairgrounds sites (giant garter snake). At the RWF tank site, the biologist will survey the grassland area where construction activity will occur for any individuals and new burrows that may contain these species. For the Kirker Creek and the Antioch Little League and Fairgrounds sites, the biologist shall survey the creek/canal and the adjacent upland area where construction activities will occur. Results of the surveys shall be provided to USFWS within 1 day of completing the surveys. If a

California tiger salamander, California red-legged frog or giant garter snake is found, DDSD shall contact USFWS to determine appropriate actions.

Mitigation Measure BIO-7: Monitor Construction Activities at the RWF Tank Site during the Rainy Season

Because construction at the RWF tank site may extend beyond October 1, DDSD will retain a qualified wildlife biologist to monitor construction activities at the work site during the first rain event of the season and thereafter until construction is complete. If a California tiger salamander or California red-legged frog is found, work will immediately stop and DDSD will contact USFWS to determine appropriate actions.

Mitigation Measure BIO-8: Provide Escape Ramps or Cover Open Trenches at the End of Each Day to Avoid Entrapment of Listed Species (Near-Term and Buildout Projects). To avoid entrapment of listed species and thereby preventing injury or mortality of species resulting from falling into trenches, all excavated areas more than 1 foot deep shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday at the Kirker Creek pipeline rehabilitation site, RWF tank site, DOW wetlands site, and Antioch Little League and Antioch Fairground sites.

If escape ramps cannot be provided, then holes or trenches will be covered with plywood or other hard material. DDSD will ensure that holes and trenches are thoroughly inspected for the presence of federally listed species at the beginning of each workday. If any federally listed species become trapped, work shall be stopped and DDSD shall contact the USFWS by phone immediately.

Mitigation Measure BIO-9: Restore Temporarily Affected Habitat for Federally Listed Species (Near-Term and Buildout Projects). DDSD shall restore temporarily disturbed natural areas upon completion of construction activities. Disturbed areas shall be revegetated with native grasses indigenous to the disturbed area. Revegetation shall occur after construction and prior to winter rains to stabilize disturbed areas against erosion.

Mitigation Measure BIO-10: Burrowing Owl and Migratory Bird Avoidance (Near-Term and Buildout Projects). Within 30 days prior to the start of project construction, preconstruction surveys for burrowing owls shall be conducted in areas where construction would occur in annual grassland; surveys for nesting migratory birds and raptors shall be conducted where construction would occur between March 1 and August 31 within 250 feet of trees. If ground-disturbing activities are delayed or suspended for more than 30 days after the survey, the site shall be resurveyed.

Occupied burrows shall not be disturbed during the breeding season (February 1 through August 31) or a method developed in coordination with CDFW to minimize disturbance would be implemented. A 160-foot buffer shall be incorporated around occupied burrows during the non-breeding season (September 1 through January 31), and a 250-foot buffer would be incorporated around occupied burrows during the breeding season. Ground-disturbing activities shall not occur within the buffers.

If occupied burrows are documented and the recommended buffer distances cannot be adequately incorporated, passive owl relocation techniques shall be implemented in coordination with CDFW.

Implementation of the above mitigation measures would reduce potential impacts to less-than-significant levels.

Mitigation Measure BIO-11: Antioch Dunes National Wildlife Refuge (Buildout Project Only). DDSD shall conduct a pre-construction survey for the Lange's Metalmark butterfly, Antioch Dunes evening primrose and Contra Costa wallflower along the rehabilitated pipeline in the vicinity of the Antioch Dunes National Wildlife Refuge before selecting construction pits locations. DDSD shall avoid locating pits in any areas that have the potential to support these species.

Mitigation Measure BIO-12: Trenchless Construction across Kirker Creek (Buildout Project Only).
 DDS D shall construct the Buildout Project pipeline across Kirker Creek using trenchless construction methods to avoid effects on riparian habitat.

3.8 Cultural Resources

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

Discussion

Setting/Affected Environment

A cultural resource inventory of the proposed Project/Action area was conducted in March 2013 (ICFI 2013b). The cultural resources inventory was conducted as a component of compliance with both Section 106 and the California Environmental Quality Act (CEQA). The tasks to accomplish the inventory consisted of pre-field research and archival research. The inventory does not identify the Area of Potential Effect (APE), archaeological or built-environment field surveys of the area of direct effect for the Project, nor contacts with Native American Tribes, references to Section 106 compliance, or any recommendation as to a finding of effect pursuant to 36 CFR Part 800 that are all required as part of a full Section 106 evaluation.

Archaeological or built-environment field surveys of the area of direct effect still have to be done. Reclamation must identify the APE, determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation’s findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties. Reclamation has completed the Section 106 process as outlined in the regulations at 36 CFR Part 800 prior to implementation of the action.

The inventory concluded that the majority of the proposed facilities would be constructed in soils that are not likely to contain buried prehistoric resources. However, a small portion of the proposed Project/Action would be built in areas that may be moderately sensitive for buried prehistoric resources. Although a variety of historic resources were identified within the proposed

Project/Action area, the majority of these resources are built (architectural) resources that would not be affected by Project/Action-related activities. Only three prehistoric archaeological sites were identified, and all three sites are located at least a half-mile from the nearest proposed facility.

Of the four historic-era archaeological resources identified, only two are within ¼-mile of project facilities. One is P-07-000761, foundations and other minor structural remains associated with the Columbia Steel Company Rolling Mills (CSCRM) structural complex and the abandoned 1923 PG&E substation built for the CSCRM. Available information indicates that there is no data potential left at this site. The likelihood of buried subsurface historic features with any integrity is very low due to previous demolition activities. Furthermore, no new pipeline is proposed in this area, only the rehabilitation of the existing pipeline (ICFI 2012b).

The second historic-era archaeological resource, P-07-000864, contains the remains of concrete foundations and footings and construction material associated with the former Redwood Manufactures Co. facility. This site also appears to have been extensively disturbed by prior grading activities.

Impacts/Environmental Consequences

As described above, a full Section 106 evaluation has not been completed, but is anticipated to be completed during design of the Project. Pursuant to the Section 106 regulations at 36 CFR Part 800, adverse effects to historic properties can only be resolved through consultation with the State Historic Preservation Officer (SHPO) and through implementation of either a Memorandum of Agreement (MOA) or a Programmatic Agreement (PA) with the SHPO that stipulates a program to resolve adverse effects. Because full Section 106 evaluation has not been completed, a finding of effect pursuant to 36 CFR Part 800 has not been made for NEPA purposes.

a, b) *Near-Term Project*

The proposed Project/Action would involve minimal ground disturbance, in the form of pipeline trenching and drilling and pipeline rehabilitation, and construction of new a storage tank, all located in heavily urbanized or industrialized areas. Previously disturbed soils can be found throughout the proposed Project/Action area because of construction of the structures present in these areas; the grading and paving of roads, sidewalks, and parking lots; and the installation of previously existing utilities and pipelines.

The proposed activities, therefore, are relatively minor. Construction activities may disturb, albeit minimally, native ground surfaces. The proposed Project/Action area was determined to have low sensitivity due to both the lack of previously recorded archaeological sites in the area, and because of the nature of the proposed activities. Nevertheless, it is possible that the proposed Project/Action could encounter previously undiscovered buried cultural resources (either historic or archaeological). Implementation of **Mitigation Measure CR-1** would ensure that any resources discovered during construction are dealt with appropriately. With implementation of mitigation, impacts on historic or archaeological resources would be less than significant.

Buildout Project

Potential impacts would be the same as for construction of the Near-Term facilities, and the Buildout Project, which includes additional above-ground facilities at the RWF, would be subject to the same mitigation. With implementation of mitigation, impacts on historic or archaeological resources would be less than significant.

c) *Near-Term and Buildout Projects*

It is possible that paleontological resources could be present in alluvial deposits. Implementation of **Mitigation Measure CR-1** would ensure that any resources discovered during construction are dealt with appropriately. With implementation of mitigation, impacts on paleontological resources would be less than significant.

d) *Near-Term and Buildout Projects*

There is a potential that human remains could be encountered during construction. Implementation of **Mitigation Measure CR-2** would ensure that any human remains discovered during construction are dealt with appropriately. With implementation of mitigation, impacts on human remains would be less than significant.

Mitigation Measures

Mitigation Measure CR-1: Halt construction if archaeological or paleontological resources uncovered (Near-Term and Buildout Projects). Although no cultural resources were observed on the surface during the archaeological survey, culturally-related sites and objects may yet exist in the proposed Project/Action area, but may be buried by fill or natural sediments. In accordance with CEQA Section 15064.5, if cultural or paleontological resources are encountered during project-related excavations, construction shall be halted or diverted to allow an archaeologist or paleontologist an opportunity to assess the resource and determine measures needed to preserve or record any site determined to be potentially significant. Prehistoric archaeological site indicators include chipped chert and obsidian tools and tool manufacturing waste flakes, grinding implements such as mortars and pestles, and darkened soil that contains dietary debris such as bone fragments and shellfish remains. Historic site indicators include, but are not limited to, ceramics, glass, wood, bone, and metal remains. Paleontological resources include fossil remains.

Mitigation Measure CR-2: Halt construction if human remains uncovered (Near-Term and Buildout Projects). Section 7050.5(b) of the California Health and Safety code shall be implemented in the event that human remains, or possible human remains, are located project-related construction excavation. It states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for "...protection of inadvertent destruction." To achieve this goal, it is recommended that the construction personnel on the proposed Project/Action be instructed as to the potential for discovery of cultural or human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof. Implementation of the above mitigation measure would reduce potential impacts to cultural resources to a less-than-significant level.

Implementation of the above mitigation measures would reduce potential impacts to less-than-significant levels.

3.9 Geology and Soils

	<i>Less Than Significant</i>		
<i>Potentially Significant Impact</i>	<i>With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>

Would the Project:

- | | | | | |
|--|---|---|---|---|
| <p>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p> <p>ii) Strong seismic ground shaking?</p> <p>iii) Seismic-related ground failure, including liquefaction?</p> <p>iv) Landslides?</p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> |
| <p>b) Result in substantial soil erosion or the loss of topsoil?</p> | <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> |
| <p>c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?</p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</p> | <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> |
| <p>e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?</p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |

Discussion

Setting/Affected Environment

Eastern Contra Costa County is located in a seismically active zone. There are no known active faults with the Project/Action area; however, there are several major faults located within a few miles (Antioch 2003). Historically active faults in Contra Costa County include the Hayward, Calaveras, Concord-Green Valley, and Marsh Creek-Greenville faults. The San Andreas Fault, a

large active fault, is located approximately 45 miles west of the City. The Antioch Fault, which is classified as a potentially active fault (with evidence of displacement during Quaternary time - last 2 million years, is located within the Project/Action area, crossing the proposed rehabilitated pipeline under the Buildout Project (see **Figure 3-3**). The intensity of ground shaking the proposed Project/Action area could experience is affected by a number of factors including proximity to the fault rupture and depth of earthquake, along with the response of the geologic materials. The topography of Antioch slopes upward in a southwesterly direction from an approximate elevation of 5 feet above sea level along the San Joaquin River to an approximate elevation of 1500 feet in the Mt. Diablo foothills to the southwest (Contra Costa Watershed Forum, 2003). The low-lying areas along the San Joaquin River are underlain mostly by clay loam soils. The southeastern portion of the City is underlain with mostly clay soil, as well as some alkali clays and loams. The higher elevation areas in the southwestern portion of the City are underlain by Altamont-Fontana Complex soils (East Contra Costa County Habitat Conservation Plan Association, 2006).

Impacts/Environmental Consequences

a) Near-Term and Buildout Projects

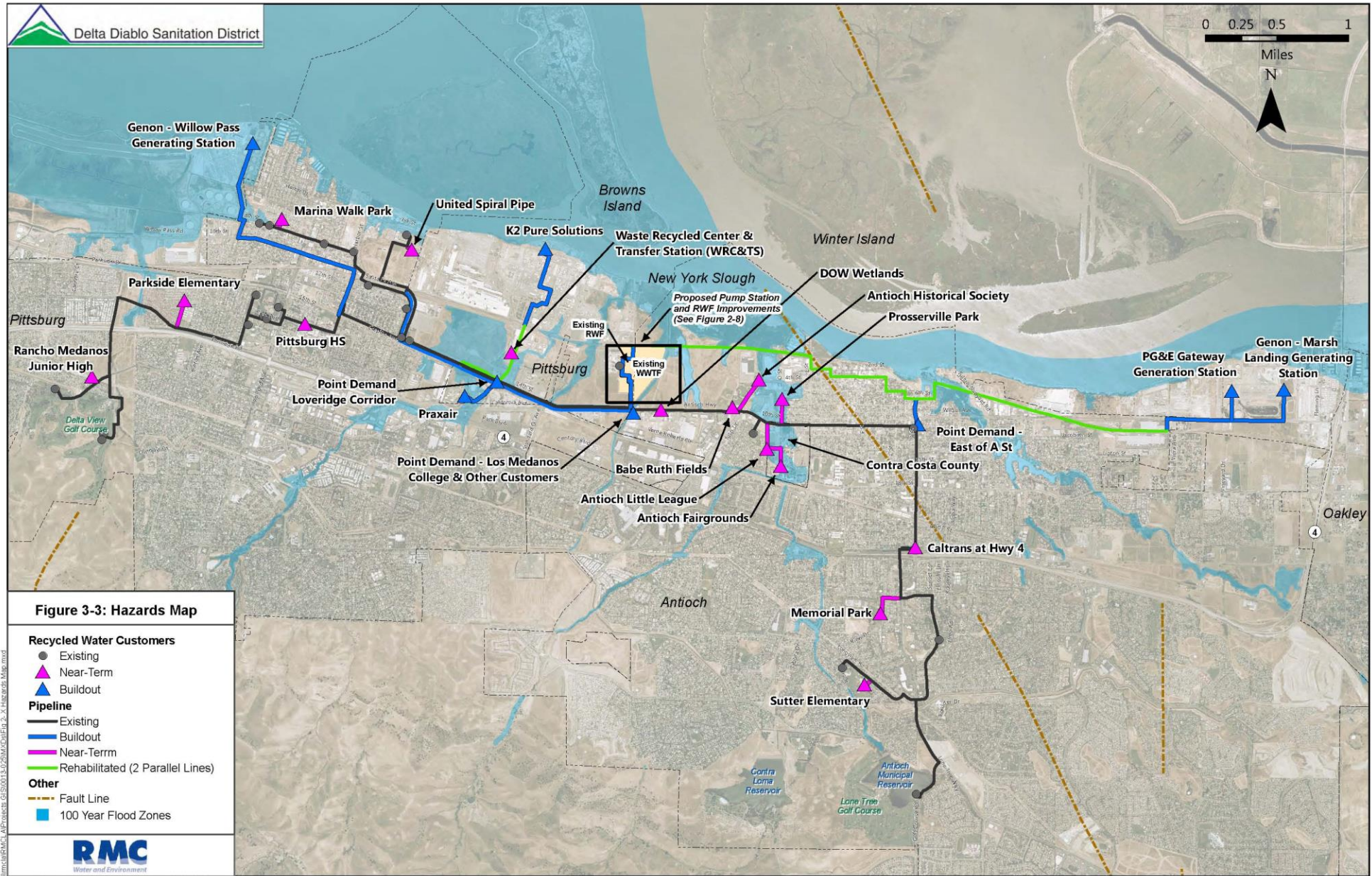
The proposed Project/Action would not expose people or structures to adverse effects, including the risk of loss, injury, or death because the proposed Project/Action does not include construction of habitable structures. Although the proposed Project/Action area is within a region of high seismic activity, and the proposed rehabilitated pipeline under the Buildout Project crosses a potentially active fault, it is not designated as an Alquist-Priolo “Earthquake Fault Zone” (CGS, 2010).

The proposed Project/Action area could experience very strong to violent shaking in the event of a major earthquake along historically active faults in the County including the Hayward, Calaveras, Concord-Green Valley and Marsh Creek-Greenville faults (ABAG, 2003). The City is expected to experience ground shaking of an intensity associated with nonstructural damage in most locations, but could experience strong shaking in bay mud deposits along Suisun Bay, north of Highway 4 (City of Antioch, 2003).

The soils in the proposed Project/Action area for Near-Term Project facilities have a very low to moderate potential for liquefaction. Soils directly adjacent to the San Joaquin River have a high to very high potential for liquefaction and small sections of the Buildout project cross these areas (ABAG, USGS 2006).

According to the California Geological Survey (CGS), none of the proposed Project/Action area is located within earthquake-induced landslide zones (CGS, 2012). Additionally, most of the Project is within flatland and no rainfall-induced landslides or existing landslides are mapped with the exception of the Memorial Park area for the Near-Term Project, which is mapped as an area of “few landslides” (ABAG, USGS, 1997).

Given that new structures, including an above ground storage tank, pipelines, a pump station, and the HPWTF could be affected by groundshaking and liquefaction, a geotechnical review (**Mitigation Measure GEO-1**) would be required for these facilities to confirm that no geologic or geotechnical “fatal flaws” exist. Implementation of **Mitigation Measure GEO-1** would reduce potentially significant impacts associated with groundshaking and liquefaction to less than significant. Impacts associated with fault ruptures and landslides are considered less than significant.



b) *Near-Term and Buildout Project*

Construction activities involving soil disturbance, such as excavation, stockpiling, and grading could result in increased erosion and sedimentation to surface waters. However, substantial erosion is not expected because of the relatively small scale of earthmoving activities necessary for Project implementation and because of implementation of **Mitigation Measure HYD-1**. Thus, impacts would be reduced to a less-than-significant level.

c, d) *Near-Term and Buildout Projects*

New structures proposed as part of the Near-Term Project (pipelines and a storage tank), and Buildout Project (pipelines, pump station, tertiary treatment process, and the HPWTF), would not affect the stability of the geologic unit or soil or result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. There are no habitable structures proposed for the Project/Action; therefore, there is no risk to human life or property. With proper engineering, the construction and operation of the proposed Project/Action is not expected to result in any significant adverse short- or long-term impacts related to geology, soils or seismicity. Portions of the pipeline alignment and structures are located within clayey soils (NRCS, 2008; NRCS, 2012) with the potential for expansion as defined by the UBC Table 18-I-B – Classification of Expansive Soil (UBC, 1997). A geotechnical review required as part of **Mitigation Measure GEO-1** would determine whether expansive soils would impact the proposed storage tank. However, no habitable structures would be built as a part of this Project/Action, and impacts to the storage tank resulting from expansive soils (which could potentially result in leaks or release of water) would only affect the areas immediately surrounding the tank pad. Therefore there is no substantial risk to life or property as a result of expansive soils. Implementation of **Mitigation Measure GEO-1** would reduce potential impacts to less than significant.

e) *Near-Term and Buildout Projects*

No septic tanks are proposed for the proposed Project/Action; therefore, no impacts would occur.

Mitigation Measures

Measure GEO-1: Conduct Geotechnical Review of the selected locations of the proposed facilities (Near-Term and Buildout Projects). The City shall conduct geotechnical review for the proposed facilities under both the Near-Term Project and Buildout Project prior to construction activities to determine the geotechnical feasibility of the selected sites.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.10 Greenhouse Gas Emissions

	<i>Less Than</i>		
	<i>Significant</i>		
<i>Potentially</i>	<i>With</i>	<i>Less Than</i>	<i>No</i>
<i>Significant</i>	<i>Mitigation</i>	<i>Significant</i>	<i>Impact</i>
<i>Impact</i>	<i>Incorporation</i>	<i>Impact</i>	<i>Impact</i>

Would the Project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Discussion

Setting/Affected Environment

As described in Section 3.6, Air Quality, BAAQMD is the agency principally responsible for comprehensive air pollution control in the SFBAAB. Climate change and GHG emissions have been addressed through a series of state legislation and executive orders, including the following:

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

The City of Antioch completed the Municipal Climate Change Action Plan in 2011 (City of Antioch, 2011). This document includes a GHG inventory for the City’s municipal operations. The City of Pittsburg adopted its Climate Action Plan in 2012. Both Cities’ GHG emissions reduction goal is equivalent to that established in AB 32, to reduce GHG emissions to 1990 levels by the year 2020, and outlines strategies that can be taken to reduce GHG emissions.

To provide GHG emission guidance to local jurisdictions within the SFBAAB, BAAQMD developed CEQA GHG significance thresholds in 2009. BAAQMD identified screening levels of 1,100 metric tons of CO₂e⁹ emissions per year (BAAQMD, 2009) for operational emissions for projects other than stationary sources, and a significance threshold of 10,000 metric tons of CO₂e per year (MTCO₂e/yr) from stationary GHG sources. BAAQMD has not established GHG significance thresholds for construction, but construction-related GHG emissions can be compared to BAAQMD’s operational threshold for non-stationary sources.

Quantification of GHG for the Near-Term Project was based on the carbon dioxide (CO₂) outputs generated during operations using the Road Construction Model and URBEMIS 2007 model. GHG emission estimates for the Buildout Project were based on presumed correlation between the GHG annual emissions and the size of the Project.

⁹ CO₂e is the concentration of carbon dioxide that would cause the same amount of radiative forcing as a given mixture of carbon dioxide and other greenhouse gases.

Impacts/Environmental Consequences

a, b) *Near-Term Project*

Applicable plans, policies, and regulations associated with reducing the emissions of GHGs include BAAQMD's proposed thresholds of significance for GHG as described above¹⁰. The total GHG emissions for construction of the proposed Near-Term Project (pipeline and tank) are estimated to be 217.2 MTCO₂e/yr, which is below the interim threshold of 1,100 MTCO₂e/yr set by BAAQMD (BAAQMD 2009) for non-stationary sources. The annual GHG emissions for operating the Near-Term Project (*i.e.*, associated with maintenance vehicles) are estimated to be 2.48 MTCO₂e/yr, far below the threshold of 10,000 MTCO₂e/yr established by BAAQMD¹¹. Given that the BAAQMD threshold is established based upon implementation of AB 32, the Proposed Project/Action would meet GHG reductions goals established in AB 32. As such, the Near-Term Project would not generate GHG emissions that would have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts would be less than significant and no mitigation is required.

Buildout Project

Air quality modeling was not completed for the Buildout Project as the details of the components have not yet been defined. The level of GHG emissions was estimated conservatively based on presumed correlation between the GHG annual emissions and the size of the Buildout Project (see **Appendix B**). Based on this analysis, the total GHG emissions for construction of the proposed Buildout components (pipelines, pump station, tertiary treatment process, and HPWTF) are estimated to be 1,080 MTCO₂e/yr, which is below the BAAQMD threshold. Operation of the Buildout Project is also expected to be below the BAAQMD threshold because it would not result in any additional truck trips associated with O&M, since all facilities would be located at the RWF where existing workers are located. Similar to the Near-Term Project, because proposed structures (with the exception of the backup diesel generator) would be operated by electricity, operational GHG emissions do not need to be calculated. The diesel generator would be operated only in the rare event when there is an emergency associated with an electric power outage. Because of the unpredictable and infrequent nature of such operations, they are not included in the emissions calculations. Thus, the Buildout Project is not expected to generate GHG emissions that would have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, impacts would be less than significant and no mitigation is required.

Mitigation Measures

None required or recommended.

¹⁰ As described in Section 3.6, Air Quality, the Alameda County Superior Court issued a writ of mandate ordering the BAAQMD to set aside the criteria pollutant thresholds in its most recent CEQA Guidelines. Thus, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts and is relying on individual lead agencies to determine the appropriate air quality thresholds of significance to use in its CEQA analysis. For the purposes of this analysis, because the BAAQMD 1999 CEQA Guidelines do not contain thresholds for GHGs, the current thresholds have been used here.

¹¹ Because GHG thresholds for operation are applicable to direct impacts only, the GHG emissions associated with operation of the tank (which would use power from the electric grid) are not included in the calculations.

3.11 Hazards and Hazardous Materials

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

Discussion

Setting/Affected Environment

The term “hazardous materials” includes a full spectrum of substances from pre-product materials to waste. Pre-product materials are considered to have value, and are used in, or represent the purpose of the manufacturing process. These materials (solvents, paints, acids and other

chemicals) are subject to proper transportation, storage, and use procedures. “Hazardous waste” refers to the valueless byproducts of manufacturing processes and other use of materials. Hazardous waste requires proper disposal.

The California Department of Toxic Substances Control (DTSC) identified two sites within Antioch where contamination has occurred due to the release of hazardous materials or wastes (City of Antioch, 2004). Those sites include the GBF/Pittsburg Dumps (south of the proposed Project/Action area), located at the intersection of Somersville Road and James Donlon Boulevard, and the former Hickmott Cannery site at the intersection of 6th and “A” Streets (within the proposed Project/Action area).

The RWQCB annually reports sites in the Bay Area with leaking underground storage tanks (LUST) and sites with environmental problems due to leaks and spills (City of Pittsburg, 2010). There are approximately 54 sites throughout Pittsburg included in the LUST list, which are identified as having soil and/or groundwater contamination resulting from leaks or other discharges from tanks and/or associated piping. There are also 12 Spills, Leaks, Investigations, and Clean-up (SLIC) sites within the City, which are large sites with environmental problems due to accidental releases of toxic substances such as metals, volatile organic compounds, and petroleum hydrocarbons.

An online database search was conducted in November 2012 to identify reported hazardous materials spills and releases. Environmental databases reviewed include the DTSC’s EnviroStor (DTSC 2012) and the SWRCB’s GeoTracker (SWRCB 2012). Properties on which historic or ongoing activities have resulted in a reported release of hazardous materials into soil and groundwater, as identified by DTSC and SWRCB, are located in and around the Near-Term Project and Buildout Project areas¹². Listed properties do not necessarily represent a potential risk to the proposed Project/Action area; many of the identified sites have been remediated and their cases have been closed. The EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. Specifically, the database lists the following site types: Federal Superfund sites (National Priority List); State Response (including Military Facilities and State Superfund); Voluntary Cleanup; Evaluation; School Investigation; Non-operating; Post-closure; Tiered Permit; and Corrective Action¹³. Based on the EnviroStor

¹² Appendix C provides the results of the hazardous materials database search.

¹³ DTSC defines terms as follows (from <http://www.envirostor.dtsc.ca.gov/public/EnviroStor%20Glossary.pdf>):

- State Response - Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
- Voluntary Cleanup: Identifies sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC’s costs.
- Evaluation: Identifies suspected, but unconfirmed, contaminated sites that need or have gone through a limited investigation and assessment process. If a site is found to have confirmed contamination, it will change from Evaluation to either a State Response or Voluntary Cleanup site type. Sites found to have no contamination at the completion of the limited investigation and/or assessment process result in a No Action Required or No Further Action determination.
- School Investigation - School: Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination.
- Non-Operating - A Treatment, Storage, Disposal or Transfer Facility (TSDTF) with no operating hazardous waste management unit(s).
- Post-closure - Monitoring, engineering controls or other requirements of a closed hazardous waste management unit or entire facility.
- Tiered-Permit – permitted sites are facilities/sites that were required to obtain a permit or have received a hazardous waste facility permit from DTSC or USEPA in accordance with section 25200 of the Health and Safety Code or the Resource Conservation and Recovery Act (RCRA).

database search, 30 cleanup sites are located in the vicinity of the proposed facilities in the cities of Pittsburg and Antioch, of which 18 are within the Near-Term Project area and 21 within the Buildout Project¹⁴. Of the total 30 cleanup sites (excluding the redundant sites), 4 are state response, 7 are voluntary cleanup, 8 are evaluation, 3 are school investigation, and the rest are non-operating, post closure, tiered permit or corrective action. Many of these cleanup sites do not need further action; however, there are four sites that are currently active (Contra Costa Power Plant, Delta Auto Wrecker, Burlington Northern Santa Fe Railway Company, and East Mill).

The GeoTracker database provides regulatory data regarding sites with LUSTs, fuel pipelines, and public drinking water supplies; these sites also meet the Cortese List¹⁵ requirements. The SWRCB Geotracker identified 39 sites in the vicinity of the proposed Project/Action area, 17 are within the Near-Term Project, 26 are within the Buildout Project¹⁶. Of the 39 sites identified, 26 of the sites are LUST sites and 13 are other cleanup sites. Of the 17 sites within the Near-Term Project (4 of which are also within the Buildout Project area), 9 are closed, 2 are open but inactive, 3 are open with remediation, 2 are open with verification monitoring and 1 is open with site assessment. Of the 22 sites within the Buildout Project only, 11 are closed, 1 is open, 4 are open and inactive, 3 are open with remediation, and 3 are open with verification monitoring. The majority of the open sites are either within industrial areas or along major roadway corridors (*e.g.*, Railroad Avenue, Loveridge Road, Willow Pass Road, East 10th Street, A Street, West 10th Street Wilbur Avenue).

Impacts/Environmental Consequences

a, b) *Near-Term Project*

Construction of the proposed Project/Action would not result in the routine transport, use, or disposal of hazardous materials. However, the proposed Project/Action could temporarily increase the transport of materials generally regarded as hazardous that are used in construction activities. It is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similar materials would be brought onto work sites, used, and stored during the construction period. The risks associated with the transport, use, and storage of these materials during construction are anticipated to be relatively small. However, there is potential for an accidental release of hazardous materials during construction, which could result in exposure of workers and the public to health hazards. In addition, construction of the proposed Project/Action could result in the exposure of construction workers and residents to potentially contaminated soils due other historic releases of hazardous materials to soil or groundwater in the area. Thus, hazardous materials-related impacts would be potentially significant, and **Mitigation Measures BIO-5** (preparation and implementation of a Risk Management Plan) and **HAZ-1** (Reduction of Excavation Impacts) would be required.

-
- Corrective Action: Investigation and cleanup activities at hazardous waste facilities (either Resource Conservation and Recovery Act (RCRA) or State-only) that either were eligible for a permit or received a permit, are called "corrective action." These facilities treated, stored, disposed and/or transferred hazardous waste.

¹⁴ Due to the proximity of the proposed alignments of both the Near-Term and Buildout Projects, nine of the hazardous material sites in the vicinity of the Near-Term Project are also in the vicinity of the Buildout Project.

¹⁵ The Cortese (Hazardous Waste and Substances Sites) List is a planning resource used by the State, local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop, at least annually, an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

¹⁶ Due to the proximity of the proposed alignments of both the Near-Term and Buildout Projects, four of the hazardous material sites in the vicinity of the Near-Term Project are also in the vicinity of the Buildout Project.

These mitigation measures would provide for the protection of workers and the public in the event of an accidental spill or release of hazardous materials or waste through the implementation of appropriate procedures. In addition, implementation of **Mitigation Measure AIR-1** (Dust Abatement Program) would minimize potential public health impacts associated with exposure to contaminated soil. With implementation of the above measures, potential impacts relating to the use and disposal of hazards and hazardous materials would be reduced to less than significant.

Operation of the proposed Near-Term Project would not involve the routine transportation, use, storage, and/or disposal of hazardous materials as it would consist of operation of underground recycled water pipelines and a storage tank. As such, no impacts would occur.

Buildout Project

Construction of the Buildout Project could temporarily increase the transport of materials generally regarded as hazardous that are used in construction activities as described above for the Near-Term Project. Impacts would also be similar and would require mitigation measures as identified above to reduce levels to less than significant.

As discussed in the Project Description, the Buildout Project consists of construction and operation of a third tertiary treatment process and a HPWTF. Operation of these facilities would require the routine transportation, use, storage and disposal of hazardous materials. Sodium hypochlorite, polymer (proprietary chemical, used as a flocculant) and alum (aluminum sulfate, used as a coagulant) would be necessary for the additional tertiary process at the RWF; these chemicals are already used as part of the existing treatment process. Citric acid, sodium hypochlorite, sodium hydroxide, sodium bisulfate and antiscalant (polymer, proprietary chemical) are needed for the HPWTF. If accidentally released, these chemicals could cause human health effects to plant personnel and surrounding populations, and could cause adverse environmental effects if released to the environment. Wastewater treatment facilities typically use these chemicals, selected by the industry to provide necessary water treatment and public health benefits. The primary concerns related to an accidental release of chemicals from the RWF are the spillage of liquid chemicals and the mixing of incompatible chemicals. With proper handling and storage methods and adequate design of secondary containment facilities in compliance with federal, state, and local workplace health and safety regulations and fire and building codes, potential on- or off-site consequences associated with accidental spills or releases of these chemicals are considered minimal. To ensure potential impacts would be reduced to a less than significant level, revision of the existing Hazardous Materials Business Plan (HMBP) for the RWF would be required (see **Mitigation Measure HAZ-2**). The HMBP specifies emergency response procedures to be implemented in the event of a chemical emergency, in accordance with the Hazardous Materials Incident Notification Policy (2010) of the Contra Costa County Health Services Department.

The transport of treatment chemicals to the RWF could indirectly result in an incremental increase in the potential for accidents during its handling and transportation. The Department of Transportation regulates the transport of chemicals by truck. An accident involving hazardous materials during vehicle transport could result in direct exposure of motorists and emergency responders to hazardous materials and contamination of the roadway and surrounding environment due to uncontrolled runoff. Regulations require that truck operations and chemical handling be carried out by appropriately-trained personnel. Most of the chemicals that would be used at the RWF with the proposed Project/Action are currently in use, and to date there have been no uncontrolled releases associated with transport of chemicals. Because of the stringent hazardous material packaging and transportation requirements and the low accident rate involving hazardous materials, this impact is considered less than significant.

c) *Near-Term and Buildout Projects*

Five schools (Rancho Medanos Junior High School, Parkside Elementary School, Pittsburg High School, Sutter Elementary, and Park Middle School) are located within one-quarter mile of the proposed pipeline alignment under the Near-Term Project. One school (Marina Vista Elementary School) is located within one-quarter mile of the proposed pipeline alignment under the Buildout Project. No schools are located within one-quarter mile of the storage tank site at LMEC or at the RWF. As described above under item a, b), construction activities would require the use of hazardous materials, which could result in accidental releases during their handling and storage. Although the duration and extent of construction activity would be limited, because of the proximity of some construction activities to the schools, impacts are considered potentially significant. However, with implementation of **Mitigation Measures BIO-5** and **HAZ-1**, potential impacts would be reduced to a less-than-significant level.

d) *Near-Term and Buildout Projects*

Based on a review of DTSC's Hazardous Waste and Substances Site List (2012), the proposed components would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese). The closest Cortese site is located nearly 0.7 mile from the pipeline alignment leading to Rancho Medanos Junior High School. Thus, no impacts would occur.

e, f) *Near-Term and Buildout Projects*

There are no airports or private airstrips within the cities of Pittsburg and Antioch. The nearest airport is located about 10 miles west of Pittsburg in the City of Concord. As such, the proposed Project/Action would not expose people residing or working in the area to safety hazards.

g) *Near-Term and Buildout Projects*

During construction, installation of pipelines along roadways could block access to nearby roadways for emergency vehicles. As part of the Traffic Control Plan (**Mitigation Measure TRA-1** in Section 3.19, Transportation/Traffic), strategies for maintaining emergency access shall be developed. Specifically, police, fire, and other emergency service providers would be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. Potential impacts during construction are considered to be less than significant with implementation of the Traffic Control Plan. Once construction is completed, operation of the proposed Project/Action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. With implementation of **Mitigation Measure TRA-1**, impacts would reduce to less than significant.

h) *Near-Term and Buildout Projects*

The proposed Project/Action would not be located in an area where there is the risk of wildland fire. Therefore, there is no potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires. No impacts would occur.

Mitigation Measures

Mitigation Measure HAZ-1: Phase 1 Environmental Site Assessment (Near-Term and Buildout Projects). During the design phase, DDSD or its contractor shall conduct a Phase I Environmental Site Assessment. The assessment includes a detailed search of existing environmental databases to identify sites with significant environmental concerns that are located within a 1-mile radius of the Project/Action area, followed up by review of regulatory agencies files for those sites previously identified as having significant environmental issues (e.g., DTSC, RWQCB), as needed. It also includes a site visit to visually identify and document the existing conditions of the Project/Action area and identify any signs of

potential contaminations (such as surface staining or discoloration). The results of the assessment, including recommendations will be identified in the final report. Examples of recommendations include site-specific field sampling and analyses to determine the extent of contamination.

Mitigation Measure HAZ-2: Hazardous Materials Business Plan (Buildout Project Only). DDSD shall revise the existing Hazardous Materials Business Plan for the RWF to reflect changes in hazardous materials handling and storage, including containment, site layouts, and emergency response and notification procedures for a spill or release from the tanks.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.12 Hydrology and Water Quality

	<u>Potentially Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| j) Inundation of seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

Setting/Affected Environment

Hydrology and Drainage

Along the northern Contra Costa County boundary, the Sacramento and San Joaquin Rivers provide a substantial portion of freshwater inflow to the San Francisco Bay through the San Joaquin-Sacramento Delta. Surface waters from the northern and eastern portion of the Contra Costa County drain into Suisun Bay and the Delta River Channels. The western part of the proposed Project/Action lies within Suisun Basin and drains to the Carquinez Strait and Suisun Bay. The eastern part of the proposed Project/Action (Antioch) lies within Central Valley RWQCB’s jurisdiction (Region 5) and surface water drainage flows northward into the Sacramento-San Joaquin Delta. The western part of the proposed Project/Action is under the jurisdiction of the San Francisco Bay RWQCB (Region 2).

Water features in the vicinity of the proposed Project/Action area include San Joaquin River, Kirker Creek and other unnamed drainages in the City of Pittsburg, and East Antioch Creek, West Antioch Creek, and other unnamed channels in the City of Antioch. Lake Alhambra, located on East Antioch Creek, is a private recreation lake for the surrounding residential area.

Groundwater

The Pittsburg Plain Groundwater Basin and the Tracy sub-basin (in the Greater San Joaquin Basin), are located under the proposed Project/Action area (City of Pittsburg, 2001; San Francisco Bay RWQCB, 2011; City of Antioch, 2003b). Intense pumping for industrial uses in the 1930s through 1950s resulted in overdraft and seawater intrusion in the Pittsburg Basin (City of Pittsburg, 2001). Limited groundwater is blended with raw water from the Contra Costa Canal before treatment and distribution. No municipal water is pumped from the Tracy sub-basin (City of Antioch, 2003b).

Flooding

The coastal areas of Pittsburg and Antioch have large areas located within the 100-year floodplain (see **Figure 3-3**), which occur primarily along the San Joaquin River. 100-year floodplains are also located along and adjacent to creek channels within the proposed Project/Action area.

The City of Pittsburg is responsible for flood control within its city boundaries (City of Pittsburg, 2001). The Contra Costa County Flood Control District and Water Conservation District oversees flood collection and flood control in the City of Antioch and unincorporated areas (City of Antioch, 2003a). At the RWF, DDSD collects and treats stormwater on site at the WWTP.

Water Quality

Water quality in the Delta is affected by a multitude of factors including upstream reservoir releases, tidal changes, the discharge of agricultural diverters, and the export rates of the State Water Project and the Central Valley Project. The water quality of the Bay is driven by the tidal influx through the Golden Gate and inflowing freshwater from the Delta and watersheds of the Bay Area.

The Water Quality Control Plans (Basin Plans) for the San Francisco Bay Region and the Central Valley Region list beneficial uses for each relevant surface water body in the proposed Project/Action area. The Basin Plans identify beneficial uses for the San Joaquin Delta and Kirker Creek, as shown in **Table 3-3**. **Table 3-3** also shows the beneficial uses for the Pittsburg Plain Groundwater Basin. The San Francisco Bay and Central Valley Basin Plans establish water quality objectives (WQOs) for surface waters within their jurisdictions, and also establishes specific WQOs for selected water bodies (*e.g.*, Sacramento-San Joaquin Delta Estuary). In 2007, the USEPA approved a revised list of impaired water bodies prepared by the State of California pursuant to provisions of Section 303(d) of the Clean Water Act. The Sacramento- San Joaquin Delta is identified on the 303(d) list as being impaired by pesticides, other organics, metals/metalloids, and miscellaneous (SWRCB, 2010). Kirker Creek is identified on the 303(d) list as being impaired by pesticides, toxicity, and trash.

Recycled Water General Permits

RWQCB permitting varies by region. DDSD operates its existing recycled water facility under two different general permits because DDSD's service area straddles the border of two RWQCB regions: the San Francisco Bay and the Central Valley. Both regions handle recycled water permitting differently. The San Francisco Bay RWQCB has a region-wide recycled water general permit (General Order 96-011), under which DDSD is currently permitted for their treatment facilities and all recycled water use sites within the City of Pittsburg. The permit specifies the prohibitions, water quality requirements and limitations, and other provisions that must be met. Under this permit, DDSD has developed a system of establishing use site managers and periodically monitoring use sites to ensure compliance with General Order 96-011.

Under the direction of the Central Valley RWQCB, DDSD has pursued the Statewide General Permit for Landscape Irrigation for areas within the City of Antioch. DDSD received a conditional Notice of Applicability (NOA) from SWRCB which allows recycled water to be applied at the use sites in Antioch for two years. As part of the conditional NOA, DDSD would have to conduct a Supplemental Monitoring and Report Program.

Table 3-3: Beneficial Uses in the Proposed Project/Action Area

Beneficial Uses	Surface Waters			Ground Waters
	Sacramento - San Joaquin Delta ¹	Kirker Creek ¹	Sacramento-San Joaquin Delta (HU#44) ²	Pittsburg Plain (Basin #2-4) ¹
Agricultural Supply (AGR)	E		E	P
Municipal and Domestic Supply (MUN)	E		E	P
Freshwater Replenishment (FRSH)				--
Groundwater Recharge (GWR)	E			
Industrial Service Supply (IND)	E		E	P
Industrial Process Supply (PROC)	E		E	P
Commercial and Sport Fishing (COMM)	E			
Shellfish Harvesting (SHELL)				
Cold Freshwater Habitat (COLD)			E	
Estuarine Habitat (EST)	E			
Marine Habitat (MAR)				
Fish Migration (MIGR)	E		E	
Preservation of Rare and Endangered Species (RARE)	E	E		
Fish Spawning (SPWN)	E		E	
Warm Freshwater Habitat (WARM)		E	E	
Wildlife Habitat (WILD)	E	E	E	
Water Contact Recreation (REC-1)	E	E	E	
Non-contact Water Recreation (REC-2)	E	E	E	
Navigation (NAV)	E		E	

Source: ¹California Regional Water Quality Control Board San Francisco Bay Region, 2011. ²California Regional Water Quality Control Board Central Valley Region, 2011.

Notes: E: Existing beneficial use; P: Potential beneficial use

The Statewide General Permit contains four required BMPs:

- Implementation of operations and management plan that provides for detection of leaks, and correction either within 72 hours of learning of a leak, or prior to the release of 1,000 gallons.

- Proper design and operation of sprinkler heads.
- Refraining from application during precipitation events.
- Management of any impoundment such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater.

The General Permit also provides a list of potential BMPs that depend on the specific project. In addition to the BMPs, the General Permit requires that the producer ensures that recycled water meets quality standards, that recycled water be applied at agronomic rates for the vegetation being irrigated, that degradation of groundwater be minimized, and that the nutritive loading to the landscape not be exceeded, when considering the nutrient loading from the recycled water and any additional fertilizers. The permit stipulates that discharge to surface waters, unless otherwise authorized by an NPDES permit, is prohibited. The General Permit also requires that recycled water be applied by trained personnel (e.g., a recycled water supervisor).

Impacts/Environmental Consequences

a) *Near-Term and Buildout Projects*

Excavation, grading, and construction activities associated with Project-related construction could violate water quality standards by exposing and disturbing soils, potentially resulting in increased erosion and siltation in and downstream of the proposed Project/Action area. In addition, hazardous materials associated with construction equipment could adversely affect surface and groundwater quality if spilled or stored improperly. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of surface water quality.

Construction activities of one acre or more are subject to the permitting requirements of the NPDES General Permit for Stormwater Discharges associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ). The project sponsor must submit a Notice of Intent to the San Francisco RWQCB and Central Valley RWQCB prior to construction. The Construction General Permit requires the preparation and implementation of a formal SWPPP which must be prepared before construction begins. The SWPPP includes specifications for BMPs implemented during Project construction to control sedimentation or pollution concentration in stormwater runoff, and defines conditions for complying with the SWRCB NPDES permit requirements. Implementation of the SWPPP starts with the commencement of construction and continues through Project completion. Upon completion of the Project, the sponsor must submit a Notice of Termination to the RWQCBs to indicate that the construction is complete. Compliance with the Construction General Permit for all activities along the new and rehabilitated pipeline alignment, new storage tank, and improvements at the RWF through development and implementation of a SWPPP (**Mitigation Measure HYD-1**) as well as implementation of **Mitigation Measures BIO-5** and **HAZ-1** would reduce potential water quality impacts to less than significant.

The proposed Project/Action proposes to expand provision of recycled water to customers for irrigation purposes. Under the Recycled Water General Permit issued by the San Francisco Bay RWQCB, DDSD has developed a system of establishing use site managers and periodically monitoring use sites to ensure compliance with the General Order 96-011.

As described above, the Statewide General Permit for Landscape Irrigation establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water for the following reasons (SWRCB 2009).

Compliance with the above general permits would ensure the protection of surface and groundwater quality associated with use of recycled water. Compliance with WDRs set forth in these permits would ensure the reasonable protection of surface water and groundwater within the proposed Project/Action area. The proposed Project/Action would not violate water quality nor wastewater treatment requirements. Thus, impacts would be less than significant.

b) *Near-Term and Buildout Projects*

The proposed Project/Action would not require any groundwater withdrawals for water supply. However, it is recognized that limited dewatering operations may be required at certain locations during construction (e.g., during grading and excavation near the San Joaquin River). These operations would be minimal and would not deplete groundwater supplies or interfere with groundwater recharge. Dewatering discharges would be released to the local sewer system to protect downstream water quality. Because these operations would be minimal, and dewatering discharges would be released to the local sewer system to protect downstream water quality, the potential groundwater impact is considered less than significant.

c, d, e) *Near-Term and Buildout Projects*

The proposed recycled water pipelines would generally be located within existing roadway ROWs. Construction of the pipelines, storage tanks, and improvements at the RWF would disturb existing developed lands or vacant lands. Due to the relatively small footprint of the proposed facilities and their locations (pipelines would be buried underground and above ground structures would be located away from water courses), the proposed facilities would not substantially alter site drainage or the course of a stream or river (Kirker Creek, San Joaquin River, or any other unnamed channels), in a manner that would result in substantial erosion or siltation on- or off-site. Construction would be conducted in compliance with the State's Construction General Permit (Order No. 2009-0009-DWQ). Preparation of the SWPPP in accordance with the Construction General Permit would require erosion-control BMPs at the Project/Action site, which would reduce potential water quality impacts to less than significant levels (see **Mitigation Measure HYD-1**).

New localized drainage facilities would be constructed at the storage tank, pump station, tertiary treatment process and the HPWTF sites. Runoff from these sites is expected to be minor and would seep into the ground if located on the site adjacent to LMEC, or would be collected and treated on site if located at the RWF (see also Section 3.20, Utilities and Service Systems). Minor alteration of existing drainage patterns at these individual sites would not increase the rate or amount of surface runoff such that on- or off-site flooding would occur, result in an exceedance of the capacity of the existing stormwater drainage systems, or create additional sources of polluted runoff. Thus, this impact is considered less than significant.

As DDS D increases the amount of recycled water distributed to its customers, its wastewater discharges to New York Slough would decrease. The reduction in discharges is so small in comparison to the total flow of New York Slough and of the Delta that the reduction does not materially impact any downstream uses. For the proposed Project/Action, the average annual reduction in discharge would be approximately 1.17 mgd, which equates to approximately 0.11 percent of the total average annual flow of New York Slough. Due to the scale of the reduction, flows in New York Slough are not expected to change substantially.

f) *Near-Term and Buildout Projects*

As described above, construction of proposed facilities is not anticipated to result in substantial erosion or siltation on or off site. Compliance with the State's Construction General Permit (Order No. 2009-0009-DWQ) would require erosion-control BMPs and therefore reduce potential construction-related water quality impacts to less-than-significant levels.

Operation of the proposed Project/Action would carry the potential for release of treated recycled water as a result of various factors related to design, construction methods and materials, age of the system, and system operation and maintenance. DDSD would ensure incidental runoff of recycled water¹⁷ associated with the proposed Project/Action conforms to the SWRCB's memo entitled "Incidental Runoff of Recycled Water" (SWRCB 2004). This memo stipulates water quality laws should be interpreted in a manner consistent with the intent of the Legislature to promote recycled water use. Compliance with the general permits would ensure occasional runoff of recycled water does not negatively impact water quality. Should the proposed Project/Action generate substantial incidental runoff that produces a water quality concern, discharges would then be regulated under an individual NPDES permit from the San Francisco Bay RWQCB. Compliance with applicable permitting requirements would ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisances. For this reason, long-term impacts to water quality would be less than significant.

The Buildout Project would include construction of a HPWTF, which would generate brine that would be discharged to the DDSD wastewater effluent outfall to New York Slough. Because DDSD would discharge brine in accordance with its NPDES permit requirements, impacts to water quality are anticipated to be less than significant.

g) *Near-Term and Buildout Projects*

The proposed Project/Action is an expansion of a recycled water system and would not involve construction of housing. As such, no impacts would occur related to placement of housing within a 100-year flood hazard area.

h, i) *Near-Term Project*

As shown in **Figure 3-3**, portions of the proposed Project/Action (areas adjacent to the San Joaquin River and tributary creeks), are subject to flooding. Portions of the new and rehabilitated pipelines would be located within the 100-year flood zone. Because proposed pipelines would be located underground, they would not impede or redirect flows, nor expose people or structures to a significant risk of loss, injury or death involving flooding.

Portions of the proposed site adjacent to LMEC are within the 100-year flood zone (see **Figure 3-4** below). The site is currently vacant. The proposed 90-foot diameter storage tank, which is surrounded by a pad, would generate more than 6,000 square feet (or approximately 0.15 acres) of impervious surface. Due to the placement of the storage tank, flood flows would be redirected around the tank. The new impervious area would be small compared to the overall 4-acre site; the tank area would take up approximately 0.04 percent of the overall land. The majority of the flows generated from the tank site would continue to seep into the surrounding ground. Limited flows may be collected by the catch basin - a safety mechanism required of all storage tanks that is intended to capture recycled water overflows - that is then routed to the existing sewer system. Due to the small area of impervious surface created by the tank, the installation of the tank is not expected to impede or redirect flood flows in a manner that would cause flooding, or expose people or structures to a significant risk of loss, injury or death involving flooding.

¹⁷ Incidental runoff of recycled water refers to small amounts of runoff from intended recycled water use areas, overspray from sprinklers that drifts out of the intended use areas, and overflow of ponds that contain recycled water during storms (SWRCB, 2004).

Figure 3-4: 100-year Flood Zone within the Proposed Storage Tank Site (Adjacent to LMEC)



The Contra Loma Dam and Antioch Municipal Reservoir are located in the City of Antioch, upstream of the proposed Project/Action area (see **Figure 3-3**). According to the Association of Bay Area Governments Dam Failure Inundation Hazard Map for Antioch (2005), the dam failure inundation areas for these dams would occur in Antioch, away from any proposed above-ground structures. As such, impacts associated with exposure of people or structures to a risk of loss, injury or death involving flooding would be considered less than significant.

Buildout Project

Similar to the Near-Term Project, portions of the new and rehabilitated pipelines would be located within the 100-year flood zone (see **Figure 3-3**). Because proposed pipelines would be located underground, they would not impede or redirect flows, nor expose people or structures to a significant risk of loss, injury or death involving flooding. Similarly, the above-ground structures associated with the Buildout Project would not expose people or structures to a risk of loss, injury or death involving flooding, as the RWF is not located within a 100-year flood zone or dam inundation area. Thus, impacts would be less than significant.

j) *Near-Term and Buildout Projects*

Earthquakes can cause tsunamis (“tidal waves”) and seiches (oscillating waves in enclosed water bodies). Low-lying portions of the City of Antioch adjacent to the San Joaquin River could be affected by a tsunami (City of Antioch, 2003) and portions of the City of Pittsburg located adjacent to Suisun Bay are susceptible to potential tsunami or seiche inundation (Pittsburg General Plan, 2011). However, the projected wave height and tsunami run-up are expected to be small in the interior portions of the San Francisco Bay and the Delta. Thus, potential impacts are considered less than significant.

Mitigation Measures

Mitigation Measure HYD-1: Preparation and Implementation of Project SWPPP. The construction contractor for the proposed Project/Action shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to protect water quality during construction, in accordance with Bay Area Stormwater Management Agencies Association. The SWPPP shall include a description of BMPs to be applied to minimize the discharge of pollutants from the site during construction. These construction-period BMPs shall include, but are not limited to, the following:

- Identify all storm drains and catch basins near the construction site and ensure all workers are aware of their locations to prevent pollutants from entering them;
- Protect all storm drain and catch basin inlets;
- Develop an erosion control and sediment control plan for wind and rain;
- Develop spill response and containment procedures;
- Inspect site regularly to ensure that BMPs are intact; and
- Regularly maintain all BMPs in proposed Project/Action area.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

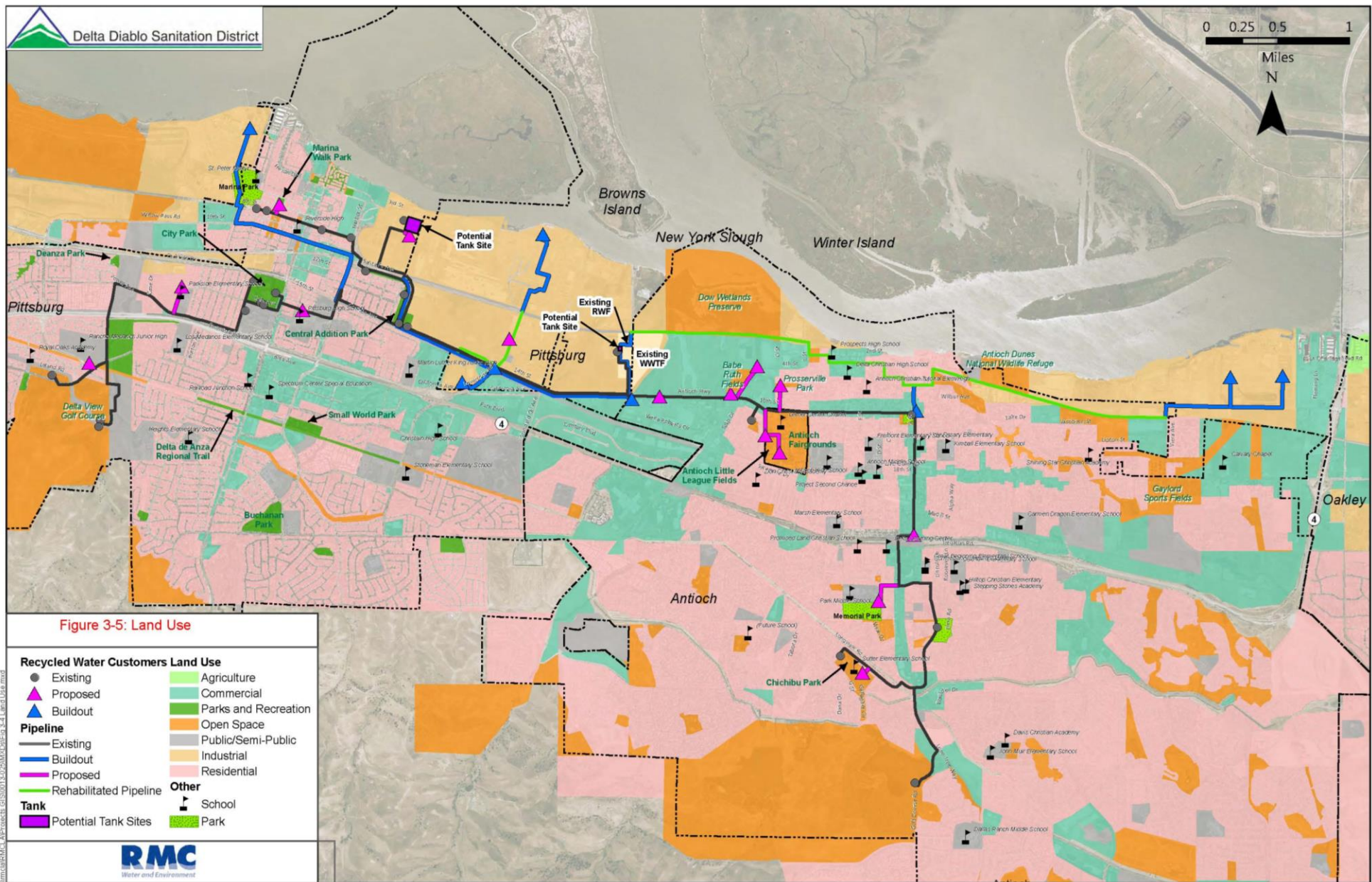
3.13 Land Use and Planning

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

Discussion

Setting/Affected Environment

The proposed Project/Action is located within the cities of Pittsburg and Antioch, and in unincorporated Contra Costa County. Land uses in and around the proposed Project/Action, including nearby parks and schools, are shown in **Figure 3-5**. Existing land uses within the



proposed Project/Action area include residential, commercial, public/institutional and industrial uses.

The proposed Project/Action consists of pipelines located within public and private roadways and above-ground structures within industrial areas. In some cases, the proposed pipelines would terminate at parks and schools because these would be the potential customers receiving recycled water for use in landscape irrigation. Specifically, the parks/recreation areas and schools located within the proposed Project/Action area include the following:

Parks/Recreation Areas: Marina Walk Park, Babe Ruth Fields, Prosserville Park, Antioch Little League, Antioch Fairgrounds, Memorial Field, Chichibu Park, Marina Park, Central (Addition) Park, and Antioch Dunes National Wildlife Refuge.

Schools: Pittsburg High School, Parkside Elementary School, John Sutter Elementary School, Park Middle School, Los Medanos College, and Marina Vista Elementary School.

Within the City of Pittsburg, the proposed facilities (pipelines and storage tank) would be located in and around areas designated as low density residential, park, mixed use, service commercial, business commercial, industrial, and utility/ROW (City of Pittsburg, 2011). Within the City of Antioch, proposed components (pipelines) would be located in and around areas designated as public/institutional, open space, residential, commercial, industrial, and focus area (City of Antioch, 2004). Within Contra Costa County, the proposed components (pipelines to Antioch Little League and Antioch Fairgrounds) would be located in an area designated as public/semi-public (Contra Costa County, 2004).

Plans, Policies, and Regulations

The general plans of the cities of Pittsburg¹⁸ and Antioch, and Contra Costa County identify goals and policies to guide the use of private and public lands within their respective boundaries. These entities recognize and value the need for infrastructure and improvements to existing infrastructure to meet the needs of their residents.

The Public Facilities Element of the City of Pittsburg General Plan identifies the following goals and policies:

Water Supply and Distribution Goal 11-G-2: Continue to implement water conservation policies to ensure adequate supplies of water in the future.

Water Supply and Distribution Policy 11-P-3: Continue water district and user conservation efforts to help reduce demand in light of recent Contra Costa Water District raw water reductions.

- In an attempt to preserve Delta species and habitat, the Central Valley Project mandated reductions in the amount of raw water available to the CCWD. Current water conservation efforts in the City include:
 - ...Study of expanded reclaimed water usage; and...

Water Supply Distribution Policy 11-P-6: Continue water conservation efforts from industrial facilities.

- Water conservation efforts by industrial users can significantly decrease water consumption, especially during peak demand periods. Measures relevant to industrial users include continued enforcement of the 1992 Water-Efficient Landscape Ordinance

¹⁸ According to the Pittsburg General Plan, Pittsburg's Planning Area includes 41.1 square miles of land, within which lie both the sphere of influence (SOI) and the City corporate limits. Pittsburg's SOI extends over 18.2 square miles and includes the unincorporated community of Bay Point, northwest of the City.

and participation in a wastewater reclamation feasibility study. If proven feasible, implementation of the Landscape Ordinance in conjunction with use of reclaimed wastewater for landscape irrigation can help to reduce industrial water demand.

Water Supply Distribution Policy 11-P-8: Develop and implement a Recycled Water Ordinance, requiring the installation and use of recycled water supplies from the new Delta Diablo Sanitation District Reclamation Plant.

Wastewater and Treatment Policy 11-P-15: Work with Delta Diablo Sanitation District to promote the use of recycled water for irrigation of large planted areas, such as business/industrial campus projects, City parks, and street medians.

The Public Services and Facilities Element of the City of Antioch General Plan identify the following goals and policies:

Wastewater Management Policy e: Work with Delta Diablo Sanitation District to explore and develop uses for treated wastewater. Where reclaimed water can be economically delivered, required the installation of dual water systems permitting the use of reclaimed water supplies for irrigation purposes and industrial purposes.

Wastewater Management Policy f: Work cooperatively with affected agencies to ensure that affected capacity allocations are adjusted among the agencies served by Delta Diablo Sanitation District to optimize plant utilization, avoid unnecessary expansions, and facilitate necessary expansions.

The Public Facilities/Services Element of the Contra Costa County General Plan identifies the following goals and policies:

Water Service Goal 7-H: To encourage the conservation of water resources available to the County and to the State.

Water Service Policy 7-24: Opportunities shall be identified and developed in cooperation with water service agencies for use of non-potable water, including ground water, reclaimed water, and untreated surface water, for other than domestic use.

Water Service Policy 7-27: The reclamation of water shall be encouraged as a supplement to existing water supplies.

Sewer Service Goal 7-M: To develop wastewater reclamation as a supplement to imported surface water supplies.

Sewer Service Policy 7-35. Opportunities for using reclaimed wastewater shall be identified and developed in cooperation with sewer service and water service agencies.

Impacts/Environmental Consequences

a) Near-Term and Buildout Projects

The proposed pipelines would be located primarily along public and private roadways and the above-ground structures would be located within industrial areas. Implementation of the proposed Project/Action would generate temporary, intermittent construction-related impacts in the areas surrounding the proposed facilities as well as staging areas (located along the pipeline alignments or within parcels where the tanks would be located). The presence of construction-related equipment and workers would temporarily change the existing character of the vicinity to that of a construction zone but would not physically divide the existing community because local access

would be maintained for residents and businesses along the proposed alignment throughout construction of the proposed Project/Action.

After the proposed Project/Action is completed, all pipeline improvements (new and rehabilitated) would be below ground, and there would be no changes to land uses in the proposed Project/Action area; as such, they would not serve as barriers within the community and existing neighborhoods would not be divided.

The aboveground facilities would be located on a vacant lot adjacent to LMEC or within the RWF, and thus would integrate with the industrial nature of the surrounding site. Their construction would result in temporary land use disturbance similar to those identified for the proposed pipeline, and operation would result in new above-ground structures. However, given these structures' locations within existing industrial areas, they would not create barriers that would separate the nearby neighborhoods or communities. As the existing character of the affected area where construction of proposed facilities would occur would not change, potential impacts related to physically dividing an established community would be less than significant.

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

b) *Near-Term Project*

The proposed pipeline would be located underground and would not result in any significant, long-term, land use and planning impacts.

The proposed storage tank would be located within the RWF or adjacent to the LMEC site, which is zoned as IG by the City of Pittsburg (City of Pittsburg, 2010). According to Section 18.54.010 through 18.54.130 of the Zoning Code, minor and major utilities are permitted or require approval of a use permit, respectively. In addition, all projects within the industrial zones require design review and strict development regulations regarding the minimum lot size, height of structures, setbacks from the front, and lot coverage. The maximum height of structures allowable in the IG district is 50 feet. However, an increase over the maximum height allowance is allowed equal to the number of additional feet the structure is set back from each property line beyond the minimum yard requirements, up to a maximum height of 75 feet. As described in the Project Description, the proposed storage tank would be a maximum of 30 feet tall. There are two options for the proposed tank. One option is within the western portion of the RWF, surrounded by currently vacant land to the north (also part of the RWF), existing treatment facilities to the east, a parking lot to the south, and the DEC to the west. The second option is at the site adjacent to the LMEC site, which is surrounded by industrial uses to the north, south and west, and a vacant parcel to the east. Neither of the two locations is situated near residential uses. Compliance with the development regulations and other sections of the Zoning Code, and as needed, the acquisition of a use permit, would ensure that the proposed Near-Term Project would not conflict with the City's land use policies.

The proposed Project/Action would not conflict with the policies of the cities of Pittsburg and Antioch, or Contra Costa County, and would not result in substantial alterations to the built character of the proposed Project/Action area. There would not be any significant, long-term, land use and planning impacts associated with implementation of the proposed Project/Action. Due to the importance of infrastructure improvements within the cities and County, and the fact that proposed infrastructure for the proposed Project/Action would be largely constructed on street ROWs or industrial areas that allow for construction of utilities, this project would not conflict

with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

Operation of the proposed facilities would not create any long-term land use impacts because they would either be buried underground (*i.e.*, for pipelines) or would be located in areas integrated with surrounding land uses and would not disrupt sensitive land uses.

Buildout Project

Similar to the Near-Term Project, the Buildout Project would not result in any significant, long-term, land use and planning impacts. The proposed pipelines would be buried and would not permanently change the character of the affected areas. The Buildout Project would require the construction of an additional treatment process, pump station, and a HPWTF within the RWF, on the vacant land in the northern portion of the RWF site, north of the proposed storage tank. As these facilities have not yet been designed, the details of their size and other characteristics are not yet available. Similar to the proposed storage tank described under the Near-Term Project, DDSD would be required to comply with the Pittsburg Zoning Code Sections 18.54.010 to 15.54.130. Compliance with these regulations would ensure that the proposed Buildout Project would not conflict with the City’s land use policies.

c) *Near-Term and Buildout Project*

Refer to Section 3.7, Biological Resources, for a discussion of consistency with the HCP/NCCP.

Mitigation Measures

None required or recommended.

3.14 Mineral Resources

Would the Project:	<u>Potentially Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Setting/Affected Environment

According to the Pittsburg General Plan (2010), coal and sand mining have historically occurred in the southern portion of its planning area, within the Black Diamond Mines; the mines were closed in the mid 1900s. There are currently no significant mineral deposits or active mining operations within the City’s planning area.

According to the Antioch General Plan (2003), coal mining has historically occurred in the southwestern portion of the City; these mines were abandoned in the 1800s. In addition, the southern portion of the City of Antioch is within the outer western margin of the Brentwood oil

field. The California Department of Conservation Oil, Gas, and Geothermal Resources online database of production wells indicates that 52 wells have been operated within the Brentwood oil field. All but three of these wells have been plugged and capped.

Impacts/Environmental Consequences

a, b) *Near-Term and Buildout Projects*

Near-Term and Buildout Project components are located within roadways and other public and private areas within the cities of Pittsburg and Antioch that are considered built-up and disturbed. They are not located in areas identified as containing state, regional, or locally important mineral resources. As such, the proposed Project/Action would not result in the loss of availability of known mineral resources and no direct or indirect impacts to mineral resources would occur.

Mitigation Measures

None required or recommended.

3.15 Noise

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

Discussion

Setting/Affected Environment

The major noise sources within the proposed Project/Action area are transportation noises, associated with traffic along highways, rail lines, and major arterial roadways. Stationary noise sources include heavier industrial development, commercial development, and construction activities.

For construction noise, the potential for an impact is determined by the proximity of sensitive receptors¹⁹ to construction activities, estimated noise levels associated with construction equipment, the potential for construction noise to interfere with daytime and nighttime activities, and whether construction noise at nearby receptors would exceed local noise ordinance standards. Typical construction activities (*e.g.*, jackhammering and use of earthmoving equipment) generate maximum noise levels (without noise controls) ranging from 75 dBA²⁰ Lmax²¹ to 90 dBA Lmax at 50 feet from the source, with slightly higher levels of about 81 to 96 dBA Lmax at 50 feet for pile-driving activities (FHWA 2013). The rate of attenuation (*i.e.*, reduction) is about 6 dBA for every doubling of distance from a point source. Similarly, vibration impacts are a function of the associated activity and equipment and the distance to the nearest receptor.

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

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

Local Noise Standards

City of Pittsburg

The City of Pittsburg General Plan Noise Element establishes standards for land use compatibility with various noise levels. The maximum acceptable exterior noise level is 60 dBA Ldn for single-family residential uses; 65 dBA Ldn for multiple-family residential uses and hotels and motels; 70 dBA Ldn for schools, libraries, churches, hospitals, parks, playgrounds, and office buildings; and 75 dBA Ldn for other uses. These standards are based upon accepted thresholds of significance and apply to long-term operational noise from any source. The Noise Element requires that interior noise levels in noise-sensitive uses (schools, hospitals, churches, or residences) do not exceed 45 dBA Ldn.

¹⁹ Noise-sensitive land uses and/or receptors include: residences of all types, schools, hospitals, convalescent facilities, rest homes, hotels, motels, and places of worship. Sensitive uses from a noise perspective include places where there is a reasonable expectation that individuals could be sleeping, learning, worshipping, or recuperating.

²⁰ The decibel scale is used to quantify sound intensity. Because sound can vary in intensity by more than 1 million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Because the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called “A-weighting,” expressed as “dBA.” The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness.

²¹ Lmax is the instantaneous maximum noise level measured during the measurement period of interest.

The Noise Element requires that noise on construction sites adjacent to noise-sensitive uses is limited to normal business hours between 8:00 a.m. and 5:00 p.m. but does not establish the days of the week nor sound level limits.

The City of Pittsburg noise ordinance does not establish noise level limits related to fixed noise sources or construction noise (Title 9 Public Peace, Safety and Morals, Chapter 9.44 Noise, §9.44.010). The noise ordinance prohibits the use of any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m. It also prohibits the creation of any excessive noise on any street adjacent to any school, institution of learning, church or court while the same is in use, or adjacent to any hospital, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such streets indicating that the same is a school, hospital, church or court street.

City of Antioch

The City of Antioch General Plan establishes exterior noise objectives for specific land use categories. The acceptable exterior noise level is 60 dBA CNEL for single-family residential uses (within rear yards) and multiple-family residential uses (within interior open space); 65 dBA CNEL (classrooms) or 70 dBA CNEL (play and sports area); 60 dBA CNEL for hospitals and libraries; and 70 dBA CNEL for commercial and industrial areas (front setback). The General Plan also identifies policies related to temporary construction. These policies include but are not limited to the use of noise reduction features on equipment and submittal of a construction-noise mitigation plan for proposed development adjacent to occupied noise sensitive land uses.

The City of Antioch noise ordinance establishes restrictions on the operation²² of heavy construction equipment²³ and construction activity²⁴ in general during the following hours (Section 5-17.04 Heavy Construction Equipment Noise and Section 5-17.04 Heavy Construction Equipment Noise):

- On weekdays prior to 7:00 a.m. and after 6:00 p.m.
- On weekdays within 300 feet of occupied dwelling space, prior to 8:00 a.m. and after 5:00 p.m.
- On weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwelling.

Impacts/Environmental Consequences

a, d) Near-Term and Buildout Projects

Construction activities associated with the proposed Project/Action would result in temporary and intermittent noise increases at sensitive receptors near construction activities. Construction noise created by excavation and use of heavy equipment would temporarily increase noise levels in the vicinity of the proposed Project/Action. As noted above, the maximum instantaneous noise (Lmax) resulting from Project construction activities would range from 75 dBA Lmax to 96 dBA

²² Operation as defined in the Antioch Municipal Code as the starting, warming-up, and idling of heavy construction equipment engines or motors.

²³ Heavy equipment as defined in the Antioch Municipal Code is equipment used in grading and earth moving, including diesel engine equipped machines used for that purpose, except pickup trucks of one ton or less.

²⁴ Construction activity as defined in the Antioch Municipal Code means the process or manner of constructing, building, refurbishing, remodeling or demolishing a structure, delivering supplies thereto and includes, but is not limited to, hammering, sawing, drilling, and other construction activities when the noise or sound therefrom can be heard beyond the perimeter of the parcel where such work is being performed.

Lmax at 50 feet from the source; the maximum instantaneous noise levels would be highest associated with piledriving activities. As described in Section 3.13, Land Use, the proposed pipeline traverses a variety of land uses, including residential, commercial, public, and industrial, as well as schools. Sensitive receptors within 50 feet of construction activities associated with the proposed Project/Action would be subjected to construction-related noise levels. Nighttime and weekend construction may be required for specific activities. Pipeline installation is anticipated to occur at a rate of approximately 100 feet a day, such that construction would not be in one location for long durations of time. Longer durations of time are needed where construction pits are located for trenchless construction activities (at crossings or pipeline rehabilitation).

Because of the range of equipment noise levels, the duration of construction at discrete locations, the possible need for nighttime construction, and the proximity of some sensitive receptors (including residents and schools), the proposed Project/Action have temporary noise impacts during construction. The proposed Project/Action would expose sensitive receptors to elevated daytime and potentially nighttime noise levels and has the potential to generate substantial temporary or periodic increase in ambient noise levels; thus noise impacts are considered potentially significant. Implementation of noise control measures and compliance with noise ordinances during construction (see **Mitigation Measure NOI-1** and **Mitigation Measure NOI-2**) would reduce noise impacts to a less-than-significant level.

b) *Near-Term and Buildout Projects*

Construction activities such as excavation, spoil transport, pile driving, and shoring of trenches would generate vibration. Buildings and Burlington Northern and Santa Fe (BNSF) railroad tracks are located adjacent to the new and rehabilitated pipelines that could be affected by construction activities. Based on anticipated equipment proposed for use and the vibration level data provided in **Table 3-4**, vibration levels generated by the majority of proposed equipment would be equal to or below the 0.2 in/sec PPV criterion applied to assess the potential for cosmetic or structural damage. Typical vibratory pile-driving vibration levels would also be below the 0.2 in/sec PPV criterion but may at times exceed the 0.2 in/sec PPV criterion when levels reach the uppermost range of measured vibration levels (0.734 in/sec PPV).

Table 3-4: Vibration Source Levels for Construction Equipment

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

In general, cosmetic or threshold damage to residential buildings can occur at vibrations greater than 0.5 in/sec PPV. Continuous vibration caused by vibratory pile drivers and large vibratory rollers/compactors could cause structural damage if the continuous vibration is greater than 0.2 in/sec PPV. Because groundborne vibration levels could exceed the established thresholds for short periods of time, impacts would be considered potentially significant and would require the implementation of vibration controls (**Mitigation Measure NOI-3**). Implementation of this measure would reduce impacts to less than significant.

c) *Near-Term Project*

Operation of the proposed pipelines and tank would not generate any permanent noise because they would not require pumps or other noise-generating equipment; thus, no impact would occur. Pumping associated with the HWPF would generate minimal operational noise, but would not affect any adjacent land uses, as described below.

Buildout Project

The Buildout Project improvements at the RWF, including the pump station for the Recycled Water System Expansion, the HPWTF, and the emergency diesel generator would generate permanent noise. The RWF is surrounded by vacant lands and other industrial uses. The nearest residential uses are located approximately 4,000 feet to the south (in Antioch). Assuming an attenuation rate of 6 dBA per doubling of distance, operational pump noise, without noise control, would be less than the 60 dBA standard for single-family residential uses and multiple-family residential uses in Antioch. As such, no operational impacts would occur.

e, f) *Near-Term and Buildout Projects*

There are no airports or private airstrips within the cities of Pittsburg and Antioch. The nearest airport is located about 10 miles west of Pittsburg in the City of Concord. As such, the proposed Project/Action would not expose people residing or working in the proposed Project/Action area to excessive noise levels.

Mitigation Measures

Mitigation Measure NOI-1: Noise Control. The construction contractor shall use appropriate noise control measures to reduce daytime and nighttime construction noise levels to the extent feasible. Noise controls could include any of the following, as appropriate:

- Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks to minimize construction noise impacts.
- If impact equipment (*e.g.*, jackhammers and pavement breakers) is used during Project construction, hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dBA). External jackets on the tools themselves shall be used, where feasible, which could reduce noise by 5 dBA. Quieter procedures, such as drilling rather than impact equipment, shall be used whenever feasible.
- Pile holes shall be pre-drilled wherever feasible to reduce potential noise and vibration impacts.

- Operation of equipment requiring use of back-up beepers shall be avoided near sensitive receptors to the extent feasible during nighttime hours (6:00 PM to 7:00 AM).
- Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to ensure local noise ordinance limits are met to the extent feasible. Enclosure opening or venting shall face away from sensitive receptors. If any stationary equipment (*e.g.*, ventilation fans, generators, dewatering pumps) is required, such equipment shall comply with daytime and nighttime noise limits specified in pertinent noise ordinances to the extent feasible.
- Material stockpiles as well as maintenance/equipment staging and parking areas shall be located as far as feasible from residential and school receptors.
- Proposed jack-and-bore pits shall be located as far from sensitive receptors as technically feasible.
- A designated Project liaison shall be responsible for responding to noise complaints during the construction phases. The name and phone number of the liaison shall be conspicuously posted at construction areas and on all advance notifications. This person shall take steps to resolve complaints, including periodic noise monitoring if necessary. Results of noise monitoring shall be presented at regular meetings with the construction contractor, and the liaison shall coordinate with the construction contractor to modify, to the extent feasible, any construction activities that generate excessive noise levels.
- A reporting program that documents complaints shall be required.

Mitigation Measure NOI-2: Compliance with Noise Ordinances. The bid specifications for this Project shall include the following restrictions:

- Within the City of Pittsburg, any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other appliance, the use of which is attended by loud or unusual noise cannot be used between the hours of 10:00 p.m. and 7:00 a.m. If DDSD proposes to employ nighttime construction for the Kirker Creek crossing or any other non-residential areas, work would be coordinated with the City of Pittsburg to ensure that equipment used at night is acceptable.
- Within the City of Antioch construction activities would not be allowed during the following times:
 - On weekdays prior to 7:00 a.m. and after 6:00 p.m.
 - On weekdays within 300 feet of occupied dwelling space, prior to 8:00 a.m. and after 5:00 p.m.
 - On weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwelling.

Mitigation Measure NOI-3: Vibration Controls to Prevent Cosmetic or Structural Damage. The construction contractor shall ensure that surface vibration associated with construction activities would be kept under 0.2 in/sec PPV for continuous vibration (e.g., vibratory equipment) at the closest receptors to ensure that cosmetic or structural damage does not occur.

DDSD or its construction contractor shall coordinate with BNSF to determine whether site-specific requirements associated with construction activities adjacent to the BNSF railroad tracks are necessary to ensure vibration does not cause any structural damage.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.16 Population and Housing

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

Discussion

Setting/Affected Environment

The cities of Pittsburg and Antioch have prepared land use maps and established land use policies that define the cities' future land use pattern and maximum development intensities throughout their planning areas. In addition, these cities have established growth management policies that ensure balanced growth and adequate public services are available to accommodate the growth.

One of the City of Pittsburg growth management policies relevant to the proposed Project/Action is to "allow urban and suburban development only in areas where public facilities and infrastructure (police, fire, parks, water, sewer, storm drainage, and community facilities) are available or can be provided" (2010). The goal of the City of Antioch's Growth Management Element relevant to the proposed Project/Action is to "maintain a clear linkage between growth and development within the City and expansion of its service and infrastructure systems, including transportation systems; parks, fire, police, sanitary sewer, water, and flood control facilities; schools; and other essential municipal services, so as to ensure the continuing adequacy of these service facilities (2003)."

Impacts/Environmental Consequences

a) *Near-Term and Buildout Projects*

The proposed Project/Action consists of expanding the recycled water system to meet current demands. The Near-Term Project would be constructed to correct existing deficiencies and to optimize the existing recycled water system. It does not propose new homes or businesses. As such, it would not induce directly or indirectly any population growth in an area. Thus, no impact would occur.

Buildout Project

The Buildout Project is intended to meet long-term demands within DDSD's service area. It would not directly induce population growth in the service area by proposing new homes and businesses. It could indirectly induce growth²⁵ in that it would provide recycled water for non-potable and industrial uses to meet the increasing demands of the cities as they reach their planned, buildout growth. As the cities increase in population and economic output, DDSD would respond accordingly. By providing an urban service necessary for development (additional recycled water supply) the proposed Project/Action would remove an "obstacle" to planned growth; by the CEQA definition the proposed Project/Action would be growth inducing.

Growth inducement may constitute an adverse impact if the growth is inconsistent with the land use and growth management policies for the affected area. A key component of the proposed Project/Action is to provide recycled water for orderly, planned growth within DDSD's service area, in accordance with approved General Plans. The proposed facilities would be constructed in phases as the demands are identified. When additional customers are identified for advance treated water, then components of the Buildout Project would be implemented, in accordance with the anticipated demand. Thus, the proposed Project/Action would not serve unplanned growth but only those approved by the cities.

It should be noted that the cities of Pittsburg and Antioch are actively trying to stimulate economic activity and jobs in their respective jurisdictions. The Buildout Project (including the HPWTF) would help to attract new businesses to the service area, increasing jobs and improving economic conditions following the recent recession. The proposed Project/Action could indirectly aid in population growth by attracting new individuals to the area, or it could indirectly increase the number of jobs for the existing population.

Because the proposed Project/Action would be consistent with land use and growth management policies, impacts are considered less than significant.

b, c) *Near-Term and Buildout Projects*

The proposed Project/Action does not involve construction or removal of residences, commercial, or industrial facilities. The proposed Project/Action would not displace existing housing or people and would not require or induce construction of new housing. Therefore, this significance criterion is not applicable to the proposed Project/Action.

Mitigation Measures

None required or recommended.

²⁵ Section 15126.2(d) of the CEQA Guidelines specifies projects that "would remove obstacles to population growth" either directly or indirectly are considered growth-inducing. "It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

3.17 Public Services

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

- a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Setting/Affected Environment

Contra Costa Fire Protection District provides fire and emergency services to the Cities of Pittsburg and Antioch, as well as adjacent unincorporated areas (City of Pittsburg, 2010; City of Antioch, 2010). The Pittsburg Police Department and Antioch Police Department provide crime prevention and law enforcement services within the respective city boundaries. California Highway Patrol and the Contra Costa Sherriff’s Department provide law enforcement services within unincorporated areas.

The City of Pittsburg Parks and Recreation Department maintains parks within its boundaries. The City of Antioch Parks Department maintains parks within its City limits.

Impacts/Environmental Consequences

- a) *Near-Term and Buildout Projects*

The proposed Project/Action is intended to meet recycled water demands within DDSD’s service area through buildout development by the affected jurisdictions (see Section 3.16, Population and Growth above). While the proposed Project/Action may indirectly increase population growth through the attraction of new businesses to the region, the proposed Project/Action in and of itself is not expected to result in substantial amount of new or physically altered government facilities. In addition, the operation and maintenance of the proposed Project/Action would not be labor intensive, and therefore would not substantially increase the need for new staff from any public protection services entities (e.g., police and fire). As implementation of the proposed Project/Action would not change the demand for any public services, it would not require additional equipment or resources for those public service providers. As such, impacts would be less than significant and no mitigation is required.

Mitigation Measures

None required or recommended.

3.18 Recreation

	<u>Potentially Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
Would the Project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the Project affect recreational facilities or its users by introducing safety hazard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

Setting/Affected Environment

Figure 3-5 shows the location of existing parks and other recreational areas relative to the proposed components within the proposed Project/Action area. Below are a listing of the parks and recreational areas that are located adjacent to or near the proposed components and their amenities (City of Pittsburg, 2009; City of Antioch, NA):

Near-Term Project Area

- Marina Walk Park, owned and maintained by the City of Pittsburg, is located on West 6th and Cutter streets and consists of picnic tables, play equipment/tot lot, a half-court basketball court, and turf areas.
- Delta De Anza Regional Trail occurs generally south and parallel to Highway 4. It is a paved, multi-use hiking, bicycling and equestrian trail that bisects both the cities of Pittsburg and Antioch. The trail provides access to regional and community parks, and schools.
- Babe Ruth Fields, located off Auto Center Drive and West 10th Street in Antioch, consists of six baseball diamonds, some structures, and a parking lot.
- Prosserville Park, owned and maintained by the City of Antioch, is located off 6th and O streets and consists of a basketball court, picnic tables, barbeque pits, turf area, and youth play area.
- Antioch Little League, located in unincorporated Contra Costa County, consists of three baseline diamonds.

- Antioch Fairgrounds, located in unincorporated Contra Costa County, consists of landscaped open lawn areas, Front Park, covered open arenas, concert pavilion, and event buildings.
- Memorial Field, owned by the Antioch Unified School District, is located off D Street and consists of a baseball diamond and other turf areas.
- Chichibu Park, owned and maintained by the City of Antioch, is located off Longview Road and Acorn Drive and consists of tennis courts, picnic areas and barbeque pits, horseshoes, tot play area, youth play area, turf area, and restrooms.
- The Mokelumne trail runs along the East Bay Municipal Utility District (EBMUD) Mokelumne Aqueduct right of way in the City of Antioch.

Buildout Project Area

- Central (Addition) Park, owned and maintained by the City of Pittsburg, is located along the Pittsburg-Antioch Highway and consists of barbeque grills, picnic tables, play equipment/tot lot, baseball/softball field, a soccer field, basketball courts, horseshoes, and restrooms.
- Gaylord Sports Field, located in Antioch consists of a picnic area, lawn games area, soccer fields, and softball diamonds.
- Marina Park, located at the end of W. 4th Street in Antioch, is currently vacant.

In addition, play yards and fields located within existing schools are also located adjacent to the proposed pipeline alignments.

The Antioch Little Leagues play at various fields within the cities of Pittsburg and Antioch, including the fields across from the Fairgrounds (Antioch Little Leagues) and the Gaylord Sports Field (also known as the ASYC fields). The Little League season occurs during spring.

Impacts/Environmental Consequences

a, b) Near-Term and Buildout Projects

The Project/Action proposes to provide recycled water to public, commercial, and industrial customers. Although this Project may indirectly induce population growth (see Section 3.16) consistent with approved General Plans, because of the nature of this Project, it would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Thus, impacts would be less than significant. In addition, the proposed Project/Action does not propose recreational facilities and would not require the construction or expansion of any recreational facilities. As such, no impacts would occur.

c) Near-Term Project

Proposed pipeline alignments would occur primarily within City streets, but at some locations they would be adjacent to or terminate at parks and other recreational facilities, including school play yards and turf areas. Construction activities would not occur directly within play areas, and thus would not result in closure of any recreational facilities.

Table 3-5 shows the recreational areas that could be affected along the proposed alignments under the Near-Term Project, either directly or indirectly. With the exception of the proposed alignment to Marina Walk Park and Antioch Little Leagues, the proposed pipelines would not directly affect existing recreational facilities or users. For most locations, impacts to recreational facilities are indirect, associated

with noise and dust generated from temporary and intermittent construction activities in the vicinity of the sites.

Table 3-5: Impacts to Recreational Facilities under the Near-Term Project

Alignment No. / Name	Location	Nearest Recreational Facility and Potential Effect ¹
1 - Rancho Medanos Junior High School	Along W. Leland Road.	The track and field is located more than 100 feet north of the proposed pipeline. The proposed pipeline alignment is located near the street access to the Delta de Anza Regional Trail. The DVGC is located more than 500 feet south of the proposed pipeline alignment. Due to their distances, no effects on the track and field facility or the DVGC are expected. Due to the proximity of the Delta de Anza Regional Trail and the potential for construction activities to block access to this recreational facility or cause safety issues, impacts are considered potentially significant. To reduce potential impacts to less-than-significant, Mitigation Measure REC-1 is required to ensure that construction would be located away from the trail access point.
2 – Parkside Elementary School	Along footpath on west side of the school.	Due to the width of the construction zone, the proposed pipeline would occur on the foot path and the western, paved portion of the school’s play yard. Although construction activities would not occur within any of the marked play areas, construction activities during the school season could result in potential hazards to the children playing in the yard. For this reason, impacts are considered potentially significant. Mitigation Measure REC-2 is required to reduce potential conflicts between children and construction work activities to a less-than-significant level.
3 – Pittsburg High School	North of the turf area.	The baseball diamond is located adjacent to the connection point. It would not be closed from construction activities and thus no direct effects on this recreational facility are anticipated. Indirect effects are expected to be less than significant due to the temporary and intermittent nature of construction activities.
4 – Marina Walk Park	Along Cutter Street, terminating at the south entrance of the park, within the paved sidewalk	The proposed alignment occurs within the southern entrance to/exit from the park. While closure of this entrance/exit is anticipated for connection of the pipeline, none of the play areas would be closed. Because there are multiple accesses to the park (official entrances from the north, northeast, and southeast and unofficial entrances from the sidewalks surrounding the entire park), this is considered a less-than-significant impact. In addition, indirect effects are expected to be less than significant due to the temporary and intermittent nature of construction activities.
9 – Babe Ruth Fields	Across W. 10 th Street.	Baseball diamonds are located more than 200 feet to the north and would not require closure during construction. No direct or indirect effects on these fields are anticipated due to the distance from construction activities.
10 – Alignment to the Antioch Historical Society	Along West 4 th Street	The pipeline terminates within the turf area of the Antioch Historical Society. No direct or indirect effects on the museum are anticipated as construction activities would occur outside the museum walls.

Alignment No. / Name	Location	Nearest Recreational Facility and Potential Effect ¹
11 - Antioch Little League	West of one of the baseball diamonds and between the north and central baseball diamonds	The proposed pipeline passes between two baseball diamonds and around an existing structure (snack bar) at the eastern end of the diamonds. Avoidance of the building may require encroachment upon one of the baseball diamonds, and would result in impacts to this recreational facility, if it occurs during the Little League baseball / softball season (spring). Thus, impacts would be considered significant. Mitigation Measure REC-3 would reduce potential impacts to less than significant by requiring DDSD to schedule construction activities at this location outside game days.
12 – Antioch Fairgrounds	West of the turf area of the Antioch Fairgrounds	The turf area of the Antioch Contra Costa County Fairgrounds is located east of the alignment. The Fairgrounds host a County Fair annually in the spring season. As the alignment would be located entirely within the roadway, no direct effects to Fair activities or events are anticipated. Indirect effects are expected to be less than significant due to the temporary and intermittent nature of construction activities.
13 – Prosserville Park	Along O Street and terminate at western end of the Park	Pipeline installation and connection would occur along the western edge of the park area, where the turf is located. As connection would not affect access into the park and there is other turf area that would remain open for recreational purposes, this is expected to be a less-than-significant impact.
15 – Memorial Park	Along Elizabeth Lane, and cut across the parking area to the turf area.	Pipeline installation and connection would occur along the parking area and southern edge of the park, where the turf is located. As connection would not affect access into the park and there is other turf area that would remain open for recreational purposes, this is expected to be a less-than-significant impact.

Note: The alignment numbers correspond to those identified in Table 2-3 in Chapter 2, Project Description.

¹ Indirect impacts are those that would not result in direct closure of the facility in any manner and would ensure that the facility would remain open. However, due to the proximity of the construction zone to the recreational facility, impacts such as increased noise and dust would occur. Direct impacts are those that would cause some form of closure to the facility.

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

Construction and operation of the above-ground facilities at the RWF or the industrial area adjacent to LMEC would not result in any impacts on existing recreational facilities because none are located near the RWF or LMEC.

Buildout Project

Several parks and schools with play areas are located along the proposed pipeline alignments under the Buildout Project, including Central (Addition) Park, Marina Vista Elementary School, Marina Park, and Gaylord Sports Fields. Installation and/or rehabilitation of proposed pipelines under the Buildout Project could result in direct or indirect impacts to recreational facilities and uses, depending on the precise locations of the construction zones (pipeline trenches and pits for rehabilitation of the existing pipeline). These impacts could include blocking access to the recreational facility or closure of specific recreational amenities. Implementation of **Mitigation Measure REC-4** would ensure that recreation-related impacts would be less than significant.

Construction and operation of the above-ground facilities at the RWF would not result in any impacts on existing recreational facilities.

Mitigation Measures

Mitigation Measure REC-1: Impacts on Delta de Anza Regional Trail (Near-Term Project Only).

DDSD or its contractors shall ensure that construction of the proposed pipeline alignment to Rancho Medanos Junior High School would not block access to the Delta de Anza Regional Trail. In addition, DDSD or its contractors shall post signage along the trail informing the public of anticipated construction activities and schedule.

Mitigation Measure REC-2: Effects on Parkside Elementary School (Near-Term Project Only).

DDSD shall coordinate with school officials to identify the appropriate timing of construction within school property. Construction shall occur either on weekends or during the summer, when school is not in session.

Mitigation Measure REC-3: Effects on the Baseball Diamonds at Antioch Little Leagues (Near-Term Project Only). DDSD or its contractors shall coordinate with the Antioch Little Leagues to ensure that construction of the alignment to the Antioch Little Leagues (between the two baseball diamonds) occurs outside of the Little League game days or season.

Mitigation Measure REC-4: Effects on Recreation from Buildout Project (Buildout Project Only). DDSD or its contractors shall ensure that the proposed pipeline alignments and pits for rehabilitation of the existing pipeline are situated in a manner that minimizes blockages/disruptions to existing recreational facilities, and will ensure that all recreational facilities are open to the public.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.19 Transportation/Traffic

	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
	<u>Potentially Significant Impact</u>		

Would the Project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>a) Conflict with and applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p>b) Conflict with applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

Setting/Affected Environment

Highway 4 (California Delta Highway), which runs east to west, bisects the cities of Pittsburg and Antioch and provides the primary regional access to the proposed Project/Action area from surrounding highways and areas. Highway 160, which diverges north from Highway 4 and crosses the San Joaquin River via the Antioch Bridge, also provides regional access to the proposed Project/Action area. The majority of the proposed pipeline alignments occur north of Highway 4, along arterials²⁶ (e.g., Pittsburg-Antioch Highway, Loveridge Road, Willow Pass Road, Harbor Street, West 4th Street) and local streets²⁷.

The proposed Project/Action area is served by public transportation. Regional service is provided by Tri-Delta Transit. Several bus lines run along proposed pipeline alignments. Within the City of Pittsburg (where the proposed Buildout Project pipeline alignments are located), Route 388 and 392 traverse Loveridge Road north to Pittsburg-Antioch Highway, then along the highway to Columbia Street, left on 12th Street (Tri-Delta Transit, 2012). At the intersection of 12th Street and Harbor Street, the routes diverge. Bus route 392 continues north on Harbor Street and left on 10th street. Within the City of Antioch, route 388 traverses Auto Center Drive north of 10th Street, along one of the proposed Near-Term pipeline alignments. Routes 380 and 392 traverse Lone Tree Way, adjacent to one of the proposed Near-Term Project pipeline alignments. In addition, Route 387 traverses 2nd Street, where the proposed Buildout Project rehabilitated pipeline alignment is located.

According to the City of Pittsburg General Plan (2011), Pittsburg experiences substantial through traffic on local arterials and collectors. As specified in the City of Antioch General Plan (2004), traffic conditions on Antioch roadways are generally acceptable, with congestion developing at intersections of major arterials and at freeway interchanges during peak hours.

²⁶ Arterial roadways primarily serve through traffic. They are generally multi-lane facilities with signalized traffic control at major intersections. They carry a mix of local and regional traffic, providing circulation between neighborhoods, activity centers, and highways and other regional routes.

²⁷ Local streets provide access to individual sites. They rarely have more than two travel lanes, and speed limits are generally kept low (25 mph).

BNSF and Union Pacific (UP) have railroad tracks running through the cities of Pittsburg and Antioch. Portions of the proposed rehabilitated pipeline under the Buildout Project run parallel to the railroad tracks in the City of Antioch. The BNSF tracks run along the southern bank of the San Joaquin River and the UP tracks are adjacent to Highway 4. Amtrak offers passenger rail service on the BNSF; the station is at the foot of I Street, in the vicinity of the proposed alignment.

Two regional trails occur in the vicinity of the proposed Project/Action area, including the Delta de Anza Regional Trail and the Mokelumne Trail. The Delta de Anza Regional Trail is located adjacent to the proposed Near-Term Project pipeline alignment to Rancho Medanos Junior High School. The Mokelumne Trail is located in the vicinity of the proposed Near-Term Project pipeline alignment to Sutter Elementary School. Both trails are considered Class I trails (bike paths that exclude motor vehicle access) (City of Pittsburg, 2011; City of Antioch, 2004). West Leland Road, where the proposed Near-Term pipeline alignment to Rancho Medanos Junior High School is located, is considered a Class III facility that is planned to be a Class II²⁸ facility according to the City of Pittsburg General Plan (2011). Within the City of Pittsburg, a number of the proposed Buildout Project pipeline alignments are designated bicycle facilities. Specifically, Willow Pass Road and Loveridge Road²⁹ are considered Class III and Class II facilities, respectively. Harbor Road is an existing Class III facility that is planned to be converted into a Class II facility. The Pittsburg-Antioch Highway is proposed to be a Class III facility. Within the City of Antioch, Wilbur Avenue is considered a Class III facility.

Impacts/Environmental Consequences

a, b) Near-Term and Buildout Projects

Construction period impacts would be associated with traffic generated by workers and haul trucks, and with lane reductions caused by construction activity in road ROWs.

Construction traffic could result in short-term increases in traffic volumes, which could lead to a reduction of roadway capacities in the immediate vicinity of the proposed Project/Action area and along haul routes. The slower movements and larger turning radii of construction-related trucks compared to passenger vehicles could also temporarily and intermittently reduce roadway capacities and increase roadway congestion and delays. In addition, lane closures associated with pipeline construction would occur along streets and intersections during construction activities. Lane reductions could further reduce the roadway capacities, especially during peak hours. For most pipeline segments, construction would be installed using the open-trench method, and thus only a small segment would be closed at one time during construction activities (construction of any one segment would proceed at a rate of 100 feet per day). For the rehabilitated pipeline alignment, lane closures may last longer at any one location (*e.g.*, at the pits).

Anticipated construction-related vehicle trips include construction workers traveling to and from the proposed Project/Action work area, spoil-hauling trucks, and other trucks associated with equipment and material deliveries. Assuming 3 crews of 15 people would be working on any given day, the total number of worker trips would be approximately 45 round trips per day. It is likely that the three construction crews would be working in different locations, such that the traffic generated by construction workers would be spread out within the two cities. As described in the Project Description, approximately 20 round trips (40 one-way trips) would be generated per day for the Near-Term Project associated with hauling of material off-site for disposal and delivery of equipment/material. These trips would likely be scattered due to the different construction locations. Any construction-related traffic occurring between 7:00 AM and 9:00 AM

²⁸ Class II facilities are designated bike lanes that provide space in the road for bicycle travel. Class III facilities are bicycle routes that provide signage to alert bicyclists and motorists that a bicycle route exists.

²⁹ A portion of the proposed rehabilitated pipeline under the Near-Term Project is located along Loveridge Road.

or between 4:00 PM and 6:00 PM would coincide with peak hour traffic and could temporarily impede traffic and transit flow. Travel during these time frames would primarily consist of workers traveling to and from the proposed Project/Action site, because delivery trucks would likely occur throughout the day.

Given the short-term nature of construction and because impacts would move as work progresses (rather than one area being shut down for an extensive period), construction-related traffic impacts are not expected to be substantial. However, to ensure appropriate traffic controls are implemented and impacts are less than significant, preparation and implementation of a Traffic Control Plan would be necessary. The Traffic Control Plan would require DDSD and its construction contractor to address and mitigate impacts associated with the closure of traffic lanes, parking lanes, or other public ROWs. Implementation of **Mitigation Measure TRA-1** would ensure construction-related traffic impacts are reduced to a less-than-significant level.

The Fairgrounds host a County Fair annually in the spring season. Traffic in and around the fairgrounds may be higher during that time. While construction of the two proposed Near-Term alignments (Alignments 11 - Antioch Little League and 12 – Antioch Fairgrounds) would be short-term and is not expected to result in significant traffic flow-related impacts, it is recommended that DDSD consider construction of these two segments when the Fair is not occurring (see **Recommended Measure TRA-4**)

As described in the Project Description, long-term maintenance of proposed facilities would consist of existing DDSD staff making inspections approximately four times a year. Thus, upon completion of construction activities, traffic operations would generally revert to the baseline (existing) conditions. As such, impacts would be considered less than significant.

c) *Near-Term and Buildout Projects*

The proposed Project/Action would not affect air traffic patterns; therefore, this criterion is not applicable to the proposed Project/Action.

d) *Near-Term and Buildout Projects*

During construction, the proposed Project/Action would temporarily change the configuration of intersections and roadways within the proposed Project/Action area. Specifically, lane closures would be required where pipelines would be installed on streets ROWs. Construction equipment and material would be staged temporarily either within the construction zone on roads, vacant parcels near the construction area, at the site adjacent to LMEC or at the RWF. Construction along any one segment of roadways would occur at a rate of approximately 100 feet per day, thereby limiting lane closures to the affected segment. Because lane closures could increase conflicts between vehicles, bicyclists, and pedestrians, potential impacts are considered significant and would require mitigation. With the implementation of the Traffic Control Plan (**Mitigation Measure TRA-1**), such hazards caused by the changed configurations would be reduced to a less-than-significant level. Upon completion of construction activities, all intersections and roadways would be restored to pre-construction conditions and no impact associated with increased hazards would occur.

e) *Near-Term and Buildout Projects*

As described in the Project Description, the construction period would span approximately 3.5 and 18 months for the Near-Term and Buildout Projects, respectively. Construction activities would generally take place Monday through Friday from 7:00 a.m. to 7:00 p.m. or in accordance with noise ordinances. Evening and weekend work might be necessary at intersections for certain pipeline connections. Pipeline installation on any one segment using the open-trench method would proceed at a rate of 100 feet per day, so construction activities would be in front of any one

location (e.g., residences, businesses, school) for a short duration of time. Pipeline installation using trenchless techniques and pipeline rehabilitation would require pits that may be at one location for longer durations. Some of the proposed pipelines under the Near-Term Project terminate at schools (e.g., at Rancho Medanos Junior High School and Sutter Elementary School³⁰), which could affect emergency access to some of these public facilities, particularly during the morning drop off hours (when school starts) and in the afternoon pick up hours (when school ends for the day). Access for emergency vehicles would be maintained for residents, businesses, and schools at all times in accordance with the Traffic Control Plan. Therefore, this temporary, significant impact is considered less than significant with implementation of the Traffic Control Plan (**Mitigation Measure TRA-1**). Implementation of the Traffic Control Plan would include notification of all emergency service providers prior to lane closure and traffic redirection, including length of anticipated closure, to further reduce any less-than-significant effects. In addition, this measure would require coordination with facility owners or administrators of sensitive land uses in regards to timing, location, and duration of construction activities. Upon completion of construction activities, all intersections and roadways would be restored to pre-construction conditions and no impact to emergency access would occur.

f) *Near-Term and Buildout Projects*

The proposed Project/Action would temporarily generate new parking demand during construction. Parking for workers and construction equipment would be accommodated at staging areas (e.g., vacant areas or at the RWF) or on nearby city streets, but is not anticipated to displace substantial numbers of existing parking spaces. However, existing on-street parking would be displaced where parking/road lane and intersection closures would occur. In addition, some of the proposed pipelines would be located within, adjacent to, or across parking areas under the Near-Term Project, as described below:

- **Alignment 5 - United Spiral Pipeline:** the proposed pipeline would cut across the parking area for USP. Parking spaces are not marked in this area. The industrial area has sufficient room for parking, and could accommodate any displaced parking. Thus, impacts would be less than significant.
- **Alignment 2 - Parkside Elementary:** there are approximately 28 parking spaces along the foot path where an approximate 400-foot segment of the pipeline alignment would be located. Pipeline installation would encroach upon the parking area thus displacing the parking spaces. Although on-street parking is available, the loss of 28 parking spaces when school is in session would be considered a significant impact. Construction during weekends and/or when school is not in session would be required. Thus, implementation of **Mitigation Measure TRA-2** would reduce the significant impact to a less-than-significant level.
- **Alignment 11 - Antioch Little League:** the proposed pipeline alignment would cross an unpaved parking area from the baseball diamonds to the unnamed street adjacent to the Fairgrounds. The portion of the pipeline across the parking area is approximately 100 feet. The parking area is large and has sufficient room for parking, and could accommodate any displaced parking. Thus, impacts would be less than significant.

³⁰ The proposed pipelines terminate at four schools: Rancho Medanos Junior High School, Parkside Elementary School, Pittsburg High School and Sutter Elementary School. The proposed pipeline to Rancho Medanos Junior High School occurs on West Leland Road, across from one of the entrances to the school. The proposed pipeline to Parkside Elementary School occurs along the unpaved footpath west of the school, adjacent to the parking lot and away from the main entrance to the school. The proposed pipeline to Pittsburg High School occurs on School Street, away from the main entrance to the school or the entrance to the parking area. The proposed pipeline to Sutter Elementary School occurs along the school parking lot entrance road.

- **Alignment 15 - Memorial Park:** The proposed pipeline would traverse Elizabeth Lane. There are approximately 29 spaces on the east side of Memorial Park, north of the existing parking lot. Construction of the pipeline would likely displace these parking spaces. However, because there are other available spaces in the parking lot and along the eastern edge of the park south of the parking lot, and due to the limited duration of construction, displacement of 29 spaces is not considered a significant impact.

The proposed Project/Action would not produce parking demand during operation, and thus no impact would occur.

g) *Near-Term Project*

The proposed Project/Action consists of infrastructure that would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, nor decrease the performance or safety of such facilities. Construction would temporarily impact alternative modes of travel. Specifically, construction would affect buses accessing bus stops along the proposed construction corridors and require the temporary relocation of bus stops. Several bus lines operate in the vicinity of the proposed Project/Action area, as described in the Setting/Affected Environment above. Because transit service would continue to be provided, the impact resulting from the temporary relocation of bus routes and bus stops is considered less than significant. Implementation of the Traffic Control Plan (**Mitigation Measure TRA-1**), which would include coordination with Tri-Delta Transit regarding the relocation of bus stops and detour of bus routes, would reduce potential impacts on buses to a less-than-significant level.

Construction activities could also disrupt bicycle and pedestrian travel during lane and intersection closures. The reduced width of roadways and increased potential for conflicts with construction-related equipment and activities could affect alternative modes of travel, including along Class I, II and III bicycle facilities. All sidewalks would remain open although some crosswalks may be closed due to lane/intersection closures. As described in Item f) above, the proposed pipeline alignment to Parkside Elementary School would occur within the footpath adjacent to the school; during construction activities, this footpath would be entirely closed. Although impacts on alternative modes of travel would be temporary, disruption to these facilities would be considered potentially significant. Implementation of a Traffic Control Plan (**Mitigation Measure TRA-1**), which would include provision of detours for closed facilities, would ensure that potentially significant impacts would be reduced to less than significant.

Construction of the proposed pipeline alignment to Rancho Medanos Junior High School would occur adjacent to the Delta de Anza Regional Trail, a Class I facility. As described in Section 3.14, Recreation, construction activities could block access to the trail. As such, impacts are considered potentially significant and **Mitigation Measure REC-1** would be required. Implementation of this mitigation measure would ensure that impacts associated with bicyclist and pedestrian circulation to the Delta de Anza Regional Trail would be less than significant.

Buildout Project

Similar to the Near-Term Project, construction would temporarily impact alternative modes of travel, including bus lines, and bicycle and pedestrian routes. Thus, impacts would be potentially significant and would require **Mitigation Measure TRA-1** to reduce effects to less than significant.

Rehabilitation of portions of the existing pipeline would occur along the BNSF railroad tracks. As construction pits would be required for rehabilitation of the pipeline, depending on their locations, construction activities could affect train travel, including Amtrak service. To reduce conflicts, including disruptions to train service, **Mitigation Measure TRA-3** would be required.

Implementation of this mitigation measure would ensure impacts would be reduced to a less-than-significant impact.

Mitigation Measures

Mitigation Measure TRA-1: Preparation and Implementation of a Traffic Control Plan (Near-Term and Buildout Projects). Prior to the start of construction, DDSD or its contractor shall prepare and implement a Traffic Control Plan. The traffic control plan would, at a minimum, include the following elements:

- Circulation and detour plans shall be developed to minimize impacts on local street circulation; examples include the following:
 - Lane closures on arterial roadways would avoid AM and PM peak periods. Roadside construction safety protocols shall be implemented.
 - The width of the construction work zone shall be limited to a width that at a minimum, maintains alternate one-way traffic flow past the construction zone.
 - The maximum amount of travel lane capacity would be maintained on roadways during non-construction periods.
 - Flagger-control shall be provided at construction sites to manage traffic control and flows.
- Designated and planned truck routes shall be identified. Haul routes that minimize truck traffic on local roadways and residential streets would be used to the extent possible. Truck trips would be scheduled during hours of the day other than the peak morning and evening commute periods to the extent feasible.
- All equipment and materials shall be stored in designated contractor staging areas to minimize obstruction of traffic and related safety hazards.
- All parking and loading for construction vehicles shall occur within the designated areas. Construction vehicle movement while entering and exiting the proposed alignment's staging areas shall be controlled and monitored.
- Written notification of the timing, location, and duration of construction activities, and the location of lane closures or detours (if any) shall be provided to all emergency service providers (fire, police, and ambulance) prior to road closure. Emergency service vehicles will be given priority for access.
- Construction shall be coordinated with facility owners or administrators of sensitive land uses such as schools. Facility owners or operators shall be notified in advance of the timing, location, and duration of construction activities and the location of detours and lane closures.
- The roadway ROW shall be kept clear of debris outside of the work zone, and the ROW would be completely cleaned of debris between lane closures on project roadways.

- Tri-Delta Transit shall be consulted to determine potential temporary rerouting for bus lines in the proposed Project/Action area related to traffic and parking lane closures. Bus stops in the area that could be affected by construction activity could be relocated and temporary bus stops installed based on Tri-Delta Transit approval.
- Temporary steel-plate trenches shall be provided to maintain reasonable traffic, bicycle, and pedestrian access to homes, businesses, and streets. When required by the applicable encroachment permit, DDSD or its contractor shall maintain existing lane configuration during non-working hours by covering the trench or pits with steel plates or by the use of temporary backfill. Access for emergency vehicles shall be maintained at all times.

Mitigation Measure TRA-2: Construction at Parkside Elementary School (Near-Term Project only). DDSD shall coordinate with the Parkside Elementary School officials regarding the timing of construction at the school, to address the potential loss of 28 parking spaces during construction. Construction could occur either on weekends or during the summer, when school is not in session.

Mitigation Measure TRA-3: Conflicts with Railroad (Buildout Project only). DDSD or its contractors shall coordinate with BNSF to determine the minimum buffers required for location of the construction pits associated with the rehabilitation of the existing pipeline. DDSD or its contractors shall ensure that all pits meet the minimum setback to ensure that conflicts with the railroad tracks do not occur.

Recommended Measure TRA-4: Construction of the Proposed Pipeline Alignments near the Antioch Fairgrounds (Near-Term Project only). DDSD shall consider constructing the two alignments (to the Antioch Little Leagues and the Fairground) when the Fair is not being held.

Implementation of the above mitigation measure would reduce potential impacts to a less-than-significant level.

3.20 Utilities and Service Systems

	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

Setting/Affected Environment

Pittsburg obtains raw water from the CCWD, through the Central Valley Project (CVP) (City of Pittsburg, 2010). The City of Antioch diverts water purchased from CCWD from the San Joaquin River; it operates its own water treatment, storage, and distribution system (City of Antioch, 2004).

The cities of Pittsburg and Antioch maintain their own sewage collection system (City of Pittsburg, 2010; City of Antioch 2004). DDS D owns and operates the collection system in Bay Point. DDS D provides sewer treatment service to both cities as well as to Bay Point.

Solid waste pickup and disposal for Pittsburg and a small portion of Bay Point is provided by Pittsburg Disposal Services (City of Pittsburg, 2010). Pleasant Hill Bayshore Disposal currently provides solid waste collection, disposal, recycling, and yard waste services to the City of Antioch through a franchise agreement (City of Antioch, 2004). Solid waste is taken to the Contra Costa Transfer and Recovery Station and thereafter to the Keller Canyon Landfill. This landfill is located southeast of the City of Pittsburg limits and serves the eastern and central portions of the County (City of Pittsburg, 2010). The landfill has a projected lifespan of 40-years. Of the 244 acres permitted for disposal, 40 acres are currently in use.

Impacts/Environmental Consequences

a) *Near-Term and Buildout Projects*

Please refer to Section 3.12, Hydrology and Water Quality for a discussion of this item. This impact would be less than significant.

b) *Near-Term and Buildout Projects*

The proposed Project/Action would not require or result in the construction of new or expanded water or wastewater treatment facilities, or expansion of existing facilities (beyond those evaluated in this environmental document). The proposed Project/Action is a standalone recycled water system expansion project. There would be no impact and no mitigation is required.

c) *Near-Term and Buildout Projects*

DDSD would implement requirements set forth within the Construction General Permit (refer to Section 3.12, Hydrology and Water Quality) to reduce stormwater runoff during construction. With implementation of the Construction General Permit, construction of the proposed Project/Action is not anticipated to generate surface runoff in quantities that would require construction of new off-site storm drains or expansion of existing off-site storm drains.

The majority of the proposed Project/Action area (*i.e.*, pipeline alignments) consists of either paved or unpaved ground surfaces that would be restored to pre-construction conditions after construction is complete. In these areas, no new on or off-site storm drains or expansion of existing on- or off-site storm drains would be required.

Above-ground structures would be constructed on ground surfaces that are currently unpaved. New impermeable surfaces would result from construction of the proposed storage tank, pump station, and the HPWTF. New impermeable surfaces would result in additional runoff that previously would have seeped into the ground. Construction of the above ground facilities would not require construction of any on- or off-site stormwater facilities. The majority of the stormwater runoff at the site adjacent to the LMEC would continue to seep into the ground, although a limited amount might be captured in the proposed catch basin that would be connected to the local sewer system. All stormwater runoff at the RWF would be collected and treated at the plant. Thus, new or expansion of existing off-site storm drains would not be required. As such, implementation of the proposed Project/Action would not result in the need for additional off-site stormwater drainage facilities or expansion of existing facilities that would cause significant environmental effects. This impact is considered less than significant and no mitigation is required.

d) *Near-Term and Buildout Projects*

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

e) *Near-Term and Buildout Projects*

The Project/Action proposes to provide recycled water to the customers identified in **Table 2-1** of the Project Description. The City would have sufficient capacity to serve the proposed Project/Action's projected demand in addition to its existing commitments. Thus, no impacts would occur.

f) *Near-Term and Buildout Projects*

Construction and implementation of the proposed Project/Action is not anticipated to generate a significant amount of solid waste. To the extent possible, excavated soil would be reused on site. The construction contractor(s) would be required to dispose of excavated soil and solid waste generated during project-related construction in accordance with local solid waste disposal requirements. Waste material would likely be hauled to the Keller Canyon Landfill, as it serves the proposed Project/Action area. Given the anticipated lifespan of the landfill (through 2040), this landfill is expected to have sufficient permitted capacity to accommodate the proposed Project/Action's solid waste disposal needs. Once constructed, operation and maintenance activities, including at the HPWTF, would generate minimal solid waste. For the reasons described above, implementation of the proposed Project/Action would not exceed permitted capacity at the local landfill. The impact would be less than significant and no mitigation is required.

g) *Near-Term and Buildout Projects*

Solid waste generation would be limited to construction-related activities, and would not affect available solid waste disposal capacity in the region. Minimal long-term solid waste generation would be associated with the proposed Project/Action. The proposed Project/Action would comply with all federal, state, and local statutes and regulations related to solid waste.

Mitigation Measures

None required or recommended.

3.21 Environmental Justice

	<i>Less Than Significant</i>		
<i>Potentially Significant Impact</i>	<i>With Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>

Would the Project:

- a) Cause impacts to minority or low-income populations that are disproportionately high and adverse, either directly, indirectly, or cumulatively?

Setting/Affected Environment

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

Economic Development

The median incomes for Pittsburg and Antioch residents, after adjusting for inflation, have remained steady since 1990. Both cities’ estimated median household incomes, 57,965 and 66,479, respectively, are lower than that of the county (79,135) based on the 2007-2011 U.S. Census data. The number of people working in Pittsburg and Antioch has increased by 9 percent and 7 percent, respectively from 2000 to 2010.

Unemployment Rates

According to 2010 U.S. Census data, the unemployment rate in both cities increased since 2008 due to the economic downturn. The City of Pittsburg’s unemployment rate was 16.7 percent while the unemployment rate for Antioch was at 12 percent. The unemployment rates for both cities follow similar trends for the county and the nation, but are consistently higher.

Minority and Low Income (Disadvantaged) Communities

According to CEQA and USEPA guidelines, a minority population is present in the proposed Project/Action area if the minority population of the affected area exceeds 50 percent, or if the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Under the same guidelines, a low-income population exists if the Project area is composed of 50 percent or more people living below the poverty threshold, as defined by the U.S. Census Bureau,

or if the percentage of people living below the poverty threshold in the proposed Project/Action area is substantially greater than the poverty percentage of the general population or other appropriate unit of geographic analysis.

A review of demographics based on the 2010 Census indicates the Project area crosses through several areas identified as minority and low income communities (U.S. Census 2010). The lists below identify specific census tracts within the Project area containing greater than 50 percent minority populations and low-income communities. **Figure 3-6** and **Figure 3-7** show the same information for 2000, as the U.S. Census does not have mapped information from 2012³¹.

Minority Community Census Tracts

- Near-Term Project – 3110, 3100, 3120, 3050
- Buildout Project – 3090, 3100, 3110, 3120

Low Income Community Census Tracts

- Near-Term Project – 3110, 3050, 3071.01, 3071.02
- Buildout Project – 3100, 3120, 3050

Impacts/Environmental Consequences

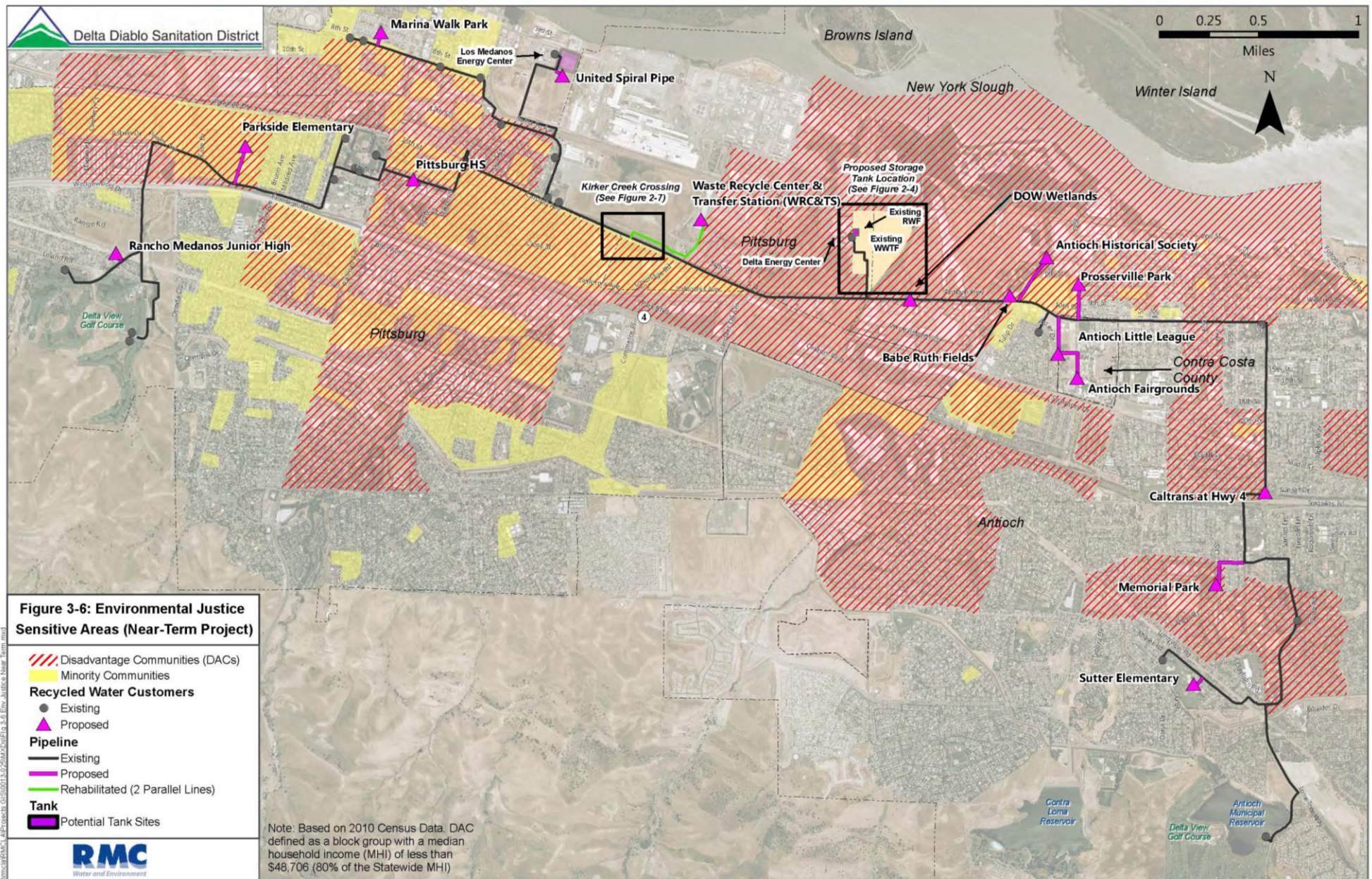
To determine if a Project could disproportionately affect a high-minority or low-income population, it must also be determined how the Project would affect other segments of the population. For example, if there are more high-income populations affected by a project than low-income populations, then the potential for disproportionate impacts to the low-income population, and thus the potential for environmental justice impacts, is low. If the proportion of low-income and high-minority populations impacted by a project is greater than either the middle or high-income populations or the middle- or low-minority populations, then there is more potential for an environmental justice impact.

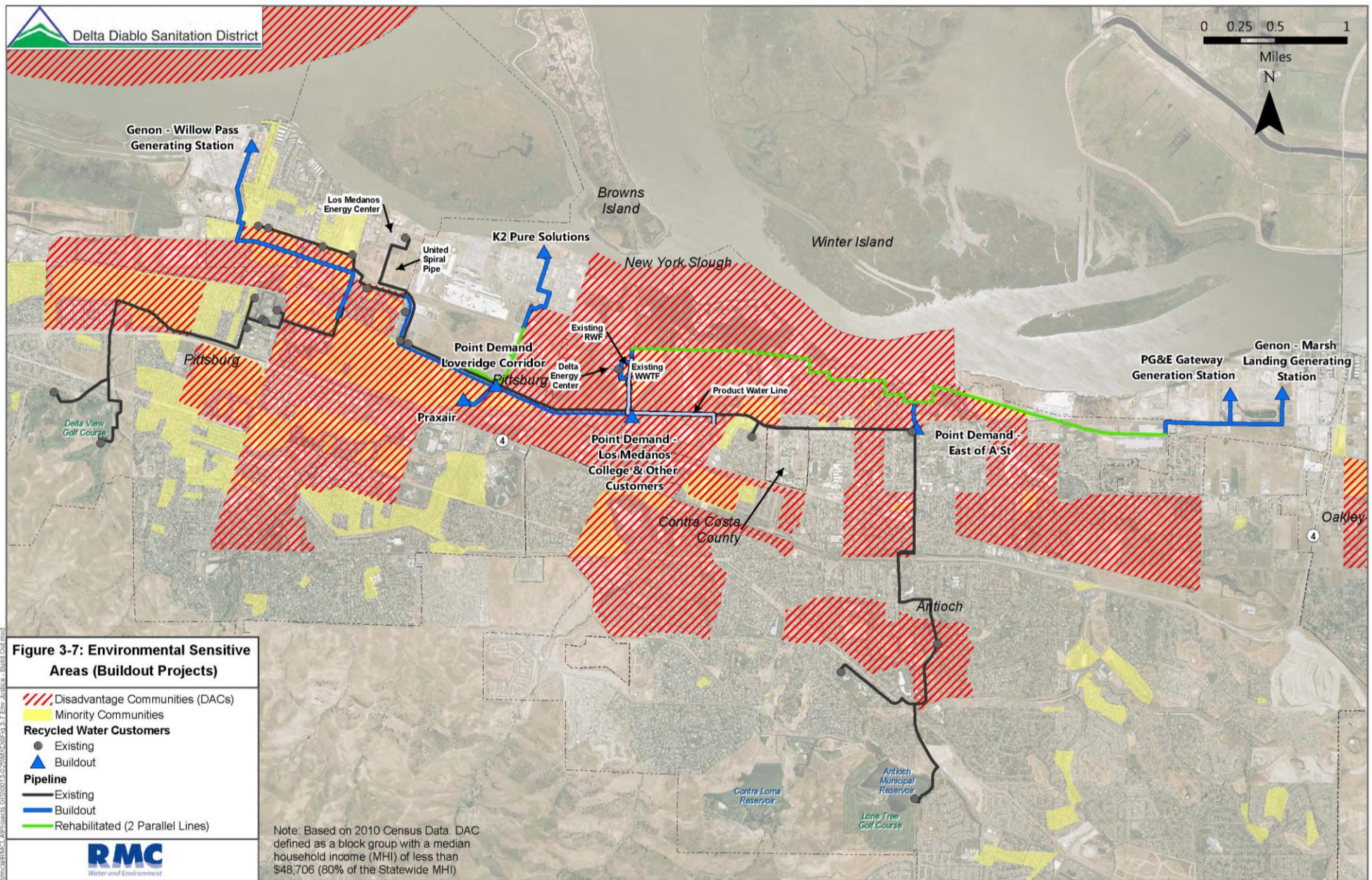
a) *Near-Term and Buildout Projects*

Implementation of the Near-Term Project would involve construction and operation of a recycled water system that occur within communities near the two Calpine power plants: DEC and LMEC. As shown in **Figure 3-6** and **Figure 3-7**, the proposed facilities are located within or adjacent to census tracts that contain greater than 50 percent minority populations and/or low income populations. Although the proposed Project/Action passes through areas with a relatively large population of minorities and low-income communities, the proposed Project/Action is not expected to disproportionately affect these populations. The placement of the proposed pipelines are strategic, intentionally located to provide recycled water to existing landscape irrigation customers, including schools and parks, and in the future, potential industrial customers within existing industrial areas. Thus, although the construction of pipelines has the potential for short-term effects, the provision of recycled water to schools and parks in the Project area would have the long-term benefit of providing a reliable water supply to maintain turf and landscaping in the Project area.

Although construction would generate impacts (e.g., dust, traffic, and noise), such activities would be intermittent and temporary, and would cease upon completion of work activities. Where potential impacts could occur, mitigation measures have been identified to reduce such effects to less than significant. In addition, construction-related effects would be similar regardless of their locations within or outside census tracts that contain minority/low-income communities.

³¹ A review of 2010 Census data tables indicates minority population data and low-income population data for the Study Area is relatively unchanged between 2000 and 2010.





With respect to operation, proposed pipelines would not generate any significant long-term impacts (e.g., dust, traffic, noise, or aesthetic impacts) because they would be buried underground. The incremental long-term impact on adjacent land uses would be the low-level risk of an accidental pipe breakage with minor flooding and traffic disruption and routine maintenance activities. The proposed above-ground structures would be situated in industrial areas away from residential uses and would not generate any significant land use impacts.

Based on the reasons described above, there is no reason to expect that minority or low-income populations would be affected disproportionately by construction and operation of the proposed Project/Action. Thus, impacts are considered less than significant.

3.22 Indian Trust Assets

	<i>Less Than Significant</i>		
	<i>With</i>	<i>Less Than</i>	<i>No</i>
<i>Potentially</i>	<i>Mitigation</i>	<i>Significant</i>	<i>Impact</i>
<i>Significant</i>	<i>Incorporation</i>	<i>Impact</i>	<i>Impact</i>
<i>Impact</i>			

Would the Project:

- a) Have a potential to affect Indian Trust Assets?

Setting/Affected Environment

Indian trust assets (ITAs) are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, EO, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” are defined as a property interest for which there is a legal remedy, such as compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. Indian trust assets cannot be sold, leased or otherwise alienated without United States’ approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, Indian trust assets may be located off trust land.

Reclamation shares Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain Indian Trust assets reserved by or granted to Indian tribes, or Indian individuals by treaty, statute, or Executive Order.

Impacts/Environmental Consequences

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Lytton Rancheria located approximately 23 miles west/southwest of the proposed Project/Action area (Rivera, 2012).

3.23 Mandatory Findings of Significance

	<i>Less Than Significant</i>		
	<i>With</i>	<i>Less Than</i>	<i>No</i>
<i>Potentially</i>	<i>Mitigation</i>	<i>Significant</i>	<i>Impact</i>
<i>Significant</i>	<i>Incorporation</i>	<i>Impact</i>	<i>Impact</i>
<i>Impact</i>			

- a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or

- animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b) Does the Project have impacts that are individually limited, but cumulative considerable? (“Cumulative considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Discussion

Impacts/Environmental Consequences

a) *Near-Term and Buildout Projects*

The proposed Project/Action area is located within a developed urban area, covered primarily by existing roads, sidewalks, and surrounded by residential/commercial/industrial uses. Some biological resources are located in the vicinity of the proposed Project/Action area. During construction activities and operation, with the implementation of the mitigation measures identified in this document, the proposed Project/Action would not have the potential to adversely affect the environmental resources in the vicinity of the proposed Project/Action. Thus, the proposed Project/Action would not degrade the quality of the environment, or affect any habitat, wildlife population or plant communities. Project implementation would increase water recycling, which would reduce dependence on Delta supplies as well as reduce wastewater discharges into the Delta. In addition, Project implementation would not eliminate important examples of major periods of California’s history or prehistory. No impacts are expected, and no mitigation is required.

Near-Term Project

The CEQA Guidelines define cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or increase in environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the proposed Project/Action when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (Guidelines, Section 15355(a)(b)).

A number of projects are currently under environmental review in the cities of Pittsburg and Antioch. While many of these cumulative projects are in the same region as the proposed Project/Action, most are outside the Project/Action vicinity. Major cumulative projects within 0.5 miles of the proposed Project/Action include the following:

- WesPac Pittsburg Energy Infrastructure Project: WesPac Energy–Pittsburg LLC proposes to modernize and reactivate an existing oil storage and transfer facility located at the

Genon Delta, LLC, Pittsburg Generating Station located at 696 West 10th Street, in Pittsburg. The western section of the proposed Buildout Project pipeline would be located within the WestPac Project area, adjacent to the proposed terminal and tanks. As specified in the EIR (published in June 2012) for the WestPac Project, the construction is scheduled to begin in January 2013 to meet an in-service date of March 2014.

- City of Pittsburg Black Diamond Redevelopment Project: This project is a downtown revitalization Project. It consists of a mixed-use development of residential and retail uses, located between Black Diamond Street and Railroad Avenue, and Fifth Street and Eighth Street.

Cumulative projects would result in a variety of construction-related impacts, including increase in dust, noise, traffic, potential for erosion and hazardous material contamination, and degradation of nearby waterways. The geographical context of these environmental resource issues is localized, but would expand to the region if appropriate mitigation measures are not implemented to contain site-specific impacts (*e.g.*, localized erosion could cause downstream water quality degradation). It is possible that cumulative projects, without mitigation measures, would result in significant, cumulative impacts to the environment. However, the proposed Project/Action would require mitigation measures that would reduce impacts to less than significant. The implementation of mitigation measures identified throughout this report would ensure that the Project/Action's contribution to cumulative impacts would not be cumulatively considerable. The proposed Project/Action's contribution to construction-related cumulative impacts would be further reduced by the short-term duration of the proposed construction activities. Thus, implementation of the proposed Project/Action in combination with other past, current or reasonably foreseeable projects within the proposed Project/Action vicinity is not expected to result in cumulatively considerable impacts. None of the environmental impacts identified in this document are substantial, and the proposed Project/Action would not cause any incremental impacts to become substantial. Therefore, the proposed Project/Action would not contribute to cumulatively considerable impacts.

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

a) *Near-Term and Buildout Projects*

Construction activities associated with the proposed Project/Action have the potential to result in impacts on air quality, hazards and hazardous materials, hydrology and water quality, noise, recreation, and transportation/traffic that could affect human beings. However, with implementation of mitigation measures prescribed above in the individual resource areas, all potentially significant project-related impacts would be less than significant.

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Chapter 4 Consultation and Coordination

4.1 Summary of Public Involvement

This NEPA Revised Environmental Assessment follows a joint 2013 CEQA Initial Study (IS) and NEPA Environmental Assessment (EA) prepared for this project. DDSD conducted public outreach during the environmental review process, as required by CEQA. DDSD published a Notice of Intent to Adopt a Mitigated Negative Declaration (MND) on September 3, 2013, and the IS/EA was made available for public review. The IS/EA was posted on Reclamation's website and was available for review for 30 days. There were no substantive comments. A public meeting was held by the DDSD Board of Directors on November 13, 2013, at which the IS/MND was adopted.

4.2 IS/EA Document Distribution

The CEQA public review period started on September 3, 2013 with publication of the Draft IS/EA and ended on October 2, 2013 after a 30-day review period. The NEPA public review period coincided with the CEQA public review period. DDSD published notices and submitted the IS/MND to the State Clearinghouse.

4.3 Final MND/NOD

DDSD adopted the MND at a regular meeting of the Board of Directors on November 13, 2013.

4.4 Public Meetings

As noted above, DDSD considered adoption of the IS/MND at a regular Board meeting. The public had the opportunity to provide comments at that meeting.

4.5 Compliance with Federal Statutes and Regulations

This section describes the status of compliance with relevant federal laws, executive orders, and policies, and the consultation that has occurred to date. Most of these regulations involve ongoing compliance, which would occur in coordination with preparation of the EA.

Federal Endangered Species Act

Section 7 of the Federal Endangered Species Act (FESA) requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. Under Section 7, a project that could result in incidental take of a listed threatened or endangered species must consult with the United States Fish and Wildlife Service (USFWS) to obtain a Biological Opinion (BO). If the BO finds that the project could jeopardize the existence of a listed species ("jeopardy opinion"), the agency cannot authorize the project until it is modified to obtain a "nonjeopardy" opinion.

As described in Section 3.7, Biological Resources, a BA was prepared for the Near-Term Project (ICFI 2013a). The BA determined that while there are a number of sensitive species in the general vicinity, only three federally-listed species have the potential to occur in the proposed Project/Action area and could be affected by the proposed Project/Action. Conservation measures identified in the BA have been included as mitigation measures in this document to reduce potentially significant impacts on the three species to less than significant levels. On March 28, 2013, Reclamation sent the BA to USFWS requesting concurrence that the project may affect, but is not likely to adversely affect, the California tiger salamander, the California red-legged frog, and the giant garter snake. On May 16, 2013, USFWS concurred with Reclamation's determination (see **Appendix D**).

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

The Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act prohibit the take of migratory birds (or any part, nest, or eggs of any such bird) and the take and commerce of eagles. Executive Order (EO) 13168 requires that any project with federal involvement address impacts of federal actions of migratory birds. No impacts to migratory birds and other protected birds and their nests are anticipated by this Project, as no trees would be removed (see Section 3.7, Biological Resources). As such, the lead agency would be in compliance with this Act.

National Historic Preservation Act

The purpose of this act is to protect, preserve, rehabilitate, or restore significant historical, archeological, and cultural resources. Section 106 requires Federal agencies to take into account effects on historic properties. Once an undertaking has been established, the Section 106 review involves a step-by-step procedure described in detail in the implementing regulations (36 CFR Part 800). As described in Section 3.8, Cultural Resources, a cultural resource inventory of the proposed Project/Action area was conducted (ICFI 2013b). A full Section 106 evaluation was completed and both a Historic Resources Inventory and Evaluation Report and an Archaeological Inventory Report were prepared. The cultural resources reports were submitted to Reclamation for consultation with SHPO. On July 15, 2015, SHPO issued a letter to Reclamation indicating their concurrence with the finding of no historic properties affected for this undertaking (see **Appendix E**). Concurrence by SHPO ensures compliance with the NHPA.

Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands

EO 11988 requires federal agencies to recognize the values of floodplains and to consider the public benefits from restoring and preserving floodplains. Under EO 11990, federal agencies must avoid affecting wetlands unless it is determined that no practicable alternative is available. Section 3.12, Hydrology and Water Quality, discusses proposed facilities relative to the 100-year flood zones. Portions of the proposed facilities would be located in 100-year flood plains; however, their placement would occur within existing developed areas and would not exacerbate flooding or create additional risks to the environment or the public. Section 3.7, Biological Resources, describes impacts on wetlands. As discussed, no work would occur within creek or canal channels; thus, there would be no loss of riparian habitat or waters of the U.S. from proposed activities. As such, the lead agency would be in compliance with these EOs.

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires a federal agency to consider the effects of its actions and programs on the nation's farmlands. The FPPA is intended to minimize the impact of federal programs with respect to the conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state, local, and private programs and policies to protect farmland. The proposed Project/Action would be located entirely within urban areas and would not occur within any designated important farmlands. As such, the lead agency would be in compliance with this Act.

Executive Order on Trails for America in the 21st Century

The EO on Trails for America requires federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. The Delta de Anza Regional Trail is located adjacent to one of the Near-Term Project components. With implementation of the mitigation measure identified in this document, no adverse effects on the trail would occur.

Clean Air Act

U.S. Congress adopted general conformity requirements as part of the Clean Air Act (CAA) Amendments in 1990 and the USEPA implemented those requirements in 1993 (Sec. 176 of the CAA (42 U.S.C. § 7506) and 40 CFR Part 93, Subpart B). General conformity requires that all federal actions “conform” with the SIP as approved or promulgated by USEPA. The purpose of the general conformity program is to ensure that actions taken by the federal government do not undermine state or local efforts to achieve and maintain the national ambient air quality standards. Before a federal action is taken, it must be evaluated for conformity with the SIP. All “reasonably foreseeable” emissions predicted to result from the action are taken into consideration. These include direct and indirect emissions, and must be identified as to location and quantity. If it is found that the action would create emissions above de minimis threshold levels specified in USEPA regulations (40 CFR § 93.153(b)), or if the activity is considered “regionally significant” because its emissions exceed 10 percent of an area’s total emissions, the action cannot proceed unless mitigation measures are specified that would bring the proposed Project/Action into conformance.

As described in Section 3.6, Air Quality, the proposed Project/Action’s potential emissions are below minimum thresholds and are well below 10 percent of the area’s inventory specified for each criteria pollutant designated non-attainment or maintenance for the Bay Area. As such, the lead agency is in compliance with this Act.

Executive Order 13007 - Indian Sacred Sites

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

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Chapter 5 Report Preparation

5.1 Report Authors

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Appendix A - Air Quality Analysis Model Results

Appendix B - GHG Emissions Estimate for the Buildout Project

Appendix C - Hazardous Materials Database Search Results

Appendix D - Endangered Species Concurrence Letter

**Appendix E - National Historic Preservation Act
Concurrence Letter**
