CHAPTER 2
Project Description

2.1 Introduction

LACWWD40 proposes to implement the North Los Angeles/Kern County Regional Recycled Water Project (proposed project) to provide the primary backbone systems for distribution of recycled water to end users in the Antelope Valley. The project involves the construction of a regional recycled water distribution system that includes conveyance pipelines, storage reservoirs, and pump stations. The proposed project would be implemented in conjunction with the following partner agencies: the City of Lancaster, the City of Palmdale, RCSD, LACSD Nos. 14 and 20, PWD, AVEK, and QHWD.

The proposed project would be located in the Antelope Valley, which encompasses approximately 2,400 square miles in northern Los Angeles County, southern Kern County, and western San Bernardino County. The area is bordered on the southwest by the San Gabriel Mountains, on the northwest by the Tehachapi Mountains, and on the east by a series of hills and buttes that generally follow the San Bernardino county line. The proposed project would be located within several cities including the City of Palmdale, the City of Lancaster, the Town of Rosamond, and portions of unincorporated Los Angeles County including Quartz Hill.

2.2 Background

LACWWD40 and the partner agencies provide potable water to the Antelope Valley, supplied primarily by local groundwater and surface water and water imported through the SWP. The Department of Water Resources (DWR) owns and operates the SWP, conveying water from the Sacramento River Delta to Southern California via the California Aqueduct. The East Branch of the California Aqueduct traverses the southern edge of the Antelope Valley from the Tehachapi Mountains to Silverwood Reservoir in San Bernardino County. AVEK as a SWP State Water Contractor has "Table A" entitlements to 141,400 acre-feet per year (afy) of SWP water. PWD is also a State Water Contractor with Table A entitlements to 21,300 afy. The SWP system reliability has historically been approximately 77 percent. Recent court rulings limiting pumping from the Sacramento Delta have reduced reliability of the system an additional 30 percent for the foreseeable future.

The Lancaster Water Reclamation Plant (LWRP), Palmdale Water Reclamation Plant (PWRP) and Rosamond Wastewater Treatment Plant (RWWTP) provide wastewater treatment for the major urbanized portions of the Antelope Valley. The LWRP and PWRP are owned and operated by LACSD Nos. 14 and 20. The RWWTP is owned and operated by the RCSD. Each of these facilities is in the process of being upgraded to provide 100 percent disinfected tertiary-treated

effluent that is suitable for all approved uses under Title 22. There is currently no regional recycled water distribution system to convey this treated water to locations where it can be beneficially used.

2.3 Purpose and Need for Project

The proposed project would construct a regional recycled water distribution system to help meet the growing demand for water in the region. Population in the Antelope Valley is experiencing rapid growth and as a result, the demand for water is increasing. Existing available water resources in the project area consist of local groundwater, surface water from Littlerock Creek reservoir, imported water from the SWP, and recycled water. The proposed project would support the use of recycled water for various end uses and reduce regional demands for imported potable water supplies. The proposed project would be consistent with California Water Code Sections 13575-13583 that sets state-wide recycled water use goals and standards.

The 2007 Antelope Valley *Integrated Regional Water Management Plan* (IRWMP) identifies an existing and projected water supply shortfall for the area (RWMG, 2007). The existing shortfall is expected to be offset by groundwater extraction, imported water, and recycled water. The proposed project would help to reduce the future regional demand for imported water and augment local water supplies.

2.4 Project Objectives

The objectives of the proposed project are as follows:

- Provide recycled water conveyance backbone infrastructure sufficient to accommodate planned regional recycled water demands;
- Integrate regional recycled water production, distribution, and re-use capabilities in the Antelope Valley;
- Provide conveyance, storage, and pumping capacity sufficient to accommodate peak future demands;
- Reduce the region's dependency on imported water;
- Augment local water supplies;
- Promote the State's policies for beneficial reuse of recycled water to replace potable water where possible.

2.5 Description of Proposed Project

The proposed project would include the following components: recycled water conveyance pipelines, four storage reservoirs, two distribution pump stations, and two booster pump stations. **Figure 2-1** identifies proposed pipeline routes and facility locations. The proposed project would provide the primary backbone system for distribution of recycled water to end users in the Antelope Valley. The end users would include but would not be limited to the following:

- Municipal and industrial (M&I) applications;
- Agricultural irrigation;[1]
- Cooling water for power plants; and
- Groundwater recharge.

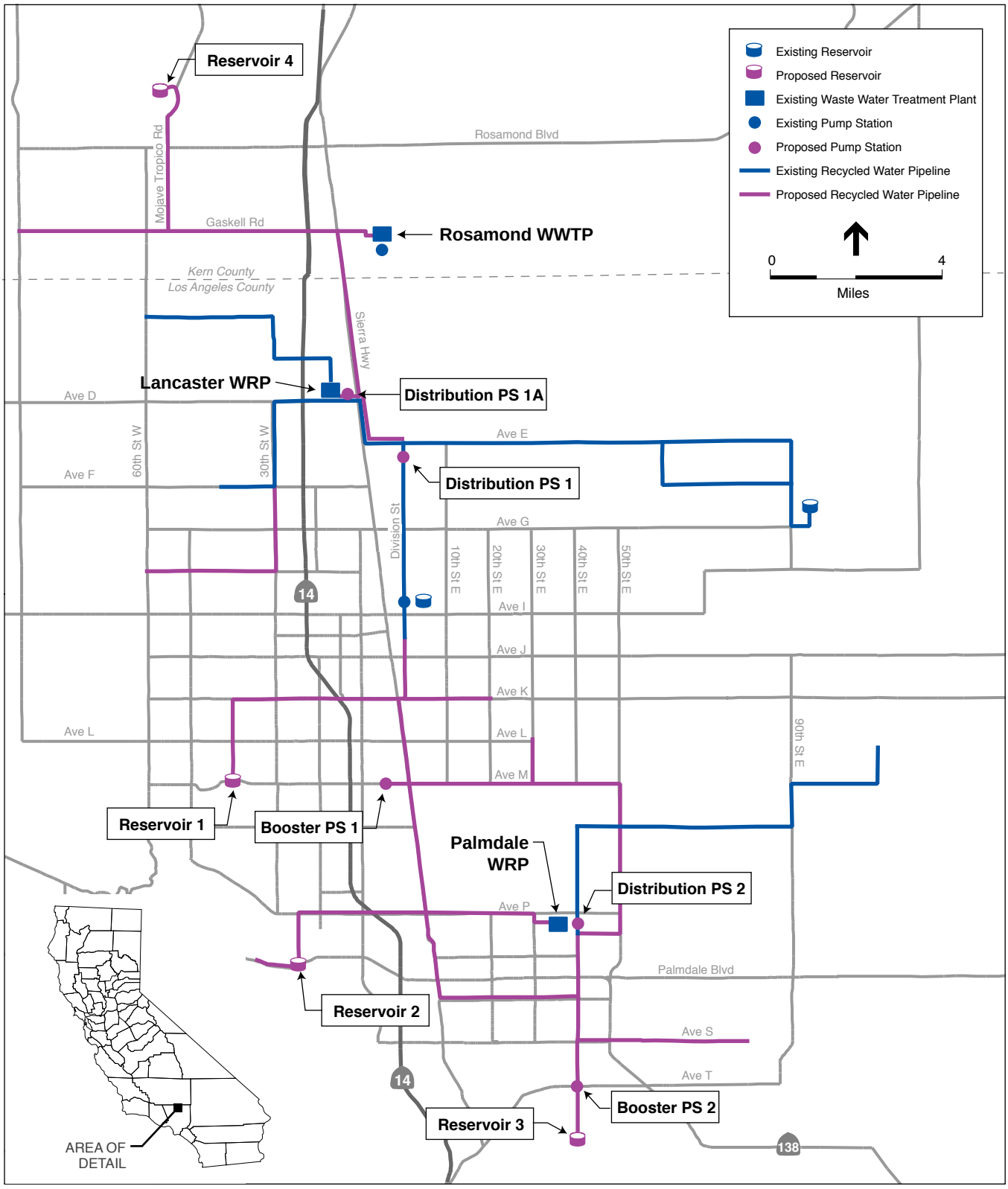
For existing and future end users identified to-date, the annual demand for recycled water in the Antelope Valley is estimated at a minimum of 21,210 afy at buildout. The system capacity of the proposed project would be designed to meet this demand. This demand includes 17,491 afy for M&I end uses in Los Angeles County as estimated in the *Final Facilities Planning Report* (Kennedy/Jenks, 2006), plus 1,119 afy for M&I end uses in the RCSD service area in Kern County (Seal, 2008), and 2,600 afy for use as cooling water at the planned Palmdale Hybrid Power Plant described further in Section 2.5.5 below.

Figure 2-2 identifies proposed locations for M&I recycled water end uses. Recycled water use would comply with the CDPH recycled water regulations contained in Title 22 of the CCR (see Chapter 1, Introduction for additional information). In addition, the proposed project would be subject to conditions imposed by the RWQCB pursuant to Water Recycling Requirements (WRRs). The proposed project would be constructed in phases as depicted in **Figure 2-3**, subject to funding and the identification of recycled water users. Each component described below would be constructed by LACWWD40 or one of the Responsible Agencies as part of the regional backbone distribution system.

2.5.1 CEQA Coverage by Project Component

As explained in Chapter 1, Introduction and Project Background, the analyses in this PEIR are intended to provide **project-level coverage** for the following project components: construction and operation of the recycled water pipelines and M&I applications for recycled water as identified in bold typeface in Table 1-2. The analyses in this PEIR provide **program-level coverage** for the remaining components of the proposed project, which include the following: construction and operation of the proposed pump stations and storage reservoirs, and the use of recycled water for agricultural irrigation (agricultural reuse), cooling water at power plants, and groundwater recharge. **Table 2-1** summarizes the level of analysis for each project component with respect to CEQA. All project components that are evaluated at the program level require additional environmental analysis and documentation prior to their implementation in order to be in compliance with CEQA.

[1] The Facilities Plans for the PWRP and LWRP include agricultural effluent management sites for application of recycled water produced at both reclamation plants (LACSD No. 14, 2004; LACSD No. 20, 2005). The environmental effects of using recycled water for agricultural irrigation at these effluent management sites have been evaluated pursuant to CEQA in previous environmental documents (see Chapter 1, Section 1.5.2). This proposed project does not include these agricultural effluent management areas.



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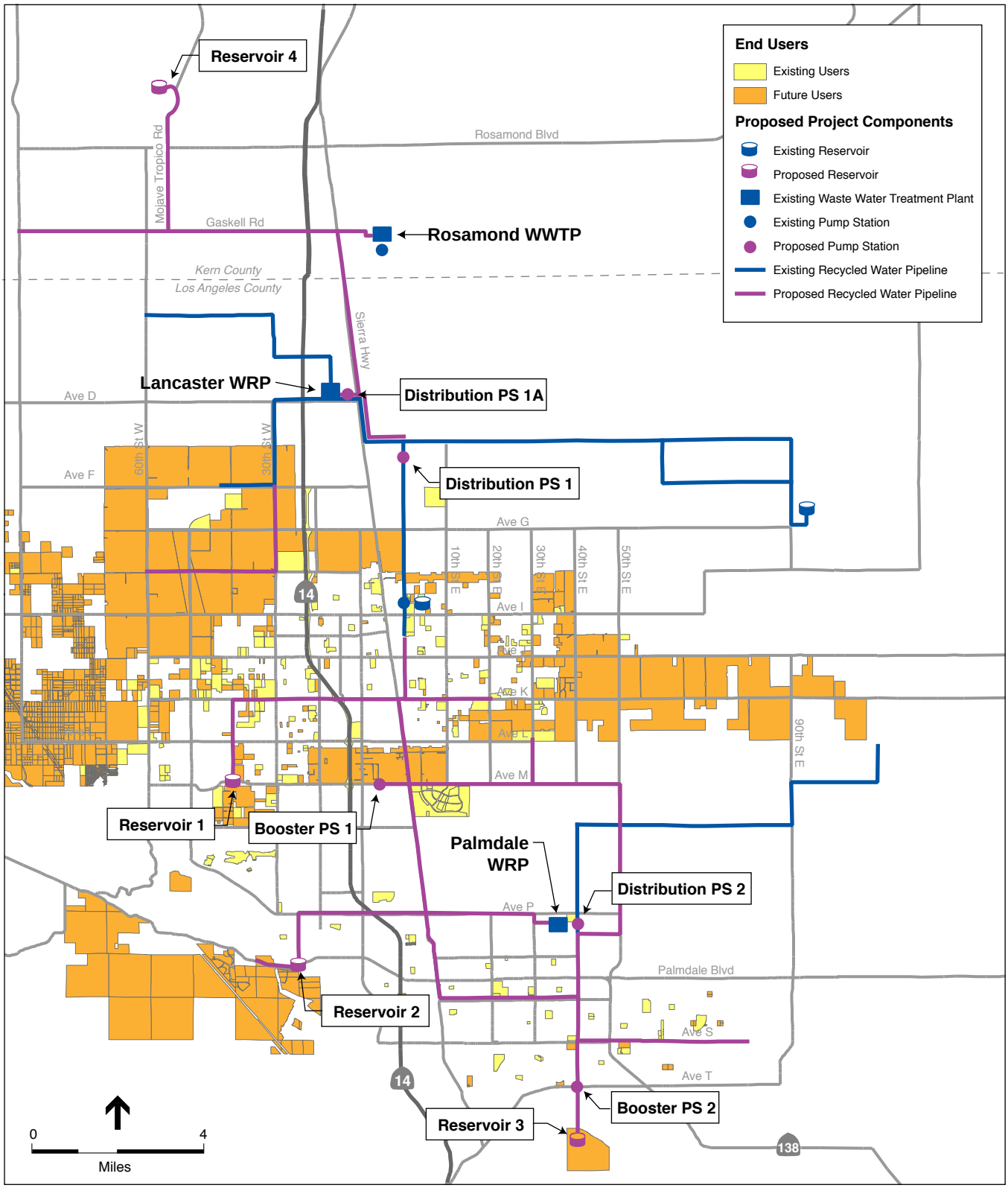
SOURCE: Kennedy/Jenks Consultants; ESA

Figure 2-1
Existing and Proposed Facilities



SOURCE: Kennedy/Jenks Consultants; ESA, 2008.

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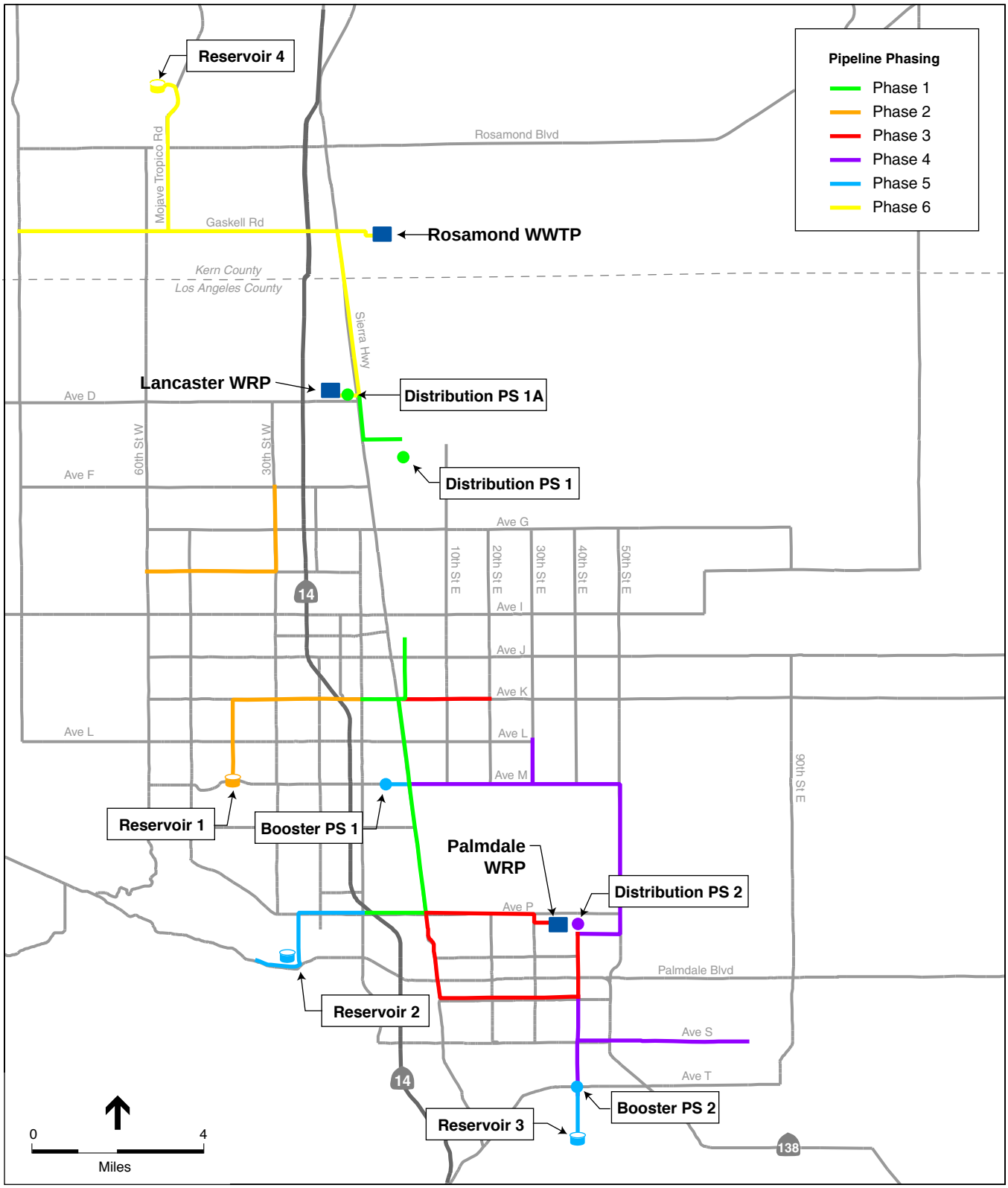
Figure 2-2
Recycled Water End Users



SOURCE: Kennedy/Jenks Consultants; ESA

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Figure 2-3

Proposed Construction Phases

TABLE 2-1
CEQA COVERAGE BY PROJECT COMPONENT

Project-Level Analysis	Program-Level Analysis
Construction/Operation of Recycled Water Pipeline	Construction/Operation of Pump Stations
End Use: M & I Applications (see Table 1-2)	Construction/Operation of Storage Reservoirs
	End Use: Agricultural Irrigation
	End Use: Power Plant Cooling Water
	End Use: Groundwater Recharge

SOURCE: ESA, 2008.

2.5.2 Pipelines

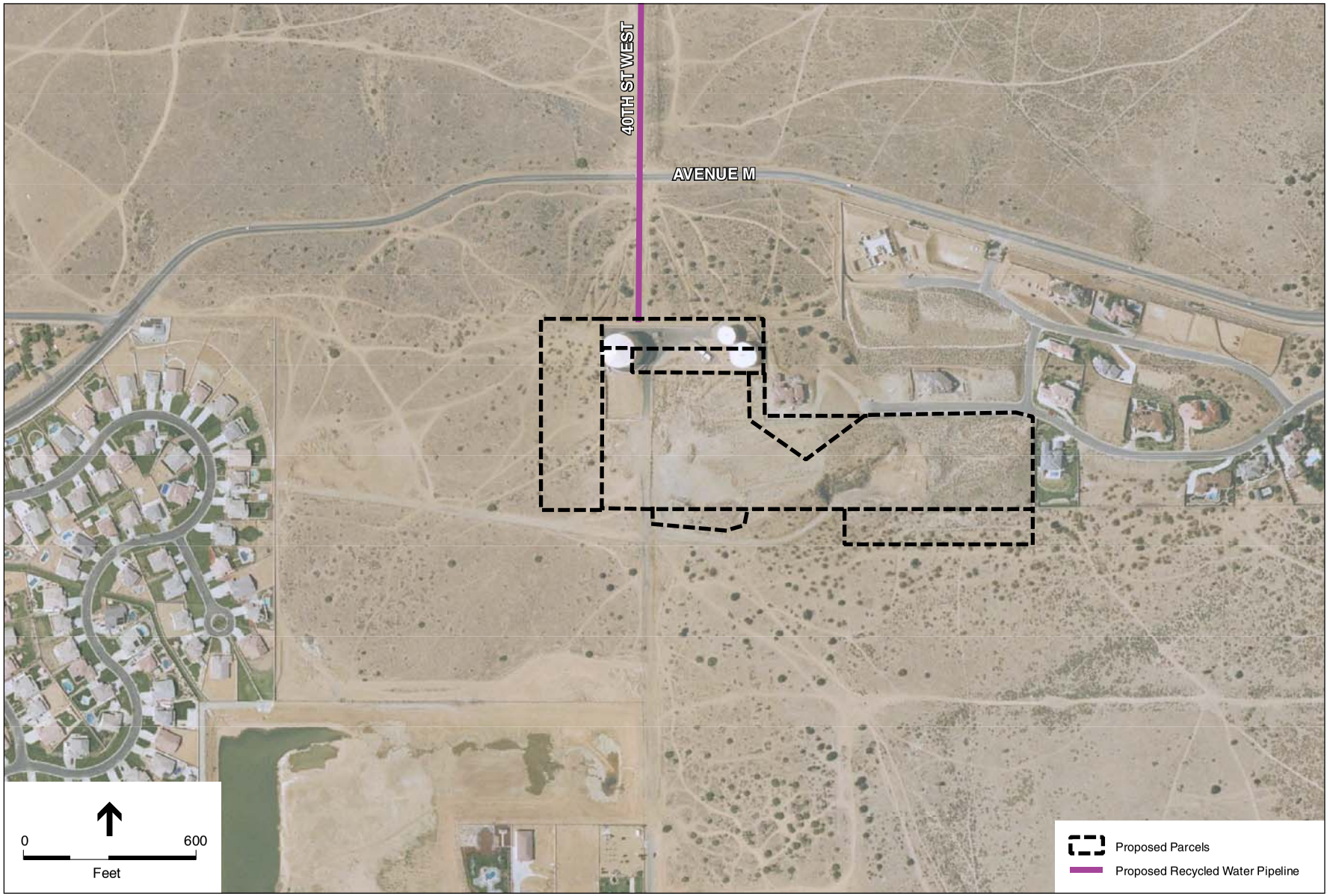
The proposed recycled water pipelines would distribute water from the three water reclamation plants to the surrounding area within the Antelope Valley. The project would consist of approximately 70 miles of 14 to 36-inch pipelines. The pipes would be colored purple or wrapped with purple tape, in accordance with the California Health and Safety Code requirements for recycled water pipelines (Division 104, Part 12, Chapter 5, Article 2, Section 116815). All pipelines would be aligned within the right-of-way of roadways as shown in Figure 2-1. Air-relief valves would be installed at peak elevations, pump stations, and as needed between valves to accommodate pipeline dewatering or system charging. The valves would typically be installed within sidewalk right-of-ways. Pipelines larger than 24 inches in diameter require that all valves be housed in vaults. The underground vaults would typically be constructed of concrete, with access hatches at ground surface either within the street or beneath the sidewalk.

2.5.3 Storage Reservoirs

The proposed project involves the construction of four storage reservoirs. The proposed locations and capacities of the storage reservoirs are identified in **Table 2-2**. **Figures 2-4** through **2-7** identify the specific parcels being considered for the storage reservoir locations. No land acquisition is required for Reservoirs 1, 2, and 4, because all parcels are owned by either LACWWD40 or one of the Responsible Agencies. Private land acquisition may be required for Reservoir 3 at the corner of 40th Street East and Barrel Springs Road. The aboveground steel reservoirs would be between 24–32 feet in height. Fencing and outside lighting would be installed around the reservoirs.

TABLE 2-2
PROPOSED STORAGE RESERVOIRS

Reservoir	Location	Capacity (MG)	Figure
Reservoir 1	40th Street West and Avenue M	3.0	Figure 2-4
Reservoir 2	25th Street West and Palmdale Blvd/ Elizabeth Lake Road	4.4	Figure 2-5
Reservoir 3	40th Street East and Barrel Springs Road	2.1	Figure 2-6
Reservoir 4	North of 60th Street West and Mojave-Tropico Road	2.0	Figure 2-7



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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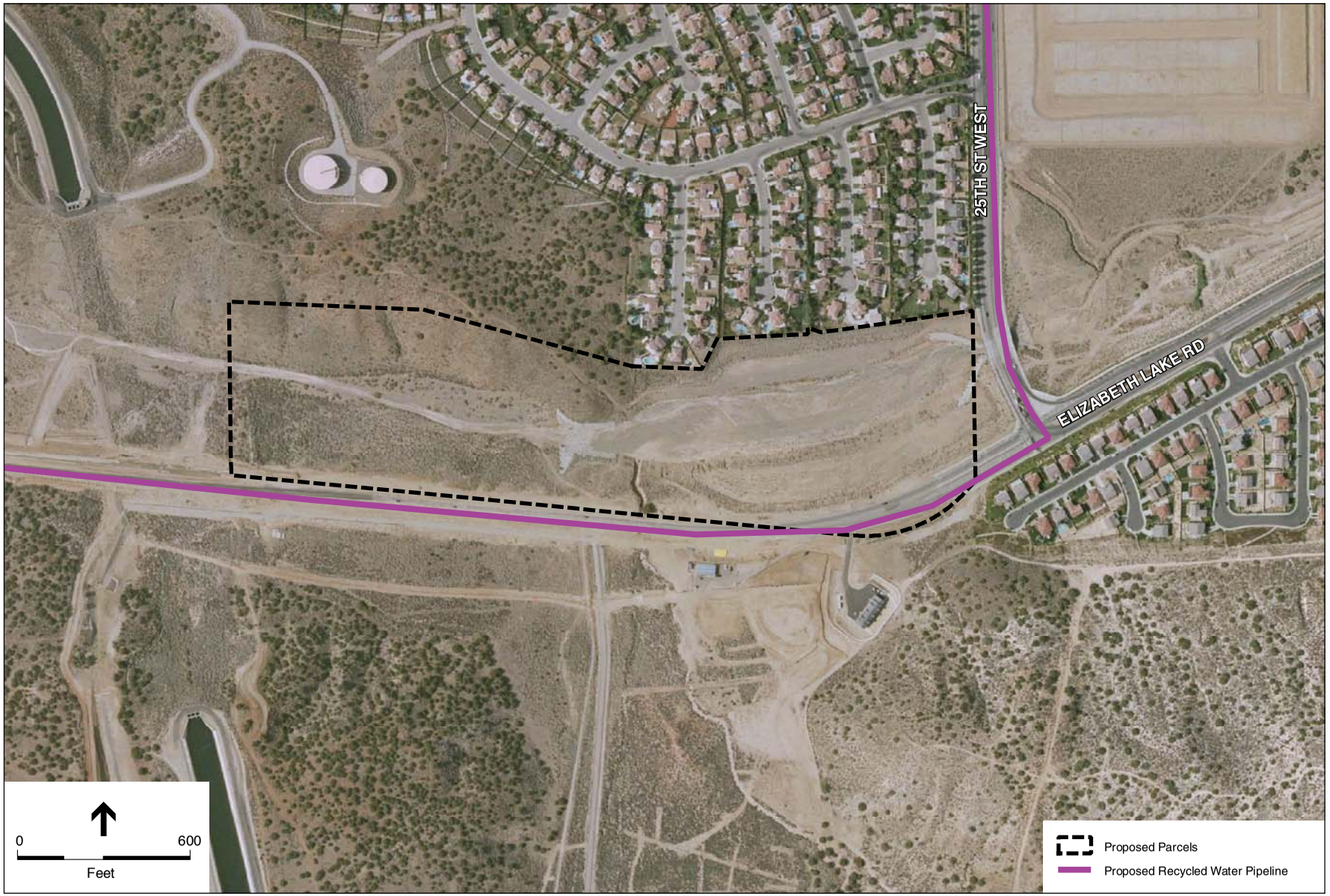
Figure 2-4

Parcels Being Considered for Storage Reservoir 1



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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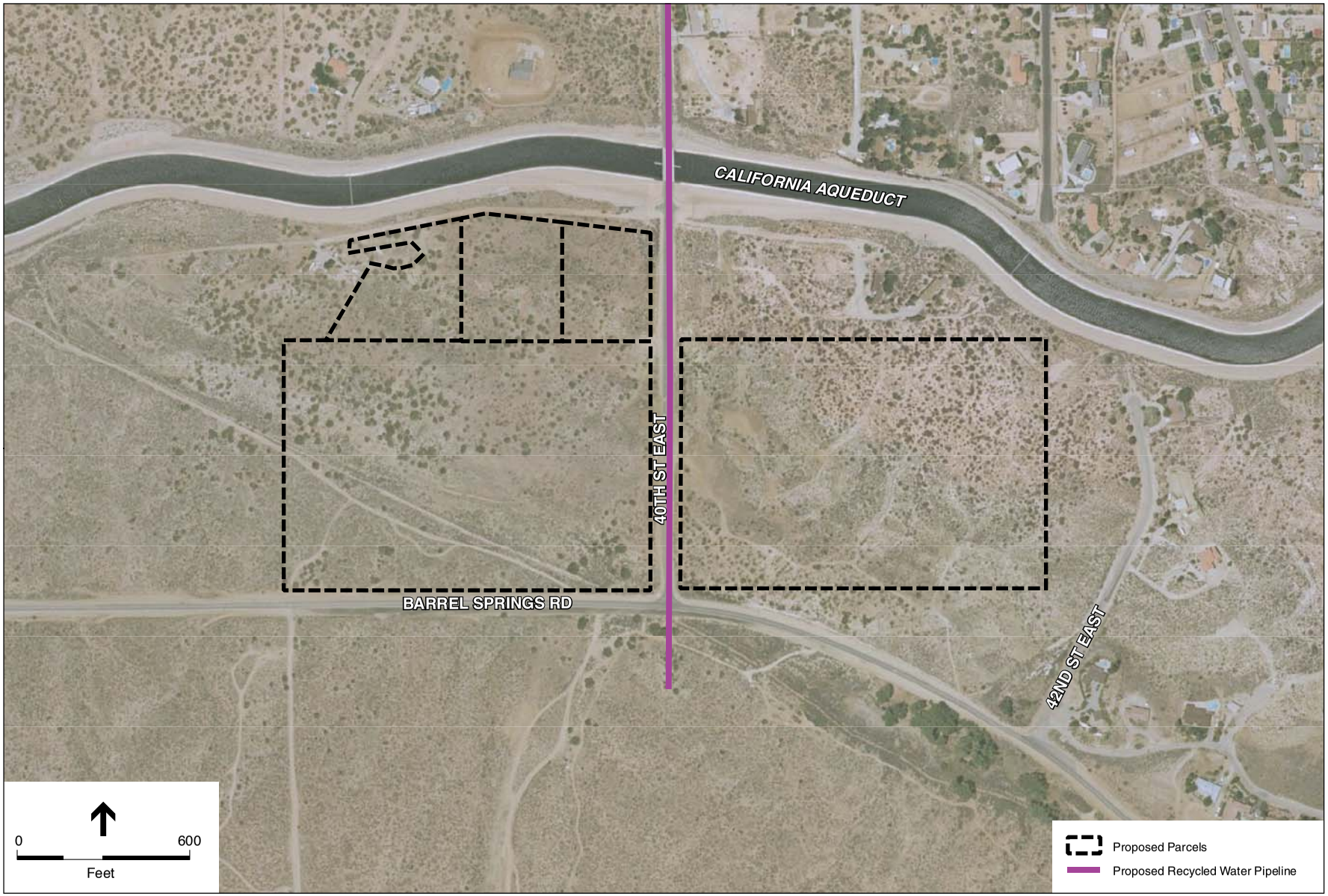
Figure 2-5

Parcel Being Considered for Storage Reservoir 2



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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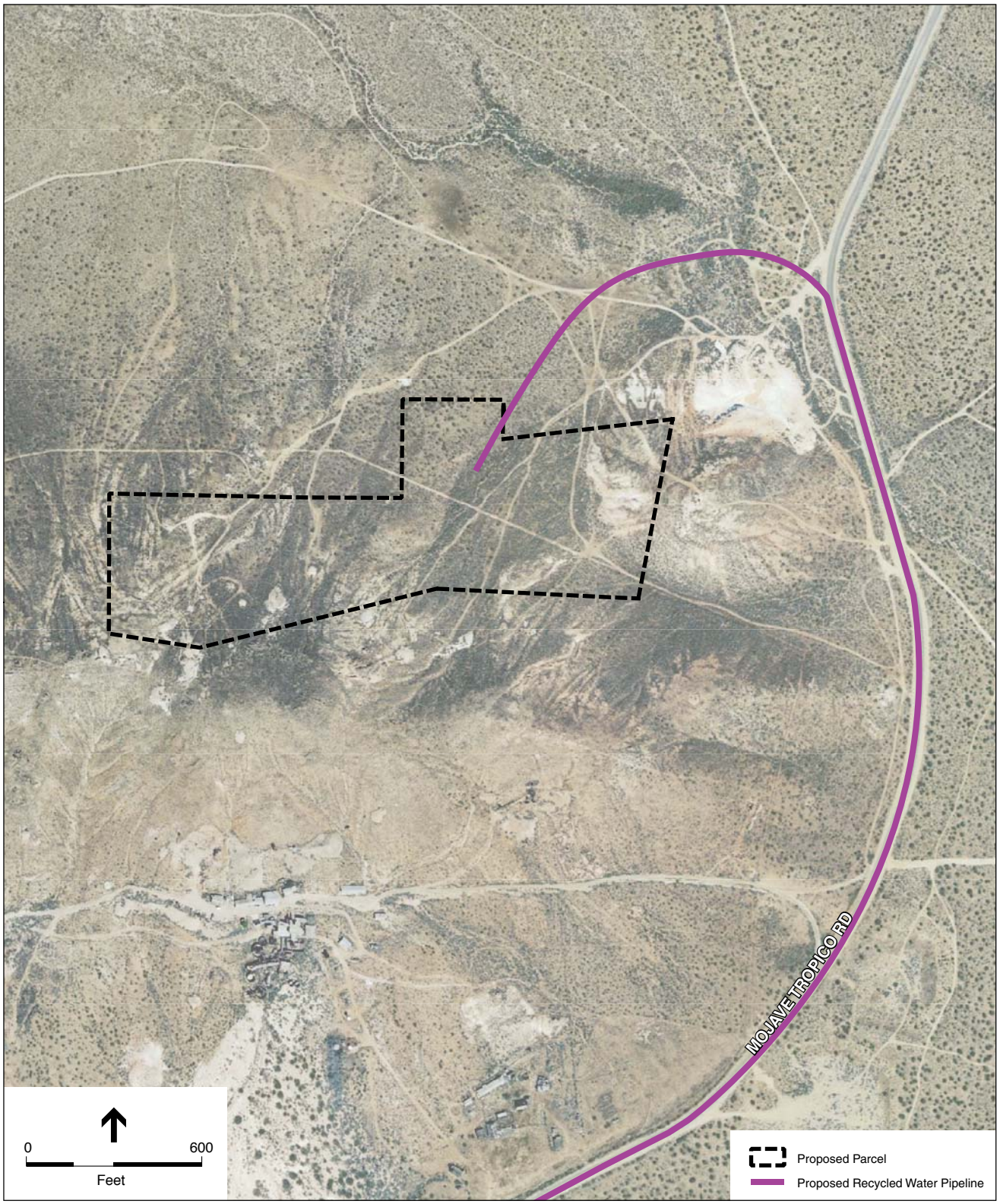
Figure 2-6

Parcels Being Considered for Storage Reservoir 3



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SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants; Kern County, 2008.

Figure 2-7
Parcel Being Considered for
Storage Reservoir 4

2.5.4 Pump Stations

The proposed project would include two distribution pump stations and two booster pump stations. The proposed pump stations, together with other existing and planned pump stations, would pump recycled water from the LWRP, PWRP, and RWWTP through the backbone system pipelines to the storage reservoirs. The proposed booster pump stations would maintain sufficient water pressure to transport recycled water through the backbone system pipelines.

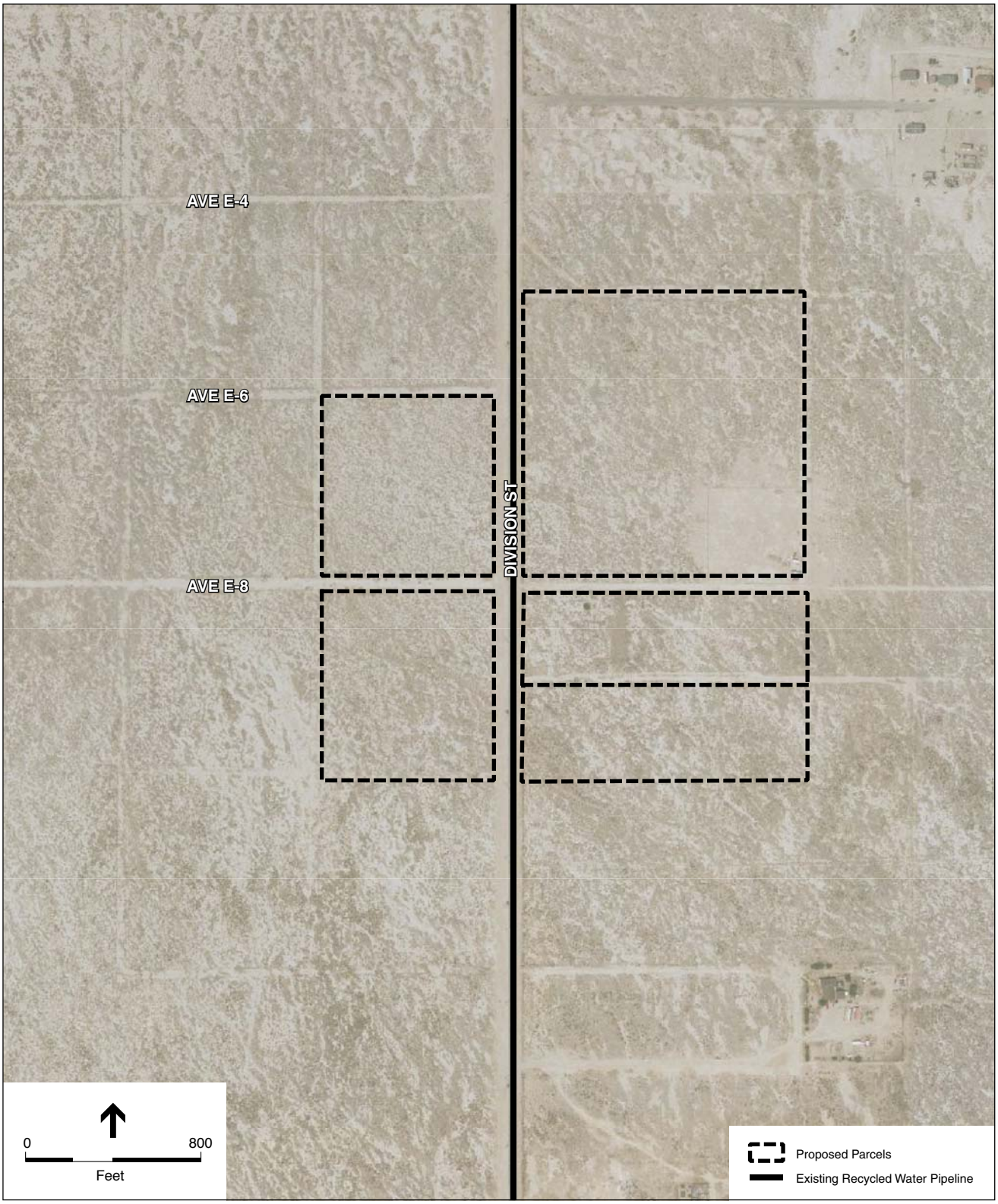
The proposed locations and pumping capacities are identified in **Table 2-3**. **Figures 2-8** through **2-11** identify the specific parcels being considered for the pump station locations. Land acquisition may be required to implement Distribution Pump Station 1 and Booster Pump Station 2 because the proposed parcels are privately owned. An alternative site for Distribution Pump Station 1 is the LWRP (indicated as Distribution Pump Station 1A in Figure 2-1 and Table 2-3), which would eliminate the need to acquire property for this pump station. Each distribution pump station structure would have an approximate footprint of 50 feet by 50 feet and be approximately 20 feet tall. Each booster pump station structure would have an approximate footprint of 20 feet by 20 feet and be approximately 20 feet tall. It is anticipated that portable generators, outside lighting, and fencing would be installed for each pump station. Each pump station must have stand-by capabilities in the event that a pump must be taken off-line.

TABLE 2-3
PROPOSED PUMP STATIONS

Pump Station	Location	Pumping Capability (gpm)	Figure
Distribution Pump Station 1	Ave E-8 and Division Street	20,833	Figure 2-8
Distribution Pump Station 1A	Avenue D and Sierra Highway (LWRP)	20,833	Figure 2-1
Distribution Pump Station 2	Ave P-8 and 30th St East (PWRP)	15,555	Figure 2-9
Booster Pump Station 1	Avenue M and 7th St West	8,460	Figure 2-10
Booster Pump Station 2	40th Street East and Ave T / Pearblossom Highway	1,725	Figure 2-11

2.5.5 Recycled Water End Use

The project facilities would distribute recycled water from the LWRP, PWRP, and RWWTP throughout the Antelope Valley for beneficial use by various categories of end users in accordance with Title 22 of the CCR (see Chapter 1). These end uses are described below. Transmission pipelines would be required to connect all end users to the proposed recycled water backbone system. These transmission pipelines are not included as part of the proposed project and will be subject to subsequent approvals and environmental review pursuant to CEQA.



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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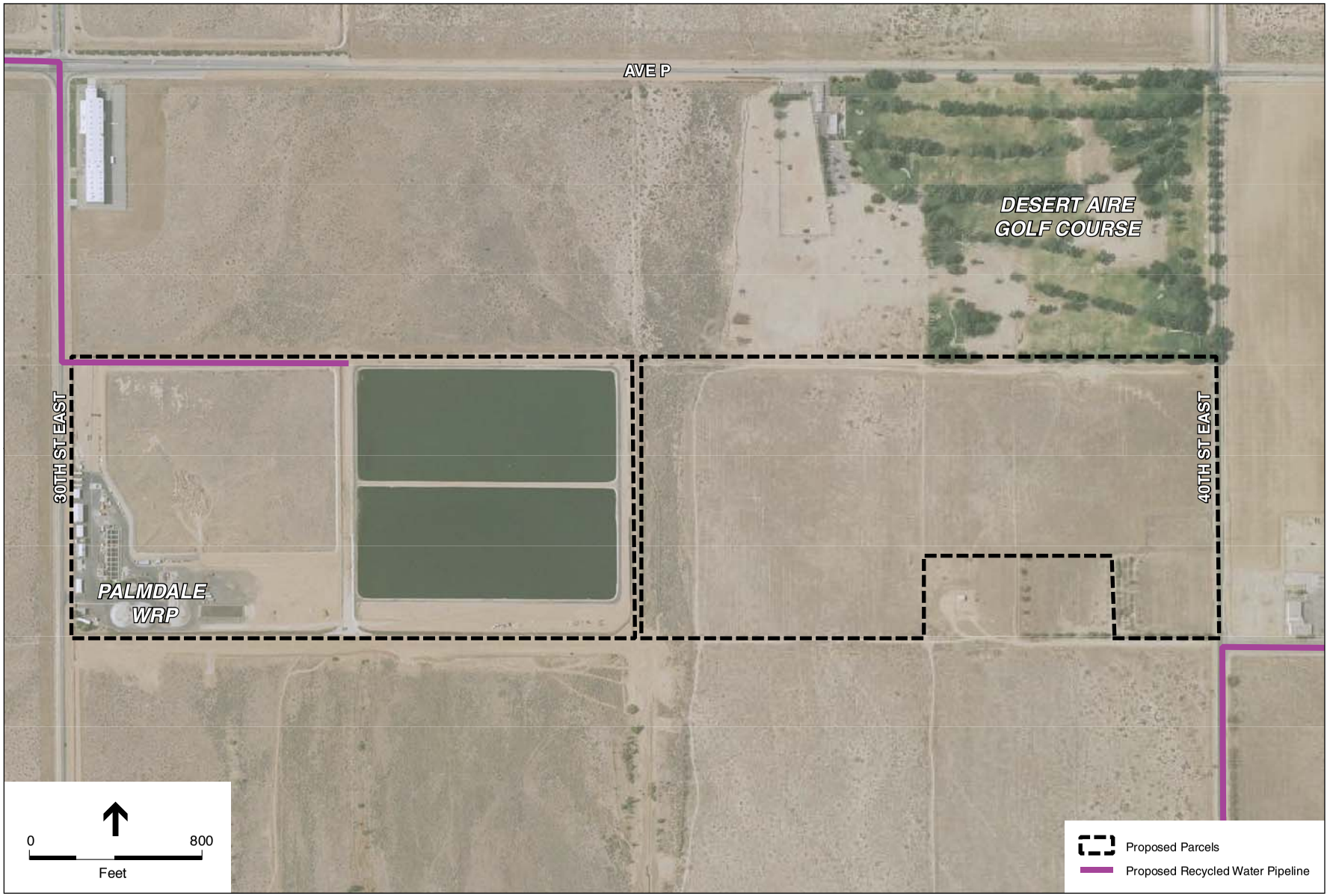
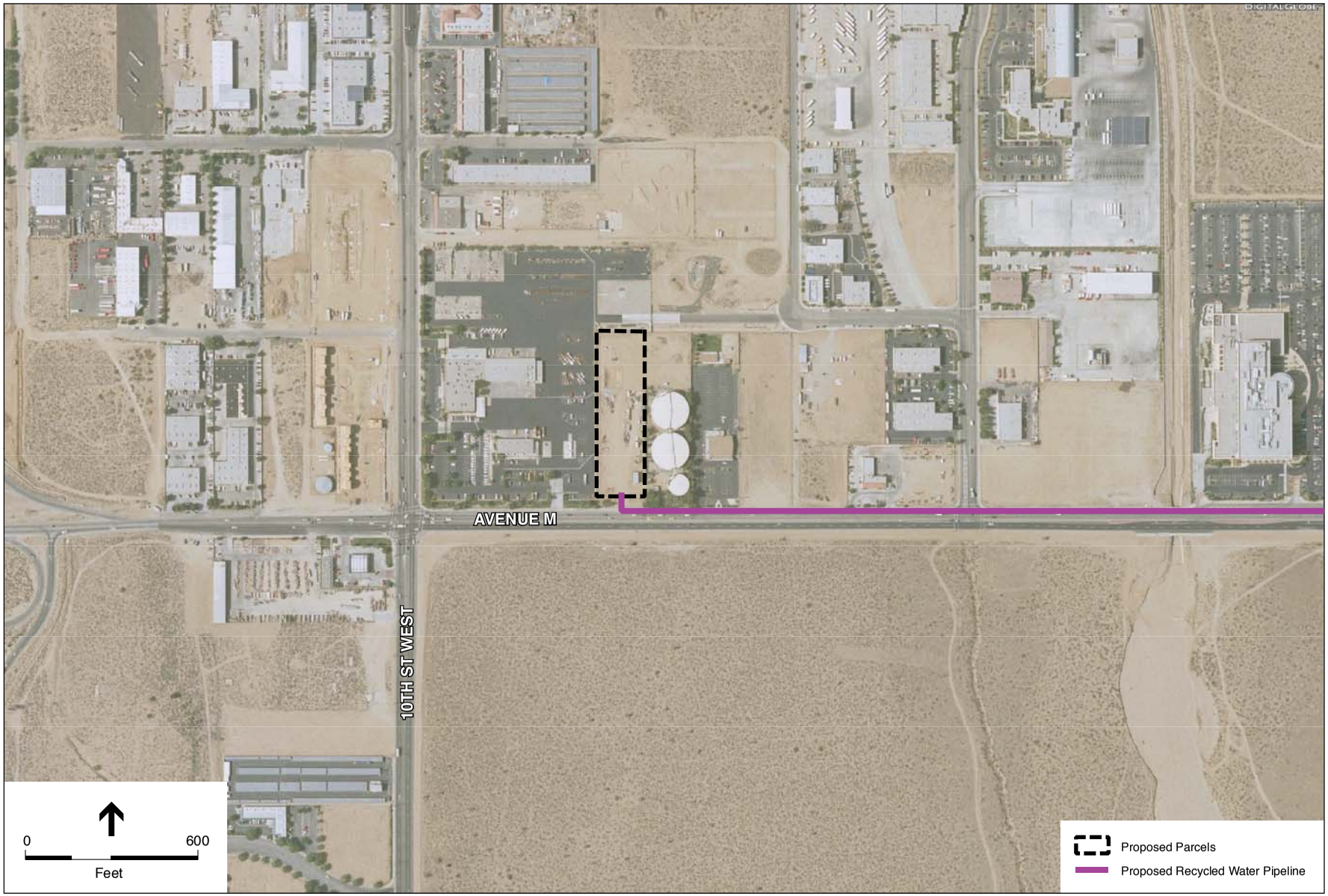
Figure 2-8
Parcels Being Considered for
Distribution Pump Station 1



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

Figure 2-9

Parcels Being Considered for Distribution Pump Station 2



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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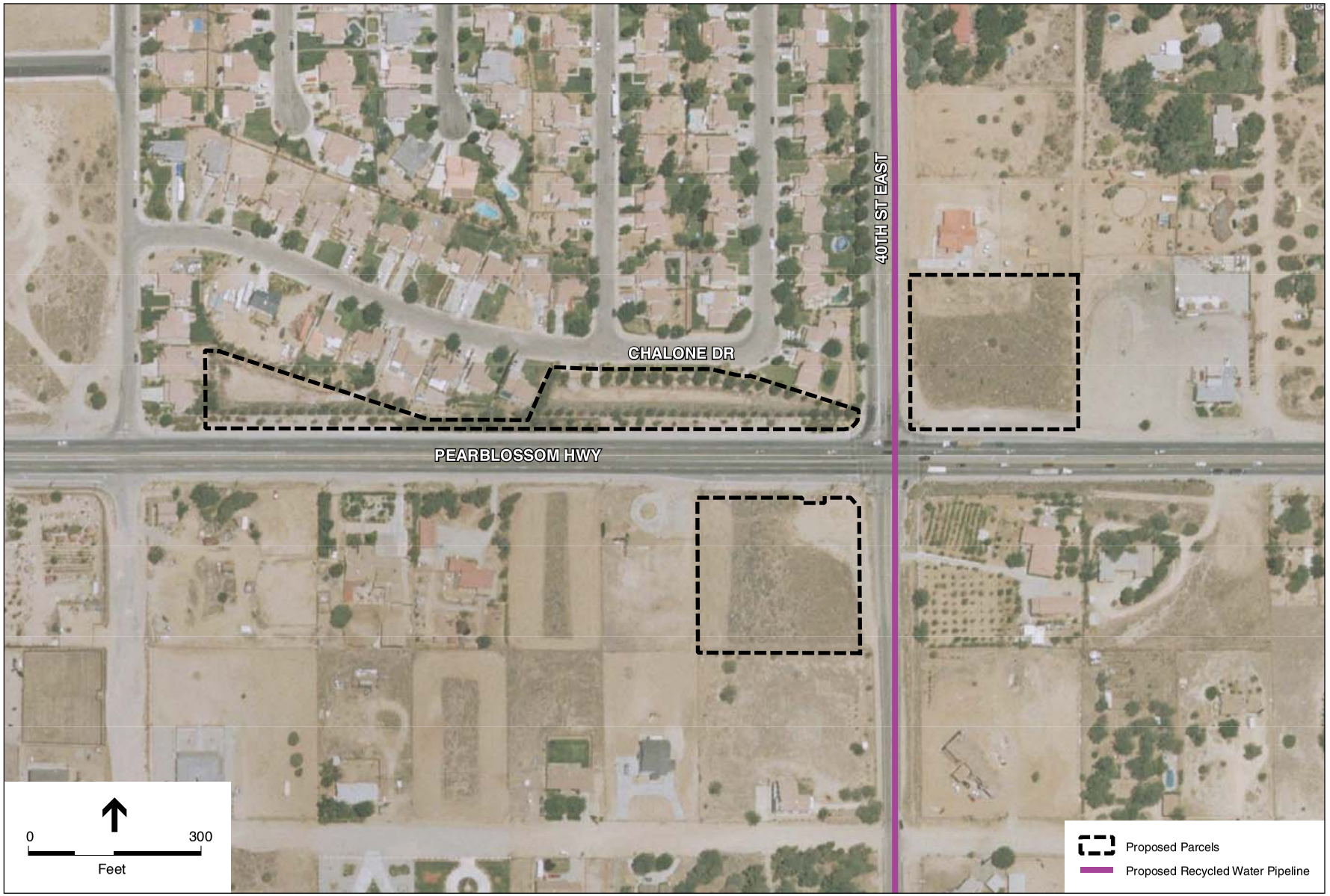
Figure 2-10

Parcel Being Considered for Booster Pump Station 1



SOURCE: GlobeXplorer, 2007; Kennedy/Jenks Consultants

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Figure 2-11

Parcels Being Considered for Booster Pump Station 2

M&I Applications

LACWWD40 conducted a market assessment of potential M&I recycled water customers as part of the preliminary design phase for the proposed project (Kennedy/Jenks, 2006). The customer locations, both existing and future, are identified in Figure 2-2. M&I applications for recycled water that are covered at the project level in this PEIR are highlighted in bold typeface in Table 1-2 and include, but are not limited to, the following: landscape irrigation of parks, schools, golf courses, sports complexes (e.g., Lancaster National Soccer Center), freeways, greenbelts, cemeteries, and landfills; landscape impoundments; fire suppression; city maintenance and street cleaning operations; culvert jetting; and construction applications, such as dust control.[2] Total estimated recycled water demand at buildout for M&I end users in the Antelope Valley identified to-date is 17,491 afy in Los Angeles County (Kennedy/Jenks, 2006) and 1,119 afy in Kern County (Seal, 2008).

This PEIR evaluates the effects of using recycled water for M&I applications at the project level, including the application of recycled water at the specific sites shown in Figure 2-2 or any other locations within the project area. Impacts of recycled water use by M&I customers not shown on Figure 2-2 would be similar in nature to those impacts identified in this PEIR and therefore would not require additional environmental review with respect to CEQA.

Agricultural Irrigation

The recycled water produced at the LWRP, PWRP, and RWWTP would be disinfected tertiary-treated effluent and would meet Title 22 standards for agricultural irrigation (agriculture reuse). As listed in Table 1-2, the product recycled water could be used for irrigation of all agricultural crops, including: ornamental nursery stock, sod farms, pastures for milk animals, orchards, vineyards, fodder and fiber crops for animals, seed crops, food crops where the recycled water does not touch the edible part of the plant, and food crops where the recycled water does touch the edible part of the plant.

The proposed project does not identify specific locations for agricultural reuse. The proposed project does not include existing agricultural reuse sites currently operated by LACSD Nos. 14 and 20 for effluent management, as described in Chapter 1. If agricultural reuse sites are identified in the future, additional environmental review and documentation would be required in accordance with CEQA prior to implementation of agricultural irrigation with recycled water.

Power Plant Cooling Water

The proposed project would serve the planned Palmdale Hybrid Power Plant (PHPP), a combined cycled power plant that is expected to be operational by 2011 and represents one of the largest single potential end users of recycled water. The average daily recycled water demand is estimated to be 2.3 mgd, or 2,600 afy (City of Palmdale, 2007). The planned location for the PHPP is a 300-acre site southeast of the intersection of Sierra Highway and Avenue M (see Figure 2-2). The PHPP would be a 550 megawatt power plant that would utilize recycled water for cooling tower and boiler feed demands (City of Palmdale, 2007). In accordance with

[2] Municipal and industrial (M&I) end uses do not include residential land uses. This PEIR does not include coverage of residential landscape irrigation.

requirements set by the California Energy Commission, the PHPP must have a redundant source of water, which would be available through the proposed project by the connection to multiple reclamation plants and multiple sources of recycled water.

Construction and operation of the PHPP requires independent environmental review pursuant to CEQA. This PEIR evaluates the use of recycled water for power plant cooling at a program level. This end use will be thoroughly evaluated at the project level in any subsequent CEQA documentation produced for the PHPP or other future power plants.

Groundwater recharge

Recycled water would be used for GRRPs to recharge the underlying Antelope Valley Groundwater Basin using surface spreading with soil aquifer treatment. The California Department of Public Health (CDPH) defines surface spreading as "the controlled application of recycled water to a spreading area [i.e. percolation basin] resulting in the recharge of a groundwater basin" (Title 22 CCR, Division 4, Chapter 3, Article 1, Section 60301.850). The proposed project does not include Aquifer Storage and Recovery (ASR), direct injection, or injection wells.

A GRRP would require construction of recharge basins at locations where soils are suitable for percolation of water and where the local geology allows a hydrologic connection to the underlying aquifer. Typically, construction of recharge basins involves excavation of basins and recontouring of the site soils to form earthen berms. Basin walls vary in height, but could be as high as six feet above ground level. A GRRP may also require construction of production wells to extract the groundwater for later treatment and delivery to end users.

The proposed project does not identify specific locations for GRRPs. This PEIR evaluates groundwater recharge at a program level. In the future, as specific GRRPs are developed, the site-specific impacts of using recycled water for groundwater recharge will be further evaluated at a project level pursuant to CEQA. Additional environmental analysis and documentation is required prior to implementation of any GRRPs in order to be in compliance with CEQA.

2.6 Construction Details

2.6.1 Pipelines

Construction of the proposed recycled water pipelines would primarily involve trenching and jack-and-bore tunneling or directional drilling. The pipelines would be installed generally within the existing roadway right-of-way, where feasible, to minimize land acquisitions or easement requirements. Tunneling and directional drilling would be required in order to pass under existing aqueducts, waterways and railways. Road closures are not anticipated, though traffic control would be necessary. It is anticipated that some soil would be removed from the construction sites. Typical construction activities for these methods are described below.

Trenching

Trenching within city streets would utilize a conventional cut and cover construction technique. The trenching technique would include saw cutting of the pavement where applicable, trench excavation, pipe installation, backfill operations, and re-surfacing to the original condition. The trench is typically three to six feet deep and approximately two to three feet wide. The pipeline would be installed a minimum of three feet below ground surface (bgs). The construction corridor would be approximately 20 feet wide to allow for staging areas and vehicle access. Construction staging areas would be identified by the contractor for pipe lay-down, soil stockpiling, and equipment storage. On average, 50 to 100 feet of pipeline may be installed per day.

Trenches would be temporarily closed at the end of each work day, by covering with steel trench plates and installing barricades to restrict access to staging areas. The construction equipment needed for pipeline construction typically includes the use of backhoes, excavators, dump trucks, shoring equipment and traffic control devices.

Jack and Bore Tunneling

Jack and bore tunneling may be employed in areas where open cut trenching is not feasible, such as under freeways, busy intersections, railroad lines, or waterways. Jack and bore tunneling is used for installing underground pipelines short distances without disturbing the ground surface. This method employs a horizontal boring machine or an auger that is advanced in a tunnel bore to remove material ahead of the pipe. Temporary bore pits and receiving pits are excavated on either side of the segment. Powerful hydraulic jacks are used to push a steel casing pipe from a launch (bore) pit to a receiving pit. As the tunneling machine is driven forward, a jacking pipe is added into the pipe string. After installment of the casing pipe, a smaller carrier pipe is inserted into the casing pipe. The carrier pipe will convey the recycled water. A jacking pit typically measures as little as 10 feet by five feet up to approximately 30 feet by 10 feet. The temporary pits typically would be excavated to a depth of 5 to 20 feet, as needed. Recycled water pipeline installation by this method would require approximately one to two weeks per crossing; excavated soils would be retained for backfill.

Directional Drilling

Horizontal directional drilling is another trenchless construction method that could be utilized for installing underground pipelines without disturbing the ground surface. This method could be used for traversing underneath highways or waterways. Using a horizontal drill rig, the pipeline is installed in two stages: (1) a small diameter pilot hole is directionally drilled along a designed directional path, and (2) the pilot hole is then enlarged to a diameter that would accommodate the casing pipeline and the pipeline is pulled back into the enlarged hole. After installment of the casing pipe, a smaller carrier pipe is inserted into the casing pipe. The carrier pipe would convey the recycled water. Slurry, typically bentonite (an inert clay), is used as a drilling lubricant. Recycled water pipeline installation by this method would require approximately one to two weeks per segment crossing. All excavated soils would be retained on-site.

2.6.2 Storage Reservoirs

Construction of new storage reservoirs would include site preparation and clearing, excavation, grading, reservoir construction, and site restoration. Each reservoir would require substantial earthwork and foundation work to stabilize hillsides and make room for the reservoir.

Each reservoir would be an aboveground storage tank constructed with structural steel. This type of construction involves the erection of structural steel panels and reinforcing beams. Erection of steel plates and reinforcing beams entails extensive welding work. Once welding is completed, the steel needs to be sandblasted, primed, painted and treated. Excavated soil is expected to be reused on site with no off-site hauling or disposal required for each reservoir. Construction of each reservoir would take approximately nine months.

The construction equipment needed for reservoir construction typically includes bulldozers, excavators, scrapers, cranes, rollers, dump trucks, concrete trucks, pre-stressing equipment and construction delivery tractor-trailers.

2.6.3 Pump Stations

The pump stations would be housed in single-story buildings with pump rooms and an electric control room. Construction of the pump stations would involve excavation and structural foundation installation, pump house construction, pump installation, and final site restoration. The pump station exteriors would be built in accordance with standard construction methods for roofed masonry buildings. After the pump houses are built and the pumps installed, electrical equipment (e.g., machinery control consoles, switchboards, lighting, etc.) would be installed. Pump stations would be equipped with portable emergency generator connections and manual transfer switches. All pump stations would have flow meters, suction and discharge pressure gauges, and remote telemetry units. Power to the pump stations would be provided through underground service to minimize possibility of damage during fires. Excavated soil is expected to be reused on site with no off-site hauling or disposal required for each pump station. Construction of the pump stations is estimated to take approximately eight months.

2.7 Project Construction Schedule

The project would be constructed in phases to accommodate developing demands. Each Responsible Agency would implement the system components in its service area as needed to meet demands. Figure 2-3 identifies the project phases. Construction of the first phase could begin in 2009 and the last phase in 2015. The actual construction schedule would be determined as funds become available and as recycled water users are identified. Construction for pipelines would proceed at 50 to 100 feet per day with entire phases taking up to a year to complete. Storage reservoirs and pump stations would require eight to nine months to complete.

2.8 Operation and Maintenance Details

The proposed project would distribute recycled water produced at the LWRP, PWRP, and RWWTP to a wide variety of end-users for non-potable irrigation, industrial applications, and

groundwater recharge. The system would be designed to connect the water discharged from the three reclamation facilities. Recycled water would be purchased from LACSD Nos. 14 and 20 and the RCSD. The backbone system would be owned and operated by a combination of one or more of the following stakeholders: LACWWD40, the City of Lancaster, the City of Palmdale, RCSD, PWD, AVEK, and QHWD. The retail water agencies would contract with LACSD Nos. 14 and 20 and/or RCSD to purchase recycled water produced at the treatment plants for distribution through the backbone system to their respective customers. The LACWWD40 and the Responsible Agencies shall consider entering into a joint powers agreement to form a Joint Powers Authority (JPA) to oversee funding, construction, and operation of the proposed project. The JPA would be distinct from its member agencies, would have its own board of directors, and would be empowered to implement the proposed project. The JPA would include a representative from LACWWD40 and each Responsible Agency, with the exception of LACSD. If the JPA is formed, then the Board of Directors of the JPA would consider this PEIR prior to approving and implementing the proposed project.

The direction and control of the recycled water flow would be variable dependent on local demands and supplies. Local water supply agencies would be responsible for constructing delivery pipelines from the backbone system evaluated in this PEIR to the actual end users. These delivery systems would be operated and maintained by the local agencies. End uses would be identified by the local agencies including irrigation, industrial uses, and groundwater recharge. Irrigation systems, feed systems, storage facilities, and recharge basins would be installed by local water supply agencies. Operational agreements stipulating use restrictions and commitments would be established by local water agencies with end users for each end use.

Maintenance inspection of distribution pump stations and booster pump stations would occur approximately two times per week. The reservoirs would be serviced once a week and the pipelines would be largely underground and serviced on an as-need basis.

2.9 Alternatives

2.9.1 No-Project Alternative

According to Section §15126.6(e) of the *CEQA Guidelines*, discussion of the No-Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the project were not approved. Under the No-Project Alternative, LACWWD40 and the partner agencies would not implement the Regional Recycled Water Project. The LWRP, PWRP, and RWWTP would be upgraded as planned to produce tertiary-treated effluent; however, there would be no integrated system to distribute this recycled water to end users in the Antelope Valley.

2.9.2 Alternative 1: Non-Integrated System

Under Alternative 1, instead of implementing the proposed project, LACWWD40, PWD, QHWD, and RCSD would design, construct, and operate their own recycled water systems. Alternative 1 would result in four separate recycled water systems in the Antelope Valley instead of one integrated regional system. LACWWD40 would construct recycled water pipelines, pump

stations, and storage reservoirs within its service area. LACWWD40 would contract independently with LACSD No. 14, LACSD No. 20, and RCSD to purchase recycled water for the end users in its service area.

2.10 Project Approvals

LACWWD40 intends to use this PEIR to consider implementation of the proposed project. As Lead Agency, LACWWD40 may use this EIR to approve the proposed project, make Findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts. Responsible Agencies having discretionary approval over components of the project include the City of Lancaster, the City of Palmdale, RCSD, LACSD Nos. 14 and 20, PWD, AVEK, and QHWD.

LACWWD40 and the Responsible Agencies would use the analysis contained within this PEIR to support the acquisition of the following regulatory permits or approvals:

- RWQCB: WDR/WRR/Master Reclamation Permit for water reuse;
- Department of Public Health: Approval to operate recycled water system;
- Caltrans: Roadway Encroachment Permit / Easement;
- Union Pacific Railroad: Encroachment Permit
- Department of Water Resources: Encroachment Permit
- County of Los Angeles: Roadway Encroachment Permit / Easement;
- County of Kern: Roadway Encroachment Permit / Easement;
- County of Los Angeles, Department of Public Works, Flood Control District: Easement;
- City of Lancaster: Roadway Encroachment Permit / Easement;
- City of Palmdale: Roadway Encroachment Permit / Easement.