DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

INITIAL STUDY

RIVER SUPPLY CONDUIT PROJECT

August 2004

Prepared by:

Los Angeles Department of Water and Power
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Los Angeles Department of Water and Power
RIVER SUPPLY CONDUIT PROJECT
INITIAL STUDY

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1. Project Information

1-1. Project Title

River Supply Conduit Project (proposed project)

1-2. Lead Agency Name and Address

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

1-3. Contact Person and Phone Number

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Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Telephone: (213) 367-1276

1-4. Project Location

The proposed River Supply Conduit (RSC) pipeline would be located in public street rights-of-way, Los Angeles Department of Water and Power (LADWP) property, and LADWP utility easements in the North Hollywood, Silver Lake, and Los Feliz communities (including Griffith Park) within the City of Los Angeles and the City of Burbank. Figure 1-1 depicts the regional location of the proposed project. The area through which the pipeline is proposed to be constructed is bounded by Sherman Way to the north, U.S. Highway 170/101 (Hollywood Freeway) to the west and southwest, Interstate 5 (Golden State Freeway) to the east, and State Route 2 (Glendale Freeway) to the southeast (see Section 10 for details). The RSC pipeline would be located in the LADWP East Valley, Central and Western District service areas.

The pipeline route has been divided into two geographic areas (the Upper Reach and the Lower Reach). As illustrated in Figures 1-2 and 1-3, the proposed pipeline route would begin at the North Hollywood Pumping Station (NHPS) and travel southeast thru the Griffith Park area, and connect to the Rowena/Ivanhoe connecting line below Los Feliz Boulevard. Two branch or trunk lines would also connect the RSC pipeline to the Rowena Tank and to the Fletcher Pump Station suction line.

1-5. Council District

The proposed project would be located in Council Districts 2, 4, and 6 of the City of Los Angeles. However, approximately 7,500 linear feet of the proposed pipeline would be located in the City of Burbank beginning at the intersection of Riverside Drive and Clybourn Avenue and extending to Buena Vista Park just southeast of the NBC Studios.

1-6. Project Sponsor's Name and Address

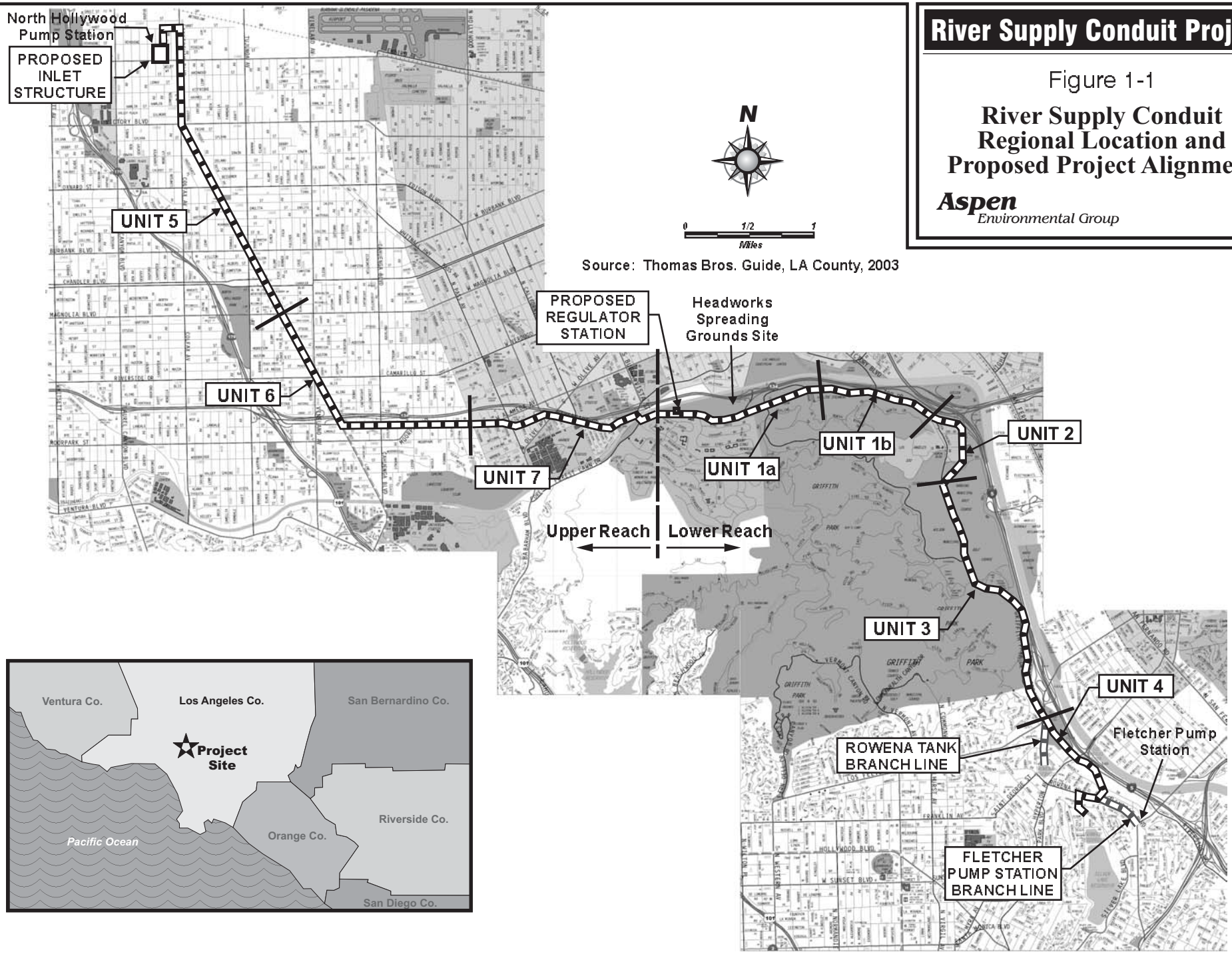
Los Angeles Department of Water and Power
Water Engineering and Technical Services Business Unit – Project Planning and Development
111 North Hope Street, Room 1336
Los Angeles, CA 90012

River Supply Conduit Project

Figure 1-1

River Supply Conduit Regional Location and Proposed Project Alignment

Aspen Environmental Group

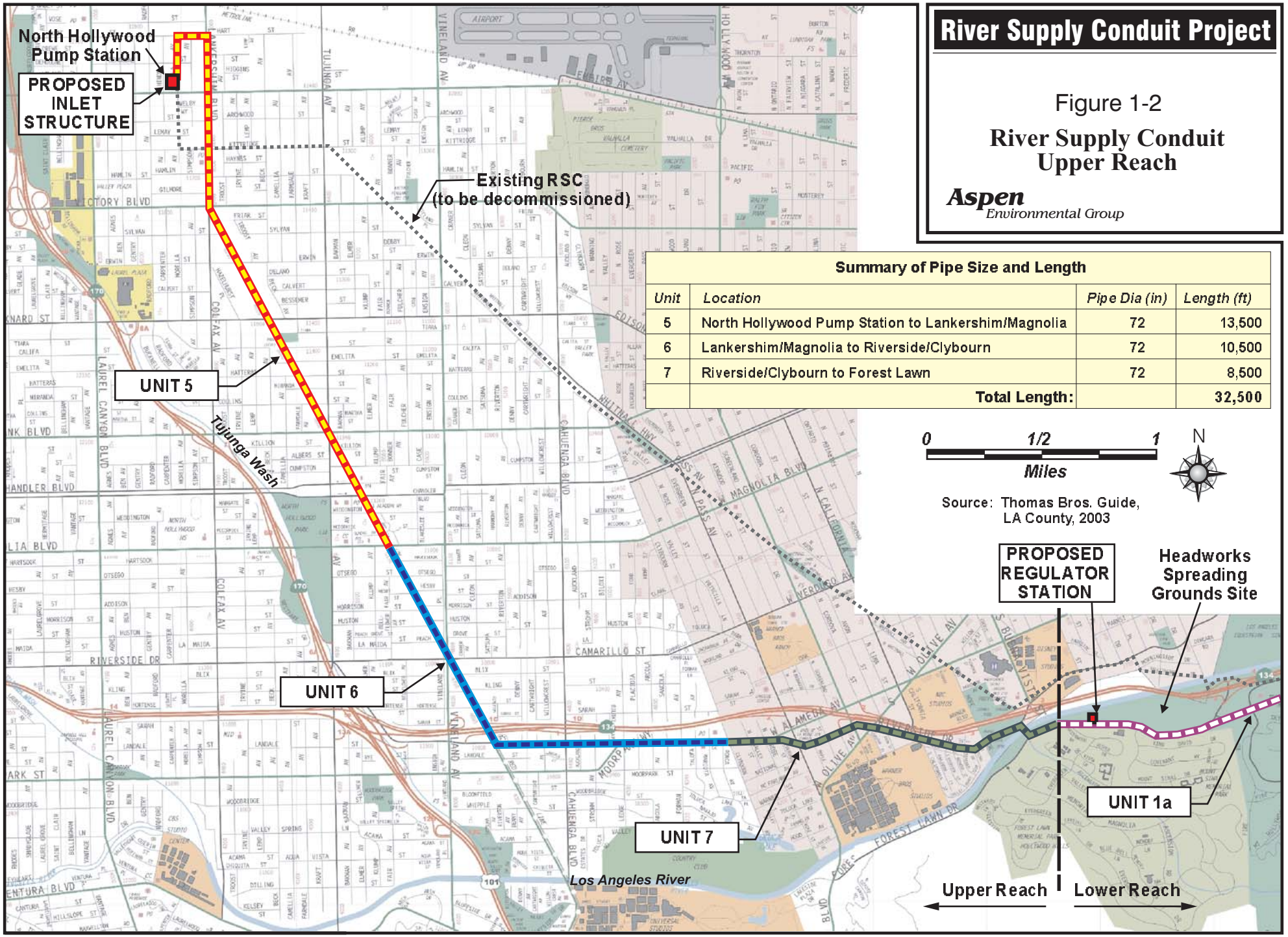


River Supply Conduit Project

Figure 1-2

River Supply Conduit Upper Reach

Aspen Environmental Group



Summary of Pipe Size and Length			
Unit	*Location*	*Pipe Dia (in)*	*Length (ft)*
5	North Hollywood Pump Station to Lankershim/Magnolia	72	13,500
6	Lankershim/Magnolia to Riverside/Clybourn	72	10,500
7	Riverside/Clybourn to Forest Lawn	72	8,500
	Total Length:		**32,500**

Source: Thomas Bros. Guide, LA County, 2003

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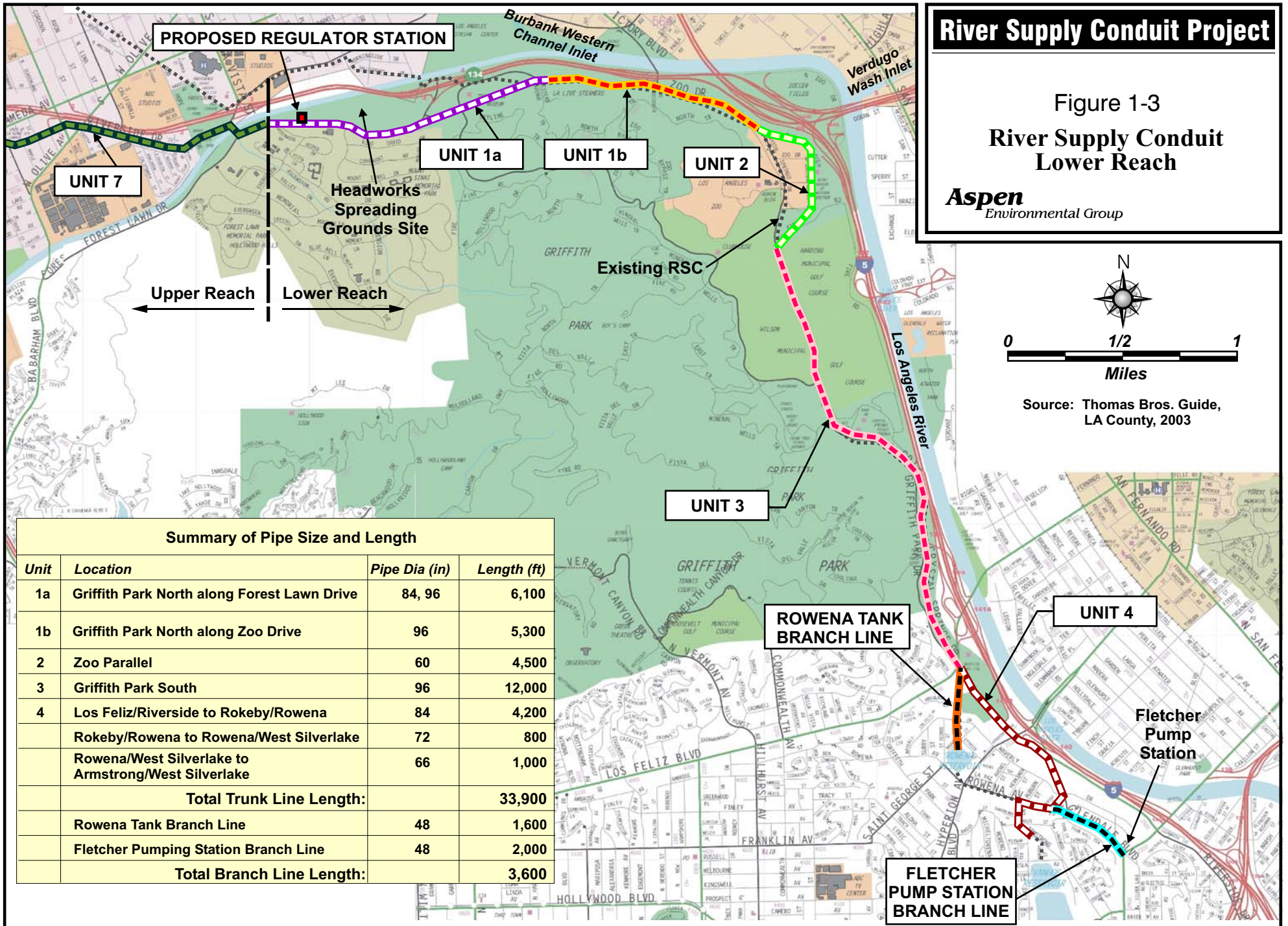
River Supply Conduit Project

Figure 1-3

River Supply Conduit Lower Reach

Aspen Environmental Group



Summary of Pipe Size and Length

Unit	Location	Pipe Dia (in)	Length (ft)
1a	Griffith Park North along Forest Lawn Drive	84, 96	6,100
1b	Griffith Park North along Zoo Drive	96	5,300
2	Zoo Parallel	60	4,500
3	Griffith Park South	96	12,000
4	Los Feliz/Riverside to Rokeby/Rowena	84	4,200
	Rokeby/Rowena to Rowena/West Silverlake	72	800
	Rowena/West Silverlake to Armstrong/West Silverlake	66	1,000
	Total Trunk Line Length:		33,900
	Rowena Tank Branch Line	48	1,600
	Fletcher Pumping Station Branch Line	48	2,000
	Total Branch Line Length:		3,600

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1-7. General Plan Designation

The proposed project would include a linear pipeline traversing two jurisdictions, and multiple land use designations and districts under various City of Los Angeles Community Plans and the City of Burbank General Plan, including the Burbank Media District Specific Plan.

1-8. Zoning

As discussed above, the RSC pipeline would traverse two jurisdictions, and multiple zoning designations and districts under the City of Los Angeles Zoning Code (Section 1 of the Los Angeles Municipal Code) and the City of Burbank Zoning Ordinance.

1-9. Surrounding Land Uses and Setting

The majority of the Upper Reach of the proposed pipeline route would pass through urban commercial zones interspersed with residential areas. The southern portion of the Upper Reach would pass through Buena Vista Park, a municipal park in the City of Burbank, and cross the Los Angeles River. The majority of the northern portion of the Lower Reach would be located within existing streets within Griffith Park, a 4,000-acre recreation area in the City of Los Angeles. The southern portion of the Lower Reach would be located within city streets surrounded by urban development including both residential and commercial zones.

1-10. Project Description

The LADWP is proposing a new larger RSC pipeline to replace the Upper and Lower Reaches of the existing RSC pipeline in a new alignment. The proposed project would involve the construction of approximately 70,000 linear feet (about 13.3 miles) of 48-, 60-, 66-, 72-, 84-, and 96-inch diameter welded steel underground pipeline. Construction of the proposed project pipeline would occur within existing street rights-of-way, LADWP property and existing easements, or open space/recreation areas, and would also include construction of appurtenant structures (e.g., maintenance/access holes, flow meters, valves, and/or vaults).

Background

The RSC is a major transmission pipeline in the LADWP water distribution system. Built in the 1940s, the existing RSC pipeline's purpose is to transport large amounts of water from the Los Angeles Reservoir Complex and local ground water wells to reservoirs and distribution facilities located in the central areas of the City of Los Angeles. Approximately 60,000 feet in length, the existing RSC pipeline begins at the NHPS and ends at the Ivanhoe Reservoir. Hollingsworth Spillway is located about midpoint along the pipeline and is currently used to control the pressure of the downstream pipeline.

The section of existing pipe north of Hollingsworth Spillway is referred to as the Upper Reach, while the section south is referred to as the Lower Reach. About 70 percent of the pipeline is located in City of Los Angeles streets and property with the remainder located within easements in the City of Burbank. Various pipe sizes and material types were used to construct the existing RSC pipeline. For the Upper Reach, 98 percent of the pipeline is reinforced concrete pipe, with the remainder being steel. For the Lower Reach, 95 percent of the pipeline is reinforced concrete pipe with the remainder being steel.

As the RSC has aged, numerous issues regarding the pipeline have emerged. Sections of the RSC pipeline are either unpressurized or are at very low pressures. As such, these pipelines are below the current requirements of the California Department of Health Services Drinking Water Regulations (Title 22, Section 64566(c)), which require "water mains to be designed to have at least 5 psig [pounds per square inch gauge] pressure throughout any buried length of the main

except when the main is removed from service for repairs or maintenance." These minimum pressures help to prevent cross-contamination from other buried utilities, in particular, sanitary sewer. At the same time, some sections of the pipe are subject to pressures greater than those recommended by the manufacturer. Additionally, over the years, the RSC pipeline has experienced cases of pipe leaks. For example, in 2001, leaking pipe joints near the intersection of Los Feliz Boulevard and Riverside Drive were repaired using an internal seal system. Although the leaks were stopped, the seals, which are still in place, were only intended to be a temporary measure.

Further impacting the service of the RSC, and in order to meet new state and federal water quality regulations, the LADWP is proposing to remove the Silver Lake Reservoir Complex, including both Silver Lake and Ivanhoe Reservoirs, which are destinations for the existing RSC, from direct service to the LADWP water distribution system. Water storage currently provided by the Silver Lake Reservoir Complex would be replaced by an underground covered storage reservoir at the former Headworks Spreading Grounds site. An EIR is being prepared for this project, the Silver Lake Reservoir Complex Storage Replacement Project, by the LADWP. Information for this project is available at the following website: www.ladwp.com/ladwp/cms/ladwp004720.pdf.

The existing RSC Inlet Structure was constructed in 1994 to serve as a source for the existing RSC pipeline. It is located inside of the NHPS sump, which is located within the North Hollywood area of the City of Los Angeles on the northwest corner of Vanowen Street and Morella Avenue. The design of the existing inlet structure results in flow and pressure losses (hydraulic losses) in the RSC pipeline by producing significant trapped air bubbles (air entrainment), which reduces the capacity of the pipeline, and by producing excessive pressure losses caused by friction (head losses). The existing RSC Inlet Structure has a current capacity of 160 cubic feet per second (cfs).

LADWP's Project Objectives

The existing RSC pipeline, which the proposed project is intended to replace, has provided over 50 years of continuous service to the City, and its reliability and capacity are near its design life limits. Additional factors contributing to the need for improvements to LADWP's water distribution system include: (1) increased consumer consumption, (2) new California Department of Health Services Drinking Water Regulations, (3) reduced open reservoir storage due to more stringent state and federal water quality regulations, and (4) susceptibility to earthquake and other natural disasters. In addition, the LADWP's water distribution system must be capable of handling increased system demands, and hydraulic losses must be minimized. Within the current RSC pipeline system, hydraulic losses occur as a result of air entrainment and excessive head losses produced by the RSC Inlet Structure and as a result of pipeline friction losses due to the smaller pipe sizes within the pipeline system.

To address these issues, LADWP has identified the following objectives for the proposed project:

- Provide a more reliable supply of water to the central area of the City of Los Angeles.
- Provide a larger flow capacity to adequately meet the current water requirements of the City of Los Angeles.
- Provide higher water pressure to meet California Department of Health Services Drinking Water Regulations.
- Compensate for loss of water storage within the LADWP water distribution system.

Proposed Pipeline Route

The proposed pipeline route includes an upper and lower reach. Each of these reaches is summarized below. Due to the considerable length of the proposed RSC pipeline and to facilitate discussion of the proposed project, the Upper and Lower Reaches have been divided into seven units that are further described in Table 1-1.

Upper Reach RSC Pipeline. The proposed Upper Reach RSC pipeline would be located along/in City of Los Angeles and City of Burbank streets and parks (See Figure 1-2). The portion of the pipeline in the City of Burbank would be 7,500 feet long, and the remaining 25,000 feet would be in the City of Los Angeles. The majority of the proposed pipeline would go through urban development consisting of commercial zones interspersed with residential zones.

The north end of the Upper Reach would begin at the proposed RSC Inlet Structure north of Vanowen Street at Morella Avenue, in the North Hollywood area of the City of Los Angeles. Once exiting the Inlet Structure, the pipeline would continue north along either Hinds Avenue or Morella Avenue, turning east onto Hart Street, then south onto Lankershim Boulevard, and east again onto Riverside Drive until reaching Buena Vista Park, a municipal park, east of Bob Hope Drive. At this point the pipeline would continue across the Los Angeles River to Forest Lawn Drive, and east to the west end of the Headworks Spreading Grounds site.

Lower Reach RSC Pipeline. The proposed Lower Reach RSC pipeline would involve the construction of approximately 37,500 linear feet (about 7.1 miles) of welded steel pipeline located along/in City of Los Angeles streets and property (See Figure 1-3). The north end of the pipeline would begin at the west end of the Headworks Spreading Grounds site. The north half of the pipeline would be located in Griffith Park along Zoo Drive and Crystal Springs Drive. Once exiting Griffith Park at Crystal Springs Drive and Los Feliz Boulevard, the pipeline would continue southerly along Riverside Drive, turning south onto Glendale Boulevard, then southwest on Rokeby Street, then west on Rowena Avenue, and south again onto West Silver Lake Drive until reaching the intersection with Armstrong Avenue. Two branch or trunk lines would also be constructed. The first would begin south of Los Feliz Boulevard at Riverside Drive, and continue south through Mulholland Memorial Park, before entering the existing Rowena Tunnel to connect to the Rowena Tank. The other branch/trunk line would begin at Rowena Avenue and Rokeby Street and continue southeast on Rowena Avenue and tie into the Fletcher Pump Station suction line.

Project Components

RSC Pipeline. Pipeline construction would be composed of several activities. The construction activities would be organized to proceed in the order listed below.

1. Pre-construction activities
2. ROW clearing
3. Pipeline installation
4. Weld inspection
5. Applying protective coating to the weld joints
6. Backfilling, if required
7. Hydrostatic testing and disinfection
8. Restoring and cleaning of affected construction areas

Once the proposed pipeline project is approved and the specific alignment is confirmed, a construction plan would be developed that, among other things, would identify refueling operations. Refueling of construction equipment would take place along the rights-of-way using absorbent material to create temporary berms around the equipment.

Prior to construction, LADWP's contractor would develop an emergency response plan, spill prevention plan, or similar document. As part of this plan, the LADWP's contractor would be required to have available adequate spill containment and cleanup resources on site at all times. The contractor would be prepared to contain, control, clean up, and dispose of any potential fuel spill quickly and completely.

Table 1-1. Summary of Unit Route(s)

Unit and Location	City	Route
UPPER REACH		
Unit 5 North Hollywood Pump Station to Lankershim/Magnolia	Los Angeles	Hinds Avenue or Morella Avenue from the proposed NHPS RSC Inlet Structure north to Hart Street Hart Street east to Lankershim Boulevard Lankershim Boulevard south from Hart Street to Magnolia Boulevard
Unit 6 Lankershim/Magnolia to Riverside/Clybourn	Los Angeles	Lankershim Boulevard south from Magnolia Boulevard to Riverside Drive Riverside Drive east from Lankershim Boulevard to Clybourn Avenue
Unit 7 Riverside/Clybourn to Forest Lawn	Los Angeles Burbank	Riverside Drive from Clybourn Avenue to Buena Vista Park east of Bob Hope Drive Across the Los Angeles River from Buena Vista Park to Forest Lawn Drive Forest Lawn Drive east to the west end of the Headworks Spreading Grounds site
LOWER REACH		
Unit 1a Griffith Park North along Forest Lawn Drive	Los Angeles	From the west end of the Headworks Spreading Grounds site along Forest Lawn Drive, to the proposed regulator station, and continuing along Forest Lawn Drive and Zoo Drive to the L.A. Live Steamers (children's train ride).
Unit 1b Griffith Park North along Zoo Drive	Los Angeles	From L.A. Live Steamers along Zoo Drive to a location 1,800 feet north of the northerly end of Western Heritage Way.
Unit 2 Zoo Parallel Line (Western Heritage Way)	Los Angeles	From the southern end of Unit 1b to approximately 800 feet south of the southern end of Western Heritage Way, running in Western Heritage Way, other paved roads, and equestrian trails.
Unit 3 Griffith Park South (Crystal Springs Drive)	Los Angeles	From the southern end of Unit 2 to Los Feliz Boulevard, running in Crystal Springs Drive.
Unit 4 Los Feliz/Riverside to Rokeby/Rowena, Rokeby/Rowena to Rowena/West Silver Lake, and Rowena/West Silver Lake to Armstrong/West Silver Lake	Los Angeles	From the southern end of Unit 3, southeast in Riverside Drive; turning southerly onto Glendale Boulevard; turning southwest onto Rokeby Street, then westerly onto Rowena; and then south in West Silver Lake Drive to the intersection of West Silver Lake Drive and Armstrong Avenue (connecting to the Ivanhoe inlet line). In addition, two branch lines would be constructed in Unit 4. The Rowena Branch Line would connect the RSC pipeline to the Rowena Tank. The Fletcher PS Branch Line would connect the RSC pipeline to the Fletcher Pump Station suction line.

Construction of the proposed project would occur on public property, including street rights-of-way and municipal parks. Installation of the pipeline would be accomplished by a combination of open-trench excavations, jacking, tunneling (micro-tunneling or traditional tunneling), and slip

lining, as described below under Pipeline Construction Methods. In general, deep sections of pipe would be tunneled and street intersections would be jacked or tunneled. For those areas along the pipeline alignment allowing for pipeline depths of 15 feet or less, open-trenching would be used. In sequence, the general process for the construction methods consists of site preparation, excavation, pipe (and/or appurtenant structure) installation and backfilling, and site restoration (where applicable). For tunneling and jacking operations, a pit would be needed at the entrance and exit of each pipe segment to install the pipeline. All these construction methods would require off-site staging area(s) to temporarily store supplies and materials (See "Staging Areas" below).

In the Upper Reach, where 72-inch diameter pipe would be installed, the minimum trench depth would be 12-feet with a maximum of approximately 55-feet at approaches to jacking pits. In the Lower Reach, in jacking areas and certain open trenching areas, it may be required to dive under existing substructures resulting in maximum trench depths of approximately 25 to 30 feet or more. The maximum trench width would be the pipe diameter plus two feet on either side of the pipe for the open trench method and the maximum pit sizes for jacking/tunneling would be about 18 feet wide by 40 feet long. The overall width, including the work area along the side of the trench, would be approximately 30 to 35 feet.

Upper Reach construction techniques would include approximately:

- 2,600 feet of tunneling or jacking with steel or concrete cylinder casing;
- 24,300 feet of open trench excavation; and
- Eleven (11) auger-bores (jacking method) or tunneling with steel casing across street intersections and the Los Angeles River (300-400 foot drives, assuming construction of the RSC pipeline beneath the river, although a pipe bridge is also a possible means of crossing the river).

Lower Reach construction techniques would include approximately:

- 5,700 feet of tunneling or jacking with steel casing or other tunnel liners for eight (8) tunnels;
- 31,700 feet of open trench excavation; and
- 1,000 feet of slip lining for the branch line to the Rowena Tank.

The Rowena Tank branch line would be constructed using open trench methods through the Mulholland Memorial Park south of the William Mulholland Memorial Fountain, before entering the existing Rowena Tunnel. Only those portions of the park directly affected by the pipeline construction would be closed upon approval by the Department of Recreation and Parks. The Rowena Tunnel is a circular tunnel, approximately 72-inches in diameter (inside diameter) located within a LADWP easement. The north portal begins approximately 850 feet south of the intersection of Los Feliz Boulevard and Riverside Drive and extends south for approximately 1,000 feet to the south portal. The new RSC pipeline would be installed (sliplined) inside this existing tunnel. Once the new RSC pipeline is installed through the Rowena Tunnel, a connection would be made to the existing Rowena Tank inlet line located in the north corner of the Rowena property, southerly of the intersection of Maxwell Street and Ettrick Street.

The branch line to the Fletcher Pump Station suction line would be constructed using the open-trench method.

A summary of the proposed pipeline route based on the seven units described above and defined in Figures 1-2 and 1-3, including the pipeline location, length, diameter and general construction

method(s) is provided in Table 1-2. The activity/pipeline construction methods presented in Table 1-2 are further described under "Pipeline Construction Methods" below.

Proposed Regulator Station. Pressure regulating stations are used in water supply systems to control pressure in the pipelines. A typical station is located in an underground vault and consists of several parallel pipes, or legs, that branch off the main pipeline. These pipe legs are smaller than the main pipeline and have regulator valves installed, which control pressure by how much the valve is opened or closed. Ancillary equipment is also required for the vault and may include lines valves, power, ventilation, and pumps.

As part of the RSC pipeline construction, a regulator station would be built underground inside a vault within the Headworks Spreading Grounds site. This station would consist of approximately seven smaller pipe legs (three 24-inch, two 16-inch, and two 12-inch legs). Each pipeline would have a control valve, which would be operated as necessary to maintain the pressure requirements downstream within the Lower Reach of the RSC pipeline.

Proposed Inlet Structure. The proposed RSC Inlet Structure would provide 250 cfs of capacity to the new RSC pipeline. The RSC Inlet Structure would generally be located inside the existing NHPS sump, except for the portion that would connect the inlet structure to the new Upper Reach of the RSC pipeline, which would be located underground and adjacent to the NHPS. The NHPS is located in the North Hollywood area of the City of Los Angeles on the northwest corner of Vanowen Street and Morella Avenue.

The proposed Inlet Structure would include:

- A concrete inlet chamber approximately 15 feet long by 15 feet wide by 44 feet deep. The structure would have openings on each side to allow water to enter the inlet.
- Approximately 90 feet of 72-inch pipe to connect from the inlet chamber to the new RSC pipeline.

Table 1-2. Summary of Unit Characteristics and Construction Method

Unit No.	Unit Details	Length (Feet)	Pipe Dia. (in)	Proposed Construction Method [b]
UPPER REACH				
5	• North Hollywood Pump Station to Lankershim/ Magnolia	13,500	72	Open Trench/ Tunneling/ Jacking
6	• Lankershim/Magnolia to Riverside/Clybourn	10,500	72	Open Trench/ Jacking
7	• Riverside/Clybourn to Forest Lawn	8,500	72	Open Trench/ Tunneling/ Jacking
LOWER REACH				
1a [a]	• Griffith Park North along Forest Lawn Drive	6,100	84, 96	Open Trench/Tunneling
1b	Griffith Park North along Zoo Drive	5,300	96	Open Trench
2	Zoo Parallel Line (Western Heritage Way)	4,500	60	Open Trench
3	• Griffith Park South (Crystal Springs Drive)	12,000	96	Open Trench/Jacking/Tunneling
4	Los Feliz/Riverside to Rokeby/Rowena Rokeby/Rowena to Rowena/West Silver Lake • Rowena/West Silver Lake to Armstrong/West Silver Lake Trunk Line Rowena Branch Line Los Feliz/Riverside to Rowena Tank Trunk Line Fletcher PS Branch Line Rokeby/Rowena to Fletcher	4,200 800 1,000 1,600 2,000	84, 96 72 66 48 48	Open Trench/Jacking Open Trench Open Trench/Jacking Open Trench/ Tunneling/ Slip Lining Open Trench

Note(s):
a. Proposed regulator station to be constructed as part of Unit 1a.
b. Construction methods are to be finalized by the construction contractor.

Since the proposed RSC Inlet Structure would generally be located inside the existing NHPS sump, which is a covered structure, and the connection to the Upper Reach of the RSC pipeline would be located underground, the new inlet structure would not be visible from outside the NHPS.

Construction of the RSC Inlet Structure would occur mostly in the existing NHPS, a property of LADWP. Approximately 50 feet of 72-inch pipe would be placed in Hinds Avenue or Morella Avenue, a public right of way. Construction of the inlet chamber would require open excavation to depths of approximately 20 feet and, potentially, a cofferdam inside the existing NHPS sump to minimize the disruption of water supply. The installation of the pipeline would be accomplished through a combination of jacking and open trench excavation to depths of approximately 45 feet.

In sequence, the typical pipeline construction process consists of site preparation, excavation and shoring, installation or construction, backfilling, and site restoration. For installation of the pipeline using jacking operations, a pit would be needed at the entrance and exit of each pipe segment. Additionally, the NHPS or off-site staging areas would be required to temporarily store supplies and materials.

Appurtenant Improvements. The Upper and Lower Reaches would also include construction of appurtenant structures as follows:

- Vaults and ventilation stacks
- Maintenance and access holes
- Flow meters
- Electrical and mechanical cabinets
- Pipeline valves, air vacuum valves, and air release valves
- Blowoffs

The proposed project would also include the modification of existing NHPS sump to accommodate the proposed RSC Inlet Structure.

Decommissioning of Existing RSC Pipeline. The existing RSC pipeline, from the NHPS to the Hollingsworth Spillway Structure, would be decommissioned after completion of the Upper Reach of the proposed RSC pipeline. The Upper Reach of the existing RSC pipeline would be kept in good condition after decommissioning, by covering existing openings. The existing Lower Reach of the RSC pipeline, from the Hollingsworth Spillway Structure to the Silver Lake Reservoir Complex, is in poor condition and would be abandoned pursuant to applicable regulations.

Project Specifics

Construction Schedule, Planning, and Labor Force. As shown in Table 1-3, construction of the proposed project would be expected to commence in October 2005 and would be completed by July 2010, for a total of 57 months.

Table 1-3. Proposed Construction Schedule

Unit	Start Date	Completion Date	Estimated Duration (Days)
1a [a]	June 2007	August 2008	326
1b	June 2006	March 2007	217
2	April 2007	December 2007	196
3	January 2006	November 2007	500
4	October 2005	August 2007	500
5	February 2008	January 2009	240
6	November 2008	September 2009	217
7	September 2009	July 2010	218
Inlet	October 2006	June 2007	175

Note(s):
a. Proposed regulator station to be constructed as part of Unit 1a.

Approximately 50 percent of the workforce would be skilled labor, and 50 percent would be unskilled labor, as shown in Table 1-4. During the peak construction period, four open trench and two jacking operations are anticipated to occur simultaneously over four pipeline units (e.g. Units 1a, 2, 3, and 4). Therefore, approximately 96 personnel (22 employees times four open trench activities, plus four employees times two jacking operations) would be employed on the project during the peak construction period. On a typical workday, workers would travel directly to one of the predetermined staging areas, where they would gather equipment and proceed in work crews to the construction sites along the alignment. Construction activities would involve several (up to 80 assuming a 1.2 rideshare/other transportation factor) construction worker vehicles traveling daily to and from the proposed pipeline alignment from the nearest LADWP facility. Additional truck trips would be needed to transport unused excavated soil from trenching to an appropriate facility for reuse or ultimate disposal.

Table 1-4. Personnel, Equipment, and Refueling Requirements

Activity [a]	Personnel		Equipment		Refueling
	Skilled	Unskilled	Quantity	Type	
Open Trench	11	11	5	Pickups	Off-site
			1	Service truck	Off-site
			1	Backhoe	On-site
			6	Dump trucks	Off-site
			1	Welding trucks	Off-site
			1	Pitman	Off-site
			1	Crane	On-site
			1	Wheel loader	On-site
			1	Compactor	On-site
			1	Fork lift	On-site
			1	Water truck	Off-site
			1	Excavator	On-site
Jacking	2	2	2	Pickups	Off-site
			1	Dump trucks	Off-site
			1	Excavator	On-site
			1	Crane	On-site
Tunneling	2	4	2	Pickups	Off-site
			1	Dump trucks	Off-site
			1	Excavator	On-site
			1	Crane	On-site
Pipe Delivery (40 ft/load)	2	0	2	Trailer truck	Off-site

Note(s):
a. The activity/pipeline construction methods presented are further described under "Pipeline Construction Methods."

Construction would generally occur between 7:00 a.m. and 6:00 p.m. Monday through Friday (10-hour work day) and 8:00 a.m. to 5:00 p.m. on Saturdays (8-hour work day). Within Griffith Park, on Crystal Springs Drive where the road is open to two-way traffic, construction would be limited to nighttime hours only. Day and/or night construction (up to 24 hours per day with Police commission approval) would occur within Griffith Park along Crystal Springs Drive, where the road is open to only one-way traffic, since the lower portion of Crystal Springs Drive would be entirely closed throughout construction within that area (Department of Recreation and Parks approval would be required). Installation of pipe would be expected to progress at approximately 120 to 160 feet per day in this area, assuming a 24-hour construction schedule.

It is estimated that a typical construction activity would require the closure of three travel lanes. Intersections where open trench construction is used would be affected for approximately four weeks with turning traffic affected considerably longer. Table 1-4 provides a description of personnel, equipment, and refueling required for each activity.

Staging Areas. During pipeline construction, LADWP's construction contractor would establish temporary yard locations for staging and storage of miscellaneous construction materials and equipment. The contractor(s) would be responsible for scouting and securing suitable local lots for staging areas. However, possible staging areas identified for the proposed project include Buena Vista Park, various City-owned lots within Griffith Park, or at local LADWP facilities, including the NHPS and Silver Lake Reservoir Complex.

During all phases of construction, refueling and lubrication of construction equipment would occur at the contractors' staging yard or along the construction right-of-way. Equipment would be regularly checked for leakage.

Construction Sites. Most of the heavy construction equipment would be delivered on lowboy trucks or trailers. Mobile cranes and dump trucks would be driven in from local contractors' yards. Construction equipment would be left overnight at the site as feasible, at the contractor yards, or at other storage yards in the area. All equipment would be lubricated, refueled, and repaired by the contractor or local servicing companies.

All construction materials would proceed to the construction areas by truck on existing roadways. For pipe delivery by truck, it is assumed that each truck would carry 40-feet of pipe. Materials that would be truck transported to the site would include: the pipe sections, pipe fittings, valve assemblies, and shoring materials; welding materials; cement, aggregate, gravel, sand, and slurry (from local plants) for backfill at street crossings; asphalt for re-paving; signs and fencing; fuel and lubrication for equipment; drinking water; and water for dust control. Alternatively, water may be available from fire hydrants or permitted water sources in the project area for hydrotesting and dust control. The amounts of each material needed would depend on the location and construction activity.

Waste Management. Generally, waste generation from construction would be in the form of short sections of pipe, welding, and coating as well as boxes and crates used in the shipment of materials. These materials would be sorted by metal or non-metal and typically would be hauled to local waste disposal centers. Other construction wastes would include contaminated soil that cannot be returned to the trench as backfill; rubble from trenching paved areas; and water used to

hydrostatically test[1] the pipeline. Non-hazardous wastes would be hauled to a sanitary landfill; hazardous wastes would be sent to a permitted treatment or disposal facility; and used hydrostatic test water would be treated to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) hydrostatic test permit and discharged into nearby storm drains, or discharged to sewer drains within the City of Los Angeles consistent with the requirement of the Bureau of Sanitation. Construction crews would use portable chemical toilets, and trash containers would be provided at each yard for daily refuse from construction workers.

Utility and Services Requirements. Construction equipment would require both gasoline and diesel fuel. All construction equipment would be fitted with appropriate mufflers and all engines would be maintained regularly. Welding machines would use diesel or unleaded fuel.

Water would be used as necessary to control fugitive dust and to wash streets as a supplement to sweeping streets. In addition to the daily construction water needs, hydrostatic testing of the pipeline would also require water. Hydrostatic test water would be obtained from LADWP. For the Upper Reach, approximately 7.4 million gallons of hydrostatic test water would be used. A minimum of one separate hydrostatic test would be conducted for each of the three units (Unit 5, 6, and 7). Therefore, a maximum discharge event for any segment in the Upper Reach would be in the order of 2.5 million gallons over four days. Similarly, for the Lower Reach, approximately 11.5 million gallons of hydrostatic test water would be used for testing five units (Unit 1a, 1b, 2, 3, and 4) with a maximum discharge on the order of 4.2 million gallons over seven days. Hydrostatic test water would be pumped from the pipeline and allowed to gutter flow to the nearest storm or sewer drain.

Construction along the proposed pipeline route would require onsite diesel fuel generators for the temporary supply of electricity. Together the main pipeline activities and street work would have approximately 15 pick-up mounted welding machines, each with its own generator. In addition, utility generators would also be used for the intermittent operation of dewatering pumps, hydraulic equipment, grinders, sandblasters, temporary lights, etc.

Pipeline Construction Methods

Open Trench Excavation. Open trench excavation is a construction method typically utilized to install pipelines and their appurtenant structures, which include maintenance holes, flow meters, valves, and vaults. In general, the process consists of site preparation, excavation and shoring, pipe installation and backfilling and site restoration (where applicable). The proposed project would be phased in work areas and each work area would typically vary between 800 and 1,000 feet. Construction usually progresses along the alignment with the maximum length of open trench at one time being approximately 500 feet in length with traffic detours beginning at least 200 feet on either side of the designated work area. The following is a description of the phases of construction for open trenching:

Site Preparation. Traffic control plans, where necessary, are first prepared in coordination with the City of Los Angeles and the City of Burbank to detour and delineate the traffic lanes around the work areas. The approved plans are then implemented. The existing pavement along the pipeline alignment is cut with a concrete saw or otherwise broken and then removed using jackhammers, pavement breakers, and loaders. Other similar equipment may

[1] A hydrostatic test involves filling a test section of the pipeline with fresh water and increasing pressure to a predetermined level. Such tests are designed to prove that the pipe, fittings, and weld sections would maintain mechanical integrity without failure or leakage under pressure.

be used. The pavement is removed from the project site and recycled, reused as a backfill material, or disposed of at an appropriate facility.

Excavation and Shoring. A trench is excavated along the pipeline alignment using backhoes, excavators, or other types of excavation equipment. Portions of the trench adjacent to some utilities may be manually excavated. The excavated soil may be temporarily stored in single rows adjacent to the trenches, stored at off-site staging areas, or immediately hauled off-site. As the trench is excavated, the trench walls are supported, or shored, typically with hydraulic jacks or trench boxes. Steel or wood sheeting between H-beams (e.g., beam and plate) may also be used for shoring. Other similar shoring methods may be utilized. Utilities not relocated prior to trenching are supported as excavation and shoring occurs.

If construction occurs in areas with high groundwater, the groundwater would be removed during the excavation of trenches, usually by pumping it from the ground through dewatering wells that have been drilled along the alignment. The extracted groundwater would first be treated for any contaminants, if present, before being discharged to the storm drain system under a permit issued by the Regional Water Quality Control Board.

Pipe Installation and Backfilling. Once the trench has been excavated and shored, pipelaying begins. Bedding material (such as sand or slurry) would be placed on the bottom of the trench. Pipe segments would then be lowered into the trench and placed on the bedding. If pipeline segments used do not include push-on joints, the segments would be welded to one another at the joints. The rate at which pipe may be installed in a single day varies, but is estimated to be installed at a rate of approximately 80 feet per day for the proposed project. Prior to backfilling, appurtenant structures would be installed as necessitated by design. After laying and attaching the pipe segments, the trench is immediately backfilled with native soils, crushed miscellaneous bases, or cement slurry. Not more than 500 feet of trench or the amount of the trench that can be backfilled in one day is left unbackfilled.

Site Restoration. Any portion of the roadway damaged as a result of construction activities will be repaved and restored in accordance with all applicable City of Los Angeles and City of Burbank standards. Once the pavement has been restored, traffic delineation (restriping) will also be restored.

Jacking Method. Pipe-jacking is utilized when open-trenching is not feasible, to avoid large substructure utilities, or to avoid the disruption of other facilities such as flood control channels (e.g., Los Angeles River). Although the installation of pipelines using jacking techniques avoids the continuous surface disruption common to open-trench construction, some surface disruption is unavoidable because jacking and receiving pits are required and may be located in street rights-of-way.

Pipe-jacking is an operation in which the soil ahead of the steel casing is excavated and brought out through the steel casing barrel while the casing is pushed forward by a horizontal, hydraulic jack which is placed at the rear of the casing. The jacking equipment utilized for this operation is placed in the jacking pit. Once the casing is placed, the pipe is installed inside the casing.

As with open trench excavation, the four primary phases for pipe-jacking are site preparation, excavation and shoring, pipe installation, and site restoration.

Site Preparation. Traffic control plans, where necessary, are first prepared in coordination with the City of Los Angeles and the City of Burbank, to detour and delineate the traffic lanes around the work areas and then implemented. In preparing to construct the jacking and receiving pits, the pavement is first cut using a concrete saw or pavement breaker. As with open-trench excavation, the pavement is removed from the project site and recycled, reused as a backfill material, or disposed of at an appropriate facility.

Excavation and Shoring. A jacking pit and a receiving pit are generally used for each jacking location, one at each end of the pipe segment. The distance between the pits typically ranges from 250 to 500 feet, but may be longer or shorter depending on site conditions.

For the proposed project, the size of the jacking and receiving pit for the Upper Reach would be approximately 20-60 feet long, 12 feet wide and 15-55 feet deep. Lower Reach pits would be approximately 20-40 feet long, 11-18 feet wide, and 25-45 feet deep. The pits are excavated with backhoes, cranes, and other excavation equipment. The excavated soil is immediately hauled away. As excavation occurs, the pits are shored utilizing a beam and plate shoring system.

Pipe Installation. Once the pits are constructed and shored, a horizontal hydraulic jack is placed at the bottom of the jacking pit. The steel casing (Upper Reach: 84-inch internal diameter. Lower Reach: 78-, 96-, 108-, and 120-inch internal diameter) is lowered into the pit with a crane and placed on the jack. A simple cutting shield is placed in front of the pipe segment to cut through the soil more easily. As the jack pushes the steel casing and cutting shield into the soil, soil is removed from within the leading casing with an auger or boring machine, either by hand or on a conveyor. Once the segment has been pushed into the soil, a new segment is lowered, set in place, and welded to the casing that has been pushed. Installation of the steel casing is expected to progress at approximately 40 feet per day for auger-bored jacked casing. Once the casing has been installed, the carrier pipe (Upper Reach: 72-inch diameter. Lower Reach: 66-, 84-, and 96-inch diameter) is then lowered and placed on the jacks, which push the pipe into the steel casing. Installation of carrier pipe is expected to progress at approximately 40 to 60 feet per day.

Site Restoration. After completion of the pipe installation along the jacking location, the shoring system is disassembled as the pits are backfilled, the soil compacted and the pavement above replaced. Once the pavement has been restored, traffic delineation (restriping) will also be restored.

Tunneling. For the purposes of this discussion, tunneling includes both micro-tunneling and traditional tunneling. These tunneling methods are described below.

***Micro-Tunneling*.** Micro-tunneling involves the installation of pipeline segments concurrent with the excavation of the tunnel via a horizontal jacking machine. A tunneling machine with directional controls (sophisticated boring head or cutting shield) is utilized to excavate the tunnel directly in front of the pipeline segment. Although the name implies small diameter pipe installations, micro-tunneling is used to install pipelines up to 72 inches in diameter or more. Micro-tunneling is comprised of the excavation of access shafts, the installation of the pipeline, and the closing of the shafts.

Shaft Excavation. Two shafts are generally used for each section of pipeline to be installed by micro-tunneling, one at each end of the alignment. Long tunneling projects may require

additional shafts along the alignment. When this is the case, the distance between the shafts typically ranges from 300 feet to 400 feet, but may be longer or shorter depending on site conditions. In general, the size of the access shaft openings is proportional to the size of the pipeline that is being installed. The pits are excavated with backhoes, cranes, and other excavation equipment. The excavated soil is immediately hauled away. As excavation occurs, the pits are shored utilizing a beam and plate shoring system.

Pipeline Installation. Once the shafts are constructed, a horizontal hydraulic jack is placed at the bottom of one of the shafts and a pipe segment placed in the jack. A tunneling boring machine (cutting head) which is the same diameter or slightly larger than the pipeline is placed in front of the pipe segment and is hydraulically pushed against the shaft wall. As the tunnel boring machine cuts horizontally into the wall of the shaft, soil is pumped in slurry form (water mixes with the soil spoils in the shield) via flexible hoses to a settling basin where the solids settle out and the water reused. When the first pipe segment is flush with the shaft wall, the slurry hoses are disconnected and the next pipe segment lowered into the shaft. The slurry hoses are routed through the second pipe segment, which is then jacked behind the first segment. The proper slope is maintained through the use of a laser, which is mounted in the jacking shaft and focused on a grid plate at the back of the tunnel boring machine. The tunneling direction is remotely controlled using the laser mark on the grid plate to guide its direction. This process is repeated until the tunnel boring machine and pipeline reach the second shaft. Installation of the steel casing is expected to progress at approximately 64 feet per day for tunnel boring, assuming the use of a closed-face tunnel boring machine in sandy soil.

Site Restoration. After completion of the pipe installation along the micro-tunneling alignment, the shoring system is disassembled as the pits are backfilled, the soil compacted and the pavement above replaced. Once the pavement has been restored, traffic delineation (restriping) will also be restored.

Traditional Tunneling. Traditional tunneling involves the placement of the pipeline in an underground tunnel, which is excavated between two or more shafts. Traditional tunneling consists of the excavation of shafts, the excavation of tunnels, the installation of the pipeline, and site restoration.

Shaft Excavation. Two or more shafts are constructed as described previously for pipe-jacking and micro-tunneling.

Tunnel Excavation. Once the access shafts are excavated and shored, a tunnel is excavated between the shafts. Excavation of the tunnel occurs either with the use of a tunnel shield or manually with small power tools. In large tunnels, rail cars or augers are typically used to transport the excavated soil to one of the shafts. Manual excavation is typically used for shorter tunnels. As the excavation progresses, tunnel supports are constructed, assembled, and installed to prevent the tunnel from caving in. The removed soil is reused, recycled, or hauled away to a disposal site or staging area. The tunneling process proceeds until a fully supported tunnel has been constructed. Typical tunnel supports include beams and boards or pre-cast concrete linings. Beams and boards usually consist of wooden frames (beams) regularly spaced within the tunnel. Boards are positioned between each frame to support the soil above. Support linings, which have been pre-cast with reinforced concrete, are lifted into the proper position and bolted or otherwise fixed in place. Installation of tunnel liner (i.e., rib and lagging) is expected to progress at a maximum rate of 20 feet per day.

Pipe Installation. The pipeline is installed in segments following completion of the tunnel. Each pipe segment is lowered into the pit with cranes or other loading equipment, mechanically pushed, carried, or hauled into the proper position within the tunnel, and placed on wood blocks or other supports that allow for adjustments in the pipe's alignment. The joints of adjoining pipe segments are sealed as pipe placement occurs. Once the entire length of pipe has been placed in the proper position and the joints sealed, the annular space between the pipe and the tunnel wall (supports) is completely filled with grout or concrete and allowed to cure. Installation of pipe is expected to progress at a rate of approximately 40 to 60 feet per day.

Site Restoration. After completion of the pipe installation along the tunneling alignment, the shoring system is disassembled as the pits are backfilled, the soil compacted and the pavement above replaced. Once the pavement has been restored, traffic delineation (restriping) will also be restored.

During construction, fugitive dust emissions at the construction site during earthmoving operations would be controlled as needed by water trucks equipped with spray nozzles.

Spoils from cuts, including cuts in streets, would typically be used as backfill materials at the site of origin. Materials unsuitable for backfill use and economically not usable for other purposes would be disposed of in accordance with local and county guidelines in available landfills. It is possible that contaminated soil would be excavated during construction, especially in older industrial areas with shallow groundwater. Soil that cannot be returned as backfill would be disposed of or treated at an appropriate permitted facility.

Slip Lining. The slip lining method involves the placement of pipeline in an existing tunnel. If high-density polyethylene (HDPE) pipe is used to slip line, then sections of HDPE pipe are butt-fused together. The fused sections are then pulled/pushed through the existing tunnel. The space between the tunnel and pipe are then filled with grout.

Operation and Maintenance

System Operation. A new RSC Inlet Structure is proposed to provide the new RSC pipeline with 250 cfs capacity. The new inlet structure would generally be located in the existing sump of the NHPS, except for the portion that would connect the inlet structure to the new Upper Reach of the RSC pipeline, which would be located underground and adjacent to the NHPS. The new inlet structure would serve the RSC pipeline using a bottom withdrawal configuration, that is, the outlet of the inlet structure is at its bottom. From the new inlet structure, the new RSC would flow by gravity to the Silver Lake Reservoir service area and Rowena Tank.

Operation of the RSC pipeline would be controlled by the Los Angeles Water System Data Acquisition and Control (LAWSDAC) and manually controlled when needed. Standard safety, operation, and maintenance appurtenances would include maintenance holes, shutoff gates, regulator valves, blowoffs, and air and vacuum valves.

System Inspection and Maintenance. Periodically, water utility crews would perform an inspection on the isolation, air, and vacuum valves. When appropriate, water utility crews would also exercise the isolation valves.

Emergency Response. Emergency response procedures for the new RSC pipeline would include:

- LAWSDAC identifies problem or an individual informs LAWSDAC personnel.
- LAWSDAC automated response or LAWSDAC personnel contacts appropriate managers and operations personnel who would then do the following:
  - Isolate damaged pipeline sections and provide alternate source of supply to affected areas.
  - Repair damaged pipeline section(s).

Project Best Management Practices and Environmental Commitments

To avoid any potential traffic/transportation impacts, construction of the proposed project would be conducted in accordance with the Standard Specifications for Public Works Construction (Greenbook), the City of Los Angeles Work Area Traffic Control Handbook (WATCH), and traffic control plans approved by the City of Los Angeles and the City of Burbank, to allow acceptable levels of service, traffic safety, and emergency access within the vicinity of the pipeline alignment during construction.

1-11. Other Public Agency Approvals Required

The proposed project would require the permits and approvals listed in Table 1-5 below, as well as approval by the LADWP's Board of Commissioners.

Table 1-5. Required Permits and Approvals

Agency/Department	Permit/Approval	Description
Federal		
U.S. Army Corps of Engineers, Los Angeles District	Section 10	Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in, over or under navigable waters of the United States, or which affects the course, location, condition or capacity of such waters. Typical activities requiring Section 10 permits are: construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, and cable or pipeline crossings; dredging and excavation.
Federal Aviation Administration (FAA)	Approval, as necessary	Those areas of the proposed project located within 20,000 feet of the Bob Hope Airport, the height of construction equipment shall not exceed one foot in height for each 100 feet horizontal distance from the nearest point of a runway, without clearance from the FAA (City of Burbank, 1988).
State of California		
California Department of Fish and Game	Streambed Alteration Agreement	Any activity that proposes to divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposes to use any material from a streambed is required to complete a Streambed Alteration Agreement (Section 1602 of the California Fish and Game Code [§§ 1600 to 1607]).
Division of Occupational Safety and Health (Formerly CAL OSHA)	Construction Permit	A permit is required for construction of trenches or excavations which are five (5) feet or deeper and into which a person is required to descend.
Regional Water Quality Control Board (RWQCB)	NPDES Permit for construction dewatering	RWQCB approval is needed for general construction runoff and/or construction dewatering discharges under the National Pollutant Discharge Elimination System (NPDES).
	NPDES Permit for hydrostatic test water discharge	Approval is needed for discharge of hydrostatic test water into any surface water of the State of California.
	Groundwater Permit	Section 402 of the Clean Water Act of 1977, as amended (33 U.S.C. 1342 et seq.) requires a NPDES permit (No. CAG994001) for Groundwater Discharges Associated with Construction Activities to regulate discharges of treated groundwater from construction and other projects dewatering to surface waters in the Region.

Agency/Department	Permit/Approval	Description
California Department of Transportation (Caltrans)	Encroachment Permit	An Encroachment Permit is required for trenching activities near State Route 134 on-and-off ramps at Lankershim Boulevard.
County of Los Angeles		
Department of Public Works	Excavation Permit	Excavation Permits are necessary when any portion of the road right of way, from property line to property line, is cut for the purpose of laying down utility lines, installing electrical cabinets, installing poles or constructing manholes. In addition, this permit is needed to excavate under the Los Angeles River.
	Encroachment Permit	Encroachment Permits are necessary when you wish to place anything in the road right-of-way temporarily or long term.
	Construction Permit	A Construction Permit is necessary for activities such as cutting, removing, or reconstructing curbs, curb and gutter, parkway drains, driveways, and/or sidewalks.
Department of Public Works, Flood Control	Discharge Permit	A Discharge Permit is needed for construction dewatering and hydrostatic test water discharge into the storm system and channels.
City of Los Angeles		
Department of Building and Safety	Building Permits	Grading, electrical, plumbing, and mechanical permits would be needed.
Department of Public Works, Bureau of Engineering	Excavation Permit	An Excavation Permit must be obtained from the Bureau of Engineering for any trench excavation activities, as well as electrifier and pull box relocations, monitoring wells, soil borings and potholes drilling within public right-of-way
	Excavation (U) Permit	A U-Permit is required by the Bureau of Engineering for construction projects that will require public right-of-ways to be trenched or excavated. Electrolier and pull box relocations, monitoring wells, soil borings, and potholes drilling in public Right-of-Ways also need to obtain an excavation permit.
Department of Public Works, Bureau of Sanitation	Sanitation Application Form for Discharging to Sewer System	Approval for discharging hydrostatic test water to the sewer system is required from the Bureau of Sanitation. A Sanitation Application Form must be submitted to the Department of Public Works, Bureau of Sanitation.
Metropolitan Transportation Authority	Approval	Construction along Lankershim Boulevard (Unit 5) would pass above the North Hollywood MTA Station, and potentially affect operations.
City of Los Angeles		
Department of Transportation	Traffic Control Plan	Approval is needed for temporary lane closures and traffic/transportation – related issues during construction.
Department of Recreation and Parks	Right-of-entry Permit	Coordination of construction activities is required for activities within Griffith Park and Mulholland Memorial Park.
City of Burbank		
Public Works Department	Excavation Permit	Excavation Permits are issued for construction projects requiring excavation, trenching or any type of digging in the City of Burbank right of way (including Buena Vista Park).
	Encroachment Permit	Temporary and long-term Encroachment Permits are issued to allow the use of City-owned right of way. In addition to completing the permit application form, applicants must meet the City's insurance requirements for Public Works permits.
	Industrial Waste Permit	Industrial Waste Permits are issued to sewer customers discharging industrial waste as part of the City's wastewater pretreatment program.
	Street Use Permit	Street Use Permits are issued to allow the complete or partial closure of sidewalks or streets for specific, short-term purposes (BMC Chapter 29, Articles 17 and 23). Depending on the street use requested, the permit may require traffic control plans. Permits requiring traffic control plans are generally routed through the Traffic Division for approval.
	Transportation Permit	Transportation Permits are issued for the transportation of oversized loads in the City of Burbank (BMC Chapter 29, Article 25).
Community Development Department, Building Division	Building Permits	Grading, electrical, plumbing, and mechanical permits would be needed.

2. Environmental Determination

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by that project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

2.2 Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ 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 to the project have been made by or agreed to by the applicant. 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 (EIR) is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" 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 EIR 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Charles C. Holloway — August 24, 2004

Signature — Date

Charles C. Holloway
Supervisor of Environmental Assessment
Los Angeles Department of Water and Power

3. Evaluation of Environmental Impacts

The following discussion addresses impacts to various environmental resources, per the Environmental Checklist Form contained in Appendix G of the State CEQA Guidelines.

3.1 Aesthetics

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

a. Would the project have a substantial adverse effect on a scenic vista?

NO IMPACT. Scenic vistas are those that offer high-quality views of the natural environment. There are no designated scenic vistas in the immediate vicinity of the proposed project or in sufficiently close proximity such that views from those vistas would be adversely affected by the proposed project. Therefore, the proposed project would have no adverse effect on a scenic vista.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

NO IMPACT. The proposed project does not lie within the viewshed of a State scenic highway. While the proposed project site is located near the Mulholland Scenic Parkway Specific Plan area, the site itself is not located within the plan area. The closest officially designated State scenic highway is State Route 2, which is approximately eight miles northeast of the project area. Therefore, the proposed project would have no impact on a State scenic highway or other scenic roadway, nor would it have the potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project would involve the construction of an underground potable water pipeline with appropriate appurtenant structures and a new inlet structure. The proposed project pipeline would be located underground and not visible to passers-by. Because the pipeline would be placed underground, operation of the pipeline would not affect the visual character of the surrounding areas. Some of the appurtenant structures (such as valves and cabinets) would be aboveground, within the sidewalk portion of the public right-of-way (for on-street segments of the alignment) or in open space/recreation areas along the proposed alignment. These structures would be placed, as necessary, along the alignment. These structures are common elements of the urban environment, and are not anticipated to substantially degrade the existing visual character or quality of the areas adjacent to the proposed alignment. The new inlet structure proposed for the NHPS building, which is an existing structure in the North Hollywood area, is expected to occur within the existing structure and underground. Therefore, any visual change would be slight and would not substantially degrade the existing character of the area. The proposed project's visual impacts would be temporary and limited to the construction phase. Therefore, impacts to the visual character of the surrounding area would be less than significant.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Without appropriate mitigation measures, construction of the proposed project would have the potential to create a new source of substantial light or glare, which would adversely affect nighttime views in the project area. As discussed in the project description, construction activities outside of Griffith Park are expected to occur during daylight hours. Therefore, nighttime construction lighting, which would have the potential to create a new source of substantial light or glare, would not be required. However, within Griffith Park construction is anticipated to occur during nighttime hours, and construction lighting would be necessary. To avoid light- or glare-related impacts or reduce impacts to a less-than-significant level within and near Griffith Park, LADWP shall implement the following mitigation measures:

AES-1 LADWP shall use the minimum amount of construction lighting necessary to safely light the construction worksite.

AES-2 LADWP shall design, install, and shield all necessary construction lighting such that it minimizes the amount of spill or reflected light onto property adjacent to the construction site.

AES-3 LADWP shall notify all persons and organizations potentially affected by nighttime lighting and shall coordinate the construction schedule such that conflicts are minimized. Coordination shall involve provision of an LADWP contact person to whom affected persons may direct lighting complaints. Persons and organizations to be contacted include, but are not limited to, the Griffith Park Observatory, the Los Angeles Zoo, the Gene Autry Museum of Western Heritage, and the California Department of Transportation (Caltrans).

3.2 Agricultural Resources

AGRICULTURAL RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural farmland. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Involve other changes in the existing environment, which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use?	☐	☐	☐	☒

a. Would the project 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?

NO IMPACT. No part of the proposed project is located on or near 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 (DOC, 2004a). According to the California Department of Conservation, the California Resources Agency tasked with overseeing Farmland conservation efforts, the area of the proposed project is not mapped and therefore cannot be considered Farmland (DOC, 2004a).

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

NO IMPACT. No part of the proposed project alignment is located on or near land zoned for agricultural use or subject to a Williamson Act contract (DOC, 2004b).

c. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

NO IMPACT. The proposed project would compensate for loss of water storage within the LADWP water distribution system, and respond to the current water requirements of the City of Los Angeles. Therefore, the proposed project would not induce growth, which could result in the conversion of Farmland to non-agricultural use. The proposed project traverses heavily urbanized lands within the Cities of Los Angeles and Burbank, and would not directly affect any agricultural land. Therefore, the proposed project would not involve any changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

3.3 Air Quality

AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

NO IMPACT. The Federal Clean Air Act requires jurisdictions of non-attainment areas to prepare air quality plans that demonstrate strategies for achieving attainment. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans (SIPs). The California Clean Air Act also requires plans for non-attainment areas with respect to the State standards. Within the project study area, the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) have responsibility for preparing an Air Quality Management Plan (AQMP), which addresses the Federal and State Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality and establishes thresholds for daily emissions. Environmental review of individual projects within the region must demonstrate that daily construction and operational emission thresholds, as established by the SCAQMD, would not be exceeded, nor would the number or severity of existing air quality violations be increased.

The proposed project would replace the existing RSC pipeline, which is over 50 years old and nearing its reliability and capacity design life limits, and would replace the existing RSC Inlet Structure, which currently results in significant air entrainment and excessive head losses. Implementation of the proposed project would not affect local or regional population or employment and would therefore be consistent with SCAG's Growth Management Plan. The proposed project would be inconsistent with air quality plans if it would result in population and/or employment growth that exceeds the growth

estimates included in the applicable air quality plan (SCAQMD, 1993). The proposed project would not require any additional LADWP employees for operations. Because there would be no employment growth generated by the proposed project, the proposed project would not conflict with or obstruct implementation of SCAQMD's AQMP.

The SCAQMD Rules and Regulations constitute a significant part of the attainment plan. Applicable rules and regulations for the proposed project may include: Rule 401 Visible Emissions; Rule 402 Nuisance; Rule 403 Fugitive Dust; Rule 1110.2 Emission from Gaseous- and Liquid-Fueled Engines; Rule 1113 Architectural Coatings; and Rule 1166 Volatile Organic Compound Emission from Decontamination of Soil. The proposed project would be constructed and operated in compliance with all SCAQMD rules and regulations; therefore, the proposed project would not conflict with or obstruct implementation of SCAQMD's AQMP.

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

POTENTIALLY SIGNIFICANT IMPACT. The proposed project would be located in the Los Angeles County sub-area of the South Coast Air Basin (SCAB), which is under the jurisdiction of the SCAQMD. Project-related air emissions would have a significant effect if they resulted in concentrations that create either a violation of an ambient air quality standard or significantly contribute to an existing air quality violation. Should ambient air quality already exceed existing standards, the SCAQMD has established specific significance threshold criteria to account for the continued degradation of local air quality. Table 3.3-1 presents the allowable contaminant generation rates at which construction and operational emissions are considered to have a significant regional effect on air quality within the SCAB.

Table 3.3-1. Regional Significance Thresholds

Air Pollutant	Construction Phase (lbs/day)	Operational Phase (lbs/day)
Reactive Organic Gases (ROGs)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_x)	100	55
Sulfur Oxides (SO_x)	150	150
Particulates (PM_{10})	150	150

Source: SCAQMD, CEQA Air Quality Handbook, 1993.
Note: The SCAQMD no longer requires construction activities to be evaluated by quarterly thresholds (SCAQMD, 2001).

Project-related construction traffic and operation of diesel equipment would have a temporary effect on air quality in the vicinity of the proposed project. Construction worker vehicles and diesel-powered equipment would emit reactive organic compounds (ROCs), CO, NO_x, SO_x, and PM_{10}. In addition, fugitive dust in the form PM_{10} would be generated onsite during earth moving operations such as trenching, and would be generated offsite along haul truck travel routes. These emissions would increase local concentrations temporarily, but would not be expected to increase the frequency of violations of air quality standards.

To estimate the maximum daily construction emissions, the one day during the course of the construction period that would have the most concurrent active construction activities would be identified. Initial analysis indicates that air quality emissions associated with construction would exceed the significance criteria shown in Table 3.3-1 and would therefore cause a potentially significant impact. Mitigation measures, such as a Fugitive Dust Emission Control Plan, modification of the construction schedule, equipment and fuel selection, and restrictions on diesel engine idle time would reduce air quality emissions and will be considered as part of the EIR to reduce significant impacts due to construction of the project. A detailed air quality emissions analysis will be conducted and impacts will be evaluated in the EIR.

Long-term air quality impacts are those associated with the change in permanent usage of the project site. Air pollutant emissions associated with the operation of the RSC pipeline and inlet structure would be minimal and only generated during periodic maintenance and inspection activities. Therefore, operational air quality impacts are anticipated to be less than significant and will be evaluated further in the EIR.

c. Would the project 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)?

POTENTIALLY SIGNIFICANT IMPACT. The proposed project would result in the generation of air pollutants in an area classified as non-attainment and could contribute to air quality violations, which would result in significant air quality impacts. To identify and assess potential impacts, a detailed air quality emissions analysis will be conducted in the EIR. As necessary, mitigation measures will be developed as part of the EIR to reduce significant impacts to the extent feasible.

Cumulative impacts during the operation of the proposed project would not occur. Only minor emissions associated with service vehicles and small pumps, as well as intermittent civil and preventative maintenance activities, would be expected during project operation. These activities would be temporary in nature and would not create substantial emissions.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

POTENTIALLY SIGNFICANT IMPACT. The proposed project could result in exposure of sensitive receptors (e.g., local residents, schools, hospitals, nursing homes) to substantial pollutant concentrations during construction. While these impacts would be limited in duration at any one location, construction could result in potentially significant air quality impacts. To identify and assess potential impacts, a detailed air quality emissions analysis will be conducted in the EIR. As necessary, mitigation measures will be developed as part of the EIR to reduce significant impacts from construction of the proposed project to the extent feasible.

e. Would the project create objectionable odors affecting a substantial number of people?

LESS-THAN-SIGNIFICANT IMPACT. Any odors (e.g., odors from construction vehicle emissions) that would be generated by the proposed project would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions). Other than construction vehicle operation, no activities are anticipated to occur, and no materials or chemicals would be stored along the pipeline alignment or in staging areas, that would have the potential to cause odor impacts during the construction of the proposed project (including the inlet structure, pipeline, and any appurtenant structures). Also, the operation of the proposed project would not include any activity that would create odors. Therefore, no significant odor impacts would be anticipated to occur and no mitigation is required.

3.4 Biological Resources [2]

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

a. Would the project 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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.

Regional Setting. The regional climate of the Los Angeles Basin is Mediterranean with most precipitation occurring in the winter months with a slightly increasing trend from south to north. Mountains and foothills reaching to approximately 1,500 feet above sea level surround the proposed project area. Surface water originating in these elevated areas historically formed drainages that pass through the sub-basins formed at the foothills of the mountains and then to the Pacific Ocean. Most of the natural flow through the basin has since been regulated or diverted, and substituted with surface runoff and stormwater.

The proposed project is located within the south coast bioregion, within the southwestern California region of the California Floristic Province, which includes Ventura and Orange Counties, most of Los Angeles County and portions of San Bernardino, Riverside, and Imperial Counties. Natural vegetation of the southwestern California region includes woodlands, riparian forests, wetlands, dunes, as well as most of the chaparral and coastal scrub vegetation in Southern California.

A more ecosystem-based classification, includes the project area within the California Coastal Sage and Chaparral Ecoregion, which supports a diversity of habitats including montane conifer forests,

[2] Information used in preparing the Biological Resources Section was derived from:
- Records of sensitive species locations from the California Natural Diversity Database (CDFG, 2004) and the Inventory of Native Plants from the California Native Plant Society (CNPS), and
- Reconnaissance-level field surveys of the project area conducted in April and May 2004.

Torrey pine woodland, cypress woodlands, southern walnut woodlands, oak woodlands, riparian woodlands, chamise chaparral, inland and coastal sage scrub, grasslands, vernal pools, and freshwater and salt marshes. Coastal sage scrub, chamise chaparral, and oak woodlands dominate much of the landscape. Coastal sage scrub is a diverse and globally rare habitat type occurring in coastal terraces and foothills below 1,000 meters, interspersed with chamise chaparral, oak woodland, grasslands, and salt marsh. This habitat type is characterized by low, aromatic and drought-deciduous shrublands of black sage (*Salvia mellifera*), white sage (*Salvia apiana*), Munz's sage (*Salvia munzii*), California sage (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), bush sunflower (*Encelia californica*), toyon (*Heteromeles arbutifolia*), lemonade-berry (*Rhus integrifolia*), and a diverse assemblage of other shrubs, herbaceous plants, cacti, and succulents. Cholla (*Opuntia* sp.), yucca (*Yucca* sp.), and dudleya (*Dudleya* sp.) are some of the most common succulent genera, with the latter represented by several locally endemic species. Coastal sage scrub is an endangered ecosystem that supports high species diversity. The region is listed by conservation organizations as an Endemic Bird Area (EBA) with a very high number of endemic scrub species. Located on highly valued coastal real estate and threatened by human development, the ecoregion represents the struggle between preservation and human development (WWF, 2004).

Notwithstanding the natural setting of the project area, the Los Angeles Basin has been extensively developed and, as a result, undisturbed habitat is generally found only in areas where steep topography precludes development and is considered increasingly rare by state and local agencies. When the last remaining portions of the Los Angeles River were channelized and paved in the late 1950s, this marked the transition of the Los Angeles area to a primarily urban environment. But even though most of the drainages, creeks, and rivers in the Los Angeles area have been covered, channelized or lined because of development, they also contain some of the last remaining habitat for biological resources.

Local Setting. The diversity and distribution of biological resources along the proposed RSC alignment are affected by climate and topography, but mostly by the extreme pressures of urbanization. The proposed RSC alignment traverses primarily residential and commercial land uses; however, approximately five miles along Units 1a, 1b, 2 and 3 of the proposed RSC alignment (Figure 1-2), occupies open space and recreational areas that support the majority of the biological resources that could be found along the alignment. To a lesser degree, Units 7 and 4 traverse recreational areas that also provide some wildlife habitat and may serve as corridors for wildlife movement. Within these units the primary area where biological resources are concentrated is Griffith Park, which is also a Significant Ecological Area (SEA), and then to a lesser extent, the Griffith Park Equestrian Trail, Buena Vista Park, the Los Angeles River crossing at Buena Vista Park, Forest Lawn Memorial Park, and Rowena Reservoir. SEAs, including the Griffith Park SEA, were identified to preserve and protect regional biodiversity; construction within an SEA is not precluded, although projects in these areas are subject to a higher level of review so that the habitat value of the SEA is protected.

The Los Angeles River at the proposed pipeline crossing is concrete lined. Soft-bottomed reaches of the River are located further to the west near the Sepulveda Basin, beyond project influence, and where the Los Angeles River turns south as it passes by Griffith Park parallel to I-5, ranging from approximately 500 to 2500 feet from the alignment. Tributaries to the Los Angeles River are located 0.5 miles or more from the alignment. The alignment may also be traversed by run-off from the adjacent hillsides during rain events.

Most of the vegetative cover present within the alignment consists of ornamental and cultivated species or ruderal species, which are those that thrive in disturbed or depleted environments. From where the alignment crosses the Los Angeles River and passes through Griffith Park however, there

are patches of oak woodland, willow riparian, coastal scrub and chaparral vegetation or species associated with those plant communities.

Ruderal species that can be found along the alignment include non-native brome grasses (*Bromus* spp.), millet grass (*Piptatherum millaceum*), wild oats (*Avena fatua*), telegraph weed (*Heterotheca grandiflora*), black mustard (*Brassica nigra*), jimson weed (*Datura stramonium*), sow thistle (*Sonchus asper*), red-stemmed filaree (*Erodium cicutarium*), poison oak (*Toxicodendron diversilobum*), tree tobacco (*Nicotiana glauca*), sweet clover (*Melilotus albus*), horse weed (*Conzia canadiensis*), and milk thistle (*Silybum marianum*). These species can be mixed with nonruderal species such as California manroot (*Marah fabaceus*), cliff aster (*Malacothrix saxatilis*), caterpillar phacelia (*Phacelia cicutaria*), California sagebrush (*Artemesia californica*), heartleaf penstemon (*Keckiella penstemon*), prickly pear cactus (*Opuntia littoralis*), and coyote brush (*Baccharis pilularis*). Other invasive non-native species include vinca (*Vinca* sp.), English ivy (*Hedera helix*), and lantana (*Lantana camara*).

Several other native trees and shrubs that occur along the proposed project alignment within the segment from Buena Vista Park through Griffith Park include coast redwood (*Sequoia sempervirens*), western sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), laurel sumac (*Malosma laurina*), sugar bush (*Rhus ovata*), ceanothus (*Ceanothus* sp.), manzanita (*Arctostaphylos* sp.), and toyon (*Heteromeles arbutifolia*). Within this segment there are also some very large, mature ornamental trees within 500 feet of the alignment such as common hackberry (*Celtis occidentalis*), southern magnolia (*Magnolia grandiflora*), California fan palm (*Washingtonia filifera*), Mexican fan palm (*Washingtonia robusta*), and Chinese elm (*Ulmus parvifolia*).

Some of the bird species observed during the survey of the proposed project area include American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), and red-tailed hawk (*Buteo jamaicensis*). Other common birds expected to occur in the project area include turkey vulture (*Cathartes aura*), American kestrel (*Falco sparverius*), western scrub jay (*Aphelocoma coerulescens*), and California towhee (*Pipilo crissalis*). Mammals likely to inhabit the proposed project alignment include raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyii*), brush rabbit (*Sylvilagus bachmani*), and striped skunk (*Mephitis mephitis*). Larger mammals that may inhabit the Griffith Park SEA include bobcat (*Felis rufus*), coyote (*Canus latrans*), and mule deer (*Odocoileus hemionus*). Additionally, a number of reptile and amphibian species are known to occur in the project area. The most common include king snake (*Lampropeltis getulus*), western fence lizard (*Sceloporus occidentalis*), and western rattlesnake (*Crotalus viridis*). Due to the proximity of urban development, the area is frequented by domestic and feral cats (*Felis cattus*) and dogs (*Canis domesticus*).

Special Status Species. Special status species include flora, fauna, and vegetation communities that are listed as threatened or endangered, candidate species, or species of special concern under the California or federal Endangered Species Act, species that are listed as fully protected by the California Department of Fish and Game (CDFG), and plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and beyond.

In this area the California Natural Diversity Database (CNDDB) (CDFG, 2004) identifies remnants of the following priority plant communities within one mile of the proposed project alignment: southern sycamore alder riparian woodland; southern California walnut woodland; and southern coast live oak riparian forest.

A records search of the CNDDB and CNPS rare find database identified occurrences of Parish's saltbush or brittlescale (*Atriplex parishii*) (CNPS List 1B) and Nevin's barberry (*Berberis nevinii*) (federally and state listed as endangered) within one mile of the proposed project alignment. The occurrence of Parish's saltbush was identified in 1994 north of Griffith Park, which includes the

approximate area where the alignment would cross the Los Angeles River. The species may be found in alkali meadows and vernal pools, which are not present within or near the alignment. Nevin's barberry has been located within Griffith Park about 0.5 miles west of Wilson Golf Course. It prefers slopes and sandy washes. There is a short segment of approximately 1,100 feet of the alignment within Griffith Park that deviates from the road right-of-way into adjacent slopes (Figure 1-2). The species was not observed in this segment during the reconnaissance visit, but a more careful survey should be carried out once the alignment is finalized, prior to ground disturbance.

A third species, not identified by the CNDDB in this area, but that might still be a concern is Braunton's milk-vetch (*Astragalus brauntonii*) (federally listed as endangered). This species prefers recently burned or disturbed areas in chaparral, coastal scrub and grasslands, and could possibly occur along the same segment of the alignment within Griffith Park.

The only faunal species identified by the CNDDB was the burrowing owl (*Athene cunicularia*) (California species of special concern) with a potential occurrence in a broadly defined area near the southern terminus of the alignment that extends to the Rowena and Silver Lake Reservoirs. However, in this segment, the alignment remains on residential property and existing road right-of-way, which makes it highly unlikely that the owl would be affected by the project.

Raptors were observed at Rowena Reservoir, at the Los Angeles River crossing and in Griffith Park. These species may utilize the project area for foraging and roost sites may occur in some of the large pines and other landscape or native trees located along the proposed alignment. The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess any migratory bird, part, nest, egg or product. Birds protected by the MBTA include raptors and almost all other native bird species.

The remainder of the alignment, outside of the segment from Buena Vista Park through Griffith Park, does not support native habitat where special status plant or wildlife species might be found. However, birds protected by the MBTA may be present throughout segments of the alignment occupied by residential or open space. Because their presence may frequently be transient (e.g., temporary resting or foraging), compliance with the Act is typically monitored from the presence of nests or nesting pairs.

Impact Analysis. There are no special status plants or wildlife species known to occur within or that have been located within 500 feet of the construction footprint of the proposed project alignment. For those special status species that are identified within one-mile of the proposed project alignment, the habitat is generally unsuitable. The only exception to this assessment of habitat quality is an approximately 700 foot long segment of the alignment within Unit 1a that would deviate from the right-of-way (Zoo Drive) and passes through sage scrub and chaparral vegetation on the northern slopes and foothills of Mount Lee. This area may support habitat for special status plant species. Although the reconnaissance visit did not identify any such species within this segment, the visit took place following a lower than normal rainy season and therefore, a more careful survey during the spring would confirm the absence of rare plants. The project would be designed such that this portion of Unit 1a would be constructed underground and the jacking pits at both ends would be located outside the native vegetation to the extent feasible (see Mitigation Measure BIO-2, below) and therefore, minimal surface disturbance would occur.

Although it is unlikely that rare plants are present within this segment, or that they would be affected by construction of the proposed project, the fact that Griffith Park supports some of the last remaining native habitat within the Los Angeles Basin warrants a more careful confirmation that this impact will be less than significant. Therefore, the following mitigation measures are recommended to reduce impacts to less-than-significant levels.

BIO-1 Rare plant surveys shall be carried out in the off-road segment of the proposed project alignment in Unit 1a and in any segment of the proposed alignment through Griffith Park that would pass through native vegetation or vegetation that contains native species. Surveys shall be completed no later than April or May 2005, depending on growth conditions. In the event that the rare plant surveys yield positive results, LADWP would comply with applicable rules and regulations.

BIO-2 To protect existing natural plant communities, LADWP shall use below ground construction in Unit 1a where the alignment deviates from Zoo Drive within Griffith Park. The dimensions of the jacking pits shall be minimized or the pits shall be placed to avoid direct or indirect impacts to native plant communities or native or nonnative mature trees, to the extent feasible.

b. Would the project 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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Approximately 700 feet of the project alignment in Unit 1a would deviate from the right-of-way (Zoo Drive) and cross through natural plant communities along the northern foothills of Mount Lee. As noted above however, the design insures that there will be no surface disturbance for pipeline construction in this area.

Hydrostatic test water would be discharged to the storm or sewer drain systems. The maximum volume for any single discharge event in the Upper Reach would be 2.5 million gallons and 2.9 million gallons for the Lower Reach. If these volumes are discharged to a soft-bottomed segment of the Los Angeles River or its tributaries over a short duration then erosion and other hydrologic, temperature or chemical changes to the aquatic environment may occur at or downstream of the discharge point. The Storm Water Pollution Prevention Plan (SWPPP) for the NPDES permit will address this potential impact (see Section 3.8, Water Resources); however, the following measure will specifically ensure that impacts to aquatic life are less than significant.

BIO-3 In those units where the discharge point for hydrostatic test water would be located within or upstream of soft-bottomed segments of the Los Angeles River (specifically in the soft-bottomed segment adjacent to Griffith Park) or its tributaries, the rate of discharge of the water shall be compatible with the range of flows naturally occurring within the affected reach during that time of the year to avoid or reduce impacts to the aquatic environment. This measure shall be implemented to the degree possible without conflicting with any requirements imposed by the Regional Water Quality Control Board.

c. Would the project 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.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

NO IMPACT. The proposed project alignment would cross a concrete-lined portion of the Los Angeles River near the Buena Vista Park at the intersection of Highway 134 and Riverside Drive. The crossing would be below ground and the entrance and exit jacking pits would be located the shortest permitted length from the Los Angeles River. Although the Corps has jurisdiction over the action that would affect the Los Angeles River, no jurisdictional wetlands would be affected. Therefore, the proposed project would not directly or indirectly affect wetlands subject to Corps' jurisdiction under Section 404 of the Clean Water Act.

d. Would the project 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 wildlife nursery sites?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed project alignment would cross residential, park and open space areas that support native and nonnative trees and shrubs that provide habitat to birds protected under the MBTA (i.e. Units 1a, 1b, 2 and 3). In addition there are wildlife populations in Griffith Park that move freely between natural and recreational areas. Trenches, jacking pits, pipeline storage areas may all obstruct wildlife movement, and because the construction pattern is lengthy and linear it would not be easy for wildlife to avoid the disturbance. However, temporary plates/covers would be used to cover trenches and pits to minimize effects on wildlife movement. Nighttime construction would occur in Unit 2 over approximately 290 days (see Table 1-3) along Crystal Spring Drive. In this segment, there is substantial tree cover and some ground cover, but the area is disturbed by relatively constant daytime traffic, recreational facilities and recreational users. During pipeline construction however, light, noise and vibration disturbance would be relatively constant, and disrupt the wildlife that is accustomed to nighttime activity to avoid the typical daytime disturbance. The construction period is temporary, but would essentially cover one to two wildlife breeding seasons. Wildlife in the park consists of relatively common species able to recover from such a disturbance. Still, because Griffith Park is a natural area that is relatively isolated from the Santa Monica Mountains to the west, it is an inherently sensitive ecosystem that warrants careful implementation of the following measures to reduce construction disturbance and ensure that impacts are reduced to less than significant.

BIO-4 LADWP shall employ a qualified biological monitor with suitable background and experience to identify sensitive biological resources and monitor implementation of all the biological mitigation measures within natural areas, open space or parks where sensitive biological resources may be present, namely Units 1a, 1b, 2, 3 and 4.

BIO-5 Pre-construction bird surveys shall be conducted in all vegetated areas of Units 7, 1a, 1b, 2, 3 and 4 from Buena Vista Park through Griffith Park. The surveys shall identify the presence of breeding or nesting pairs or active nests of special status bird species within the project and construction footprint and an additional distance of 500 feet. In the event that surveys indicate habitat occupied by special status bird species within 500 feet of the construction or project footprint, appropriate construction protocol will be developed and implemented.

BIO-6 LADWP shall manage their construction site, and related facilities, in a manner to avoid or minimize impacts to the local biological resources by implementing the following within Units 7, 1a, 1b, 2, 3 and 4 in the segments from Buena Vista Park through Griffith Park:

- Temporarily cover pits and trenches or provide wildlife escape ramps or an approved exclusionary fence for construction areas that contain steep walled holes or trenches that are not required to be covered for human safety reasons. The temporary fence shall be hardware cloth or of similar materials that are approved for use by the U.S. Fish and Wildlife Service and the California Department of Fish and Game;
- Make certain all food-related trash will be disposed of in closed containers and removed at least once a week. Feeding of wildlife shall be prohibited;
- Prohibit pets from being brought to the site;
- Report all inadvertent deaths or injuries of wildlife to the biological monitor who will in turn, notify and follow instruction provided by the City of Los Angeles Department of Recreation and Parks (LADRP) or the City of Burbank Department of Parks and Recreation (BDPR);

- Use native coastal sage scrub, chaparral species in the restoration of land temporarily disturbed during pipeline installation (see Mitigation Measures BIO-7 through BIO-9 below);
- Restore temporarily disturbed sites to their pre-existing physical condition; and
- Ephemeral drainages shall be restored to pre-construction topography/contours and compaction immediately following construction and installation activities. Furthermore, the proposed disturbance to such features may not affect (i.e., act as a barrier to) existing surrounding hydrologic conditions.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Within the City of Los Angeles, the proposed project alignment may directly eliminate or indirectly impact mature native oak trees greater than eight inches in diameter that are covered by the City of Los Angeles Tree Protection Ordinance, Sec. 46.00 of the Municipal Code. In addition, project construction would result in the potential removal, pruning or damage to large, mature native and nonnative trees in Units 7, 1a, 1b, 2, 3 and 4, particularly trees present in Buena Vista and Griffith Parks. The number of affected trees has not yet been determined. Those trees located along the street right-of-way on Zoo Drive and Crystal Springs Drive (that include native mature oaks) may not be within the pipeline width, but may be affected by the construction width, which would be much greater (approximately 30 feet wide inclusive of the pipeline). The habitat value of these trees is relatively less than for trees that persist in natural communities, and many of these trees stand between the street and adjacent recreational facilities. Within the segment that deviates from Zoo Drive in Unit 1a, approximately 350 feet passes through a park area where approximately nine mature native and nonnative trees could be affected. These trees are adjacent to natural communities in the upland and they have clearly been present in the park for many years such that they also have natural historical value that cannot be quantified. Native and nonnative trees may also be present in Units 5, 6, and 7, but these generally are small trees located in residential areas that do not have natural historical or habitat value.

The LADWP would comply with Los Angeles Municipal Code Sec. 46.00 that requires a permit for the removal or relocation of mature native oak trees. Essentially the permit requires that an oak tree report be completed by an approved expert that indicates the species, size, condition and location of the affected oak trees and that the report provides a plan for protection, replacement, or relocation of the affected trees.

Unlike native oak trees, other mature native trees are not protected by any ordinance or regulation within the City of Los Angeles. They are however, addressed by policies established by the City of Los Angeles Department of Public Works (LADPW) and the City of Los Angeles Department of Recreation and Parks (LADRP). Also, Sec. 62 of the Los Angeles Municipal Code requires that a permit be obtained from the Street Tree Division of the Public Works Department for the removal of any tree on City streets or public property. Removal of more than three trees may also require review and approval by the Board of Public Works.

The LADWP would also comply with the City of Burbank Municipal Code, Sec. 28-111, which requires tree replacement if removal of street trees for construction is necessary. According to the code, trees shall be replaced with a tree of the nearest size available, of a species and in the location to be determined by the Director of Parks and Recreation or the cost of the tree and removal by the City shall be reimbursed. Section 28-115 also states that all trees on any street or other publicly owned property near any excavation or construction shall be sufficiently guarded and protected so as to prevent any injury to said trees. No person shall excavate any ditches, tunnels, trenches, or pavement within a radius of ten feet from any public tree without prior notification to the Director.

This impact is potentially significant, but would be reduced to less than significant with implementation of Mitigation Measure BIO-2 and the following mitigation measures, which are intended to avoid or reduce impacts to mature native and nonnative trees.

BIO-7 LADWP shall complete a report that identifies all mature native and nonnative trees that would be directly or indirectly impacted by project construction. For ease of interpretation "mature" shall be defined consistent with the City of Los Angeles' tree protection ordinance as 8 inches in diameter and greater than 4.5 feet high and applicable City of Burbank requirements. This includes all trees whose canopy is located entirely or partially within the pipeline alignment or construction footprint. It shall include trees that are located in segments where underground jacking will occur. The report shall indicate the location, species, size and condition of affected trees and a proposed plan for protection, relocation or replacement. The report shall be provided to the LADRP, Division of Forestry, the Los Angeles Department of Public Works (LADPW), and the BDPR.

BIO-8 LADWP shall coordinate with the LADPW and the LADRP prior to construction to determine the applicable measures that need to be implemented from the LADPW Street Tree Policy and the LADRP Tree Preservation Policy. LADWP shall also coordinate with the BDPR. The purpose of this coordination shall be to identify construction protocols that would be implemented to reduce construction damage, and the pruning, removal and replacement of trees, including heritage trees, special value trees and common park trees.

BIO-9 For any mature native or nonnative tree that must be removed, LADWP shall prefer replacement or relocation of trees within the same park or residential area in coordination with the LADPW or BDPR, as applicable, for trees affected on city streets, or LADRP or BDPR, as applicable, for trees affected within city parks. Nonnative trees removed within Griffith Park that cannot be successfully relocated shall be replaced with native trees consistent with LADRP recommendations.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

NO IMPACT. The proposed project would not conflict with any applicable habitat conservation plans or natural community conservation plans because no such plans cover the proposed project alignment or immediate surrounding area. The County of Los Angeles designates Griffith Park as a SEA. The SEA designation is intended to preserve and protect regional diversity; however SEAs do not preclude limited compatible development. Therefore, no impacts would occur under this criterion.

3.5 Cultural Resources

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

a. Would the project cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?

LESS-THAN-SIGNIFICANT IMPACT. A Phase I Cultural Resources Investigation of the proposed RSC pipeline alignment was conducted by McKenna et al. (2004)[3]. McKenna et al. completed a standard records check through the California State University, Fullerton, South Central Coastal Information Center. In addition, McKenna et al. completed research through the Bureau of Land Management General Land Offices files, the University of California Riverside, Historic Map Library, and local libraries and historical societies. The City of Los Angeles listing of local Monuments was also researched. The research was conducted at a level that addressed the entire RSC pipeline alignment and approximately one-quarter mile to either side of the alignment (one-half mile corridor). Site records, cultural resource management reports, and documentation on listed properties and/or historic maps were also researched.

The proposed project crosses three United States Geological Survey (USGS) quadrangles: the Van Nuys Quadrangle, the Burbank Quadrangle, and the Hollywood Quadrangle. Within the Van Nuys Quadrangle, historic and prehistoric resources have been found along or near the proposed alignment, specifically historic refuse and one prehistoric bowl. As such, the project alignment identified on the Van Nuys Quadrangle should be considered moderately sensitive for cultural resources. Resources identified on the Burbank Quadrangle, where the majority of the proposed project alignment would be located, tend to cluster in two areas: near Lankershim Boulevard and the Universal City property (north of the Hollywood Freeway) and north of the Warner Bros. Studios (north of the Ventura Freeway). There is also an area of sensitivity in Griffith Park. Given the extent of the known resources and the lack of definitive data for areas not previously surveyed (prior to urban development), the proposed project alignment within this area should be considered sensitive for cultural resources. Only a short segment of the proposed alignment would be located on the Hollywood Quadrangle. Nonetheless, there are resources in the general area, including the Glendale Southern Pacific Railroad Depot, the Charles and Mabel Ennis House (State Historic Landmark 1011), and two California Historical Landmarks (1902 and 1921). There are also a number of Los Angeles Historical/Cultural Monuments including the Tierman House (No. 124), the William Mulholland Memorial Fountain (No. 162), the First Official Walt Disney Studio (No. 163), the Glendale Hyperion Bridge (No. 164), the Fletcher Drive Bridge over the Los Angeles River (No. 322), the Engine Company No. 56 (No. 337), the Silver Lake and Ivanhoe Reservoirs (No. 422), and the "Little Nugget" Travel Town at Griffith Park (No. 474). The resources listed above are relatively close to the proposed alignment, but on privately held properties and not within the roadway right-of-ways. Though considered significant (by nature of their listings), none of these resources would be directly or indirectly impacted by the proposed project as all would be avoided by the proposed route. These resources are at least 50 feet from the proposed pipeline excavation route and temporary ground shaking would not affect the resources. As a result, it has been determined that the proposed project would have a less-than-significant impact to known historic resources.

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The records search described above and field surveys conducted in May 21 and 22, 2004, resulted in confirmation that archeological resources have been identified in areas adjacent to the proposed pipeline alignment. This is especially true in the areas near Universal City, the Warner Bros. Studios, and the area north of Silver Lake Reservoir (McKenna, 2004).

[3] Results of a Phase I Cultural Resources Investigation of the Proposed Los Angeles Department of Water and Power River Supply Conduit, Los Angeles County, California, prepared by McKenna et al., is available for review at the LADWP Environmental Services Office, located at 111 North Hope Street, Room 1044, Los Angeles, CA 90012.

In general, all areas subjected to prior research have resulted in the identification of either standing structures of historic significance (see above) or archeological (buried) resources (e.g., refuse concentrations or evidence of habitation). To further address archeological resources, Native American Consultation was conducted by McKenna et al through contact with the Native American Heritage Commission and through letters to all identified Native American contacts within Los Angeles County. McKenna et al. also consulted with the current Chair of the Gabrielino/Tongva of Los Angeles County.

Although no archeological resources have been identified specifically within the proposed project alignment, construction would require a considerable amount of excavation relatively close to known site areas and has the potential to uncover additional archeological resources. This is especially true in areas of previous finds. Therefore, Mitigation Measures CUL-1 and CUL-2 are recommended to reduce impacts to archeological resources to a less-than-significant level.

CUL-1 LADWP shall conduct archaeological monitoring during all ground disturbing activities within Units 7 and 4, specifically those areas near Universal Studios, Warner Bros. Studios, and the area north of the Silver Lake Reservoir. Cultural resource monitoring locations shall be mapped and flagged prior to construction. Monitoring shall be conducted by a qualified archaeological monitor familiar with the cultural resources of southern California.

In the event a potential significant archeological resource is discovered, all work shall temporarily cease within the immediate area of the find until the site can be assessed by a qualified archeologist in consultation with the LADWP. If the material is determined to be significant, the qualified archeologist shall prepare and implement a treatment plan in consultation with the LADWP. Construction activity shall not resume until authorization has been provided by the LADWP and the qualified archeologist.

CUL-2 LADWP shall require the qualified archeologist to provide a cultural resources briefing prior to the start of construction for all construction personnel. If construction personnel discover a cultural resource in the absence of an archeological monitor, construction shall be halted and a qualified archeologist shall be contacted to make an immediate evaluation of significance and recommend appropriate treatment of the resource.

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. McKenna et al.'s (2004) investigation/research through the Natural History Museum of Los Angeles County determined that no known fossil finds have been reported in the proposed project area. There are, however, older alluvial deposits in the area of the Los Angeles River flood plain and these deposits have been known to yield paleontological specimens. For this reason, deep excavations (anything greater than eight feet is considered deep by the City of Los Angeles) in the area of the Los Angeles River flood plain, if planned, should be monitored by a professional paleontological monitor (McKenna, 2004). Mitigation measures CUL-3 and CUL-4 would be implemented to reduce impacts to paleontological resources to a less-than-significant level.

CUL-3 LADWP shall conduct paleontological monitoring during all ground disturbing activities (excavation, trenching, boring, drilling, etc.) in the area of the Los Angeles River flood plain. Paleontological resource monitoring locations shall be mapped and flagged prior to construction. Monitoring shall be conducted by a qualified paleontologist familiar with paleontological resources of southern California. In the event a potentially significant paleontological specimen is uncovered, all work shall temporarily cease within the immediate area of the find until the specimen can be removed and assessed by the qualified

paleontologist. If the material is determined to be significant, an adequate course of action shall be determined in consultation with the qualified paleontologist and LADWP, consistent with the Standards of Professional Paleontologists. Construction activity shall not resume until authorization has been provided by the LADWP and the qualified paleontologist.

CUL-4 LADWP shall require the qualified paleontologist to provide a briefing prior to the start of construction for all construction personnel. If construction personnel discover a paleontological resource in the absence of a monitor, construction shall be halted and a qualified paleontologist shall be contacted to make an immediate evaluation of significance and recommend appropriate treatment of the resource.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. As discussed in the Phase I Cultural Resources Investigation conducted by McKenna et al. (2004) for the proposed RSC pipeline alignment, ethnographic and ethnohistoric sources were consulted and these sources verify that the proposed project area falls within the boundaries of Gabrielino territory. This territory extends from San Gabriel and San Bernardino Mountains to the coast; from Aliso Creek (in Orange County) north to the San Fernando Valley; and includes Santa Catalina, San Nicolas, and San Clemente Islands. Although no known burial grounds have been identified along the proposed project alignment, the possibility of uncovering human remains exists. To reduce impacts associated with the disturbance of human remains to a less-than-significant level, the following mitigation measure shall be implemented:

CUL-5 In the event that human remains or potential human remains are discovered, construction activities within the immediate area of the find shall be immediately halted. The LADWP Construction Project Manager shall immediately notify the LADWP Project Manager and the County Coroner. The County Coroner will make a determination as to the origin of the remains and, if determined to be of Native American origin, the Native American Heritage Commission (NAHC) will be contacted. In consultation with the Most Likely Descendant, the NAHC and qualified archeologist shall determine the disposition of the remains in accordance with California Health and Safety Code §7050.5 and CEQA Guidelines §15064.5(e). If the remains are not of Native American origin, the County Coroner will make a determination as to the disposition of the remains. Construction may continue once compliance with all relevant sections of the California Health and Safety Code have been addressed and authorization to proceed issued by the County Coroner and the LADWP.

3.6 Geology and Soils

GEOLOGY AND SOILS - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, 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.	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐

GEOLOGY AND SOILS - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c. Be located on a 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a. Would the project expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving:

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.

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed project does not cross any mapped Alquist-Priolo Earthquake Hazard Zones, however it does cross the Hollywood-Santa Monica fault and is located within a City of Los Angeles Fault Rupture Study Zone. Additionally, the Lower Reach is located almost entirely within a Fault Rupture Study Zone as designated by the Safety Element of the Los Angeles City General Plan (1996a). The Hollywood-Santa Monica fault is, at a minimum, a potentially active fault. A recent fault study (Dolan et al., 2000) indicates evidence of seismic activity[4], including fault rupture, approximately 6,000 to 11,000 years ago. Therefore, there is a potential for damage to the pipeline due to fault rupture. Impacts from this type of movement can be mitigated with appropriate design measures. Impacts associated with fault rupture would be reduced to less-than-significant levels with incorporation of the following mitigation measure.

GEO-1 A geotechnical investigation shall be conducted as indicated by the *Engineering Standards Manual, Water Operating Division, Department of Water and Power, City of Los Angeles, Second Edition, Effective August 3, 1992, Chapter 10, Section 10.03*. This investigation shall be conducted by a qualified professional, and conform to local and State requirements. This investigation shall identify the trace of the Hollywood-Santa Monica fault, and based on the findings of this investigation appropriate mitigation measures may be developed to reduce potential damage due to fault rupture. Results of this geotechnical investigation will support design considerations of constructing fault rupture mitigation measures and/or repairing the damaged pipeline. Construction and operation issues should be considered during design to identify practical measures that can be implemented within the urban setting along the Lower Reach.

[4] An active fault, as defined by the CGS (1999), is a fault which has had surface rupture within Holocene time (the last 11,000 years). A fault is deemed sufficiently active if there is evidence of Holocene surface displacement along one or more of its segments or branches.

ii) Strong seismic ground shaking?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project area will be subject to ground shaking associated with earthquakes on faults of both the San Andreas and Transverse Ranges fault systems. The Los Angeles area has many active and potentially active faults and may be subjected to moderate to strong ground shaking. The closest major active and potentially active faults in the area include the Santa Monica, Hollywood, Raymond Hill, Northridge Thrust, Verdugo and Sierra Madre faults. Other faults in the vicinity include Benedict Canyon fault, Elysian Park Blind Thrust, and Newport-Inglewood fault.

Seismic shaking maps by the California Geological Survey (CGS) predict a 10 percent chance of exceedance in 50 years of 0.5 to 0.6 g (gravity) peak ground acceleration (CGS, 1998 and 2001) in the proposed project area. This moderate ground shaking is not likely to cause significant damage to a buried pipeline.

iii) Seismic-related ground failure, including liquefaction?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Seismic-related ground failures such as liquefaction, lurching, lateral spreading, and differential settlement can result from strong ground shaking. The proposed project alignment would be located almost entirely within areas mapped as having potential for seismically induced liquefaction (CGS, 1998 and 1999). Liquefaction-related phenomena occur when seismic shaking of loose, cohesionless, saturated sand deposits temporarily lose strength and behave as a liquid. Liquefaction-related phenomena generally occur in areas of shallow groundwater (depths of 50 feet or less). Historically measured groundwater levels for the project area range from 0 to 30 feet below ground surface (CGS, 1998 and 2001). Areas of greatest potential for earthquake induced liquefaction phenomena occur near the Los Angeles River and within the loose alluvial deposits along the southern edge of the San Fernando Valley.

Lateral spreading is the horizontal component of soil movement toward an unsupported face or slope that results from liquefaction of underlying layers. Surface fissures on gently sloping ground are a common feature of lateral spreading and reflect the horizontal movement ranging from a few inches to several feet. The Los Angeles River channel within the proposed project area has vertical concrete sidewalls which could potentially fail during an earthquake resulting in lateral spreading.

Ground lurching, heaving and cracking were noted at the alluvium-bedrock contact in foothill areas after the San Fernando earthquake. Three units (Units 1b, 2, and 3) within the Lower Reach of the RSC pass along the alluvium-bedrock contact at the base of the eastern Santa Monica Mountains (Griffith Park area). Ground lurching near the base of the hills may impact the proposed pipeline.

Differential or seismic settlements are generally attributed to seismically induced densification of loose granular materials as well as due to loss of material through liquefaction induced lateral spreading. Settlements associated with densification of unconsolidated soils, in the absence of water, are generally nominal. Seismic settlements of the alluvial deposits in areas of shallow groundwater along the RSC alignment may potentially impact the proposed project.

Ground failure, including liquefaction, differential settlement, and ground lurching could impact the proposed project where the pipeline is located within liquefiable alluvial deposits near the Los Angeles River. Implementation of Mitigation Measure GEO-2 would ensure impacts from seismic-related ground failure, including liquefaction, are reduced to less-than-significant levels.

GEO-2 A geotechnical investigation shall be conducted to determine areas that will be susceptible to liquefaction related phenomena and ground lurching. This investigation shall be conducted by a qualified professional and conform to the requirements of the City of Los Angeles. Based on the findings of this investigation, appropriate mitigation measures may be developed to reduce potential damage due to liquefaction related phenomena. Results of

the geotechnical investigation will support design considerations of constructing liquefaction and ground lurching mitigation measures and/or repairing the damaged pipeline. The latter option is the standard practice for non-hazardous pipelines and typically includes consideration of economic factors.

iv) Landslides?

NO IMPACT. Generally, only small, but abundant, landslides occur on the steep slopes in the project vicinity. However, these shallow small landslides will not affect pipeline construction or operation. Land subsidence due to any of several mechanisms is not expected to occur along the proposed project alignment. Based on the placement of the pipeline underground, primarily beneath existing roadways and right-of-ways, the proposed project is not expected to be impacted by landslides or to create a landslide hazard.

b. Would the project result in substantial erosion or the loss of topsoil?

NO IMPACT. Construction of the proposed project would require significant trenching, however the alignment would pass primarily through relatively level areas that have been previously disturbed (i.e. paved streets and developed park land). No significant erosion or loss of topsoil is expected in these areas due to project construction. The final pipeline would be operated underground and would have no impact on erosion.

c. Is the project located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

NO IMPACT. The proposed project is located in the southeastern San Fernando Valley, near the eastern terminus of the Santa Monica Mountains. The San Fernando Valley is an east-west structural trough within the Transverse Ranges geologic province of southern California. The mountains that bound the trough are actively deforming anticlinal ranges bounded on their south sides by thrust faults. As these ranges have risen and deformed, the San Fernando Valley has subsided and been filled with sediment. The southeastern portion of the valley has received sediment from the Los Angeles River, Tujunga wash and small drainages of the Santa Monica Mountains and Verdugo Mountains due to uplift and subsequent erosion.

The San Fernando Valley within the proposed project area is largely covered by an alluvial plain, which extends from the north to the Los Angeles River. The major sources of sediment that make up this plain have been the river systems of the Tujunga and Pacoima washes and the Los Angeles River. Sediment in the study area is composed of deposits of sand, silt, and gravel. The U.S. Department of Agriculture's (USDA) Soil Survey of the San Fernando Valley Area (1917) indicates that soils underlying the proposed project area consist of three main soil series; the Altamont, Tujunga, and Yolo Series. Altamont series soils are typically clayey soils derived from fine grained sandstones and shales and are found on gently sloping to steep upland hills. Tujunga series soils are characteristically deep, well drained soils formed in predominately granitic derived alluvium and flood plain deposits. The Yolo series consists of fine to silty loam formed on level to moderately sloping alluvial fans. Additionally, varying amounts of artificial fill are expected to underlie the roads along the proposed project alignment.

The proposed project alignment would be located along relatively flat terrain consisting primarily of previously disturbed soil and alluvial deposits. Construction and operation of the proposed pipeline through these materials would not result in instability of these units.

d. Is the project located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?

NO IMPACT. Soils in the proposed project area are mainly alluvial and have expansion potential ranging from low to high. Guidelines for trench backfill in the *Engineering Standards Manual, Water Operating Division, Department of Water and Power, City of Los Angeles, Second Edition, Effective August 3, 1992, Chapter 7, Section 7.12* indicates that only suitable native soil, sand-cement slurry, or suitable sand shall be used as bedding and trench backfill. The use of select bedding material and approved trench spoil material will prevent impacts from expansive soil.

e. Would the project 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?

NO IMPACT. The proposed project would not involve septic tanks or alternative wastewater disposal systems. Construction and operation of the proposed project would not affect any existing, or hinder future, septic tanks or alternative wastewater disposal systems, or the soils that would adequately support those systems. Therefore, no impacts related to soil compatibility with septic or other alternative wastewater systems would occur and no mitigation is required.

3.7 Hazards and Hazardous Materials

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

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

LESS-THAN-SIGNIFICANT IMPACT. Construction of the proposed project would involve the excavation and transport of paving materials (e.g., asphalt, concrete, road bed fill materials) and soils that could possibly be contaminated by vehicle-related pollution (e.g., oil, gasoline, diesel, and other automotive chemicals). All such paving, road bed materials and soils would be transported and

disposed of in accordance with applicable codes and regulations of the U.S. Department of Transportation, U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Marshal. Such transport and disposal is not expected to create a significant hazard to workers or the surrounding community.

During construction small quantities of hazardous materials, such as petroleum hydrocarbons and their derivatives (e.g., gasoline, oils, lubricants, and solvents), would be required to operate the construction equipment. These materials would be used with large construction equipment (e.g., cranes, compactors, forklifts, excavators) and would be contained within vessels engineered for safe storage. Storage of substantial quantities of these materials along the pipeline alignment or in staging areas is not anticipated. Construction vehicles would require on-site refueling, and may require routine or emergency maintenance that could result in the release of oil, diesel fuel, transmission fluid or other materials; however, the materials would not be used in quantities or stored in a manner that would pose a significant hazard to the public or the workers themselves. Therefore, impacts from the routine transport, use, or disposal of hazardous materials during construction would be less than significant.

Operation of the proposed project would involve the conveyance of potable water under pressure, and would not require the use, storage, or disposal of hazardous substances. Therefore, operation of the proposed project would not create impacts related to the routine transport, use, or disposal of hazardous materials and no mitigation is required.

b. Would the project 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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. As described above in Section 3.7(a), the proposed project would not involve the use of substantial quantities of hazardous materials that would pose a risk to the public. Before commencing any excavation, the construction contractor would be required to obtain an "Underground Service Alert Identification Number." To minimize potential damage to any existing utilities, the contractor would not be allowed to excavate until all utility owners are notified, and all substructures are clearly identified. Additionally, as part of the construction activities (described in the project description), LADWP's construction contractor would be required to develop a construction plan, emergency response plan, spill prevention plan, or similar documents. These documents would identify specific sites for fuel storage, to adequately provide setbacks from existing water bodies (approximately 100-foot minimum) and water wells (approximately 200-foot minimum), and to provide requirements for hazardous material containment (e.g., earthen berms lined with plastic). Storage or use of hazardous materials in or near wet or dry streams would be consistent with the Fish and Game Code and other State laws. Furthermore, LADWP's contractor would be required to have available adequate spill containment and cleanup resources on site at all times and be prepared to contain, control, clean up, and dispose of any potential fuel spill quickly and completely. During construction, project personnel would follow all applicable rules and regulations governing the storage, transportation, use, handling, and disposal of hazardous materials.

In addition to the above best management practices (BMPs), Mitigation Measures HAZ-1 through HAZ-5 would be implemented to reduce the potential and extent of an upset or accident condition involving the release of hazardous materials during construction to less-than-significant levels.

Operation of the proposed project would involve the transportation of potable water under pressure via an inlet structure and underground pipeline. Operation would not create a significant hazard to the public or environment involving the release of hazardous materials. Therefore, no reasonably foreseeable upset or accident conditions that could involve the release of hazardous materials into the

environment are anticipated during operations. As such, no impacts are anticipated during operations and no mitigation is required.

HAZ-1 LADWP or its construction contractor shall store fuel, oil, and other hazardous materials only at designated sites. Quantities of all hazardous materials stored on-site shall be avoided or minimized, and substitution of non-hazardous materials for hazardous materials shall be implemented to the extent practicable. Each hazardous material container shall be clearly labeled with its identity, handling and safety instructions, and emergency contact. Similar information shall be clearly available and visible in the storage areas. Storage and transfer of such materials shall not be allowed within 100 feet of streams or sites known to contain sensitive biological resources except with the permission of LADWP environmental compliance monitors. Material Safety Data Sheets shall be made readily available to the Contractor's employees and other personnel at the various work sites. The accumulation and temporary storage of hazardous wastes shall not exceed 90 days. Soils contaminated by spills or cleaning wastes shall be contained and shall be removed to an approved disposal site. Disposal of hazardous wastes shall be in compliance with the applicable laws and regulations.

HAZ-2 LADWP or its construction contractor shall maintain construction equipment to minimize fuel, oil and other potentially hazardous material spills. Stationary power equipment, such as engines, pumps, generators, welders, and air compressors, shall be positioned over drip pans.

HAZ-3 LADWP or its construction contractor shall store hazardous materials in containers with secondary containment.

HAZ-4 In case of a spill or accident involving hazardous materials, LADWP or its construction contractor shall immediately notify the Los Angeles County Fire Department. All other federal, state, and local notification requirements shall be followed for any release that exceeds the reportable quantity or threatens to have a significant impact.

HAZ-5 LADWP or its construction contractor shall protect tanks temporarily placed for refueling from potential traffic hazards by vehicle barriers.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

LESS-THAN-SIGNIFICANT IMPACT. As discussed in Section 3.3, Air Quality, operation of construction equipment would produce air contaminant emissions. None of these emissions are expected to be generated at levels that are considered hazardous. Construction of the proposed project would also involve the excavation and transport of paving materials (e.g., asphalt, concrete, and road bed fill materials) and soils that could possibly be contaminated by vehicle-related pollution (e.g., oil, gasoline, diesel, and other automotive chemicals). All such materials would be transported and disposed of in accordance with applicable codes and regulations. Such transport and disposal is not expected to involve acutely hazardous materials, substances or waste. Several schools are located within one-quarter mile of the proposed project alignment, including Lankershim Elementary School (5250 Bakman Avenue, North Hollywood), Providence High School (511 South Buena Vista Street, Burbank), and Ivanhoe Elementary School (2828 Herkimer Street, Los Angeles). However, construction of the proposed project is not anticipated to have an adverse effect on these facilities, given the limited scale and temporary nature of construction activities.

Operation of the proposed project would not involve hazardous emissions or materials. The proposed project would transport potable water under pressure beneath existing public rights-of-way and open space/recreation areas. If there were any emergency condition related to the proposed project, the

result would involve the release of potable water, which poses no health threats; therefore, less-than-significant impacts to schools are anticipated and no mitigation is required.

d. Would the project be located on a site that 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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Existing and past land use activities are used as potential indicators of hazardous material storage and use. For example, many industrial sites, historic and current, are known or suspected to have soil or groundwater contamination by hazardous substances. Properties devoted to oil production, including oil fields and processing facilities, are commonly known or suspected to have environmental contamination from petroleum hydrocarbons, heavy metals, and chlorinated solvents. Other examples of hazardous material sources include leaking underground tanks in commercial and industrial areas, surface runoff and groundwater migration from contaminated sites, and pesticides and herbicides in the soil of past agricultural lands. In addition to contaminants found in soils, groundwater is subject to contamination associated with underground storage tanks and other sources.

The primary issues of concern related to contamination are: (a) worker health and safety and (b) public exposure to hazardous materials during construction and offsite waste handling. Potential impacts on air quality and traffic during waste transport must also be considered. Where encountered, contaminated soil may qualify as hazardous waste and thus require handling and disposal according to local, State, and federal regulations.

A government records search was conducted for the proposed project alignment that identified hazardous materials sites listed pursuant to Government Code Section 65962.5. Environmental Data Resources, Inc. (EDR) conducted a search designed to meet the government records search requirements of the American Society for Testing and Materials' Standard Practice for Environmental Site Assessments. A summary of the results of the search is provided in Table 3.7-1[5].

Based on the EDR database search, many sites have been identified in the surrounding area and adjacent to the proposed alignment, as shown in Table 3.7-1, which are listed in various databases compiled pursuant to Government Code Section 65962.5 (EDR, 2004). Although these facilities are listed on government hazardous materials databases, the storage, use, and disposal of such hazardous materials, or historic releases of such materials, is not expected to present a risk to the public or the environment as a result of the proposed project. If, during construction or operation of the proposed project, contamination is discovered with the potential to create a significant hazard to the public or the environment, the applicable regulatory agency would be contacted and the appropriate corrective actions undertaken to eliminate the hazard.

To further minimize the potential of creating a significant hazard to the public or the environment as the result of the discovery of hazardous materials along the pipeline alignment, the following mitigation measure is recommended to reduce impacts to less-than-significant levels.

[5] Environmental Data Resources, Inc. government records search results for the RSC Project are available for review at the LADWP Environmental Services Office, located at 111 North Hope Street, Room 1044, Los Angeles, CA 90012.

Table 3.7-1. Target Sites within One Mile of the Proposed Project Alignment

Database List	Search Distance (0-1.0 mile)
National Priority List (NPL)	3
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	9
CERCLIS sites designated "No Further Remedial Action Planned" (CERCLIS-NFRAP)	22
Handlers with Resource Conservation and Recovery Act (RCRA) Corrective Action Activity (CORRACTS)	3
Resources Conservation and Recovery Information System for sites that treat, store, or dispose of waste (RCRIS-TSD)	1
Resources Conservation and Recovery Information System of Large Quantity Generators (RCRIS-LQG)	63
Resources Conservation and Recovery Information System of Small Quantity Generators (RCRIS-SQG)	480
Emergency Response Notification System (ERNS)	72
California DTSC's Annual Workplan (AWP)	4
Known and Potential Hazardous Substance Sites in California (CAL-SITES)	7
California Hazardous Materials Incident Report System (CHMIRS)	62
CORTESE	122
NOTIFY 65	2
TOXIC PITS	1
Solid Waste Facilities/Landfill Sites (SWF/LF)	10
Waste Management Unit Database System (WMUDS/SWAT)	10
Leaking Underground Storage Tank (LUST)	122
Hazardous Substance Cleanup Bond Act sites (BEP)	4
Underground Storage Tank (UST)	89
Low level threat properties with DTSC oversight (VCP)	2
California Facility Inventory Database (CA FID UST)	375
Historical UST	340
Record of Decision (ROD)	2
Facilities Index System (FINDS)	607
Hazardous Materials Incident Report System (HMIRS)	6
Material Licensing Tracking System (MLTS)	2
PCB Activity Database (PADS)	3
Formerly Used Defense Sites (FUDS)	3
RCRA Administration Action Tracking System (RAATS)	1
Toxic Chemical Release Inventory System (TRIS)	10
Toxic Substance Control Act (TSCA)	5
Federal Insecticide, Fungicide and Rodenticide Act (SSTS)	3
FIFRA, TSCA and EPCRA Tracking System (FTTS)	14
Aboveground Storage Tank Database (AST)	7
Dry Cleaners	60
California Water Resources Control Board – Waste Discharge System (WDS)	71
Recorded land use restrictions (DEED)	1
List of DTSC sites that do not pose a problem to the environment or to public health (NFA)	6
Emissions Inventory Data (EMI)	98
Sites where contamination has not been confirmed and do not require direct DTSC Site Mitigation Program action or oversight (REF)	10
School sites being evaluated by DTSC (SCH)	9
California Spills, Leaks, Investigations, and Cleanups (CA SLIC)	5
Hazardous waste manifests (HAZNET)	1,348
Sites requested to have DTSC oversee investigation and/or cleanup activities (VCP)	2
TOTAL	4,076

Source: EDR, 2004.
Note: Only databases where sites were found are listed in the table. Sites may be listed in multiple databases.

HAZ-6 LADWP shall establish an environmental training program to communicate environmental concerns and appropriate work practices, including spill prevention, emergency response measures, and implementation of proper best management practices, to all construction personnel. The training program shall emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of potentially hazardous substances and sites along the pipeline route) and shall include a review of all site-specific plans. A monitoring program shall also be implemented to ensure that the plans are followed throughout the period of construction.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?

NO IMPACT. The NHPS (northernmost portion of pipeline alignment) is located approximately one mile west of the Bob Hope Airport (formerly known as Burbank-Glendale-Pasadena Airport), approximately 4.5 miles south-southeast of Whiteman Airport in Pacoima, and approximately six miles east of the Van Nuys Airport. According to the Burbank General Plan, part of the proposed project would be within the Airport Approach Area for Bob Hope Airport, which imposes restrictions on building heights (City of Burbank, 1988). For example, at the north end of the pipeline alignment along Lankershim Boulevard, which is the closest point on the alignment to Bob Hope Airport, construction equipment heights would be limited to approximately 50 feet without FAA approval. Per the Federal Code of Regulations (CFR), 49 CFR Part 77 (§ 77.15), construction would not need approval if the equipment were to be shielded by existing structures of a permanent and substantial character of equal or greater height, and would be located in the congested area of a city where it is evident beyond all reasonable doubt that the equipment would not adversely affect safety in air navigation. LADWP would obtain FAA approval as necessary to meet the height limitations specified. Therefore, construction of the proposed project would not affect airport activities during construction.

Operation of the proposed project would occur underground and within existing structures (NHPS), therefore building height restrictions would not be exceeded. Consequently, the proposed project would not result in an airport-related safety hazard for people residing or working in the project area. Once operational, the proposed project would be underground in public rights-of-way (e.g., roadways) and open space areas, and would not interfere with, nor be affected by, airport operations. Therefore, neither construction nor operation of the proposed project would have an impact on public airports or public use airports and no mitigation measures are required.

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?

NO IMPACT. The proposed project is not located within the vicinity of a private airstrip. Therefore, neither construction nor operation of the proposed project would have an impact on any private airstrips and no mitigation is required.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agency's emergency evacuation plan, except for possible short-term periods during construction of the proposed project, when roadway access may be limited in some areas. Construction site preparation would include the preparation and implementation of traffic control plans in coordination with the Los Angeles Department of Transportation (LADOT) to detour and delineate the traffic lanes around the work area(s). Emergency access during construction is discussed further under Transportation and Traffic

[Section 3.15(e)]. Once operational, the proposed project would be underground in public rights-of-way or in open space/recreation areas, and thus would not interfere with emergency response or evacuation plans. Therefore, less-than-significant impacts to emergency response or evacuation plans are anticipated and no mitigation is required.

h. Would the project 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?

LESS-THAN-SIGNIFICANT IMPACT. The majority of the Upper Reach of the pipeline alignment and the southern portion of the Lower Reach are located within highly urbanized areas, and are not located in close proximity to any wildlands and no wildlands are found intermixed. However, the southern portion of the Upper Reach (Unit 7), which travels through Buena Vista Park, and the northern portion of the Lower Reach (Unit 1a, 1b, 2, and a portion of Unit 3), which travels through Griffith Park, are located within portions of the City of Los Angeles Mountain Fire District and Fire Buffer Zone (City of Los Angeles, 1996b).

Construction activities within such fire hazard areas would not pose a substantial risk relative to wildland fires as long as emergency vehicle access is maintained, since construction activities would be temporary and all pipeline welding activities would occur within construction trenches or jacking pits (i.e., away from flammable vegetation). Operation of the proposed project would not expose any people or structures to a significant risk of loss, injury or death involving wildland fires, since the pipeline would be buried and would only convey potable water under pressure. Therefore, impacts would be less than significant and no mitigation is required.

3.8 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off site?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☐	☒	☐
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?	☐	☒	☐	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year floodplain structures that would impede or redirect flood flows?	☐	☐	☐	☒

HYDROLOGY AND WATER QUALITY - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j. Inundate by seiche, tsunami, or mudflow?	☐	☐	☒	☐

a. Violate any water quality standards or waste discharge requirements?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Construction of the RSC pipeline and inlet structure would require water, as necessary, to control fugitive dust. Fugitive dust emission at the construction sites would be controlled by water trucks equipped with spray nozzles. Construction water needs would generate minimal quantities of discharge water, which would drain into existing storm drains located along the pipeline alignment.

In addition to the daily construction water needs, dewatering will be likely if construction occurs in areas of high groundwater levels. For the Upper Reach, the maximum trench depth is expected to be approximately 55-feet, whereas for the Lower Reach, excavation may be required to dive under existing substructures resulting in maximum trench depths of approximately 25 to 35 feet or more. The groundwater would be removed during the excavation of trenches, usually by pumping it from the ground through dewatering wells that have been drilled along the alignment. The extracted groundwater would first be treated for any contaminants, if present, before pumping it into storm drains located nearby, or directly into flood control channels (i.e., the Los Angeles River channel).

During construction and maintenance of the proposed RSC pipeline, hydrostatic testing would be required to be performed upon completion of all activities associated with pipeline installation, including coating, bedding, and trench backfill. As described under the Waste Management Section of the project description, a hydrostatic test involves filling a test section of the pipeline with fresh water and increasing pressure to a predetermined level. Such tests are designed to prove that the pipe, fittings, and welded sections would maintain mechanical integrity without failure or leakage under pressure. During construction of the Upper Reach, approximately 7.4 million gallons of hydrostatic water would be used. Since a minimum of one separate hydrostatic test would be conducted for each of the three units (Unit 5, 6 and 7), a maximum discharge event for any segment would be on the order of 2.5 million gallons. For the Lower Reach, approximately 11.5 million gallons of hydrostatic test water would be used. However, the pipeline would be hydrostatically tested in segments, using a fraction of that volume.

The discharge water from construction and dewatering is not expected to contain contaminants that would cause its release to violate any water quality standards or waste discharge requirements. Water discharge from construction and dewatering activities would be carried out in accordance with, and would adhere to, a SWPPP, as required by the NPDES permit. The SWPPP would be submitted to the Los Angeles Regional Water Quality Control Board (RWQCB) for review and approval prior to project construction. Compliance with the SWPPP would ensure that the potential for violating water quality standards would be less than significant.

Hydrostatic test water used for completion of all activities associated with pipeline installation, would become construction waste, and could potentially have a significant impact on waste discharge requirements. However, by implementing Mitigation Measure WQ-1 described below, impacts would be reduced to a less-than-significant level.

WQ-1 All hydrostatic test water shall be treated for contaminants and toxic substances to meet the NPDES hydrostatic test permit before being discharged into surface waterbodies, as approved by the local Regional Water Quality Control Board or Bureau of Sanitation. All

hydrostatic test water that does not meet the NPDES hydrostatic test permit requirement shall be discharged to an appropriate waste handling facility and not to surface waterbodies.

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)?

LESS-THAN-SIGNIFICANT IMPACT. During construction of the proposed pipeline, groundwater may be encountered in areas of high groundwater levels (i.e., shallow depth to groundwater). Depths to groundwater in the project vicinity would vary and may be relatively shallow, particularly in proximity to the Los Angeles River. In the Upper Reach, where 72-inch diameter pipe would be installed, the minimum trench depth would be 12-feet with a maximum of approximately 55-feet. In the Lower Reach, in jacking areas and certain open trenching areas, it may be required to dive under existing substructures resulting in maximum trench depths of approximately 25 to 30 feet or more.

Dewatering would be required in the event that groundwater is encountered during construction and operation. Dewatering would occur by pumping the groundwater through dewatering wells that have been drilled along the alignment. The extracted groundwater would first be tested and treated for any contaminants and pollutants to meet the requirements of the NPDES permit. The water would then be discharged into storm drains located nearby, or into flood control channels directly. In the event that dewatering is required, it is not expected to occur in quantities that would substantially deplete the groundwater supplies or interfere significantly with groundwater recharge.

By comparison, current public supply water use in Los Angeles County exceeds 1 billion gallons per day, with total groundwater withdrawals for public supply of approximately 524 million gallons per day (USGS, 1995). It is expected that the proposed project would use (by means of dewatering) far less than one percent of the public supply groundwater withdrawals for Los Angeles County. Therefore, it is unlikely the proposed pipeline project would result in groundwater withdrawals that would adversely affect groundwater levels. Consequently, the proposed project would not contribute to the depletion of groundwater supplies, interfere substantially with groundwater recharge, or lower the groundwater table. No significant adverse impacts to groundwater supply or recharge are expected to occur and no mitigation is required.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on-or off-site?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project would be constructed along public streets and rights-of-way and through open space areas, and would not permanently alter the drainage pattern of the area. However, the proposed project would cross the Los Angeles River. The Los Angeles River, which originates in the Santa Monica and Santa Susana Mountains, is the main tributary in the Los Angeles River Watershed. The Los Angeles River extends approximately 55 miles, through the San Fernando Valley and into the Port of Los Angeles and the Port of Long Beach, where it meets the Pacific Ocean (LARWQCB, 2004). Within the project area, the Los Angeles River consists of a concrete-lined channel. Construction of the RSC pipeline beneath the river would be carried out by jacking the pipeline from Buena Vista Park, under the Los Angeles River, to Forest Lawn Drive. As such, construction of the proposed project would not alter the course of the Los Angeles River. Therefore, the proposed project would not alter the existing drainage pattern of the area, which could result in substantial erosion or siltation.

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?

LESS-THAN-SIGNIFICANT IMPACT. As discussed in Section 3.8(c), above, construction of the RSC pipeline would not alter the course of the Los Angeles River. Construction areas would also be in close proximity to three major tributaries of the Los Angeles River: the Central Branch Tujunga Wash, the Burbank Western Channel, and the Verdugo Wash (See Figures 1-2 and 1-3). The Central Branch Tujunga Wash drains portions of the Los Angeles National Forest in the San Gabriel Mountains and parallels State Route 170 (west of the project alignment) until it reaches the Los Angeles River. The Central Branch Tujunga Wash meets the Los Angeles River channel where the Los Angeles River crosses Highway 101. Unit 5 and the northern portion of Unit 6 (along Lankershim Boulevard) would parallel the Tujunga Wash, located approximately a half mile to the west.

The Burbank Western Channel drains the Verdugo Mountains, located northeast of the project alignment, and meets the Los Angeles River channel near the intersection of State Route 134 and San Fernando Road. The Verdugo Wash also drains the Verdugo Mountains, including the hills north of Burbank and Glendale, and meets the Los Angeles River channel at the intersection of Highway 5 and State Route 134 (LARWQCB, 2004). The western-most portion of Unit 1b would be constructed less than a quarter mile from where the Burbank Western Channel intersects the Los Angeles River. In addition, the northern portion of Unit 2 would be constructed less than half a mile from where the Verdugo Wash meets the Los Angeles River.

Open-trench and tunneling construction methods (i.e., jacking, micro-tunneling) would not substantially increase the rate or amount of surface runoff, or result in erosion, siltation, flooding on- or off-site. The proposed pipeline project would be constructed below grade within public rights-of-way, minimizing the potential to increase surface runoff. In addition, when and if dewatering is required, water would be pumped and discharged into storm drains located nearby, or into flood control channels directly, thereby avoiding erosion and surface run-off. Therefore, impacts are considered to be less than significant, and no mitigation is required.

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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. Jacking would be a commonly used construction method along the proposed pipeline alignment. As such, dewatering may be required. However, water discharge from dewatering would be minimal, and is not anticipated to be released in substantial quantities. Therefore, water discharge from dewatering is not expected to exceed the existing or planned capacity of the local stormwater drainage system. No impacts would occur. Furthermore, as discussed in Section 3.8(a), the discharge water is not anticipated to contain significant quantities of contaminants. All dewatering discharges would be carried out in accordance with, and would adhere to, a SWPPP, as required by the NPDES permit. Prior to project construction, the SWPPP would be submitted to the Los Angeles RWQCB for review and approval.

In addition, fugitive dust emission at the construction sites would be controlled by water trucks equipped with spray nozzles. Construction water needs would generate minimal quantities of discharge water, which would drain into existing storm drains located along the pipeline alignment. Therefore the impact of dust control water on water quality and runoff would be adverse, but less than significant.

As discussed in Section 3.8(a), hydrostatic test water would be used for completion of all activities associated with pipeline installation. Hydrostatic test water would become construction waste, and

could potentially have a significant impact. However, hydrostatic test water would be mitigated to less-than-significant levels through implementation of Mitigation Measure WQ-1 [see Section 3.8 (a)].

f. Otherwise substantially degrade water quality?

LESS-THAN-SIGNIFICANT IMPACT. Potential short-term erosion could occur during site excavation and construction activities, including backfilling, which could adversely affect surface water quality from runoff water. However, due to the linear nature of the proposed project and the limited area of ground disturbance, this effect is expected to be minimal.

Construction equipment and trash containers may potentially leak contaminants, increasing the possibility of washing contaminated runoff into nearby waterbodies. Usually, however, the amount of contaminants that would leak from construction equipment and trash containers would be relatively small. By comparison, contamination from spills at staging and refueling sites would have a higher risk, as leaked or spilled pollutants could then wash into a waterbody during a storm event and degrade the surface water quality causing potentially significant impacts. However, under the requirements of the NPDES, a SWPPP would be submitted to the Los Angeles RWQCB and/or State Water Regional Control Board. Compliance with the SWPPP would ensure that the potential for contamination during construction would be less than significant. No mitigation is required.

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?

NO IMPACT. The construction and operation of the proposed project would not involve the placement of housing or structures within a 100-year flood hazard area. The proposed RSC pipeline would be placed underground along/in City of Los Angeles and City of Burbank streets and parks. The pipeline would cross under the Los Angeles River flood control channel, thereby avoiding affects on flood flows. Therefore, no impacts are expected and no mitigation is required.

h. Place within a 100-year flood area structures to impede or redirect flood flows?

NO IMPACT. Although portions of the project alignment are in proximity to 100-year and 500-year flood zones (i.e., in proximity to the Los Angeles River channel), as delineated by both the City of Los Angeles and the City of Burbank, construction activities near such areas would not interfere with or redirect the movement of water. The proposed pipeline would operate as an underground closed system within existing street rights-of-way, LADWP property and existing easements, and within open space/recreation areas. Therefore, no impacts are expected and no mitigation is required.

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?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project would not cause, or increase the likelihood of, failure of a levee or dam that could result in flooding. As such, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding. In the event the proposed pipeline were to fail, LADWP emergency response procedures, as discussed in the project description, would be followed. For example, in response to a loss of pressure, safety valves throughout the water distribution system would be shut (as deemed necessary by LADWP) in order to isolate the break. The volume of potable water released in such an event would be limited to the amount of water contained in the section of pipeline between the shut-off valves, which is not expected to yield enough water to pose a threat to life or property. Therefore, less-than-significant flooding impacts are expected and no mitigation is required.

j. Inundation by seiche, tsunami, or mudflow?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project is not subject to tsunami-related inundation, as it is not located within the range of a tsunami hazard zone. However, portions of the

proposed alignment are located in areas subject to seiche and/or mudflows. Areas immediately surrounding the Silver Lake Reservoir Complex and the Rowena Tank, near the southern end of the Lower Reach, as well as Toluca Lake, near the southern portion of the Upper Reach, may be subject to seiche impacts during a seismic event. However, construction and operation of the proposed project would not increase the risk of inundation in these areas, due to the fact that construction activities would not place housing or other occupied structures near these facilities, and operation of the pipeline would occur underground. Portions of the alignment within Griffith Park are adjacent to, and downgradient from, hillside areas. Such hillside areas may be subject to mudflows during heavy storm events. Nonetheless, construction and operation of the proposed pipeline would not increase risks to people or structures relative to mudflows, since, as indicated above, the project involves no housing or other occupied structures, and operation of the pipeline would occur underground. Therefore, the potential impacts to, or from, the construction and operation of the proposed project from inundation by seiche, tsunami, or mudflow would be less than significant. No mitigation is required.

3.9 Land Use and Planning

LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☒	☐
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

a. Would the project physically divide an established community?

LESS-THAN-SIGNIFICANT IMPACT. A field survey of the land uses in the areas along the pipeline route was conducted. These uses are summarized in Table 3.9-1.

As presented in the table, the pipeline route would be constructed near properties that primarily consist of residential, commercial and recreational/open space land uses. Also as presented under the column "General Character/Notable Land Uses", the proposed pipeline corridor includes established land uses, some of which include well-known businesses and recreational areas.

All construction activities would occur within existing street rights-of-way, LADWP property and existing easements, and within open space/recreation areas. These areas are existing community features and are incorporated into existing community land use patterns. Therefore, construction in these areas would not further physically divide an existing community. For construction scheduled within open space/recreation areas, LADWP has incorporated project features to limit impacts to recreational areas resulting from physical division of recreational uses. For example, as described in Section 1.10, Project Description, construction within portions of Griffith Park would occur 24 hours per day to minimize the duration of impact to this important recreational resource. Therefore, less-than-significant impacts are expected and no mitigation is required.

During operation, the proposed project would be underground and would not physically divide established communities. The project would consist of an underground potable water utility pipeline, which would be located within existing street rights-of-way, LADWP property and existing easements, and within open space/recreation areas. The RSC Inlet Structure would generally be located inside the existing NHPS sump, except for the portion that would connect the inlet structure to

the new Upper Reach of the RSC pipeline, which would be located underground and adjacent to the NHPS. This connection would also be underground. No impacts are expected during operations and no mitigation is required.

Table 3.9-1 Summary of Land Uses along Pipeline Route

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
UPPER REACH					
Unit 5: North Hollywood Pump Station to Lankershim/Magnolia					
Morella Ave. to Hart St.	Morella Ave.	City of Los Angeles	West: NHPS, Single-Family Residential East: Multi-Family Residential	----	• ROW characterized generally by large to medium commercial business storefronts • Business types include, construction supply, clothing and household goods, large auto sale lots, strip malls, fast food restaurants, motels, and gas stations • A fire station, post office, and North Hollywood Amelia M. Earhart Regional Branch Public Library all located west of ROW between Tujunga Ave. and Bakman Ave. • MTA Metro Redline North Hollywood Station on NE corner of Lankershim and Magnolia. Redline ROW within Lankershim • NoHo Arts District along ROW between Chandler and Magnolia Blvds
OR Hinds Ave. to Hart St.	Hinds Ave.	City of Los Angeles	West: Single/Multi-Family Residential East: NHPS, Single-Family Residential	----	
Hart St. to Lankershim Blvd.	Hart St.	City of Los Angeles	North: Single/Multi-Family Residential South: Single/Multi-Family Residential	----	
Hart St. to Magnolia Blvd.	Lankershim Blvd.	City of Los Angeles	West: Commercial East: Commercial	• A park on SE corner of Lankershim Blvd./Tiara St. just south of Oxnard St. • Lankershim Elementary School east of ROW between Weddington and Magnolia Blvd.	
Unit 6: Lankershim/Magnolia to Riverside/Clybourn					
Magnolia Blvd. to Riverside Dr.	Lankershim Blvd.	City of Los Angeles	East: Commercial West: Commercial	----	• ROW characterized generally by a combination of low density commercial uses such as strip malls, and offices, and high density residential uses such as apartment buildings • At the intersection of Lankershim Blvd. and Riverside Dr. just south of the 134 Freeway, there are a gas station and a high-rise bank building.
Riverside Dr. to Clybourn Ave.	Riverside Dr.	City of Los Angeles	North: Low Density Commercial & 134 Freeway South: Low Density Commercial, Multi-Family Residential	----	

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
Unit 7: Riverside/Clybourn to Forest Lawn					
Clybourn Ave. to Pass Ave.	Riverside Dr.	City of Burbank	North: Commercial South: Commercial	----	• ROW characterized generally by a combination of commercial office, and residential uses • Land uses include strip malls, small storefronts, high-rise office buildings, and single- and multi-family residential (Including the Multi-Family West and Multi-Family South areas of the City of Burbank) • Majority of high-rise office buildings are generally offices of the entertainment and recording industries such as the Disney Channel, etc. • LADWP Substation located between Pass and Edison Blvd. • Warner Bros. Studios is located along the south of the ROW between W. Olive Ave. and S. California St. • NBC and Disney Studios are located north of the ROW and north of the 134 Freeway • Between Fairview St. and Buena Vista Park (Bob Hope Drive) is all single-and multi-family residential homes • ROW crosses under a transmission line ROW and crosses river • There are multiple high-circuit transmission lines and associated structures along the river ROW (Whitnall Highway Transmission Line Easement).
Pass Ave. to W. Olive Ave.	Riverside Dr.	City of Burbank	North: Commercial South: Commercial	• University of La Verne north of ROW between Pass and Maple	
W. Olive Ave. to Forest Lawn Dr.	Riverside Dr.	City of Burbank	North: Commercial, Residential South: Commercial, Residential	• Buena Vista Park north and south of ROW • Equestrian Trail immediately adjacent to river along maintenance road ROW • Forest Lawn Memorial Park (cemetery) across river on south side	
LOWER REACH					
Unit 1a: Griffith Park North along Forest Lawn Drive					
Forest Lawn Dr. to L.A. Live Steamers	Forest Lawn Dr.	City of Los Angeles	North: Recreational South: Open Space	• Equestrian trail within Griffith Park north of ROW • Forest Lawn Memorial Park (cemetery) south of ROW • Mount Sinai Memorial Park south of ROW • Travel Town Museum north of ROW	• ROW characterized by open space and recreational uses associated with Forest Lawn and Mount Sinai Memorial Parks and Griffith Park
Unit 1b: Griffith Park North along Zoo Drive					
L.A. Live Steamers to Crystal Springs Dr.	Zoo Drive	City of Los Angeles	North: Recreational/Open Space South: Recreational/Open Space	• Equestrian trail within Griffith Park north of ROW (Los Angeles Equestrian Center north of the ROW and 134 FREEWAY)	• ROW characterized by open space and recreational uses associated with Forest Lawn and Mount Sinai Memorial Parks and Griffith Park

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
Unit 2: Zoo Parallel (Western Heritage Way)					
Crystal Springs Dr. to Griffith Park Dr.	Crystal Springs Dr.	City of Los Angeles	East: Recreational, Open Space West: Recreational, Open Space	• Los Angeles Zoo east and west of ROW • Gene Autry Museum of Western Heritage east of ROW	• ROW characterized by open space and recreational uses associated with Griffith Park • 134 Freeway and I-5 intersection and Los Angeles River NE of ROW
Unit 3: Griffith Park South (Crystal Springs Drive)					
Griffith Park Dr. to intersection of Los Feliz Blvd. and Riverside Dr.	Crystal Springs Dr./Griffith Park Dr.	City of Los Angeles	East: Recreational, Open Space West: Recreational, Open Space, Residential	• Harding Municipal Golf Course east of ROW • Wilson Municipal Golf Course Griffith Park Visitor Center east of ROW • Crystal Springs Picnic Grounds east of ROW • Griffith Park west of ROW (including playgrounds, tennis courts, merry-go-round, Cedar Tree Picnic Grounds, and pony and train rides)	• ROW characterized by open space and recreational uses associated with Griffith Park • Park Ranger Headquarters east of ROW just south of Wilson Municipal Golf Course • I-5 Los Angeles River east of ROW
Unit 4: Los Feliz /Riverside to Rokeby/Rowena, Rokeby/Rowena to Rowena/West Silver Lake, and Rowena/West Silver Lake to Armstrong/West Silver Lake					
Los Feliz Blvd./Riverside Dr. to Rowena Reservoir	Rowena Branch: Through Mulholland Memorial Park	City of Los Angeles	East: Residential West: Recreational, Residential	• Griffith Recreation Center NE corner of Los Feliz and Riverside • Mulholland Memorial Park on SW corner of Los Feliz and Riverside • Silver Lake Presbyterian Church off of Hyperion and Ettrick St. across from Rowena Tank Reservoir/Park	• ROW characterized by recreational uses associated with Griffith Park, and residential neighborhoods as the Rowena Branch approaches the Rowena Reservoir and associated park (not open to public) • Residential streets are narrow with single-family residences
Los Feliz Blvd./Riverside Dr. to Rokeby/Rowena	Riverside Dr., Glendale Blvd, Rokeby St.	City of Los Angeles	Northeast: Recreation Southwest: Recreational, Residential, Commercial	• Griffith Recreation Center NE corner of Los Feliz and Riverside • Mulholland Memorial Park on SW corner of Los Feliz and Riverside	• ROW characterized by recreational uses and residential neighborhoods with some low density commercial uses • Along Rowena, Rokeby, W. Silver Lake, and Armstrong ROW predominantly characterized by residential neighborhoods with narrow streets • Fire station located at the NE corner of Glendale Blvd. and Rokeby St.
Rokeby St. to Armstrong Ave.	Rowena Ave., W. Silver Lake Dr., Armstrong Ave.	City of Los Angeles	North: Low density commercial, Residential South: Residential	• Ivanhoe Elementary School north of Rowena Avenue at W. Silver Lake Dr. • Country Villa Los Feliz Health Center west of ROW at corner of Hyperion Ave.	

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
Rokeby St. to Fletcher Ave.	Fletcher Pump Station Branch Line: Rowena Ave.	City of Los Angeles	North: Low Density Commercial, Residential South: Residential	----	

b. Would the project 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?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project would traverse the City of Los Angeles and the City of Burbank. Within the City of Los Angeles, the proposed project would cross the communities of North Hollywood, Tuluca Lake, Hollywood, and Griffith Park. As such, the proposed project would be subject to land use polices identified in the following plans:

- City of Burbank General Plan
- City of Burbank Media District Specific Plan
- City of Los Angeles General Plan
- City of Los Angeles Municipal Code
- North Hollywood-Valley Village Community Plan
- Sherman Oaks-Studio City-Tuluca Lake-Cahuenga Pass Community Plan
- Hollywood Community Plan
- Silver Lake – Echo Park Community Plan
- Los Angeles River Revitalization Plan
- Griffith Park Master Plan (including the Valley Gateway Plan, Zoo Gateway Plan, Resource Management Plan, and Park Improvement Strategy)

Relevant land use policies were reviewed to determine the project's consistency with existing requirements. While the project has the potential to impact other resource areas, construction would be carried out consistent with existing plans, policies and regulations. The general intent of these plans is to protect and enhance existing communities. The proposed project would provide a necessary and scarce resource to the Los Angeles area and is consistent with the local agency's mission to guide development and direct resource use to the greatest possible benefit of their residents. As noted above, the proposed project would have less-than-significant impacts on the communities surrounding the pipeline alignment. While the proposed project does not create any significant policy conflicts, these less-than-significant impacts represent less-than-significant policy inconsistencies because the intent of the existing policies is to protect and enhance communities.

Operation of the pipeline would also be consistent with existing plans and policies because it would be constructed underground and, thus, its use would not conflict with existing land uses. The proposed project is expected to have no operational impacts resulting from conflict with applicable existing plans and policies. Overall, the proposed project would have less-than-significant impacts.

c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

NO IMPACT. The proposed project would not conflict with any applicable habitat conservation plans or natural community conservation plans because no such plans cover the proposed project alignment or immediate surrounding area. Therefore, no impacts would occur under this criterion. For more information on biological resources, please refer to Section 3.4.

3.10 Mineral Resources

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

a. Would the project result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?

NO IMPACT. The California Geologic Survey (previously known as the California Division of Mines and Geology) has classified *urbanizing lands* according to the presence or absence of significant sand, gravel, or stone deposits that are suitable as sources of aggregates. These areas are called Mineral Resources Zones (MRZ). The classification system is intended to ensure that through appropriate lead agency policies and procedures, mineral deposits of statewide or regional significance are considered in agency decisions.

The MRZ-2 Mineral Resource Zone classification includes those areas where adequate information indicates that significant mineral deposits are present, or there is a high likelihood for their presence and development should be controlled. According to Russel Miller of the California Geologic Survey, the proposed project alignment would not be located in a mineral resource zone designated as MRZ-2 (CGS, 2004). Therefore, impacts to a known mineral resource that would be of value to the region and its residents would not occur.

b. Would the project 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?

NO IMPACT. The proposed project is not located in an area designated as containing locally important mineral resources (City of Los Angeles, 2001). Therefore, construction and operation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur.

3.11 Noise

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

a. Would the project result in 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?

The majority of the project (all units, except a portion of Unit 7) would be located within the City of Los Angeles and is subject to the noise policies and standards of the City's General Plan and noise ordinances. Section 41.40 of the Los Angeles Municipal Code indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. of the following day, because such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment, or other place of residence. In addition, no person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling, shall perform any construction or repair work of any kind within 500 feet of residential buildings before 8:00 a.m. or after 6:00 p.m. on any Saturday, national holiday, or at any time on Sunday.

Section 112.05 of the Los Angeles Municipal Code specifies the maximum noise level for powered equipment or powered hand tools. It states that any powered equipment or powered hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet from construction or industrial machinery between the hours of 7:00 a.m. and 10:00 p.m. in any residential zone of the City or within 500 feet thereof shall be prohibited. However, the above noise limitation shall not apply where compliance is technically infeasible. Technically infeasible means that the above noise limitation cannot be complied with despite the use of mufflers, shields, sound barriers, and/or any other noise reduction device or techniques during the operation of equipment.

Unit 7 of the new pipeline would be located within the City of Burbank. Section 21-209 of the City of Burbank Municipal Code states that construction is not permitted to occur at nighttime (i.e., between 10:00 p.m. and 7:00 a.m.) within a residential zone of the City, or within a radius of 500 feet from any residential zone, as to cause discomfort or annoyance to any reasonable person of normal sensitiveness that resides within the affected residential zone (City of Burbank, 1998).

Construction Impacts

POTENTIALLY SIGNFICANT IMPACT. Construction noise would be created from on-site and off-site sources. Construction activity would generally occur between 7:00 a.m. and 6:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday. However, within Griffith Park along portions of Crystal Springs Drive, construction activities would occur up to 24-hours per day. On-site noise during construction would occur primarily from heavy-duty diesel and gasoline-powered construction equipment. Off-site noise would be generated from trucks delivering materials and equipment to the job-sites, as well as from vehicles used by workers commuting to and from the job sites.

On-site Sources. Short-term adverse noise levels would result from the construction of the new pipeline. On-site sources would include the operation of heavy construction equipment during activities such as open trenching, jacking, and tunneling. Based on the proposed construction schedule, up to four pipeline units would be constructed concurrently. Table 3.11-1 presents the typical noise levels that would be produced by most of the heavy equipment required to construct the new pipeline. Generally, noise levels adjacent to the active construction areas can be expected to range from 75 to 90 dBA, depending on the distance the receptor is from the source of noise.

Table 3.11-1. Noise Emission Characteristics of Construction Equipment

Type of Equipment	Typical Noise Level, dBA at 50 feet
Backhoe	80
Compactor	82
Crane, Mobile	83
Excavator/Shovel	82
Loader	85
Paver	89
Truck	88

Source: FTA, 1995.

Within and immediately adjacent to residential zones, construction noise levels would likely violate Section 112.05 of the Los Angeles Municipal Code, resulting in potentially significant impacts. Nighttime construction activity along the southern portion of Unit 3 (Crystal Springs Drive) would likely violate Section 41.40 of the Los Angeles Municipal Code, potentially resulting in significant impacts to residences in the area. In addition, nighttime construction activities in Griffith Park could potentially result in short-term significant impacts to sensitive nighttime uses at the park.

The actual magnitude of construction noise impacts would depend on the type of construction activity, the noise level generated by various pieces of construction equipment, the duration of the activity, the distance between the activity and the sensitive noise receptors, and whether local barriers and topography provide shielding effects.

Land uses along the proposed pipeline route are primarily residential, commercial, recreational, and open space. During construction, residences in the vicinity of construction activities would be exposed to potentially significant noise levels generated by heavy construction equipment operating within the construction zones. The majority of the pipeline would be constructed at a maximum rate of 80 feet per day (open trench excavation). Any one receptor adjacent to an open trench construction area could experience adverse noise levels for approximately one week. Receptors adjacent to jacking or tunneling construction zones could be exposed to adverse noise levels for several weeks. Those receptors near the NHPS would be exposed to adverse noise levels for several months during the construction of the inlet structure.

Due to the potential noise impacts associated with the construction of the proposed project, this issue will be evaluated in greater detail in the EIR. The evaluation will analyze potential noise impacts on the sensitive receptors and residential uses in the project area that could be adversely impacted.

Off-site Sources. Noise levels from off-site construction related traffic (delivery trucks, automobiles, and haul trucks) would be potentially adverse (approximately 70 dBA to 80 dBA at 50 feet). Travel in residential neighborhoods, particularly during nighttime hours, could result in potentially significant short-term noise impacts. Offsite construction noise sources will be evaluated in greater detail in the EIR.

Operational Impacts

NO IMPACT. In general, the proposed project would generate a very limited amount of long-term noise. The new inlet structure would generally be constructed within the existing NHPS, except for the portion that would connect the inlet structure to the new Upper Reach of the RSC pipeline, which would be located underground and adjacent to the NHPS. From the inlet structure, the new pipeline would flow via gravity requiring no new pumps. The noise sources from normal operations of the proposed project would include annual valve inspection and maintenance activities performed by LADWP's water crews. These activities would be infrequent and temporary. No noise related impacts would occur from operations of the proposed project.

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

POTENTIALLY SIGNIFICANT IMPACT. Groundborne vibration is measured in terms of the velocity of the vibration oscillations. As with noise, a logarithmic decibel scale (VdB) is used to quantify vibration intensity. When groundborne vibration exceeds 75 to 80 VdB, it is usually perceived as annoying to building occupants. The degree of annoyance is dependent upon type of land use, individual sensitivity to vibration, and the frequency of the vibration events. Typically, vibration levels must exceed 100 VdB before building damage occurs.

Construction of the proposed project would not involve pile-driving activities; as a result, although construction of the proposed project would include heavy equipment, it is unlikely that construction

would result in perceptible, let alone excessive, groundborne vibration or groundborne noise levels. However, impacts from groundborne vibration and noise will be evaluated further in the EIR.

General operation of the proposed project would be passive (underground or inside the NHPS) and would not cause substantial groundborne vibration or noise levels. Groundborne noise or vibration impacts would be less than significant.

c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

LESS-THAN-SIGNIFICANT IMPACT. The proposed pipeline would operate underground, and the inlet structure would be contained within the NHPS and underground; therefore, no substantial permanent increase in ambient noise levels would occur in these areas. However, the proposed regulator station could potentially cause a localized increase in ambient noise levels. This increase in ambient noise levels would occur only when the regulator station is operational, which is expected to be infrequent. Additionally, the regulator station would be located in an underground vault within the Headworks Spreading Grounds site. As such, the increase in ambient noise levels would be not be substantial, as the placement of the station in an underground vault would substantially reduce noise levels, and due to the proposed location it would not affect sensitive receptors. Therefore, less-than-significant impacts to ambient noise levels would occur as a result of the proposed project.

d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

POTENTIALLY SIGNFICANT IMPACT. Construction-related activities would temporarily elevate noise levels in the vicinity of the project sites [see Section 3.11(a), above]. Due to the potential increase in noise levels associated with the construction of the project, impacts would be assessed in greater detail in the EIR to determine the degree of significance, and identify appropriate mitigation measures, as necessary.

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?

NO IMPACT. NHPS (northernmost portion of pipeline alignment) is located approximately one mile west of the Bob Hope Airport, approximately 4.5 miles south-southeast of Whiteman Airport in Pacoima, and approximately six miles east of the Van Nuys Airport. However, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airport operations. No impacts would occur.

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?

NO IMPACT. The proposed pipeline would not be within the vicinity of a private airstrip and it would not expose people residing or working in the project area to excessive airport noise levels. No impacts would occur.

3.12 Population and Housing

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

a. Would the project 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)?

NO IMPACT. The proposed RSC pipeline would be located in public street rights-of-way, LADWP property, and LADWP utility easements in the North Hollywood, Silver Lake, and Los Feliz communities (including Griffith Park) within the City of Los Angeles and within the City of Burbank. Construction activities resulting from project implementation would be short-term and temporary, as described in Table 1-3 of the Project Description.

For purposes of this analysis, U.S. Census Year 2000 data for population, housing, and employment for the City and County of Los Angeles and the City of Burbank is presented in Table 3.12-1. As shown in Table 3.12-1, the Cities of Los Angeles and Burbank contain a considerable construction workforce (81,032 persons and 3,252 persons in construction trades, respectively), with a total construction workforce within Los Angeles County alone of 202,829 workers. For the proposed project, approximately 96 personnel would be employed on the project during the peak construction period. Approximately 50 percent of the workforce would be skilled labor, and 50 percent would be unskilled labor, as discussed in the project description. It is assumed that required construction personnel would come from within Los Angeles County, and specifically within the City of Los Angeles. Therefore, construction personnel would not generate a permanent increase to population levels or result in a decrease in available housing. No construction impacts to existing or future population growth levels would occur as a result of the proposed project.

Table 3.12-1. Year 2000 Existing Conditions Population, Housing, and Employment

Location	Population	Housing Units		Employment	
		Total Units	Vacancy	Total Employed [a]	In Construction Trades
City of Burbank	100,316	42,847	Owner: 385 (0.9%) Renter: 900 (2.1%)	52,744	3,252 (6.6%)
City of Los Angeles	3,694,820	1,337,706	Owner: 24,079 (1.8%) Renter: 46,820 (3.5%)	1,532,074	81,032 (5.3%)
County of Los Angeles	9,519,338	3,270,909	Owner: 52,335 (1.6%) Renter: 107,940 (3.3%)	3,953,415	202,829 (5.1%)

Source: U.S. Census Bureau, 2004.
Note(s): a. Accounts for population greater than 16 years of age and in Labor Force.

Upon completion, the RSC pipeline and inlet structure would be unmanned, requiring only periodic maintenance, and would therefore not require additional employees for operation. Furthermore, the proposed project does not involve the construction of any new residential housing units. As such, implementation of the proposed project would not generate a direct increase in the permanent population of the area or cumulatively exceed official regional or local population projections. The purpose of the proposed project includes replacing the existing deteriorated piping, and ensuring that the water distribution system has adequate system pressure and capabilities to handle system demands.

While the project is intended to meet water needs generated by residential and business uses, the proposed project would not induce population growth either directly or indirectly. Thus, no impacts associated with induced population growth would occur.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT. No residential properties exist within the proposed project pipeline route right-of-way. No housing or persons would be displaced by the project. Therefore, implementation of the proposed project would not result in the displacement of any housing, including affordable housing, nor would it necessitate the construction of replacement housing. No impacts would occur.

c. Would the project displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

NO IMPACT. As stated in Section 3.12(b), above, there is no existing housing within the proposed pipeline route right-of-way. Therefore, the proposed project would not result in the displacement of people, nor would it necessitate the construction of replacement housing elsewhere. No impacts would occur.

3.13 Public Services

PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

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:

i) Fire protection?

NO IMPACT. Within the City of Los Angeles, the Los Angeles Fire Department (LAFD) provides fire prevention and suppression services and emergency medical services. Within the City of Burbank, the City of Burbank Fire Department (Burbank FD) provides fire prevention and suppression services and emergency medical services. The LAFD has a total of 1,035 uniformed firefighters per rotating 24-hour shift (including 175 employees serving as firefighter/paramedics), at 103 neighborhood fire stations located strategically across the LAFD's 470 square-mile jurisdiction (LAFD, 2004). Equipment includes engines, trucks, paramedic engines, crash units, hazardous materials response and decontamination units, foam carriers, rescue ambulances, helicopters, and boats. The Burbank FD has 145 employees and operates six engine companies, including one that is paramedic equipped and staffed, two ladder truck companies, and three paramedic rescue ambulances

out of six strategically located fire stations (BFD, 2004). Fire Stations serving the proposed project area are summarized in Table 3.13-1.

The southern portion of the Upper Reach (Unit 7), which travels through Buena Vista Park, and the northern portion of the Lower Reach (Units 1a, 1b, 2, and a portion of Unit 3), which travels through Griffith Park, are located within portions of the City of Los Angeles Mountain Fire District and Fire Buffer Zone (City of Los Angeles, 1996b). Construction activities within such fire hazard areas would not pose a substantial fire risk as long as emergency vehicle access is maintained, since construction activities would be temporary and all pipeline welding activities would occur within construction trenches (i.e., away from flammable vegetation). Operation of the proposed project would not pose a substantial fire risk, since the pipeline would be buried and would only convey potable water under pressure.

Table 3.13-1. Fire Stations Serving the Proposed Project Area

RSC Pipeline Unit	Fire Station Location
Units 1a and 1b	Los Angeles Fire Department - Station 76 3111 Cahuenga Boulevard
Unit 2	Los Angeles Fire Department - Station 50 3036 Fletcher Drive
Unit 3	Los Angeles Fire Department - Station 35 1601 Hillhurst Avenue
Unit 4	Los Angeles Fire Department - Station 56 2759 Rowena Avenue
Unit 5	Los Angeles Fire Department - Station 89 7063 Laurel Canyon Boulevard
Unit 6	Los Angeles Fire Department - Station 86 4305 Vineland Avenue
Unit 7	City of Burbank Fire Department - Station 15 1420 W. Verdugo Ave.

Source: LAFD, 2004.

As indicated in Table 3.13-1, seven local LAFD and Burbank FD stations would serve the pipeline alignment. Fire protection could be required at a project construction site in the event of a construction accident. The likelihood of an accident requiring such a response would be low. Overall, project construction would not occur in areas of high fire danger; the biggest potential hazard would be fire associated with dry vegetation along the route, specifically within Units 1a, 1b, 2, 3 (northern portion), and 7 (southern portion). However, watering activities associated with dust suppression for disturbed areas would reduce the potential for this type of accident to occur. Therefore, the service capacities of local fire departments in which accidents could occur would not be adversely affected by the proposed project. Additionally, emergency access to the construction sites would be maintained during construction. Therefore, no impacts to fire protection services would occur.

ii) Police protection?

NO IMPACT. The City of Los Angeles Police Department (LAPD) provides police service to the City of Los Angeles. The City of Burbank Police Department (Burbank PD) provides police service to the City of Burbank. Police Stations serving the RSC pipeline alignment are summarized in Table 3.13-2.

Table 3.13-2. Police Stations Serving the Propose Project Area

RSC Pipeline Unit	Fire Station Location
Unit 1	LAPD Hollywood Community Police Station 1358 N. Wilcox Avenue
Units 2, 3, and 4	LAPD Northeast Community Police Station 3353 San Fernando Road
Units 5 and 6	LAPD North Hollywood Community Police Station 11640 Burbank Boulevard
Unit 7	City of Burbank PD 200 N. Third Street

Source: ZIMAS, 2004.

According to Officer Tanya Hanamaikai of the Crime Prevention Unit, Community Relations Section of the LAPD, the proposed RSC Project would not impact the LAPD's ability to serve the area (LAPD, 2004). Officer Hanamaikai estimates that the service response time to each unit of the proposed alignment would be approximately 10 minutes. Because the proposed project does not include the construction of residential housing or generate the need for additional employees (refer to Section 3.12, Population and Housing), the project would not reduce the officer to population ratio, nor would the relatively limited additional demand substantially affect the provision of public police services of the LAPD or Burbank PD. The proposed project would include security features such as controlled construction access and nighttime security lighting, which would reduce the demand for police protection. Emergency police access to the construction sites would be maintained during construction, as required by the City of Los Angeles and the City of Burbank. Therefore, no impacts to police protection services would occur.

iii) Schools?

NO IMPACT. The demand for new or expanded school facilities is generally associated with an increase in housing or population. As described above and in Section 3.12, Population and Housing, the proposed project would neither induce population growth through the need for new employees nor result in new housing. Thus, the proposed project would not increase the need for new or expanded school facilities. Therefore, no impact on schools within the project vicinity would occur.

iv) Parks?

NO IMPACT. The demand for new or expanded parks is generally associated with an increase in housing or population. As described above and in Section 3.12, Population and Housing, the proposed project would neither induce population growth through the need for new employees nor result in new housing. Thus, the proposed project would not increase the need for new or expanded park facilities. Therefore, no impact on parks within the project vicinity would occur.

v) Other public facilities?

NO IMPACT. The demand for new or expanded hospital, library, power/data lines, and roadways is generally associated with an increase in housing or population. As described above and in Section 3.12, Population and Housing, the proposed project would neither induce population growth through the need for new employees nor result in new housing. Thus, the proposed project would not increase the need for new or expanded public facilities. Project implementation would not require new or altered public utilities or infrastructure services above existing conditions. No impacts would occur.

3.14 Recreation

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

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?

NO IMPACT. The increase in use of recreational facilities is generally spurred by regional population growth. As demonstrated in Section 3.12, Population and Housing, the proposed project would not induce growth, but would instead replace an existing water line to better serve an existing population in a previously developed area. Therefore, the proposed project would not induce population growth. As such, the proposed project would cause no increase in use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

b. Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

LESS-THAN-SIGNIFICANT IMPACT. The proposed project includes a water supply pipeline, an inlet structure, and appurtenant structures necessary for the operation and maintenance of the pipeline. The proposed project would not include the construction of or induce expansion of any recreational facilities. Therefore, the proposed project would have less-than-significant impacts on recreational facilities.

3.15 Transportation and Traffic

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

a. Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

POTENTIALLY SIGNIFICANT IMPACT. The proposed project itself, upon completion, would not affect local traffic conditions. However, transportation impacts would be associated with construction activities required for the proposed RSC pipeline infrastructure. The proposed pipeline would be located in public street rights-of-way, LADWP property, and LADWP utility easements in the North Hollywood, Silver Lake, and Los Feliz communities (including Griffith Park) within the City of Los Angeles and the City of Burbank. Construction activities within public streets would require temporary closures, detours, and delineation of existing traffic lanes around the work area, resulting in traffic delays and increased traffic volumes on surrounding roadways that may significantly impact existing circulation in the area and the traffic load and capacity of the surrounding street system. The change in traffic volumes and patterns from existing conditions to future conditions with and without the proposed project construction will be determined and evaluated as part of the EIR.

b. Would the project cause, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways to be exceeded?

POTENTIALLY SIGNIFICANT IMPACT. Because construction activities associated with the proposed project would occur within public streets and require closures, detours, and delineation of existing traffic lanes around the work area, it is anticipated that the proposed project could generate traffic during construction that may significantly impact, either cumulatively or individually, levels of service established by the Los Angeles County Congestion Management Agency. The level of service of potentially impacted streets will be determined and evaluated as part of the EIR.

c. Would the project 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?

NO IMPACT. Although Unit 5 of the proposed project is located approximately one mile west of the Bob Hope Airport, the proposed project alignment is not located within the Airport Planning Boundary. According to the Burbank General Plan, however, part of the proposed project would be within the Airport Approach Area for Bob Hope Airport, which imposes restrictions on building heights (City of Burbank, 1988). For example, at the north end of the pipeline alignment along Lankershim Boulevard, which is the closest point on the alignment to Bob Hope Airport, construction equipment heights would be limited to approximately 50 feet without FAA approval. Per the Federal Code of Regulations, 49 CFR Part 77 (§77.15), construction would not need approval if the equipment were to be shielded by existing structures of a permanent and substantial character of equal or greater height, and would be located in the congested area of a city where it is evident beyond all reasonable doubt that the equipment would not adversely affect safety in air navigation. LADWP would obtain FAA approval as necessary to meet the height limitations specified. Therefore, construction of the proposed project would not affect airport activities during construction.

Operation of the proposed project would occur underground and within existing structures (NHPS), therefore building height restrictions would not be exceeded. The proposed project does not propose any uses that would change air traffic patterns or generate air traffic. As such, safety risks associated with a change in air traffic patterns would not occur.

d. Would the project substantially increase hazards because of a design feature or incompatible uses?

POTENTIALLY SIGNIFICANT IMPACT. The proposed project could result in increased conflicts between automobile traffic, buses, and pedestrians. Although design features such as sharp curves or other hazardous conditions do not exist in the area, the increased traffic levels in the immediate vicinity of the route during construction, in addition to the increased number of vehicular turning movements resulting from detours, could result in greater potential for traffic accidents to occur.

Furthermore, the increase in traffic levels during construction could conflict with existing pedestrian activity along commercial corridors and through Griffith Park. The EIR will include a pedestrian survey and an analysis of potential areas of risk to pedestrians and others. Traffic and pedestrian safety issues will be examined further in the traffic study to be prepared as part of the EIR.

e. Would the project result in inadequate emergency access?

POTENTIALLY SIGNIFICANT IMPACT. Emergency access to the construction route would be maintained during construction. However, the majority of project construction and staging would be within existing roadways and could interfere with access and movement of emergency vehicles to surrounding properties. The EIR will consider mitigation measures, such as coordination with appropriate permitting agencies and the maintenance of adequate emergency vehicle access, to reduce impacts.

f. Would the project result in inadequate parking capacity?

POTENTIALLY SIGNIFICANT IMPACT. Temporary closures, detours, and delineation of existing traffic lanes along the proposed project route could result in the temporary elimination of existing street parking and access to existing off-street parking facilities during project construction. Therefore, the EIR will include an analysis of potential impacts to existing street parking and off-street parking facilities as a result of proposed project construction activities.

g. Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

POTENTIALLY SIGNIFICANT IMPACT. Temporary closures, detours, and delineation of existing traffic lanes along the proposed project route could result in the temporary elimination of existing public bus, bicycle, or equestrian facilities during project construction. The proposed project route is accessible and serves various Metropolitan Transportation Authority (MTA) bus lines within the City of Los Angeles and the City of Burbank. Bicycle lanes and locking racks may exist along the route and could be impacted by potential traffic lane and sidewalk closures required during project construction. Equestrian trails, specifically in the vicinity of Buena Vista Park, could also be temporarily closed due to project construction. Therefore, the proposed project could have an adverse effect on policies supporting the use of alternative transportation. The EIR will include an analysis of potential impacts to alternative transportation facilities as a result of the proposed project.

3.16 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e. Result in a determination by the wastewater treatment provider, which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

UTILITIES AND SERVICE SYSTEMS - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

LESS-THAN-SIGNIFICANT IMPACT. The sanitary sewer system that serves the area of the proposed project route is operated under the jurisdiction of the City of Los Angeles Department of Public Works, Bureau of Sanitation. The City's wastewater collection system includes over 6,500 miles of major interceptor and mainline sewers, five central outfall sewers, eight maintenance yards, and 55 pumping plants. The Hyperion Treatment Plant (HTP) provides the majority of the City's wastewater treatment needs. The current Year 2003 daily average dry weather flow capacity of the HTP is 450 million gallons per day (mgd). As of April 2002, HTP treated an average dry weather flow of approximately 331 mgd. Wastewater collected in the proposed project area is conveyed to the HTP by major interceptor sewers that are fed by smaller collector systems that extend throughout the area.

During construction, the amount of wastewater generated by construction workers, including possible releases of hydrostatic test water, if approved, into the Los Angeles City sanitary sewer, would be considered a short-term minimal impact and would not result in a permanent increase to the treatment plant that receives the wastewater. Therefore, construction impacts to wastewater treatment would be less than significant.

Upon completion of the proposed RSC pipeline and inlet structure, no further wastewater generation would occur. Therefore, because the wastewater flows associated with operation of the proposed project would not introduce any new wastewater to any treatment plants daily capacity, the proposed project would be within the requirements of the Los Angeles Regional Water Quality Control Board and would result in no impacts to wastewater treatment providers.

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?

LESS-THAN-SIGNFICANT IMPACT. As stated above in Section 3.16(a), the existing wastewater treatment facilities serving the RSC pipeline alignment would be adequate to provide wastewater services during construction and operation of the proposed project.

LADWP is responsible for supplying, conserving, treating, and distributing water for the City of Los Angeles, including the proposed project route. The LADWP obtains water from wells in the local groundwater basin and the Los Angeles Aqueduct System, purchases water from the Metropolitan Water District of Southern California, and also receives recycled water from treatment and reclamation plants.

The proposed project may require water during site grading for dust suppression purposes. Due to the short-term nature of construction, the water consumed would be considered less than significant and would not impact the local water supply. Operation of the RSC pipeline and inlet structure would not result in increased potable water use. Therefore, water consumption associated with the proposed project would not require or result in the construction of new water treatment facilities or the expansion of existing facilities.

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?

LESS-THAN-SIGNIFICANT IMPACT. Project construction would require trenching and excavation activities within local streets that contain stormwater drainage facilities. These disruptions would be considered short-term and temporary. Upon completion of each segment of RSC pipeline, replacement (as needed) of any existing on-site storm drains would occur as part of the construction activities. During construction, catch basins and storm drain piping would be relocated to maintain existing drainage. Therefore, because existing drainage patterns would not be altered, and any existing stormwater infrastructure that may be removed during construction would be replaced, less-than-significant impacts to stormwater drainage facilities would occur.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

NO IMPACT. As stated above in Section 3.16(a) and (b), the existing water and wastewater treatment facilities serving the RSC pipeline alignment are anticipated to be adequate to provide wastewater, domestic potable water service, and fire flows for the area. No impacts would occur.

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?

NO IMPACT. As stated above in 3.16(a), the existing wastewater treatment facilities serving the RSC pipeline alignment are anticipated to continue to provide wastewater services for the area. The proposed project would not require the construction of new wastewater treatment facilities or the expansion of existing facilities. Therefore, no impacts to wastewater treatment providers are anticipated.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

LESS-THAN-SIGNIFICANT IMPACT. Within the City of Los Angeles, solid waste management, including collection and disposal services and landfill operation, is administered by various public agencies and private companies. Table 3.16-1 indicates the landfill facility that would likely serve the proposed project area and the most recent permitted disposal, daily disposal, remaining capacity, and permit status. In addition, four unclassified (inert waste) landfills in Los Angeles County are permitted to accept inert waste and construction/demolition debris. The most recent permitted disposal capacity, daily disposal rates, remaining capacity, and permit status for the unclassified landfills serving the proposed project area are also shown in Table 3.16-1.

The proposed project would generate demolition and construction debris during project construction, primarily in the form of soil spoils. Spoils from cuts, including cuts in streets, would typically be used as backfill materials at the site of origin. Materials unsuitable for backfill use and economically not usable for other purposes would be disposed of in accordance with local and county guidelines in available landfills. Because the amount of backfill is unknown at this time, estimates of the total tons per day of solid waste debris from demolition activities associated with the proposed project are unavailable. During construction, recycling and on-site re-use of construction materials would occur when possible. Table 3.16-1 lists the four unclassified landfills likely to be used for disposal of demolition and construction debris.

Table 3.16-1. Existing Landfills Available to the Project Site

Name	Location	Permitted Daily Disposal (Tons)	Average Daily Disposal (Tons)	Remaining Capacity (Million Tons)	Permit Expiration Date
Sunshine Canyon (Class III)	Sylmar	12,100	3,481	90.0	2027
Azuza Land and Reclamation (Unclassified)	Azuza	6,500	500	48.93	Project Completion
Nu-Way Live Oak (Unclassified)	Irwindale	6,000	1,834	N/A	Project Completion
Peck Road Gravel Pit (Unclassified)	Monrovia	1,210	990	2.38	Project Completion
Reliance Pit No. 2 (Unclassified)	Irwindale	6,000	2,233	N/A	Project Completion

Sources: California Integrated Waste Management Board, California Waste Facilities, Sites, & Operations Database, downloaded July 13, 2000 and February 19, 2002 from http://www.ciwmb.ca.gov/SWIS/; California Integrated Waste Management Board, Permitting and Enforcement Committee, Agenda Item 3, March 19, 1998; Williams, Timothy, Board of Supervisors OKs Expansion of Chiquita Canyon Landfill, Los Angeles Times, February 26, 1997; City of Los Angeles, Draft Subsequent Environmental Impact Report Sunshine Canyon Landfill, SEIR 91-0377-ZC/GPA, SCH No. 92041053.

The known total permitted daily disposal at the four identified unclassified landfills is 19,710 tons and the actual daily disposal is 5,557 tons, which yields a remaining total permitted capacity of 14,153 tons per day (The remaining daily permitted capacity is the average daily disposal subtracted from the permitted daily disposal.). While the project would increase solid waste generation as a result of demolition activities, it is not anticipated that the tons per day of solid waste generated would account for a significant percent of the total combined remaining daily permitted capacity. Therefore, waste generated by demolition and construction activities would not exceed the available capacity at the unclassified landfills serving the project area that would likely accept construction and demolition debris generated by the proposed project. Additionally, recycling and on-site re-use of construction materials would further minimize the amount of construction solid waste generation. Construction solid waste impacts would be short-term and less than significant.

Upon completion of the proposed RSC pipeline and inlet structure, no permanent increase in solid waste generation would occur. The proposed project would be an unmanned water pipeline facility and would not require any additional staff to oversee facility operations. Therefore, solid waste associated with operation of the proposed project would not introduce any increase in solid waste generation to the Sunshine Canyon landfill facility serving the project area. No impacts would occur.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

NO IMPACT. As stated above in 3.16(f), existing solid waste facilities serving the proposed project area are anticipated to continue to provide solid waste services in compliance with existing federal, state, and local statutes and regulations related to solid waste. The LADWP complies with all applicable laws and regulations related to solid waste generation, collection, and disposal in the County of Los Angeles. The proposed project would result in a short-term and temporary increase in solid waste generation during project construction, but would not, directly or indirectly, affect standard solid waste operations of the facility, which inherently is in compliance with applicable regulations. Upon completion of the proposed RSC pipeline and inlet structure, no permanent increase in solid waste generation would occur. The proposed project would be an unmanned facility and would not require any additional staff to oversee facility operations. Therefore, solid waste associated with operation of the proposed project would not introduce any increase in solid waste generation to the landfill facilities serving the project area. Recycling activities during project construction would ensure that the proposed project would be in compliance with the California Integrated Waste Management Act of 1989 (AB 939), the County of Los Angeles Source Reduction and Recycling

Element, and the County of Los Angeles Countywide Integrated Waste Management Plan as described above. No impacts related to applicable solid waste regulations would occur.

3.17 Mandatory Findings of Significance

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

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?

LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The preceding Biological Resources analysis (Section 3.4) does not reveal any significant unmitigable impacts to the habitat of fish or wildlife species. Based on these findings, the proposed project is not expected to degrade the quality of these environments. The majority of the proposed pipeline route is covered in impervious surfaces in the form of existing roadways. These areas contain limited landscaping, which does not typically support sensitive species. As presented in Section 3.4, Biological Resources, there are no special status plants or wildlife species observed to occur within, or that have been located within, 500 feet of the construction footprint of the proposed project alignment. However, the project alignment would traverse residential, park and open space areas that support native and nonnative trees and shrubs that provide habitat to birds protected under the Migratory Bird Treaty Act. This is particularly the case in Units 1a, 1b, 2 and 3. In addition there are wildlife populations in Griffith Park that move freely between natural and recreational areas. In addition, the proposed project alignment may directly eliminate or indirectly impact mature native oak trees greater than 8 inches diameter that are covered by the City of Los Angeles Tree Protection Ordinance, Sec. 46.00 of the Municipal Code. As outlined in Section 3.4, Biological Resources, Mitigation Measures BIO-1 through BIO-9 are presented to reduce construction disturbances associated with the proposed project on plant and wildlife habitat to a less-than-significant level. Therefore, the proposed project is not expected to have the potential to substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed in Section 3.5, Cultural Resources, the proposed project alignment travels through areas considered to be sensitive to cultural resources. Historical record searches and field reconnaissance have resulted in the identification of standing structures of historic significance or buried resources (e.g., refuse concentrations or evidence of habitation) along the proposed alignment. Therefore,

although no resources have been specifically identified within the proposed project alignment, construction would require a considerable amount of excavation and have the potential to uncover additional cultural and paleontological resources. To reduce impacts associated with the potential disturbance of cultural resources to a less-than-significant level, Mitigation Measures CUL-1 through CUL-5 are proposed and shall be implemented. The inclusion of these mitigation measures would ensure that any potential impacts to important examples of the major periods of California history or prehistory would be less than significant.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)

POTENTIALLY SIGNIFICANT IMPACT. All environmental issue areas were considered as part of this Initial Study. Of the seventeen issue areas, only three are expected to be significant and will be evaluated further in the EIR. All other issue areas were identified as having no impacts, less-than-significant impacts, or less-than-significant impacts with mitigation incorporated.

As discussed in Section 3.3, Air Quality, Section 3.11, Noise, and Section 3.15, Transportation/Traffic, the proposed project could potentially result in significant cumulative impacts to air quality, noise, and traffic. Further analysis of these issues is recommended as part of the environmental review process.

c. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?

POTENTIALLY SIGNIFICANT IMPACT. All environmental issue areas were considered as part of this Initial Study. Of the seventeen issue areas, only three are expected to be significant and will be evaluated further in the EIR. All other issue areas were identified as having no impacts, less-than-significant impacts, or less-than-significant impacts with mitigation incorporated.

As discussed in Section 3.3, Air Quality, Section 3.11, Noise, and Section 3.15, Transportation/Traffic, the proposed project could have environmental effects, which could cause direct or indirect substantial adverse effects on human beings. Further analysis of these issues is recommended as part of the environmental review process.

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5. Report Preparation

Table 5-1. List of Preparers and Reviewers

Name/Organization	Project Role
Los Angeles Department of Water and Power	
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Aspen Environmental Group	
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George Hampton	Previous Task Order Manager
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Scott Debauche	Population and Housing, Public Services, Traffic and Transportation, Utilities and Service Systems
Matt Fagundes	Air Quality, Noise
Shari Koslowsky	Biological Resources
Carolina Morgan	Permits, Mineral Resources, Hydrology and Water Quality
Tatiana Inouye	Mineral Resources
Kathleen Robertson	Aesthetics, Agricultural Resources, Recreation, Land Use and Planning
Negar Vahidi	Land Use and Planning
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Geotechnical Consultants, Inc.	
Aurie C. Patterson, R.G.	Geology and Soils
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Jeanette McKenna	Phase I Cultural Resources Survey