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## **APPENDICES**

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**APPENDIX A**  
**SCOPING MATERIALS**

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**A.1 Notice of Preparation**

**A.2 Initial Study – River Supply Conduit Improvement – Upper  
Reach Project**

**A.3 Comment Letters**

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**APPENDIX A.1**  
**NOTICE OF PREPARATION**

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ANTONIO R. VILLARAIGOSA  
Mayor

Commission  
H. DAVID NAHAI, *President*  
EDITH RAMIREZ, *Vice President*  
MARY D. NICHOLS  
NICK PATSAOURAS  
FORESCEE HOGAN-ROWLES  
BARBARA E. MOSCHOS, *Secretary*

RONALD F. DEATON, *General Manager*

## Notice of Preparation

January 25, 2007

**To:** Agencies, Organizations, and Interested Parties

**SUBJECT:** Notice of Preparation of an Environmental Impact Report  
River Supply Conduit Improvement – Upper Reach  
Los Angeles Department of Water and Power, City of Los Angeles

The City of Los Angeles Department of Water and Power (LADWP), acting as the lead agency under the California Environmental Quality Act (CEQA), has determined that an Environmental Impact Report (EIR) will be prepared for the proposed River Supply Conduit Improvement – Upper Reach (proposed project). The project description, location, and the potential environmental effects of the proposed project are summarized below and are presented in more detail in the Initial Study. The Initial Study may be accessed via the internet at the following website: <http://www.ladwp.com/ladwp/cms/ladwp004156.jsp>. It is also available for public review at the following Los Angeles and Burbank Public Library locations:

Valley Plaza Branch 12311 Vanowen Street North Hollywood, CA 91605 (818) 765-0805	North Hollywood Regional 5211 Tujunga Avenue North Hollywood, CA 91601 (818) 766-7185	Buena Vista Branch Library 300 North Buena Vista Street Burbank, CA 91505 (818) 238-5620
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**Agencies:** The LADWP invites the views of your agency regarding the scope and content of the environmental information to be included in the EIR, relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by the LADWP when considering your permit or other discretionary approval your agency may issue for the proposed project.

**Organizations and Interested Parties:** Comments and concerns regarding environmental issues of concern associated with the proposed project are also requested from organizations and individuals.

Due to the time mandated by State Law, responses must be received by 5:00 p.m. **February 26, 2007**. Please indicate a contact person in your response and submit your response to the following:

Sarah Easley Perez  
Environmental Program Manager  
Los Angeles Department of Water and Power, Environmental Services  
111 North Hope Street, Room 1044  
Los Angeles, CA 90012.

If you require additional information, please contact Sarah Easley Perez at (213) 367-1276.

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**Project Title:** River Supply Conduit Improvement - Upper Reach

**Project Location:** The proposed project pipeline would be located in public street rights-of-way and in an existing utility easement (Whitnall Highway) in the North Hollywood and Hollywood communities within the City of Los Angeles and within the City of Burbank. 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 Forest Lawn Drive to the south. The proposed project pipeline would be located in the LADWP East Valley District service area.

**Project Description:** The LADWP proposes to construct a new larger pipeline to replace the Upper Reach of the existing River Supply Conduit (RSC) pipeline in a new alignment. The existing RSC pipeline has provided over 50 years of continuous service to the City of Los Angeles, and its reliability and capacity are near its design life limits.

Key reasons necessitating the project include the following: (1) existing pipeline does not currently meet California Department of Health Services Drinking Water Regulations, (2) air entrainment causes restricted flow capacity, (3) an increased pipe capacity is needed to provide maximum operational flexibility (4) stringent water regulations has resulted in loss of water storage, and (5) the existing concrete pipeline is susceptible to natural disaster risk. Therefore, LADWP has identified the following objectives for the proposed project:

- Install a new larger pipeline with supporting facilities in a new alignment
- Allow for maximum operational capacity, flexibility, and reliability
- Design and construct the pipeline using the latest technology and methods available
- Meet or exceed current governmental codes and regulations
- Decommission the existing Upper Reach pipeline.

The proposed pipeline would involve the construction of approximately 31,000 linear feet (about 5.9 miles) of 78-inch diameter welded steel underground pipeline, and would also include construction of appurtenant structures (e.g., maintenance/access holes, pumping station upgrades, flow meters, valves, and/or vaults). Construction of the proposed project pipeline would occur within existing street rights-of-way, an existing utility easement (Whitnall Highway), new easements, and in recreation areas within the Cities of Los Angeles and Burbank.

**Potential Environmental Effects:** The LADWP has prepared an Initial Study of the proposed project and has determined that four issue areas may be potentially significant: Air Quality, Noise, Recreation, and Transportation and Traffic. The remaining environmental issues have been determined to have no impact, less-than-significant impact, or less-than-significant impacts with mitigation incorporated. The Initial Study includes mitigation measures that when implemented would reduce Aesthetic, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Land Use impacts associated with the proposed project. Agricultural Resources, Mineral Resources, Population and Housing, Public Services, and Utilities and Service Systems would have no impact or a less-than-significant impact as a result of the proposed pipeline project. Therefore, the LADWP will prepare an EIR that evaluates in more detail the Air Quality, Noise, Recreation, and Transportation and Traffic impacts associated with the proposed project.

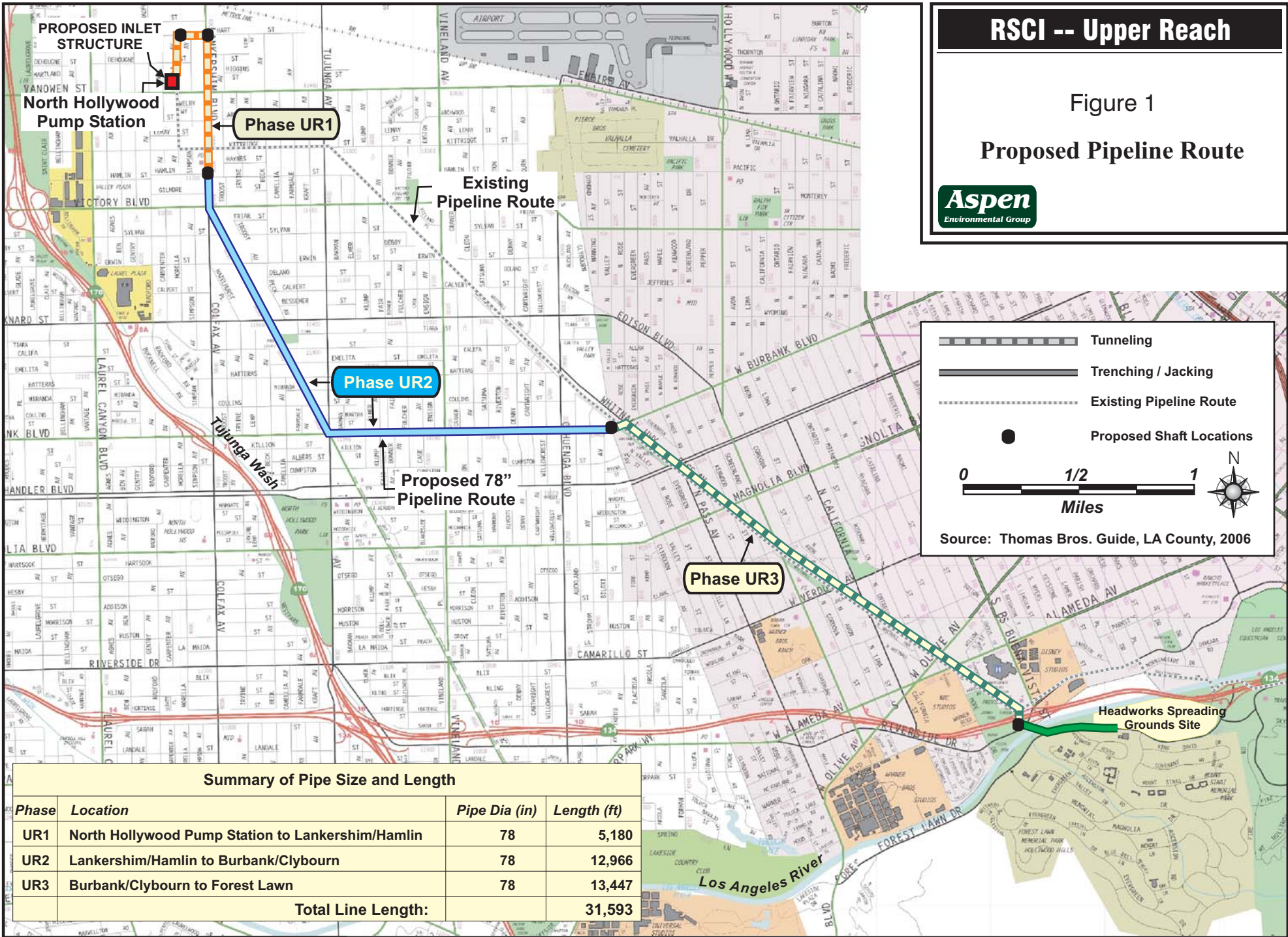
The EIR will also include analysis of a reasonable range of alternatives, including a “No Project” alternative.



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**Signature**

Charles C. Holloway  
Supervisor of Environmental Assessment



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**APPENDIX A.2**  
**INITIAL STUDY – RIVER SUPPLY CONDUIT IMPROVEMENT –**  
**UPPER REACH PROJECT**

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**DEPARTMENT OF WATER AND POWER  
CITY OF LOS ANGELES**

**INITIAL STUDY  
RIVER SUPPLY CONDUIT IMPROVEMENT  
UPPER REACH**

**January 2007**

**Prepared by:**

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

**Technical Assistance Provided by:**

Aspen Environmental Group  
30423 Canwood Street, Suite 215  
Agoura Hills, CA 91301





**Los Angeles Department of Water and Power  
RIVER SUPPLY CONDUIT IMPROVEMENT – UPPER REACH  
INITIAL STUDY**

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# **1. Project Information**

## **1.1 Project Title**

River Supply Conduit Improvement – Upper Reach (proposed project or Upper Reach)

## **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**

Sarah Easley Perez  
Environmental Program Manager  
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 Improvement – Upper Reach (proposed project or Upper Reach) pipeline would be located in public street rights-of-way, and Los Angeles Department of Water and Power (LADWP) easements, new easements, and in recreation areas in 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 170/134 (Hollywood Freeway) to the west and southwest, Interstate 5 (Golden State Freeway) to the east, and Forest Lawn Drive to the south. The Upper Reach pipeline would be located in the LADWP East Valley service area.

As illustrated in Figure 1-2, the proposed pipeline route would begin at the North Hollywood Pumping Station, travel north along Morella Avenue, east along Hart Street, south along Lankershim Boulevard, east along Burbank Boulevard, and then southeast along the Whitnall Highway utility corridor through the City of Burbank to the Headworks Spreading Grounds located along Forest Lawn Drive, on the south side of the Los Angeles River.

## **1.5 Council District**

The proposed project would be located in Council Districts 2, 4, and 6 of the City of Los Angeles. Approximately 11,900 linear feet (2.2 miles) of the proposed pipeline would also be located in the City of Burbank beginning at the intersection of Burbank Boulevard and Clybourn Avenue and extending through Buena Vista Park, which is owned by the City of Los Angeles.

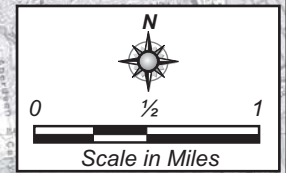
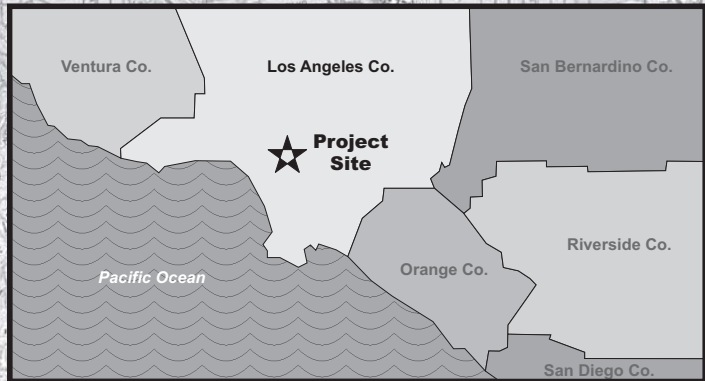
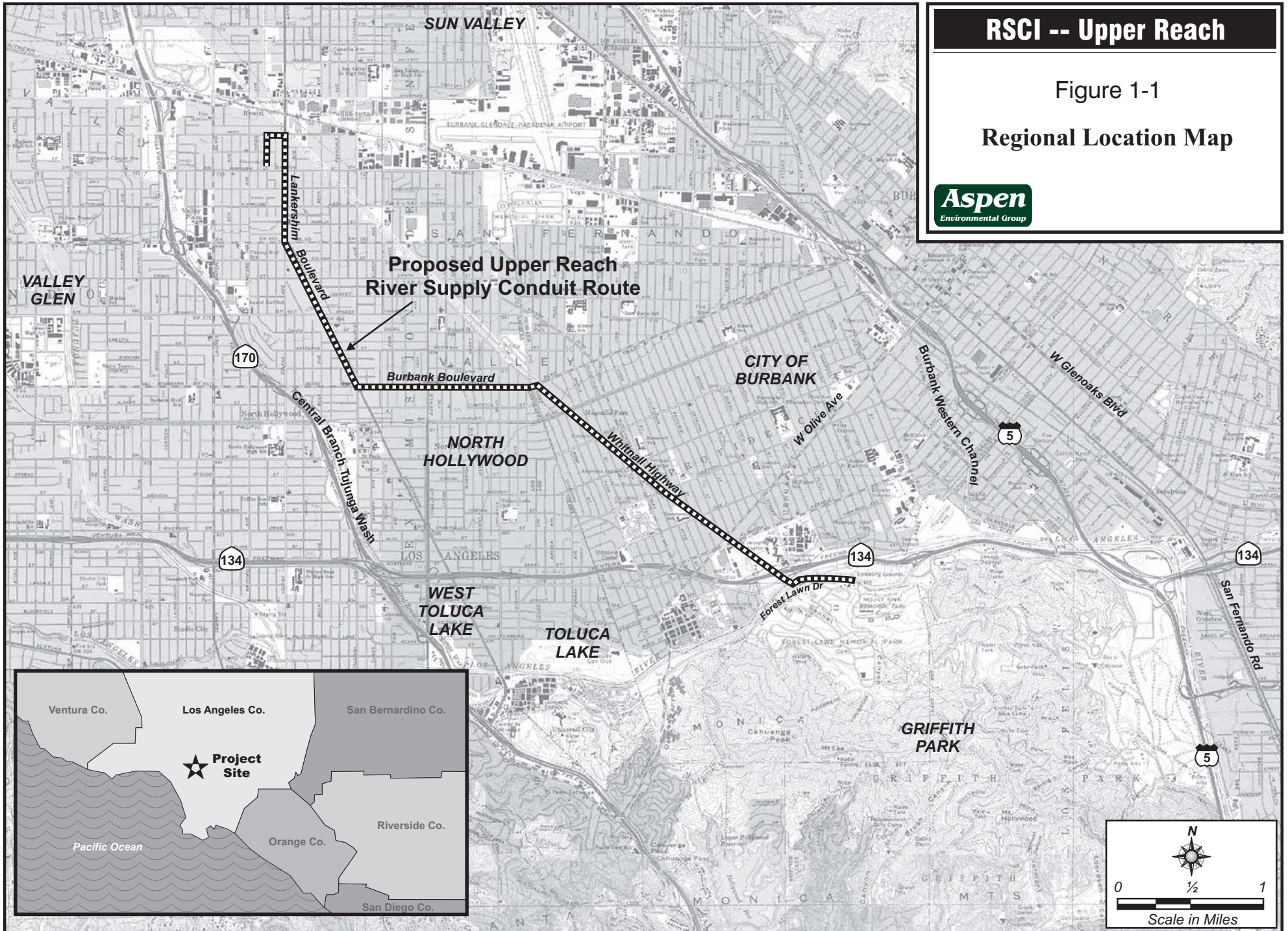
## **1.6 Project Sponsor's Name and Address**

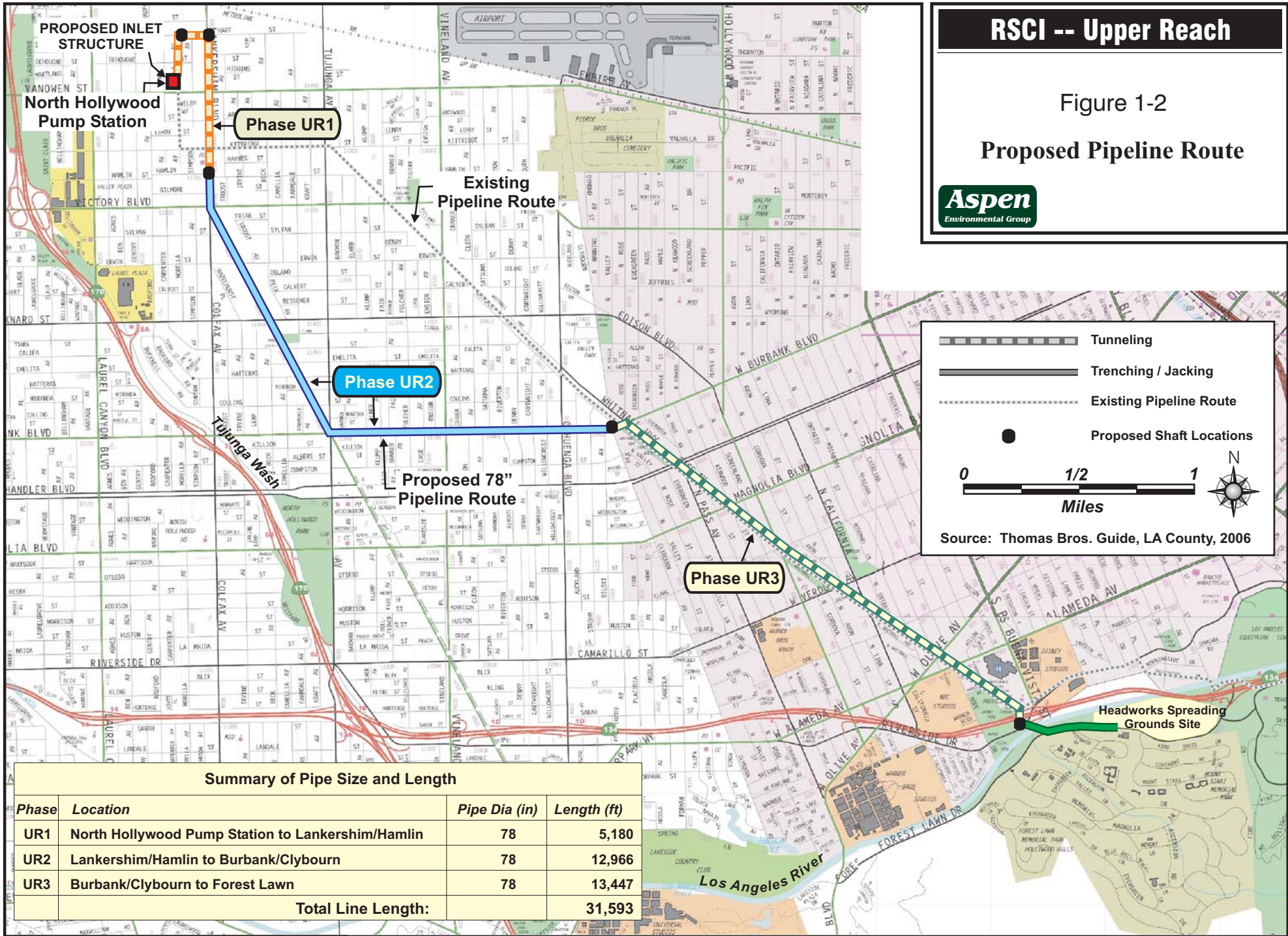
Los Angeles Department of Water and Power  
Water Engineering and Technical Services Division  
Project Planning and Development  
111 North Hope Street, Room 1348  
Los Angeles, CA 90012

# RSCI -- Upper Reach

Figure 1-1

Regional Location Map





# RSCI -- Upper Reach

Figure 1-2

Proposed Pipeline Route



Tunneling  
 Trenching / Jacking  
 Existing Pipeline Route  
 Proposed Shaft Locations

0                      1/2                      1  
 Miles

Source: Thomas Bros. Guide, LA County, 2006

Summary of Pipe Size and Length			
Phase	Location	Pipe Dia (in)	Length (ft)
UR1	North Hollywood Pump Station to Lankershim/Hamlin	78	5,180
UR2	Lankershim/Hamlin to Burbank/Clybourn	78	12,966
UR3	Burbank/Clybourn to Forest Lawn	78	13,447
<b>Total Line Length:</b>			<b>31,593</b>

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## 1.7 General Plan Designation

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

## 1.8 Zoning

As discussed above, the proposed Upper Reach 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 proposed pipeline route would pass through urban commercial zones interspersed with residential areas, as well as the existing Whitnall Highway utility (transmission) corridor. The southern portion of the Upper Reach would pass through Johnny Carson Park (owned by the City of Burbank), Buena Vista Park (owned by the City of Los Angeles), and tunnels under the Los Angeles River.

## 1.10 Project Description

The LADWP proposes to construct a new larger Upper Reach pipeline to replace the existing pipeline in a new alignment. The proposed project would involve the construction of approximately 31,600 linear feet (about 5.98 miles) of 78-inch diameter welded steel underground pipeline, and would also include construction of appurtenant structures (e.g., maintenance holes, regulator station, flow meters, valves, and or vaults). Construction of the proposed Upper Reach would occur within existing street rights-of-way, existing easements such as Whitnall Highway and Headworks Spreading Grounds, new easements, and recreation areas within the City of Burbank and City of Los Angeles. The project area is shown in Figure 1-1.

### Background

The existing Upper Reach pipeline is a major transmission pipeline in the LADWP water system. Built in the 1940s, the pipeline's purpose is to transport large amounts of water from the Van Norman Reservoir Complex and local groundwater wells to storage and distribution facilities in the central areas of the City of Los Angeles.

Approximately 60,000 feet in length, the existing pipeline begins at the North Hollywood Pump Station and ends at the Ivanhoe Reservoir. Hollingsworth Spillway, a structure located about midpoint on the existing pipeline, is used to control the pressure in the lower portion of the pipeline. The section of the existing pipeline north of Hollingsworth Spillway is referred to as the Upper Reach. About 70 percent of the existing Upper Reach is located in City of Los Angeles streets and property, with the remainder within City of Burbank easements. Various pipe sizes and material types were used to construct the existing Upper Reach. Approximately 98 percent is concrete pipe with the remainder steel pipe.

The existing pipeline has provided over 50 years of continuous service to the City of Los Angeles. However, numerous issues regarding regulations, system operation, reliability, and capacity require replacement of the existing Upper Reach. Key issues including water pressure regulations, air entrainment and increased capacity are further described in the next section.

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## LADWP's Project Objectives

The Upper Reach project proposes to replace the existing Upper Reach pipeline. The major objectives of the project are listed below:

- Install a new larger water pipeline with supporting facilities in a new alignment
- Allow for maximum operational capacity, flexibility, and reliability
- Design and construct the pipeline using the latest technology and methods available
- Meet or exceed current governmental codes and regulations
- Decommission the existing Upper Reach pipeline

Key reasons necessitating the project include the following:

- **California Department of Health Services Regulations.** Sections of the existing Upper Reach pipeline are un-pressurized or at low water pressures. Consequently, the pipeline is below current pressure requirements of the California Department of Health Services Drinking Water Regulations, Title 22, §64566(c). The proposed pipeline would meet minimum pressure requirements, which help to prevent cross-contamination from other buried utilities, particularly sanitary sewers.
- **Air Entrainment.** The proposed new pipeline would reduce air entrainment, or trapped air, which causes restricted flow capacity in the existing Upper Reach.
- **Pipe Capacity.** A larger diameter pipeline is needed for both current water consumption and projected future growth. Planned changes to the water system, including commissioning of new facilities and a different water disinfection method, will require new allowances for operational sequencing and phasing. The proposed pipeline, with its increased pipe capacity, would help provide maximum operational flexibility.
- **Storage Reduction.** More stringent water quality regulations have resulted in the loss of water storage within the LADWP distribution system. The proposed pipeline would improve operational capacity and flexibility.
- **Natural Disaster Risk.** The existing pipeline is constructed mainly of concrete pipe. The properties of this material may put the pipeline at greater risk for breakage during an earthquake or other natural disaster. The proposed welded steel pipeline would help reduce this risk.

## Proposed Pipeline Route

The proposed Upper Reach alignment is shown in Figure 1-2. To facilitate design and constructability of the proposed project, the Upper Reach has been divided into construction phases. Table 1-1 describes the three phases of the Upper Reach.

The proposed Upper Reach pipeline would be located in City of Los Angeles and City of Burbank streets, utility corridors, and parks (See Figure 1-2). The portion of the pipeline in the City of Burbank would be approximately 11,900 feet long, and the remaining approximately 19,700 feet would be in the City of Los Angeles. The majority of the proposed pipeline would be located within city streets surrounded by urban development including both residential and commercial zones, as well as the existing Whitnall Highway utility (transmission) corridor.



**Table 1-1. Summary of Route Phase(s)**

Phase and Location	City	Route
<b>UPPER REACH</b>		
Phase UR 1 North Hollywood Pump Station to Lankershim/Hamlin	Los Angeles	Morella Avenue from the North Hollywood Pump Station north to Hart Street Hart Street east to Lankershim Boulevard Lankershim Boulevard south from Hart Street to Hamlin Street
Phase UR 2 Lankershim/Hamlin to Burbank/Clybourn	Los Angeles	Lankershim Boulevard south from Hamlin Street to Burbank Boulevard Burbank Boulevard east to Clybourn Avenue/Whitnall Highway
Phase UR 3 Burbank/Clybourn to Headworks	Burbank Los Angeles	Burbank Boulevard east from Clybourn Avenue to Whitnall Highway Whitnall Highway southeast 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

The north end of the Upper Reach would begin at the North Hollywood Pumping Station, north of Vanowen Street at Morella Avenue, in the North Hollywood area of the City of Los Angeles. From the North Hollywood Pump Station, the pipeline would continue north along Morella Avenue, turning east onto Hart Street, then south onto Lankershim Boulevard, and east again onto Burbank Boulevard until reaching the Whitnall Highway. At this point the alignment would turn southeast and travel within the Whitnall Highway, continuing through Johnny Carson Park and Buena Vista Park, east of Bob Hope Drive. The pipeline would then cross the Los Angeles River to Forest Lawn Drive, and east to the west end of the Headworks Spreading Grounds site.

### Project Components

**Upper Reach 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. Right-of-way clearing
3. Excavation and Pipeline installation
4. Weld inspection
5. Applying protective coating to the weld joints
6. Backfilling
7. Hydrostatic testing and disinfection
8. Restoring and cleaning of affected construction areas

Once the proposed pipeline project is approved, a construction plan would be developed to, among other things, identify refueling operations. Refueling of construction equipment would take place along the work area rights-of-way. Absorbent material and temporary berms around the equipment staging areas would be used to contain spills, fluids, fuels, and lubricants.

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.

Construction of the proposed project would occur on public property, including street and utility corridor rights-of-way and municipal parks. Installation of the Upper Reach pipeline would be

accomplished by a combination of open-trench excavations, jacking, and traditional tunneling, 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 constrained to pipeline depths of 25 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 tunneled or jacked segment to enable installation of 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, 78-inch diameter pipe would be installed. The minimum trench depth would be 12 feet with a maximum of approximately 46 feet at approaches to jacking pits. The maximum trench width would be the pipe diameter plus two feet on either side of the pipe for the open trench method (10.5 feet for 78-inch diameter pipe). The maximum pit sizes for jacking or tunneling would be about 18 feet wide by 60 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:

- 16,700 feet of tunneling or jacking with steel or concrete cylinder casing;
- 14,893 feet of open trench excavation; and
- Jacking across seven (7) street intersections, including Lankershim Blvd./Burbank Blvd. and Burbank Blvd./Clybourn Ave.<sup>1</sup>, under the Los Angeles River from north of Riverside Drive (and south of Highway 134) to Forest Lawn Drive, and beneath existing storm drain on Forest Lawn Drive northeast of Memorial Drive.

Table 1-2 provides a summary of the proposed pipeline route's construction phase details, pipeline length, pipeline diameter, and general construction method(s). The construction methods presented in Table 1-2 are further described under "Pipeline Construction Methods" below.

**Table 1-2. Summary of Phase Characteristics and Construction Method**

Phase No.	Phase Details	Length (Feet)	Pipe Dia. (in)	Proposed Construction Method <sup>a</sup>
<b>UPPER REACH</b>				
UR 1	• North Hollywood Pump Station to Lankershim/Hamlin	5,180	78	Tunneling/ Jacking
UR 2	• Lankershim/Hamlin to Burbank/Clybourn	12,966	78	Open Trench/ Jacking
UR 3	• Burbank/Clybourn to Forest Lawn	13,447	78	Open Trench/Tunneling/ Jacking

Note:

a. Construction methods are to be finalized by the construction contractor.

**Proposed Regulator Station.** Pressure regulator stations are commonly used in water distribution systems. The regulator station's primary purpose is to reduce the pressure from a higher water source to supply a lower service area. This helps to economize the cost of water system facilities, while providing adequate pressures to the customer.

A typical regulator station is located in an underground vault and consists of several smaller parallel pipes or legs branching from the main pipe. A regulator valve installed on each pipe leg, controls pressure by how much the valve is opened or closed. Ancillary equipment is also required and may include isolation valves, ventilation system, pumps, pressure and flow sensors

<sup>1</sup> Only the confirmed jacking locations are listed. However, it is anticipated that some intersections will be added after the design phase is completed.

and recorders, electrical power, and instrumentation cabinets. Additionally, a relief station consisting of a vault and valve system is needed in association with the regulator station. In the event a regulator valve fails and remains open, the relief valve serves as backup to discharge water and avoid over-pressurization of the lower service area.

As part of the Upper Reach project, modification to an existing regulator station is required. The existing Morella & Vanowen Regulator Station can be used to supply water to the existing pipeline from another pipeline. Not normally used for daily operation, the existing regulator station will need to be upgraded to match improved flow capacity of the Upper Reach.

**Appurtenant Improvements.** The Upper Reach pipeline would also include construction of appurtenant structures as follows:

- Vaults
- Ventilation Systems
- Maintenance and Access Holes
- Flow Meters and Monitoring Equipment
- Electrical and Mechanical Cabinets
- Valves including isolation, air vacuum, and air release
- Blowoff Systems
- Cathodic Protection System and Test Stations

**Decommissioning of Existing Upper Reach Pipeline.** The existing pipeline, from the North Hollywood Pump Station to the Hollingsworth Spillway Structure, would be decommissioned after completion of proposed Upper Reach pipeline. The existing pipeline would be removed from service and retained as an asset. Options for future use of the existing pipeline are currently under study.

### 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 August 2008, work completed in October 2012, for a total of 51 months.

**Table 1-3. Proposed Construction Schedule**

Phase	Start Date	Completion Date	Estimated Duration (Days)
UR 1	August 2008	January 2011	630
UR 2	December 2010	October 2012	468
UR 3	November 2008	September 2011	748

As a worse-case scenario, up to three open trench and three jacking operations, in addition to tunnel operations, are anticipated to occur simultaneously over three pipeline phases (e.g. UR 1, 2, and 3) during the peak construction period. Therefore, approximately 84 personnel (22 employees times three open trench activities, plus four employees times three jacking operations, plus six employees for tunnel 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 70 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.

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). It is estimated that a typical construction activity would require the closure of up to 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.

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

Activity	Personnel	Equipment		Refueling
		Quantity	Type	
Open Trench	22	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	4	2
1	Dump trucks			Off-site
1	Excavator			On-site
1	Crane			On-site
Tunneling	6	2	Pickups	Off-site
		1	Dump trucks	Off-site
		1	Excavator	On-site
		1	Crane	On-site
Pipe Delivery (40 ft/load)	2	2	Trailer truck	Off-site

Note:

- a. The activity/pipeline construction methods presented are further described under "Pipeline Construction Methods."

**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 the Headworks Spreading Grounds, Buena Vista Park north of Riverside Drive, open right-of way within the Whitnall Highway, or local LADWP facilities, including the North Hollywood Pump Station.

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 leaks.

**Construction Sites.** Most of the heavy construction equipment would be delivered on 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

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at other storage yards in the area. All equipment would be lubricated, refueled, and repaired offsite by the contractor or local servicing companies.

All construction materials would be delivered to the construction areas by truck on existing roadways. For pipe delivery by truck, it is assumed that each truck would carry 40-foot lengths of pipe. Materials that would be truck transported to the site would include: the pipe sections, pipe fittings, and valve assemblies to form the new Upper Reach pipeline; shoring materials to maintain trench integrity during construction; welding materials; cement, aggregate, gravel, sand, and slurry (from local plants) for backfill; asphalt for re-paving; signs and fencing for identification and protection of construction and staging areas; fuel and lubrication for equipment; drinking water for construction crew; 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 rods, and coating materials (i.e., cement mortar) 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. LADWP's contractor would sort and recycle all recyclable materials. 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<sup>2</sup> the pipeline. Non-hazardous wastes would be hauled to a sanitary landfill; hazardous wastes would be sent to a permitted treatment or disposal facility. Hydrostatic test water would be treated to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) permit. Test water would be then discharged into nearby storm drains, or discharged to sanitary sewer systems 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. However, the LADWP would use alternative fuels (i.e., propane, use of electrical grid for stationary motors) where available and feasible for construction equipment. 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 construction phases (UR 1, UR 2, and UR 3). 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. Hydrostatic test water would be pumped from the pipeline and allowed to gutter flow to the nearest storm drain or sanitary sewer system. Best management practices would be used to protect affected downstream waterways during construction.

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<sup>2</sup> 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.

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Construction along the proposed Upper Reach pipeline route would require onsite diesel fuel generators for the temporary supply of electricity. As noted earlier, where available and feasible, alternative fuels would be used. 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 appurtenant structures which include maintenance holes, flow meters, valves, and vaults. In general, the process consists of site preparation, excavation and shoring, pipe installation, trench backfilling, and site restoration (where applicable). The proposed project would be phased in work areas, typically between 800 and 1,000 feet in length. The work areas are contained within a 1,400 foot construction zone. Construction usually progresses along the alignment with the maximum length of open trench at one time being approximately 500 feet. Traffic detours would begin at least 200 feet on either side of the 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 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. 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

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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, 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 to 60 feet long, 12 feet wide and 15 to 55 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 (84-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 (72-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.

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*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 (restripping) 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.

*Tunnel Excavation.* The large diameter tunnels are excavated using a tunnel boring machine (TBM). For tunneling below the groundwater level without dewatering, pressurized-face TBMs are used to stabilize the tunnel face and prevent water from entering the tunnel. One of two basic types of TBMs may be used: (1) Slurry Pressure Balance (SPB) TBM or (2) Earth Pressure Balance (EPB) TBM.

Excavation by EPB machine supports the tunnel face by pneumatically pressurizing the excavated soil (muck) within a chamber behind the cutter head. Muck is removed from the chamber by a screw conveyor and then transported out of the tunnel by means of a conveyor belt and/or muck cars on rails. The granular, cohesionless materials anticipated require addition of soil conditioners to the native soil prior to excavation to increase stability and minimize potential for tunnel collapse. Conditioners include bentonite, polymers and foams.

Excavation by SPB machine supports the tunnel face using a pressurized bentonite slurry mix within the cutter head. The slurry and excavated muck mixture is pumped through slurry lines from the tunnel face, back to the surface work area to a separation plant equipped with a shaker and cyclone to separate sand, gravel, and silt from the slurry. The slurry is recycled back into the system and the sand, gravel, and silts are transported to appropriate disposal sites. SPB machines can also be fitted with a stone crusher to allow tunneling through soils with intermittent cobbles and boulders.

The tunneling process proceeds until a fully supported tunnel has been constructed. Typical tunnel supports include steel or pre-cast concrete linings. Support linings are lifted into the proper position and bolted or otherwise fixed in place. Installation of tunnel liner 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 supports that allow for adjustments in the pipe's alignment. The joints of adjoining pipe segments are welded as pipe placement occurs. Once the entire length of pipe has been placed in the proper position and the joints welded, 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.

### Operation and Maintenance

**System Operation.** Future improvements to the water system infrastructure will allow increased supply to the Upper Reach through the North Hollywood Pump Station. Operation of the Upper Reach 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, isolation valves, 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 Upper Reach 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).

### 1.11 Other Public Agency Approvals

The following permits and approvals listed in Table 1-5 below would be obtained for the proposed project, as applicable.

**Table 1-5. Permits and Approvals**

Agency/Department	Permit/Approval	Description
<b>Federal</b>		
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).

Agency/Department	Permit/Approval	Description
<b>State of California</b>		
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.
California Department of Transportation (Caltrans)	Encroachment Permit	An Encroachment Permit is required for trenching activities near State Route 134 on-and-off ramps.
California Department of Fish and Game (CDFG)	Streambed Alternation Agreement	A Streambed Alternation Agreement may be required if construction activities result in minor impacts to riparian habitats.
California Department of Toxic Substances Control (DTSC)	Approval as necessary	Coordinate with DTSC, as needed, to address the classification and disposal of contaminated soils if encountered during construction.
<b>County of Los Angeles</b>		
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.
<b>City of Los Angeles</b>		
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. Electrifier 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.
Department of Public Works, Bureau of Street Services, Street Tree Division	Tree Permit	A Permit must be obtained from the Bureau of Street Services, Street Tree Division 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.

Agency/Department	Permit/Approval	Description
Department of Transportation	Traffic Management Plan	Approval is needed for temporary lane closures and traffic/transportation – related issues during construction.
<b>City of Burbank</b>		
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 Johnny Carson Park and 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.

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## 2. Environmental Determination

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### 2.1 Environmental Factors Potentially Affected

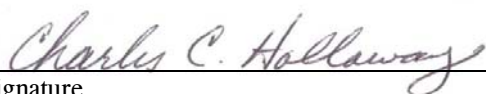
The environmental factors checked below would be potentially affected by that project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

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

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

\_\_\_\_\_  
January 25, 2007  
Date

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

**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.

**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 (Glendale Freeway), which is approximately 7.5 miles northeast of the project area. State Interstate 210 (Foothill Freeway) is eligible as a scenic highway, but has not been officially designated. The 210 Freeway is approximately five miles north from the northern-most end of the proposed route.

**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. The proposed project pipeline would be located underground and would not be 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), in an existing utility corridor (Whitnall Highway), or in 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. Therefore, any visual change would be slight and would not substantially degrade the existing character of the area.

**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.** As discussed in the project description, construction 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 Saturdays. In the winter months, this may require the use of lighting to illuminate the construction work areas. As such, construction of the proposed project without mitigation measures incorporated would have the potential to create a new source of substantial light or glare, which would adversely affect nighttime views in the project area and could be disruptive to residences along the construction route. To avoid light- or glare-related impacts or reduce impacts to a less-than-significant level, 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.

### 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 Impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Involve other changes in the existing environment, which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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, 2006; 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, 2004b).

**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 subject to a Williamson Act contract (DOC, 2004b). Near (less than 0.5 miles) the project alignment there is property zoned for agriculture, which is currently used for non-agricultural uses consistent with the surrounding land uses (cemetery/open space). This property is located south of the alignment (ZIMAS, 2006).

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

**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 Upper Reach pipeline, which is over 50 years old and nearing its reliability and capacity design life limits. 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 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.

**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	Operational Phase
	(lbs/day)	(lbs/day)
Reactive Organic Gases (ROGs)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO <sub>x</sub> )	100	55
Sulfur Oxides (SO <sub>x</sub> )	150	150
Particulates (PM <sub>10</sub> )	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<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10</sub>. In addition, fugitive dust in the form PM<sub>10</sub> 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 Upper Reach pipeline would be minimal and only generated during periodic maintenance and inspection activities.

- 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.** Construction of 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 SIGNIFICANT IMPACT.** The proposed project could result in temporary exposure of sensitive receptors (e.g., local residents, schools, hospitals) 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 pipeline and any appurtenant structures). Also, the operation of the proposed project would not include any activity that would create odors.

### 3.4 Biological Resources

**BIOLOGICAL RESOURCES** - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**BIOLOGICAL RESOURCES** - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Background**

This section describes the biological resources that occur in the proposed Upper Reach alignment project area. It includes a description of common communities of plants and wildlife, information addressing special status species and their locations in relation to the proposed Project, followed by an assessment of potential impacts to these resources. Information used in preparing this section was derived from:

- Records of sensitive species locations from the California Natural Diversity Database (CDFG 2006)
- Review of the Environmental Impact Report for the Lower Reach River Supply Conduit Project (LADWP 2005), and
- Reconnaissance-level field surveys of the project areas conducted in April and May 2004 and December 2006.

**Setting**

Biological resources located in the project area are typical of species common to the urbanized areas of southern California. While historically the area likely supported a diverse assemblage of plant and wildlife species, urban development has removed the majority of habitat that once occurred in the project area. Today, the project area supports a variety of common communities such as disturbed ruderal habitat, landscaped parks, degraded riparian areas including the concrete lined Los Angeles River, and residential gardens. Most of the natural hydrology that was present in the San Fernando Valley has since been regulated or diverted, and substituted with surface runoff and storm water flow.

The diversity and distribution of biological resources that occur along the proposed Upper Reach alignment have been degraded by ongoing urbanization. The proposed Upper Reach alignment extends through the cities of Burbank and Los Angeles traversing primarily residential and commercial land uses, as well as the Whitnall Highway utility corridor. Although highly urbanized, common biological resources were noted at several locations along the proposed Upper Reach alignment. These areas included the green belts along the Whitnall Highway utility corridor, Johnny Carson Park, Buena Vista Park, the Los Angeles River crossing at Buena Vista Park, and the LADWP Headworks Spreading Grounds located just north of Forest Lawn Memorial Park.

Where the proposed pipeline crosses the Los Angeles River, the channel has been concrete lined and supports only sparse vegetation. Soft-bottomed reaches of the River which support riparian habitat are located further to the west near the Sepulveda Basin, beyond the 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

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2500 feet from the alignment. A small drainage extends through Johnny Carson Park, under the 134 Freeway and empties into the Los Angeles River at the eastern edge of Buena Vista Park. This man-made ornamental drainage is cemented along the sides and bottom and has been constructed to resemble a small meandering stream. Although small rocks have been permanently placed in the channel, this is for aesthetic purposes only and provides little substrate for any riparian species. In addition, the drainage appears to be routinely cleared of any vegetation that may accumulate during routine maintenance activities conducted at the Johnny Carson Park. Water levels in this man made drainage are only a few inches deep during the dry season and is most likely the result of urban runoff from the surrounding park irrigation system and the large hospital complex located near by. Where the drainage flows into the Los Angeles River, a small (50 x 50ft.) patch of riparian habitat occurs where soil has accumulated above the concrete lined channel. Native species include western sycamore (*Platanus racemosa*), black willow (*Salix nigra*), mule fat (*Baccharis salicifolia*), nutsedge (*Cyperus esculentus* L.), and broadleaf cattails (*Typha latifolia*). Tributaries to the Los Angeles River are located 0.5 miles or more from the alignment.

## Wildlife and Vegetation

Most of the project area is located entirely within the rights-of-ways of existing roadways including the heavily urbanized Lankershim and Burbank Boulevards. The vegetative cover, where present, consists of ornamental roadside trees and other cultivated species. Ruderal species, which are those that thrive in disturbed or depleted environments, are present along the margins of the existing roadways, medians, and empty lots. These consist of weedy non-native species such as horse weed (*Conzia canadiensis*), sow thistle (*Sonchus asper*), and various brome grasses (*Bromus* spp.). Where the project alignment runs along the Whitnall Highway utility corridor and greenbelt vegetation consists primarily of manicured lawns, urban trees, and container plantings. This habitat consists of introduced trees, shrubs, flowers, and turf grass associated with urban parks, landscaped hillsides, and housing developments. Acacia (*acacia* sp.), gum (*Eucalyptus* sp.), Peruvian pepper (*Schinus molle*), and pine (*Pinus* sp.) dominate these areas. Common park and residential trees also include fruitless mulberry (*Morus alba*), Chinese elm (*Ulmus parvifolia*), sycamore (*Platanus* sp.), Brazilian pepper tree (*S. terebinthifolius*), crape-myrtle (*Lagerstroemia* sp.), and elm. Several native trees and shrubs occur along the proposed project alignment within the segment from Johnny Carson Park to Buena Vista Park, these include; western sycamore, coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), sugar bush (*Rhus ovata*), and toyon (*Heteromeles arbutifolia*). The majority of these trees and shrubs occur within the public park setting and are subject to park landscaping activities and public uses.

Disturbed vegetation communities typically support a limited variety of wildlife species; however, the existing trees located in the utility corridor and park areas likely provide for foraging, nesting/ burrowing, and other wildlife use. Observations of wildlife were limited due to the developed character of the project area and included a variety of common birds, small mammals, and reptiles.

### **Birds**

Birds were the most common species observed and consisted of species well adapted to urbanized areas. Some of the bird species observed during the survey of the proposed project area included American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), and California towhee (*Pipilo crissalis*). House finches (*Carpodacus* sp.), Brewer's blackbird (*Euphagus cyanocephalus*), European starlings (*Sturnus vulgaris*), and pigeons are other species common to urbanized areas. At the Los Angeles River a single great egret (*Ardea alba*), a great blue heron (*A. herodias*), and several black necked stilts (*Himantopus mexicanus*) were observed foraging in the concrete channel.

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Other common birds that may occur in the project area include red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), American kestrel (*Falco sparverius*), and western scrub jay (*Aphelocoma coerulescens*).

### ***Mammals***

Large mammals were not observed during the survey and are not expected to frequent the project area. However, common species that are well adapted to urban life include raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Virginia possum (*Didelphis virginiana*), and coyote (*Canis latrans*). Other common species observed in the park areas and adjacent roadsides include Bottas' pocket gopher (*Thomomys bottae*), and California ground squirrels (*Spermophilus beecheyii*). Because of the close proximity to urban development, the area is likely used by domestic animals such as house cats (*Felis catus*) and dogs (*Canis familiaris*).

### ***Amphibians and Reptiles***

Amphibians often require a source of standing or flowing water to complete their life cycle. However, some terrestrial species can survive in drier areas by remaining in moist environments found beneath leaf litter and fallen logs, or by burrowing into the soil. Conditions along the project area likely limit the potential for amphibians. However, the Los Angeles River, the small concrete lined drainage in Johnny Carson Park, and the Headworks spreading grounds would be expected to support common amphibians. Although no amphibians were observed during the surveys the area likely supports common species including tree frogs (*Hyla regilla*) and bullfrogs (*Rana catesbeiana*).

The diversity of reptile species is related to the diversity of plant communities found on the site. As the project area is largely urbanized few reptiles are expected to occur and no species were observed during the reconnaissance surveys. Common reptile species likely to occur in the project area include side-blotched lizards (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).

### ***Fish***

No fish were observed during the surveys and none are expected to occur in the majority of the right-of-way. However, it is possible the Los Angeles River supports populations of fish.

### ***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.

No sensitive species were observed in or adjacent to the project area during the April and May 2004 or December 2006 reconnaissance surveys. In this area the California Natural Diversity Database (CNDDDB) (CDFG, 2006) identifies remnants of the following priority plant communities within two miles of the proposed project alignment: southern sycamore alder riparian woodland and southern coast live oak riparian forest. The database also indicates a past occurrence of southern cottonwood willow riparian forest just east of Buena Vista Park, but this stand was extirpated, most likely during the 134 freeway construction. A records search of the CNDDDB and CNPS rare find database identified occurrences of Parish's saltbush or brittle scale (*Atriplex parishii*) (CNPS List 1B) within one mile of the proposed project alignment and Nevin's barberry (*Berberis nevinii*) (federally and state listed as endangered) within two miles. The occurrence of Parish's saltbush was identified in 1994 north of Griffith Park, which includes

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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, over two miles from the project alignment. It prefers slopes and sandy washes and is not expected to occur within the project alignment. Although sensitive plant species have been documented in the region the project area is confined to developed areas currently subject to regular disturbance and would not occur in areas containing native vegetation.

Raptors have been observed at the Los Angeles River crossing and in nearby Griffith Park. These species may utilize the project area for foraging and roost sites may occur in some of the large sycamores 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. No other sensitive wildlife species are expected to occur in the proposed project area.

Overall, the alignment does not support native habitat where special status plant or wildlife species might be found. The segment of the proposed project alignment from Johnny Carson park through Buena Vista Park and across the Los Angeles River, may support small patches of native habitat, but due to the habitats small size, relative isolation, and proximity to commercial and residential uses (including the 134 freeway), the potential for sensitive species to occur here is unlikely. It is however, possible for birds protected by the MBTA to be present throughout segments of the alignment occupied by residential or recreation. Because their presence may frequently be transient (e.g., temporary resting or foraging), compliance with the Act is typically monitored by the presence of nests or nesting pairs.

- 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.* There are no special status plants or wildlife species that have been located or are known to occur within 500 feet of the construction footprint of the proposed project alignment. For those special status species identified by the CNDDB to occur within one-mile of the proposed project alignment, the habitat is generally unsuitable, and impacts are not expected.

Raptors and MBTA protected bird species may utilize large sycamores and other landscape or native trees in project area for foraging and roost sites. Therefore, the following mitigation measure is recommended to reduce impacts to less-than-significant levels.

- BIO-1** Pre-construction surveys for nesting raptors shall be conducted in areas where above ground construction will be occurring from Johnny Carson Park south to the end of the project alignment. The survey shall be conducted by a qualified ornithologist or wildlife biologist to ensure that no raptor nests will be disturbed during project implementation. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (January through April) or no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the qualified biologist shall inspect all trees in and immediately adjacent to the impact areas for raptor nests. If an active raptor nest is located within 300 feet of the project area, the ornithologist, in consultation with CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest until the young have fledged.

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- 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.* Construction of the proposed project would not result in impacts to native vegetation communities. Construction would be limited to developed roadways, disturbed habitat, and landscaped areas.

Construction of the proposed project would require tunneling under the Los Angeles River and the small concrete lined drainage in the Johnny Carson Park. If construction activities may result in minor impacts to any riparian habitat LADWP, if necessary, would obtain a Streambed Alteration Agreement from the CDFG.

During construction hydrostatic test water would be discharged to the storm or sewer drain systems, potentially including the Los Angeles River and its tributaries. The maximum volume for any single discharge event in the Upper Reach would be 2.5 million gallons. 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 remain less than significant.

**BIO-2** During construction, the discharge rate of hydrostatic test water 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, 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.* Construction of the proposed Project would not result in impacts to wetlands, vernal pools, marsh, or riverine habitats. The proposed project alignment would cross a concrete-lined portion of the Los Angeles River near 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 at the shortest permitted length from the Los Angeles River. LADWP has indicated that standard construction measures including the use of best management practices to minimize sediment transport from the project area during storm events shall be implemented. Although the Corps has jurisdiction over the action that would affect the Los Angeles River, no jurisdictional wetlands would be affected.

- 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.* The proposed project alignment would cross residential and recreation areas that support only limited potential for native wildlife use (i.e. green belts along the Whitnall Highway utility corridor, Johnny Carson Park, Buena Vista Park, the Los Angeles River crossing at Buena Vista Park, and the LADWP Headworks Spreading Grounds just north of Forest Lawn Memorial Park). In general these areas are not active in supporting wildlife movement and with the exception of the Los Angeles River, which would be avoided, are not considered wildlife

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movement corridors. While open trenches, jacking pits, and pipeline storage areas may all obstruct wildlife movement, the project is linear and would occur primarily in urban areas where it would be easy for wildlife to avoid the disturbance if present.

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.* Construction of the proposed project may directly eliminate or indirectly impact mature native and ornamental trees within the City of Los Angeles and the City of Burbank. Impacts from construction activities may include tree removal and/or mortality; soil compaction; dust accumulation; drainage alteration; soil erosion; cut or broken tree limbs; damage or exposure of roots and dripline; increased chance of desiccation. LADWP has indicated that construction activities associated with pipeline construction would comply with the ordinances and regulations that protect native and non-native trees. The following ordinances apply to the proposed project:

- The City of Los Angeles Protected Tree Ordinance, Sec. 46.00 of the Municipal Code, aims to preserve valley oak (*Quercus lobata*), California live oak (*Quercus agrifolia*), California black walnut (*Juglans californica* var. *californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*), greater than four inches in diameter.
- The DRP (Department of Recreation and Parks) Tree Preservation Policy was established as a regulatory tool to protect trees in the City of Los Angeles. This policy covers four main categories of trees: trees protected by Los Angeles City ordinances (see above), Heritage trees (determined based on size, historical, commemorative, or horticultural significance), Special Habitat Value trees, and common park trees. Special Habitat Value Trees includes: California sycamore (*P. racemosa*), California bay laurel (*U. californica*), box-elder (*A. negundo* 'California'), big leaf maple (*Acer marcophyllum*), California walnut (*J. californica* and *J. hindsii*), toyon (*H. arbutifolia*), native cherry tree (*P. ilicifolia*, *P. lyonii*), cottonwood (*P. fremontii* and *P. trichocarpa*), and native willow trees (*S. hindsiana*, *S. laevigata*, *S. lasiandra*, *S. lasiolepis*).
- 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 City of Burbank Municipal Code, Sec. 28-111, requires tree replacement if the removal of street trees for construction is necessary. The Director shall be notified prior to excavating any ditches, tunnels, trenches, or pavement within a radius of ten feet from any public tree. 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.

Impacts to large trees protected by the City or County are likely to occur in both Buena Vista and Johnny Carson Park as large mature native and nonnative trees are present. The remainder of the alignment from outside Johnny Carson Park to the North Hollywood Pumping Station is dominated by small native and non-native trees. These smaller trees have been planted as landscape features in residential and commercial areas and do not have natural, historical or habitat value; therefore impacts are not expected to occur along this portion of the proposed alignment. To reduce impacts to protected trees, LADWP would implement the following mitigation measure, which would avoid or reduce impacts to mature native and nonnative trees to less-than-significant levels.

**BIO-3** If mature trees will be directly or indirectly impacted by project construction, LADWP will comply with all Los Angeles City and Burbank City tree ordinances. A mature tree is defined as having a DBH (diameter at breast height) or 4 inches or greater.

*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. Therefore, no impacts would occur under this criterion.

### 3.5 Cultural Resources

CULTURAL RESOURCES - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*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 WITH MITIGATION INCORPORATED.* A Phase I Cultural Resources Investigation of the proposed Upper Reach pipeline alignment was conducted by McKenna et al. (2006)<sup>3</sup>. McKenna et al. completed a standard records check through the California State University, Fullerton, South Central Coastal Information Center. In addition, the Bureau of Land Management General Land Offices files, the University of California Riverside, Historic Map Library, and local libraries and historical societies were researched. The historic Sanborn Maps located at the Los Angeles Public Library were also reviewed. The research was conducted at a level that addressed the Upper Reach pipeline alignment and approximately one-half mile to either side of the alignment (one mile corridor). Site records, cultural resource management reports, and documentation on listed properties and/or historic maps were also researched.

The proposed project crosses two United States Geological Survey (USGS) quadrangles: the Van Nuys Quadrangle and the Burbank Quadrangle. Within the Van Nuys Quadrangle, historic and prehistoric resources have been found along or near the proposed alignment including, historic refuse, one prehistoric sandstone bowl, the Toluca Southern Pacific Depot (built in 1896), and the North Hollywood Branch of the Los Angeles Public Library system (registered with the National Register of Historic Places). As such, the project alignment identified on the Van Nuys Quadrangle should be considered moderately sensitive for cultural resources. Furthermore, the area of Lankershim Boulevard and Chandler should be considered sensitive for additional historical deposits.

<sup>3</sup> Results of a Phase I Cultural Resources Investigation of the Proposed Los Angeles Department of Water and Power RSC Upper Reach, Extending from the North Hollywood Pump Station to the Headworks Spreading Grounds, 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.



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Within the Burbank Quadrangle, where the majority of the proposed project alignment would be located, historic structures have been identified in the area of potential effect for the proposed alignment. Based on previous research for the Burbank Quadrangle, the alignment on the western extent of Burbank Boulevard is considered sensitive for historic buildings. The area may also be sensitive for buried historic archaeological sites. The area is not sensitive for prehistoric resources, although there is always a potential for such resources. The alignment along Whitnall Highway is not considered sensitive for historic structures or historic or prehistoric resources, but areas closer to the Los Angeles River and Headworks Spreading Grounds may be considered more sensitive given the reported presence of an adobe structure and the use of the river by Native Americans.

The field survey completed on September 16, 2006 confirmed that no historic resources are located in the area of the proposed alignment north of Burbank Boulevard. Structures located along Morella Avenue, Hart Street, and Lankershim Boulevard were identified as modern structures and of no historical significance. Similarly, no significant historic resources were previously recorded along the pipeline alignment on Burbank Boulevard or along the Whitnall Highway. Prior to the initiation of this proposed project, the only resources identified along the proposed project alignment were two structures on Burbank Boulevard (11178 Burbank Blvd. and 11123 Burbank Blvd.), which were built in 1945 and 1932. Research into the alignment along Burbank Boulevard east of Lankershim Boulevard to Whitnall Highway resulted in the identification of numerous modern structures and some structures pre-dating 1960 (the 45 year age range for assessing historic structures). A minimum of 17 structures were identified along Burbank Boulevard. There are likely to be more pre-1960 structures present, as Assessor records suggest later construction dates based on alterations or additions. A single historic resource was reported in the area of the Headworks Spreading Grounds; however, this resource was destroyed by the construction of the 134 Freeway and no longer exists. Resources associated with this site may be present in the immediate area; therefore, the Headworks Spreading Grounds site should be considered moderately sensitive for historic period resources.

The proposed project would generally involve excavations within the existing street right-of-ways and within the Whitnall Highway, an existing transmission line right-of-way. No significant historic resources have been identified north of Burbank Boulevard within the area of potential effect (APE) along the proposed alignment. On Burbank Boulevard east of Lankershim Boulevard, at least 17 pre-1960 properties have been identified; however, none of these buildings should be adversely impacted by the proposed project. Nonetheless, the excavations should be completed in a manner that would not directly or indirectly impact any of these structures. There are no known resources along the Whitnall Highway, but as the AEP nears the Los Angeles River there is a greater potential for buried prehistoric and historic period resources. This area is also sensitive for paleontological resources.

To insure no indirect impacts to potentially significant historic resources, Mitigation Measure CUL-1 is recommended to reduce impacts to historical resources to a less-than-significant level.

**CUL-1** LADWP shall conduct spot-monitoring (the extent and duration will be dependent upon the excavation schedule) along the pipeline alignment located on and south of Burbank Boulevard during construction activities. The extent and locations for spot monitoring will be determined by a qualified historian based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. Monitoring shall be conducted by a qualified historian.

***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 on September 16, 2006, resulted in confirmation that

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archeological resources have been identified near the proposed pipeline alignment and may extend into the project area (McKenna, 2006).

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-2 and CUL-3 are recommended to reduce impacts to archeological resources to a less-than-significant level.

**CUL-2** LADWP shall conduct archaeological monitoring during ground disturbing activities along and south of Burbank Boulevard. The extent and location of monitoring will be determined by a qualified archeologist based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. Archaeological 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 anywhere along the pipeline alignment, 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-3** 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 investigation/research through the Natural History Museum of Los Angeles County conducted in 2004 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, 2006). Mitigation Measures CUL-4 and CUL-5 would be implemented to reduce impacts to paleontological resources to a less-than-significant level.

**CUL-4** LADWP shall conduct paleontological monitoring during ground disturbing activities (excavation, trenching, boring, drilling, etc.) in the area of the Los Angeles River and the Headworks Spreading Grounds. The extent and location of monitoring will be determined

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by a qualified paleontologist based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. 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-5** 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. (2006) for the proposed Upper Reach 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-6** 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 Impact 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.**

**NO IMPACT.** The proposed project does not cross any mapped Alquist-Priolo Earthquake Hazard Zones, and thus would not be subject to damage due to fault rupture.

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. Major active and potentially active faults in the project area likely to cause significant groundshaking along the project alignment in the event of an earthquake include the Santa Monica, Hollywood, Raymond Hill, Northridge Thrust, Upper Elysian Park Blind Thrust, Verdugo, and Sierra Madre faults.

Seismic shaking maps by the California Geological Survey (CGS) predict a ten percent chance of exceedance in 50 years of 0.5 to 0.6 g (gravity) peak ground acceleration (CGS, 2006) in the proposed project area. This moderate ground shaking is not likely to cause significant damage to a buried pipeline.

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*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. Phases UR2 and UR3 of 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 along the project alignment range from approximately 50 to 70 feet below ground surface (bgs) along Phase UR1, 10 to 50 feet bgs along Phase UR2, and 0 to 10 feet bgs along Phase UR3 (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.

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 Upper Reach alignment may potentially impact the proposed project.

Ground failure, including liquefaction and differential settlement could impact the proposed project where the pipeline is located within liquefiable alluvial deposits near the Los Angeles River. Implementation of Mitigation Measure GEO-1 would ensure impacts from seismic-related ground failure, including liquefaction, are reduced to less-than-significant levels.

**GEO-1** A geotechnical investigation shall be conducted to determine areas that will be susceptible to liquefaction related phenomena. 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 of the Santa Monica Mountains near the southern end of Phase UR3. However, as the pipeline primarily crosses flat alluvial plain and gently sloping alluvial fans, these shallow small landslides would 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.

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**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, utility corridors, and developed park lands). 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 one main soil series, the Tujunga Series. Tujunga series soils are characteristically deep, well drained soils formed in predominately granitic derived alluvium and flood plain deposits. 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.

**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 generally have low expansion potential. 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.

### 3.7 Hazards and Hazardous Materials

#### HAZARDS AND HAZARDOUS MATERIALS - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**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.

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.

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- 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 or work within the Whitnall Highway utility corridor 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 waterbodies (approximately 100-foot minimum) and water wells (approximately 200-foot minimum); provide requirements for hazardous material containment (e.g., earthen berms lined with plastic); and identify avoidance measures to limit conflicts with existing utilities. 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, 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.

Operation of the proposed project would involve the transportation of potable water under pressure via an 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.

**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 Services personnel. 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.



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- HAZ-3** LADWP or its construction contractor shall store hazardous materials in containers with secondary containment.
  - HAZ-4** Federal, state, and local notification requirements shall be followed for any release of hazardous materials that exceeds the reportable quantity.
  - 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 Theodore Roosevelt Elementary School (850 N. Cordova Street, Burbank), American Lutheran School (755 N. Whitnall Highway, Burbank), Montessori Preschool (3711 Clark Avenue, Burbank), Robert Louis Stevenson Elementary School (3333 W. Oak Street, Burbank), and Providence High School (511 South Buena Vista Street, Burbank). 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, an existing utility corridor (Whitnall Highway), and 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.

**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.<sup>4</sup>

Based on the EDR database search, many sites have been identified in the surrounding area and adjacent to the proposed alignment, generally along Lankershim Boulevard and Burbank Boulevard. Table 3.7-1 provides a list of sites documented in various databases compiled pursuant to Government Code Section 65962.5 located within one mile of the proposed alignment (EDR, 2006). 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.

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

Database List	Search Distance (0-1.0 mile)
<b>FEDERAL RECORDS</b>	
National Priority List (NPL)	2
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	3
CERCLIS sites designated "No Further Remedial Action Planned" (CERCLIS-NFRAP)	5
Resources Conservation and Recovery Information System of Large Quantity Generators (RCRIS-LQG)	9
Resources Conservation and Recovery Information System of Small Quantity Generators (RCRIS-SQG)	85
Emergency Response Notification System (ERNS)	4
List of sites with engineering controls in place updated as of 3/21/2006 (US ENG CONTROLS)	2
Major Legal settlements that establish responsibility and standards for cleanup at NPL (superfund) sites. Released periodically by U.S. District Courts after settlement by parties to litigation matters. (CONSENT)	1
Record of Decision (ROD)	2
FIFRA, TSCA and EPCRA Tracking System (FTTS)	1
Integrated Compliance Information System (ICIS)	1
Facilities Index System (FINDS)	104
RCRA Administration Action Tracking System (RAATS)	1
<b>STATE AND LOCAL RECORDS</b>	
Known and Potential Hazardous Substance Sites in California (Hist Cal-Sites)	2
School sites being evaluated by DTSC (SCH)	3
State Landfill	2
California Water Resources Control Board – Waste Discharge System (CA WDS)	8
Waste Management Unit Database System (WMUDS/SWAT)	1
Database identifying public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. (CORTESE)	25
Listing of recycling facilities in California (SWRCY)	11
Leaking Underground Storage Tank (LUST)	23
California Facility Inventory Database (CA FID UST)	63
California Spills, Leaks, Investigations, and Cleanups (SLIC)	27
Underground Storage Tank (UST)	20
Historical UST (HIST UST)	49

<sup>4</sup> Environmental Data Resources, Inc. government records search results for the Upper Reach RSC Project are available for review at the LADWP Environmental Services Office, located at 111 North Hope Street, Room 1044, Los Angeles, CA 90012.

Database List	Search Distance (0-1.0 mile)
Aboveground Storage Tank Database (AST)	2
Statewide Environmental Evaluation and Planning System listing Underground Storage Tanks (SWEEPS UST)	72
California Hazardous Materials Incident Report System (CHMIRS)	4
Dry Cleaners	18
Well Investigation Program cases in the San Gabriel and San Fernando Valley area updated 7/25/2006 (WIP)	269
Listing of drug lab location (CDL)	1
Hazardous waste manifests (HAZNET)	172
Emissions Inventory Data (EMI)	224
The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. (ENVIROSTOR)	5
<b>TOTAL</b>	<b>1,221</b>

Source: EDR, 2006.

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

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.

**HAZ-6** LADWP shall conduct environmental briefings 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 briefings 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 North Hollywood Pump Station 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 (at Hart Street), 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.

Operation of the proposed project would occur underground, 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 existing utility corridor (Whitnall Highway), and recreation areas, and would not interfere with, nor be affected by, airport operations.

- 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.

- 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, an existing utility corridor (Whitnall Highway), and in recreation areas, and thus would not interfere with emergency response or evacuation plans.

- 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 pipeline is located within a highly urbanized area, and is not located in close proximity to any wildlands and no wildlands are found intermixed. However, the southern portion of the Upper Reach (Phase UR3), which travels through Johnny Carson Park and Buena Vista Park, is located within portions of the City of Los Angeles Mountain Fire District and Fire Buffer Zone (City of Los Angeles, 1996).

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.

### 3.8 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**HYDROLOGY AND WATER QUALITY - Would the project:**

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year floodplain structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Inundate by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

**LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.** Construction of the Upper Reach pipeline 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 pipeline, the maximum trench depth is expected to be approximately 55-feet. 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 Upper Reach 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 pipeline, 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 construction phases (UR1, UR2, and UR3), a maximum discharge event for any segment would be on the order of 2.5 million gallons over four days.

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 Stormwater Pollution Prevention Plan (SWPPP), as required by the NPDES permit. The SWPPP would be submitted to the Los Angeles Regional Water Quality Control Board

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(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. The minimum trench depth would be 12 feet with a maximum of approximately 55 feet at approaches to jacking pits.

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.

- 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, an existing utility corridor (Whitnall Highway), new easements, and through recreation 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.

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Construction of the Upper Reach 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 Upper Reach pipeline would not alter the course of the Los Angeles River. Construction areas would however be in close proximity to two major tributaries of the Los Angeles River: the Central Branch Tujunga Wash and the Burbank Western Channel (See Figure 1-1). 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. Phase UR1 and the northern portion of Phase UR2 (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 eastern-most portion of Phase UR3 would be constructed approximately one mile from where the Burbank Western Channel intersects 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.

- 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 and tunneling would be a commonly used construction method along the proposed pipeline alignment. As such, dewatering may be required. However, water discharge from dewatering is not expected to exceed the existing or planned capacity of the local stormwater drainage system. 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)].

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**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.

**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 Upper Reach pipeline would be placed underground along/in City of Los Angeles and City of Burbank streets, utility corridors (Whitnall Highway), and parks. The pipeline would cross under the Los Angeles River flood control channel, thereby avoiding affects on flood flows.

**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, such as Whitnall Highway, and within recreation areas.

**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 was 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.

**j. *Inundation by seiche, tsunami, or mudflow?***

**NO IMPACT.** The proposed project is not subject to tsunami-related inundation or seiche, as it is not located within the range of a tsunami hazard zone or near a body of water capable of creating a seiche large enough to reach the area of the proposed Upper Reach pipeline. Furthermore, the alignment would not be placed in areas adjacent to, or downgradient from, hillside areas, which could be subject to mudflows during heavy storm events.



### 3.9 Land Use and Planning

LAND USE AND PLANNING – Would the project:

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

**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, public facilities (Whitnall Highway) and recreational 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, and existing easements, such as Whitnall Highway, and within 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.

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, and existing easements.

**Table 3.9-1 Summary of Land Uses along Upper Reach Pipeline Route**

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
<b>UPPER REACH</b>					
<b>Phase UR1: North Hollywood Pump Station to Lankershim/Kittridge</b>					
Morella Ave. to Hart St.	Morella Ave.	City of Los Angeles	West: North Hollywood Pump Station, Single-Family Residential East: Multi-Family Residential	----	<ul style="list-style-type: none"> <li>Northernmost portion of ROW characterized generally as a residential area</li> <li>Along Lankershim, ROW characterized generally by large to medium commercial business storefronts</li> <li>Business types include, construction supply, clothing and household goods, large auto sale lots, auto repair, strip malls, fast food restaurants, motels, and gas stations</li> <li>US Post Office – Victory Center on Lankershim Blvd.</li> </ul>
Hart St. to Lankershim Blvd.	Hart St.	City of Los Angeles	North: Single/Multi-Family Residential South: Single/Multi-Family Residential	----	
Hart St. to Hamlin St.	Lankershim Blvd.	City of Los Angeles	West: Commercial East: Commercial	----	

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
<b>Phase UR2: Lankershim/Hamlin to Burbank/Clybourn</b>					
Hamlin Street to Burbank Blvd.	Lankershim Blvd.	City of Los Angeles	East: Commercial West: Commercial	<ul style="list-style-type: none"> <li>A park on SE corner of Lankershim Blvd./Tiara St. just south of Oxnard St.</li> </ul>	<ul style="list-style-type: none"> <li>ROW characterized generally by large to medium commercial business storefronts</li> <li>Business types include, construction supply, clothing and household goods, large auto sale lots, auto repair, income tax, strip malls, fast food restaurants, motels, and gas stations</li> <li>MTA Metro Redline North Hollywood Station on NE corner of Lankershim and Magnolia. Redline ROW within Lankershim</li> </ul>
Burbank Blvd. to W. Burbank Blvd./Whitnall Highway	Burbank Blvd.	City of Los Angeles and City of Burbank (east of Clybourn Ave.)	North: Low Density Commercial South: Low Density Commercial	<ul style="list-style-type: none"> <li>South of the route is North Hollywood Park</li> </ul>	<ul style="list-style-type: none"> <li>MTA Metro Redline North Hollywood Station on NE corner of Lankershim and Magnolia. Redline ROW within Lankershim</li> </ul>
<b>Phase UR3: Clybourn/Burbank/Whitnall Highway to Headworks Spreading Grounds</b>					
W. Burbank Blvd./Whitnall Highway to Forest Lawn	Whitnall Highway	City of Burbank	North: Public Facilities South: Public Facilities	<ul style="list-style-type: none"> <li>Theodore Roosevelt Elementary School, a private school on Cordova Street east of route</li> <li>American Lutheran Church and School on Clark and Whitnall</li> <li>Montessori preschool on Clark and Whitnall</li> <li>Park lands/open space established at Whitnall and Chandler and Whitnall and Verdugo utility corridor crossings</li> <li>Verdugo Park, east of route</li> <li>R. L. Stevenson Elementary School south of ROW at Oak St.</li> <li>NBC Studios north and south of ROW</li> <li>Providence St. Joseph's Medical Center, east of route</li> <li>Providence High School on Buena Vista, east of route</li> <li>Johnny Carson Park north and south of ROW</li> <li>Buena Vista Park north and south of ROW</li> <li>Equestrian Trail immediately adjacent to river along maintenance road ROW</li> </ul>	<ul style="list-style-type: none"> <li>Transmission Line Corridor</li> <li>Generally residential, with some commercial uses north and south beyond corridor</li> <li>High-density residential housing with direct access to green belt under utility corridor</li> </ul>

Location	Street (ROW)	Jurisdiction	General Land Use Type	Non Residential Sensitive Receptor(s)	General Character /Notable Land Uses
Forest Lawn Dr. to Headworks Spreading Grounds	Forest Lawn Dr.	City of Los Angeles	North: Open Space South: Residential Estate, Agriculture, and Open Space	• Forest Lawn (cemetery) and Mount Sinai Memorial Park south of ROW	<ul style="list-style-type: none"> <li>• ROW characterized by open space and cemetery associated with Forest Lawn and Mount Sinai Memorial Parks</li> <li>• Headworks Spreading Grounds site</li> </ul>

**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 WITH MITIGATION INCORPORATED.** 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 and Hollywood. As such, the proposed project would be subject to the following plans and regulations:

- City of Burbank General Plan
- City of Burbank Media District Specific Plan
- City of Burbank Municipal Code
- City of Los Angeles General Plan
- City of Los Angeles Municipal Code
- North Hollywood-Valley Village Community Plan
- Hollywood Community Plan
- Los Angeles River Revitalization Plan

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.

The City of Burbank is in the process of updating its General Plan. As part of its update, the City is changing the current land use designations of certain properties within the City. Of particular relevance is the City’s intent to designate the green space on the Whitnall Highway between Whitnall and Chandler and between Whitnall and Verdugo as Public Park. The current land use designation is unclassified. Both of these areas are actively used by residents near the Whitnall corridor as open space/parkland. The construction of the project would temporarily disrupt the current use of utility corridor parks as well as Johnny Carson Park and Buena Vista Park.

In addition to residential uses along the route, there is one high school and four elementary schools within a close proximity to the route. Construction activities have the potential to disrupt these land uses and therefore be in conflict with local land use policies. See Table 3.9.1 and Appendix A, Photographs of Proposed Project Route, for more information on surrounding land uses.

LADWP would need to coordinate with adjacent land uses to notify landowners of proposed construction activities and provide avenues for the public to gain more information on the construction schedule and scope. Notification regarding construction activities and a procedure for responding to construction complaints or questions is necessary for the land uses along the proposed project route. Mitigation Measure L-1 (Construction Notification Program) has been identified to ensure adequate notification of construction activities and to provide a contact person in case residents or landowners have questions or concerns regarding construction activities.

Operation of the pipeline would 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.

Measure L-1 is recommended to reduce construction on adjacent and surrounding land uses along the project route. With the incorporation of this mitigation measure, land use impacts are less than significant.

**L-1** Fifteen days prior to construction, LADWP shall inform property and business owners, schools, medical centers, and other public facilities of the location and duration of construction. Within each construction phase, notification of construction activities shall be provided by placing advertisements in local and/or community newspapers. The advertisement shall state when and where construction will occur and identify construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, and public facilities (e.g., schools and memorial parks). The notice shall also state the type of construction activities that will be conducted, duration of construction activities, and provide LADWP contact information for public questions or concerns. If construction delays of more than 30 days occur, an additional notice shall be placed in local and/or community newspapers.

**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. 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 Impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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).

**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.

### 3.11 Noise

**NOISE** - Would the project result in:

	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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?**

Approximately sixty percent of the project alignment would be located within the City of Los Angeles and would be 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.

Phase UR3 of the new pipeline would be located within the City of Burbank, except for the portion along Forest Lawn Drive. 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 SIGNIFICANT 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. 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 three pipeline phases 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. 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, and recreational. 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.

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.

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## Operational Impacts

*NO IMPACT.* In general, the proposed project would generate a very limited amount of long-term noise. From the North Hollywood Pump Station, 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.

- 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 involve jacking and tunneling, but would not involve pile-driving activities. 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, due to local sensitive land uses (i.e., media studios) in the project area, 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 North Hollywood Pump Station) and would not cause substantial groundborne vibration or noise levels.

- 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 would not result in substantial permanent increase in ambient noise levels.

- 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 SIGNIFICANT IMPACT.* Construction-related activities would temporarily elevate noise levels in the vicinity of the project route [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.* The North Hollywood Pump Station (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.

- 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.

## 3.12 Population and Housing

POPULATION AND HOUSING - Would the project:

	Potentially Significant Impact	Less-Than-Significant Impact 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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)?*

**LESS-THAN-SIGNIFICANT IMPACT.** 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 84 personnel would be employed on the project during the peak construction period. 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.

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

Location	Population	Housing Units		Employment	
		Total Units	Vacancy	Total Employed <sup>a</sup>	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 Upper Reach pipeline 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 could indirectly encourage population and/or housing growth as a result of increasing the capacity of the water system. However, the area the pipeline would service is densely populated, which would ultimately limit growth in the project area.



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

*NO IMPACT.* In general, residential properties do not exist within the proposed project pipeline route right-of-way; as it would be located within city streets, existing utility right-of-ways, and parks. However, between Hart Street and Lankershim Boulevard homes and/or commercial buildings would be tunneled under to gain access to the street right-of-way. It is not anticipated that housing or persons would be displaced by the project as a result of these activities. 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.

**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.

### 3.13 Public Services

#### PUBLIC SERVICES

	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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 1,091 uniformed firefighters per rotating 24-hour shift (including 223 employees serving as firefighter/paramedics), at 103 neighborhood fire stations located strategically across the LAFD's 470 square-mile jurisdiction (LAFD, 2006). 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, 2006). Fire Stations serving the proposed project area are summarized in Table 3.13-1.

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

Upper Reach Pipeline Phase	Fire Station Location
UR1	Los Angeles Fire Department - Station 89 7063 Laurel Canyon Blvd., North Hollywood
UR2	Los Angeles Fire Department - Station 60 5320 Tujunga Ave., North Hollywood
UR3	City of Burbank Fire Department - Station 12 644 N. Hollywood Way, Burbank

Source: LAFD, 2006 and BFD, 2006.

The southern portion of the Upper Reach, which travels through Johnny Carson Park and Buena Vista Park to the Headworks Spreading Grounds site, is located within a portion of the City of Los Angeles Mountain Fire District and Fire Buffer Zone (City of Los Angeles, 1996). 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.

As indicated in Table 3.13-1, three local fire 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 Phase UR3 where the project traverses existing park areas. 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.

**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 Upper Reach pipeline alignment are summarized in Table 3.13-2.

**Table 3.13-2. Police Stations Serving the Proposed Project Area**

Upper Reach Pipeline Phase	Fire Station Location
UR1 and UR2	LAPD North Hollywood Community Police Station 11640 Burbank Boulevard
UR3	City of Burbank Police Department 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 Upper Reach Project would not impact the LAPD's ability to serve the area (LAPD, 2004). Officer Hanamaikai estimates that the service response time to each phase 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. During construction, the proposed project would include

security features such as controlled construction access along the route, 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.

**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.

**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.

**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.

### 3.14 Recreation

#### RECREATION

	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Would the project increase or decrease the use of existing neighborhood and regional parks or other recreational facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**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?**

*POTENTIALLY SIGNIFICANT IMPACT.* During construction, the project would use Buena Vista Park as work area during tunneling under both the Whitnall Highway and the Los Angeles River. To accommodate the construction of the project, Buena Vista Park could be closed for more than two years. The construction activity at this park could also affect the use of Johnny Carson Park across the street and equestrian trails along the river. Therefore, recreational impacts from construction activities will be evaluated further in the EIR.

Operational impacts are determined by the increase in use of recreational facilities that is generally spurred by regional population growth. As demonstrated in Section 3.12, Population and Housing, the proposed project would not directly induce growth, but would instead replace an existing water line to better serve an existing population in a previously developed area. As such, the proposed project would not directly cause permanent increase in use of existing neighborhood and regional parks or

other recreational facilities such that substantial physical deterioration of existing facilities would occur or be accelerated with operation of the water pipeline.

**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 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.

### 3.15 Transportation and Traffic

**TRANSPORTATION/TRAFFIC - Would the project:**

	Potentially Significant Impact	Less-Than-Significant Impact 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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Result in inadequate parking capacity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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 Upper Reach pipeline infrastructure. The proposed pipeline would be located in public street rights-of-way, and LADWP utility easements in the North Hollywood community 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

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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 Phase UR1 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.

Operation of the proposed project would occur underground and within existing structures (North Hollywood Pump Station), 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.

**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. 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 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

<b>UTILITIES AND SERVICE SYSTEMS - Would the project:</b>				
	Potentially Significant Impact	Less-Than-Significant Impact With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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 within the City of Los Angeles 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 (most recently published) 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.

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Within the City of Burbank, the City of Burbank Public Works Department provides wastewater treatment service. The City of Burbank Water Reclamation Plant (BWRP) is a tertiary wastewater treatment plant that currently treats 9 mgd of sewage generated within the City of Burbank.

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

Upon completion of the proposed Upper Reach pipeline, no further wastewater generation would occur. 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.

***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-SIGNIFICANT IMPACT.** As stated above in Section 3.16(a), the existing wastewater treatment facilities serving the existing Upper Reach 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.

Within the City of Burbank, Burbank Water and Power supplies potable water. The water supply for Burbank comes from three different sources: local groundwater, the Colorado River, and the State Water Project. The Colorado River and the State Water Project are imported water supplies purchased from the Metropolitan Water District of Southern California (MWD). MWD operates treatment facilities for these surface water supplies before delivering it to Burbank. For the year 2003, 57 percent of the City's water came from the State Water Project and 2 percent came from the Colorado River Aqueduct. An additional water resource for the City is reclaimed water. The BWRP distributes reclaimed water to users around the City. Of the 330 million gallons of reclaimed water distributed over the last year, 50 percent was used for the cooling tower at the Burbank Water and Power steam power plant, 30 percent was used at Debell golf course, 10 percent was used at the City of Burbank Landfill, and 10 percent went to other uses.

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 Upper Reach pipeline 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 the Upper Reach 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. .

- 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 existing Upper Reach pipeline alignment are anticipated to be adequate to provide wastewater, domestic potable water service, and fire flows for the area.

- 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 existing Upper Reach 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.

- 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 and the City of Burbank, 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, five 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.

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

Name	Location	Permitted Daily Disposal (Tons)	Remaining Capacity (Million Cubic Yards)	Permit Expiration Date
Scholl Canyon Landfill (Class III)	Glendale	3,400	11.5 (calculated in 2005)	2019
Sunshine Canyon (Class III)	Sylmar	6,600	16 (calculated 2003)	2008
Bradley Landfill West (Class III)	Sun Valley	10,000	4.7 (calculated 2002)	2007
Burbank Land fill (Class III)	Burbank	240	5.1 (calculated in 2006)	2053
Azuza Land Reclamation (Unclassified)	Azuza	6,500	34.1 (calculated 1996)	2025

Sources: California Integrated Waste Management Board, California Waste Facilities, Sites, & Operations (SWIS) Database, accessed from <http://www.ciwmb.ca.gov/SWIS> on September 25, and December 4, 2006. Scholl Canyon Landfill: <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0012&OUT=HTML>, Sunshine Canyon Landfill: <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0853&OUT=HTML>, Bradley Landfill West: <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AR-0008&OUT=HTML>, Burbank Landfill: <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0040&OUT=HTML>, Azuza Land Reclamation Landfill: <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0013&OUT=HTML>.

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 unclassified landfills likely to be used for disposal of demolition and construction debris.

The known total permitted daily disposal at the five identified landfills is 26,740 tons. 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 daily permitted capacity. Therefore, waste generated by demolition and construction activities would not exceed the available capacity at the landfills serving the project area. If one of the identified landfills reaches its daily limit, LADWP would hold the waste until the next day or take it to another landfill with available daily capacity.

Upon completion of the proposed Upper Reach pipeline, 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 landfills serving the project area.

**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 Upper Reach pipeline, 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.

### 3.17 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE				
	Potentially Significant Impact	Less-Than-Significant Impact 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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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. 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 and recreational areas that support native and nonnative trees and shrubs that provide habitat to birds protected under the Migratory Bird Treaty Act. However, to mitigate potential construction impacts to raptors, aquatic resources, and “protected” trees, Mitigation Measure BIO 1-3 will be implemented to reduce impacts 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 four 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, Section 3.14 Recreation, 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.

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*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 four 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, Section 3.14 Recreation, 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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## 4. References

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## 5. Report Preparation

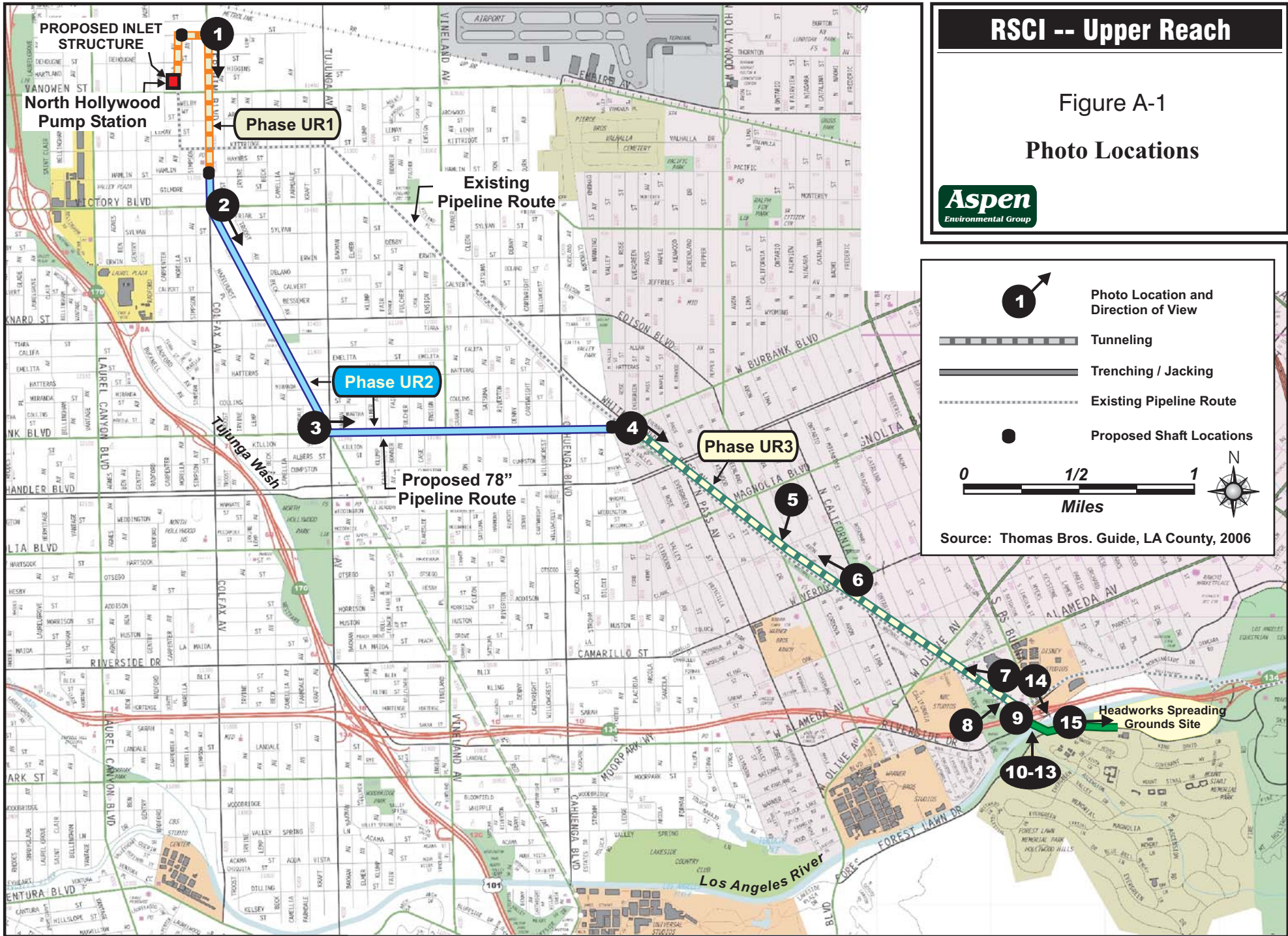
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**Table 5-1. List of Preparers and Reviewers**

Name/Organization	Project Role
<b>Los Angeles Department of Water and Power</b>	
Nancy A. Wigner	Project Manager
Charles Holloway	Supervisor of Environmental Assessment
Jennifer Edge	Environmental Program Manager
<b>Aspen Environmental Group</b>	
Sandra Alarcón-Lopez	Task Manager, Land Use, Aesthetics, Agriculture
Lisa Blewitt	Cultural Resources, Hazardous Materials, Noise, Hydrology and Water Quality
Scott Debauche	Population and Housing, Public Services, Traffic and Transportation, Utilities and Service Systems
Tatiana Inouye	Mineral Resources
Chris Huntley	Biological Resources
Lindsay Sirota	Biological Resources
William Walters	Air Quality
<b>Geotechnical Consultants, Inc.</b>	
Aurie C. Patterson, P.G.	Geology and Soils
<b>McKenna et al.</b>	
Jeanette McKenna	Phase I Cultural Resources Survey

## **Appendix A.**

### **Photographs of Proposed Project Route**





## RSCI -- Upper Reach

Figure A-2  
Photographs  
along the Route

**Aspen**  
Environmental Group



1. Commercial properties south on Lankershim Boulevard at Hart Street



2. Commercial properties south on Lankershim Boulevard at Victory Boulevard



3. View east on Burbank Boulevard at Lankershim Boulevard

## RSCI -- Upper Reach

Figure A-3  
Photographs  
along the Route

**Aspen**  
Environmental Group



4. View south through corridor at Whitnall Highway and Burbank Boulevard



5. Transmission corridor on Kenwood Street



6. View northwest through corridor at Whitnall Highway and California Street

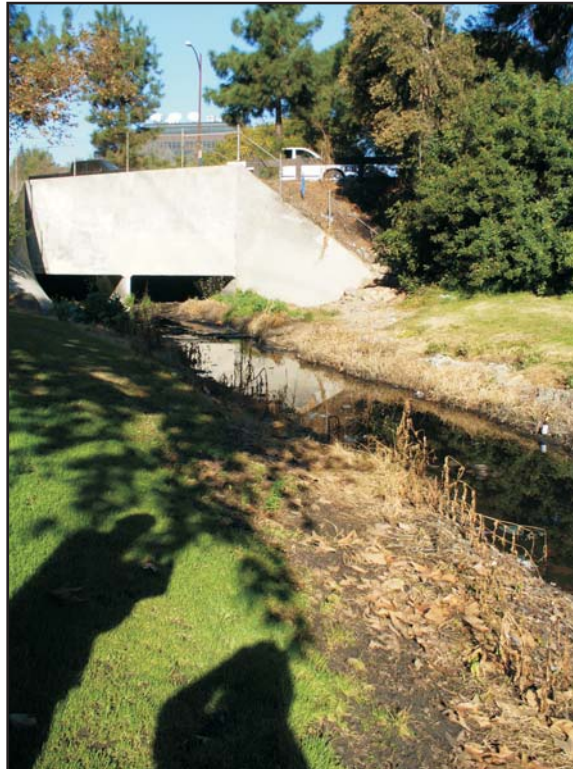
## RSCI -- Upper Reach

Figure A-4  
Photographs  
along the Route

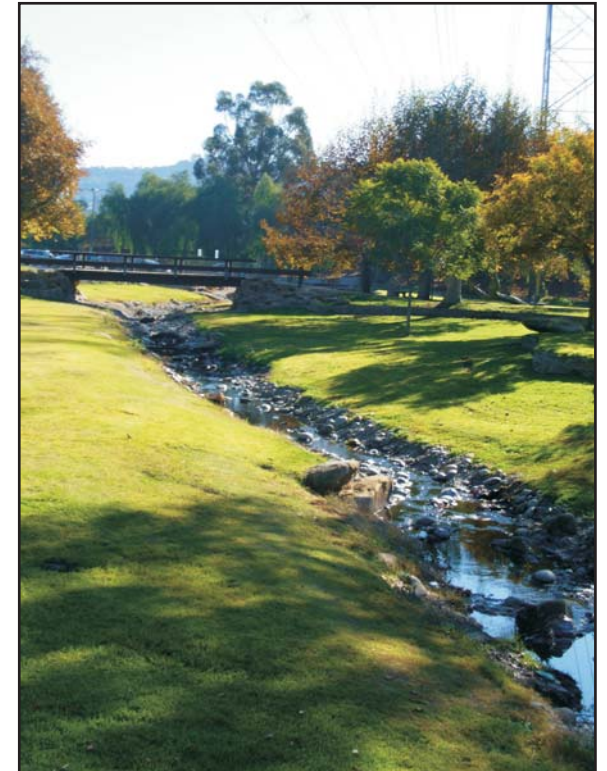
**Aspen**  
Environmental Group



7. View northwest through corridor at NBC Studios



8. Manmade waterway at Johnny Carson Park



9. Corridor over Johnny Carson Park

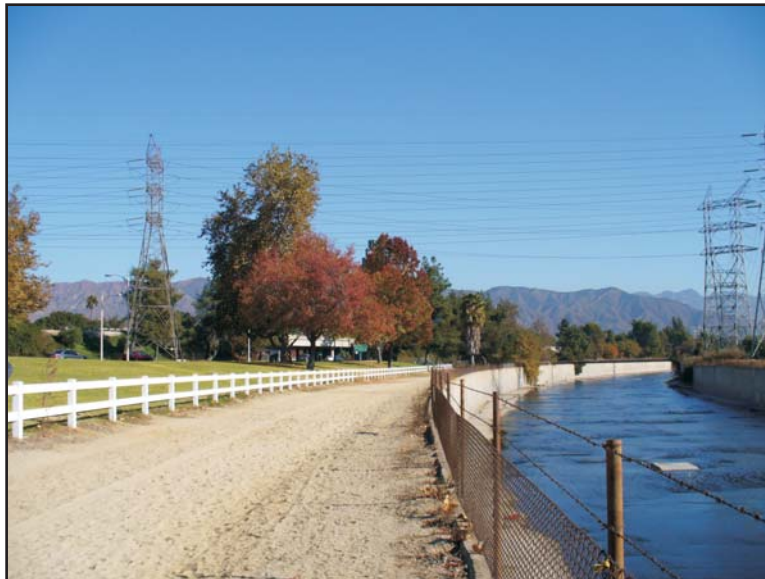
## RSCI -- Upper Reach

### Figure A-5 Photographs along the Route

**Aspen**  
Environmental Group



10. Confluence of manmade waterway and Los Angeles River



11. View east of corridor over Buena Vista Park and Los Angeles River



12. View northeast at Los Angeles River

## RSCI -- Upper Reach

### Figure A-6 Photographs along the Route

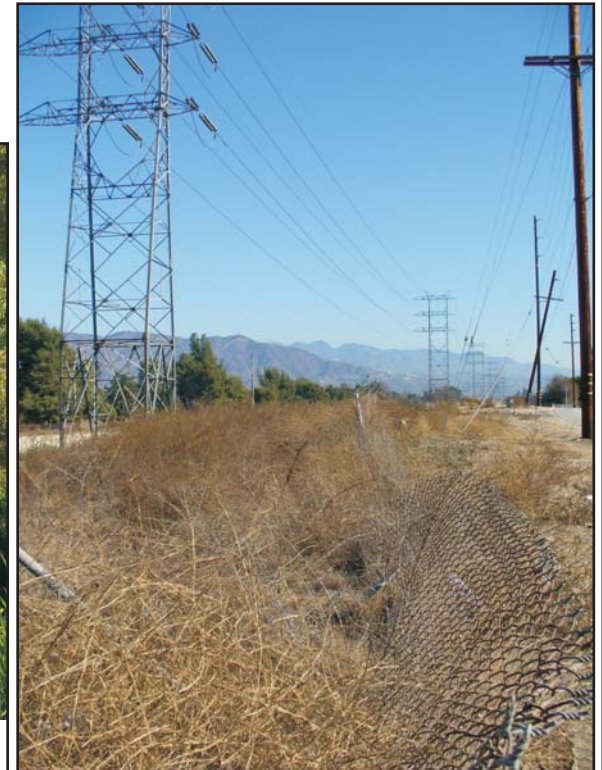
**Aspen**  
Environmental Group



13. View northwest through corridor over Buena Vista Park



14. Native vegetation in corridor through Los Angeles River



15. View east through headworks spreading site

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**APPENDIX A.3**  
**COMMENT LETTERS**

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## Appendix A.3 Comment Letters

The LADWP solicited input from other agencies on the proposed project through the distribution of a Notice of Preparation (NOP). The LADWP filed the NOP and the Initial Study with the State Clearinghouse in the Office of Planning and Research as an indication that an EIR would be prepared. In addition, the NOP/IS was distributed to local agencies and interested parties to solicit comments on the scope and content of the environmental analysis to be included in the EIR. The public was given 30-days to respond, which ended on February 26, 2007. A total of five comment letters and one fax were received from various State and local agencies during the review period. These comments are listed in Table A.3-1, below. The actual letters are provided in this section for reference. All comments have been addressed in this EIR, as appropriate.

**Table A.3-1. Listing of Comment Letter Received**

Organization	Name	Date
City of Los Angeles, Department of Transportation	Bill J. Shao	January 31, 2007
South Coast Air Quality Management District, Diamond Bar	Steve Smith	January 31, 2007
California Department of Transportation	Cheryl J. Powell	February 7, 2007
City of Burbank, Community Development Department (fax)	Greg Herrmann	February 23, 2007
City of Los Angeles, Bureau of Engineering, Wastewater Conveyance Engineering Division	Dan Comorre	February 26, 2007
City of Los Angeles, Department of Recreation and Parks, Planning and Development Division	Michael A. Schull	February 27, 2007

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City of Los Angeles  
Inter-Departmental Correspondence

Date: January 31, 2007  
To: Victor Soto  
Department of Water & Power  
From: Bill J. Shao  
Department of Transportation

CD 2, 4, 6  
07-3517-19,50-56  
Various

**SUBJECT: LADOT COMMENTS FOR RIVER SUPPLY CONDUIT (RSC)  
IMPROVEMENTS – UPPER REACH**

This is in response to the meeting we had on January 24, 2007 regarding the Department of Water and Power's proposed River Supply Conduit (RSC) Improvements – Upper Reach.

We have completed our initial review of Construction Units 5, 6 and 7. As you requested, we are providing the following comments for all three units.

Unit 5- 60% Contract Drawings  
(Drawing Numbers D5712-T-0, 2, 101, 102, 104, 105, 106)

The area north of Vanowen Street and west of Lankershim Blvd has a high concentration of apartments. Whereas the area south of Vanowen Street and west of Lankershim Blvd is developed to single family dwellings. We would prefer to avoid construction near apartments due to the high and constant traffic volumes.

We suggest the following two alternate routes:

1. Lankershim Blvd to Vanowen St to Morella Ave  
Although Vanowen Street is designated as a Secondary Highway, it is wide enough to handle the work area required for construction and still allow traffic to flow in both directions.
2. Lankershim Blvd to Archwood St to Morella Ave  
Most of these residential streets are 36 feet wide. Due to the size of the equipment required for this project and the instability of the sandy soil in this area, we anticipate partial or full closure of these intersections. In the event that detours become necessary for unforeseen reasons, it will be easier to detour traffic around Archwood Street since it carries half the amount of traffic that Hart Street carries. (Hart Street is designated as a collector street and carries 3,300 vehicles per day. Archwood Street is designated as a local street and carries 1,500 vehicles per day.)



Unit 6 – 30% Contract Drawings

(Drawing Number D5713-T-101, 102, 103, 104, 105, 106, 107, 108)

The alignment selected for this Unit does not seem to present traffic problems, especially if tunneling is selected as the method of construction.

Unit 7 – 60% Contract Drawings

(Drawing Numbers D5714-T-0, 2, 101 thru 115)

Burbank Boulevard is 74 feet wide within City of Los Angeles right-of-way and narrows to 68 feet within the City of Burbank right-of-way. We do not foresee problems with the proposed alignment in the City of Los Angeles city limit. Most of the remaining alignment is within the City of Burbank.

The southeastern segment within Forest Lawn Drive is within LADOT's Hollywood-Wilshire District. For comments, please contact Jeannie Shen at (323) 845-9835, or she can also be reached via e-mail at [jeannie.shen@lacity.org](mailto:jeannie.shen@lacity.org).

In addition to the comments relating directly to the alignment, below is a recap of the suggestions that were made at the meeting:

- Establish a procedure to request LADOT traffic control officers and traffic signal electricians for emergencies or on an as needed basis.
- Overhead power lines and traffic signal standards should be taken into account at the design stage at locations where large equipment such as cranes will be used at time of construction.
- Obtain an exemption from EXECUTIVE DIRECTIVE No. 2 (Rush Hour Construction on City Streets) prior to start of construction.
- Meet with all affected council office representatives as needed to inform them of the project alignment and schedule.

If you have any questions please do not hesitate to contact me or Sandra Herrera of my staff at (818) 374-4688.

BJS:sh  
DWP-RSC.wd

C: Jeannie Shen, Hollywood-Wilshire District



South Coast  
Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4182  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

January 31, 2007

Ms. Sarah Easley Perez  
Environmental Program Manager  
Los Angeles Dept. of Water and Power  
Environmental Services  
111 North Hope Street, Room 1044  
Los Angeles, CA 90012

Dear Ms. Perez:

**Notice of Preparation of a Draft Environmental Impact Report for  
River Supply Conduit Improvement Upper Ranch**

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft Environmental Impact Report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. In addition, please send with the Draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files.

**Air Quality Analysis**

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2002 Model. This model is available on the SCAQMD Website at: [www.aqmd.gov/ceqa/models.html](http://www.aqmd.gov/ceqa/models.html).

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: [http://www.aqmd.gov/ceqa/handbook/PM2\\_5/PM2\\_5.html](http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html).

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at <http://www.aqmd.gov/ceqa/handbook/LST/LST.html>.

It is recommended that lead agencies for projects generating or attracting vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA webpages at the following internet address: [http://www.aqmd.gov/ceqa/handbook/mobile\\_toxic/mobile\\_toxic.html](http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html). An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

#### **Mitigation Measures**

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA webpages at the following internet address: [www.aqmd.gov/ceqa/handbook/mitigation/MM\\_intro.html](http://www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html) Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: <http://www.aqmd.gov/prdas/aqguide/aqguide.html>. In addition, guidance on siting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: <http://www.arb.ca.gov/ch/handbook.pdf>. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

#### **Data Sources**

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (<http://www.aqmd.gov>).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Charles Blankson, Ph.D., Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,



Steve Smith, Ph.D.  
Program Supervisor, CEQA Section  
Planning, Rule Development and Area Sources

SS:CB:li

LAC070126-12LI  
Control Number

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 7, REGIONAL PLANNING  
IGR/CEQA BRANCH  
100 MAIN STREET, MS # 16  
LOS ANGELES, CA 90012-3606  
PHONE: (213) 897-3747  
FAX: (213) 897-1337



*Flex your power!  
Be energy efficient!*

IGR/CEQA No. 070141AL, NOP  
River Supply Conduit Improvement-  
Upper Reach  
Vic. LA-170 and 134-Various Locations  
SCH# 2007011110

February 7, 2007

Sarah Easley  
Los Angeles City Department of Water and Power  
111 N. Hope Street, Room 1044  
Los Angeles, CA 90012

Dear Ms. Easley:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project is to construct a new larger pipeline to replace the upper reaches of the existing River Supply Conduit (RSC) pipeline in a new alignment.

To assist us in our efforts to evaluate the impacts of this project on State Transportation Facilities, please forward a copy of a construction traffic study for our review, if one has been prepared. Otherwise, a new construction traffic study should be prepared to analyze the following information:

1. Traffic impacts on State Routes 134, 170, and all affected on-ramps and off-ramps, all significantly impacted streets, crossroads and controlling intersections, as well as analysis of existing condition and construction periods.
2. Traffic volume counts to include anticipated AM and PM peak-hour volumes.
3. Level of service (LOS) before and during the construction.
4. A brief construction traffic discussion showing ingress/egress, turning movements, and a directional flow for construction vehicle trips.
5. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts, including sharing of mitigation costs.
6. A truck/traffic construction management plan is needed for this project.

*"Caltrans improves mobility across California"*

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If you have any questions, please feel free to contact me at (213) 897-3747 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 070141AL.

Sincerely,



CHERYL J. POWELL  
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

*"Caltrans improves mobility across California"*



CITY OF BURBANK  
COMMUNITY DEVELOPMENT DEPARTMENT

275 East Olive Avenue, P.O. Box 6459, Burbank, California 91510-6459  
www.ci.burbank.ca.us

February 23, 2007

Sarah Easley Perez  
Environmental Program Manager  
Los Angeles Department of Water and Power, Environmental Services  
111 North Hope Street, Room 1044  
Los Angeles, California 90012

Re: Notice of Preparation for River Supply Conduit Improvement – Upper Reach

**VIA FACSIMILE TO (213) 367-4710 (20 PAGES TOTAL) AND U.S. MAIL**

Dear Ms. Easley Perez:

The City of Burbank has reviewed the Notice of Preparation and accompanying Initial Study for the River Supply Conduit Improvement – Upper Reach project as a responsible agency under the California Environmental Quality Act, and respectfully submits the following comments.

**Project Description and Related Analysis**

To fully analyze the potential impacts of the proposed project, additional details about the project must be provided in the project description and studied to a higher level of specificity in the Draft Environmental Impact Report (EIR). Such details include the following:

- The specific portions of the project that will utilize the trenching, jacking, and/or tunneling construction methods, the specific locations of jacking and receiving pits for jacking operations, and the specific locations of shafts for tunneling operations. Given that each of the various construction methods are likely to have different sorts or combinations of impacts on the environment, it is paramount that the EIR clearly identify the locations where each method is to be used. The importance of this information cannot be understated, especially in light of the footnote to Table 1-2 on page 8 of the Initial Study which clearly states “Construction methods are to be finalized by the construction contractor.”
- The location of permanent above ground facilities including ventilation and monitoring stations. The potential impacts of these facilities, including aesthetics and noise, must be studied for the specific locations of the equipment, rather than in a generalized manner as was done in the Initial Study. If any of these facilities will be located in parks or recreation areas, their impact on the ability to use the surrounding space for recreation purposes and any impacts on users of the park space must be analyzed.
- The specific areas of Whitmall Highway Parks North and South, Johnny Carson Park, and equestrian trails south of Riverside Drive that will be closed to the public during

ADMINISTRATION 818.238.5176	❖	BUILDING 818.238.5220	❖	HOUSING & GRANTS 818.238.5160	❖	LICENSE & CODE SERVICES 818.238.5280
PLANNING 818.238.5250	❖	REDEVELOPMENT AGENCY 818.238.5180	❖	TRANSPORTATION 818.238.5270	❖	WORKFORCE CONNECTION 818.238.JOBS

construction, the length of time that the areas will be closed, and how they will be used. Users of the adjacent park and recreation space that remains open for public use may be impacted differently depending upon whether the closed areas are used for staging, materials storage, or actual construction activity. The specific use of the space must therefore be discussed and analyzed.

- The location, extent, and duration of the use of public rights-of-way. This information must specifically include any expected street closures or detours and detailed information about any expected use of public streets or sidewalks for construction activity, haul routes, staging areas, equipment or materials storage, construction worker parking, utility relocation, and exploratory borings and testing.

The above information will be necessary for the City of Burbank to determine whether the EIR adequately addresses the potential environmental impacts that the proposed project would have within the City of Burbank.

As an aside, please also note that the City of Burbank previously renamed the entire area formerly known as Buena Vista Park to Johnny Carson Park, including the park areas north and south of the Ventura Freeway. The Initial Study refers to the park area south of the Ventura Freeway along Riverside Drive as Buena Vista Park. While it may be useful to use that name to differentiate that park area from the area north of the Ventura Freeway, it is not accurate.

#### **City of Burbank Approvals**

Please note that in addition to the permits and approvals from the City of Burbank listed in the Initial Study, the following additional permits and clearances will be required:

- A confined space entry permit will be required to be obtained when applicable from the Burbank Fire Department for those portions of the project located in the City of Burbank.
- The Park, Recreation, and Community Services Department must approve all use of, and work in, City parks.
- The Public Works Department must review and approve Traffic Control Plans. Such Plans must include restricted hours, travel time restrictions to avoid peak traffic periods, local traffic detours, protective devices and traffic controls, provisions to maintain emergency access through construction work areas, and haul routes.
- The Public Works Department must review and approve a Noise Control Plan and Vibration Control Plan.
- The Public Works Department must approve and issue a Water Discharge Permit for any discharge of water into a public right-of-way.

#### **Air Quality**

The air quality analysis must acknowledge the presence of sensitive receptors along the Whitnall Highway alignment and study any impacts on those receptors. As noted on pages 39 and 48 of the Initial Study, there are numerous sensitive receptors in close proximity to the project within the City of Burbank, including but not limited to Roosevelt Elementary School, Stevenson Elementary School, Media Center Montessori Preschool, American Lutheran School, Providence

High School, and Providence St. Joseph Medical Center. In addition, there are several parks and recreation areas in proximity to the project area in the City of Burbank where children and elderly people congregate, including Whitnall Highway Park North, Whitnall Highway Park South, Johnny Carson Park, and Verdugo Park.

#### **Geology/Soils**

Because geology and soils impacts are one of the primary areas of concern with this project, the City of Burbank asked an environmental consultant with expertise in geology to review the Notice of Preparation and Initial Study and provide comments. Due to the technical nature of the comments, they are attached to this letter and are incorporated herein by this reference.

In addition to the issues addressed in the attached comments, the EIR must address any potential impacts that may result from the existing decommissioned pipeline remaining in place, including potential failure or subsidence due to its age, failure due to adjacent pipeline replacement work, and seismic events. Measures must be taken and addressed in the EIR as necessary to prevent the decommissioned pipeline from becoming a habitat for rodents and other pests.

The EIR must also address the potential impacts resulting from any underground obstruction that cannot be broken down by the tunneling or boring equipment and must be removed from the ground surface. The City of Burbank notes that such removal would require additional permits or amendments to permits obtained for the tunneling or boring activity.

#### **Hazards and Hazardous Materials**

Because hazards and hazardous materials impacts are one of the primary areas of concern with this project, the City of Burbank asked an environmental consultant to review the Notice of Preparation and Initial Study and provide comments. Due to the technical nature of the comments, they are attached to this letter and are incorporated herein by this reference.

In addition to the issues addressed in the attached comments, the EIR must disclose the project's proximity to the Burbank Operable Unit and analyze the potential for significant impacts resulting from excavation of contaminated soil and/or pumping of contaminated ground water.

Further, the Initial Study acknowledges the possible release of potable water under pressure resulting from an emergency condition during operation of the pipeline. While potable water is not a hazardous substance, the release of large volumes of water under pressure due a pipeline failure or other emergency could potentially result in adverse impacts to people and the environment including ground failure, damage to structures or subsurface utilities and infrastructure, and flooding. This issue and the potential related impacts must be addressed in the EIR. All appropriate mitigation measures to address this issue, including but not limited to the provision of isolation valves, must be analyzed in the EIR. This issue is also raised in the attached comments related to the Geology and Soils section.

The Initial Study discusses the use of various substances in the soil in conjunction with tunneling and jacking activities, including soil conditioners such as bentonite, polymers, and foams; and slurry mixes. The EIR must address any potential environmental impacts resulting from the addition of these substances to the soil.



**Hydrology and Water Quality**

Please see the attached comments regarding groundwater related to the Geology and Soils section.

**Noise**

Much of the construction in the City of Burbank will occur in the middle of single family and multiple family residential neighborhoods and in close proximity to schools, movie and television studios, and recording studios. The noise and vibration analysis in the EIR must thoroughly discuss the expected impacts on these sensitive receptors for noise. All feasible mitigation measures must be utilized to reduce noise and vibration impacts to the extent feasible. Construction activity within the City of Burbank will be expected to comply with the requirements of the Burbank Noise Ordinance (Burbank Municipal Code Section 21-201 et seq.).

Because noise and vibration impacts are one of the primary areas of concern with this project, the City of Burbank asked an environmental consultant to review the Notice of Preparation and Initial Study and provide comments. Due to the technical nature of the comments, they are attached to this letter and are incorporated herein by this reference.

**Recreation**

The Initial Study acknowledges that the project will affect the public's ability to use certain parks and recreation facilities, including Whitnall Highway Parks North and South and Johnny Carson Park. As noted above, the project description must include a full discussion of all park and recreation areas or portions thereof that will be closed to the public during construction, the length of time that the facilities will be closed, and how the closed areas will be utilized, as well as a discussion of any permanent above-ground facilities to be located in any parks or recreation areas and the associated impacts on the use of the surrounding open space. The City of Burbank is concerned about the temporary loss of this park space, and possible impacts on users of the remaining park space during construction activities. Further, Johnny Carson Park hosts several large community events each year. The loss of park space during construction could significantly affect the ability to hold these events at the park. The impacts on these large events and day-to-day use of the parks must be fully discussed in the EIR, and the EIR must analyze all feasible mitigation measures needed to retain a portion of the park space for public use and to reduce the impacts on users of that space. The City is further concerned about temporary or permanent impacts on irrigation systems, the drainage channel that runs through Johnny Carson Park, and other park infrastructure that could result from construction activity or permanent facilities related to the project.

**Transportation/Traffic**

As noted above, further information must be provided in the EIR about the specific extent and duration of use of public rights-of-way. The traffic analysis must examine the anticipated impacts to specific intersections and street segments based upon the nature of the activities that are expected to occur at those locations and the timing of those activities. Aside from general impacts on the traffic flow and the street circulation system, the traffic analysis must examine any localized impacts that may affect access to schools, businesses, and residences in proximity to the construction activity.

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Sarah Easley Perez  
February 23, 2007  
Page 5

The traffic impact analysis in the EIR must carefully consider and address emergency vehicle access, which is noted as a potentially significant impact in the Initial Study. It will be critical to ensure that Burbank Fire Department personnel can adequately access the project site during construction activity. Further, any emergency response plan must ensure that emergency vehicle access to and from Burbank Fire Department Station No. 12 is maintained during construction, including access from Whitnall Highway.

**Utilities and Service Systems**

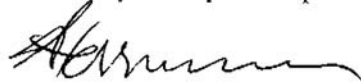
The City of Burbank is concerned about the impact that the proposed pipeline would have on available alignments for future utility construction and relocations for existing utility infrastructure where the pipeline crosses City of Burbank rights-of-way. The EIR must analyze the possible impacts of this project on the ability to meet future utility needs.

**General Comments**

Although the proposed project will take place within existing LADWP easements, much of the construction activity along Whitnall Highway will occur in the front and rear yards of Burbank residents in very close proximity to residential structures. The quality of life of residents living in these structures may be affected during construction activities. The EIR must acknowledge the proximity of residences and carefully consider any related impacts throughout all aspects of the impacts analysis. It will be critical for the EIR to thoroughly examine several alternative alignments due to the impacts that this project may have on residences, schools, parks, and businesses in proximity to the construction activity. The alternatives studied must consider the possibility of placing the pipeline entirely within the City of Los Angeles.

Thank you for the opportunity to comment on the Notice of Preparation. If you have any questions or wish to discuss these comments further, please contact Michael Forbes, Principal Planner, at (818) 238-5250.

Sincerely,  
Community Development Department



Greg Herrmann  
Chief Assistant Community Development Director/City Planner

Attachment

C: Honorable Mayor and Members of the Burbank City Council  
Mary Alvord, City Manager  
Dennis Barlow, City Attorney

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**Comments on the  
Notice of Preparation and Initial Study  
River Supply Conduit Improvement – Upper Reach  
Dated January 2007**

**Department of Water and Power  
City of Los Angeles**

**Prepared For:**

City of Burbank  
333 E. Olive Avenue  
Burbank, California 91510  
Contact: Greg Herrmann, City Planner  
818-238-5250

**Prepared by:**

Impact Sciences, Inc.  
803 Camarillo Springs Road, Suite A  
Camarillo, California 93012  
Contact: Joe Gibson, Senior Project Manager  
805-437-1900

**February 2007**

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## 1.0 INTRODUCTION

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Note: Section 1.0 of this document included an introduction and summary of the proposed project, which was duplicative of information contained in the Initial Study. That section has been omitted for brevity.

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## 2.0 TECHNICAL COMMENTS

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### 2.1 GEOLOGY AND SOILS

The Phase UR-3 tunnel will extend through Quaternary alluvium deposits composed of unconsolidated sand, gravel, and cobbles with some fine-grained clay- and silt-rich layers. These deposits are classified as "soft ground" for tunneling purposes and, due to the complex depositional history in the eastern San Fernando Valley, the subsurface distribution of these deposits will be difficult to predict along the tunnel alignment. In addition, groundwater elevations in the eastern San Fernando Valley have historically been subject to large fluctuations since the 1940s, having risen some 20 feet in the period 1992 through 1996 in the southern portion of the Phase UR-3 reach. Historical earthquake activity and the presence of significant capable earthquake faults beneath the Valley and the Santa Monica Mountains strongly suggest that planning for critical structures must consider the potential for very strong ground shaking (contingency design earthquake) and associated ground failure to protect project structures and the safety of residents within the City of Burbank.

#### 2.1.1 Would the project expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and seismic-related ground failure, including seismic settlement and liquefaction?

**Issue:** Operational risks from strong seismic ground shaking.

**Comment:** While it is acknowledged that underground pipelines generally perform better during strong ground shaking than aboveground structures, a failure of the proposed pipeline during a large local earthquake could induce a catastrophic break that could cause substantial surface flooding with attendant damage and personal injury. The elevation difference (head) from the north end of the Phase UR-1 to the City of Burbank is approximately 100 to 200 feet. It is indicated that there will be an ability to isolate areas of the pipeline to reduce the water flow, but there is no specific information on how many million gallons of water could be released with potentially devastating surface affects.

Ground motion analysis for the specific alignment geotechnical, engineering geology, and water conditions is necessary to determine if such a flood potential is reasonably foreseeable. Contingency planning would be necessary if there are areas where this potential exists.

**Issue:** Post-construction local settlement potential from strong seismic ground shaking.

**Comment:** Tunneling in alluvial deposits such as those present along the Phase UR-3 alignment can potentially degrade the strength and character of the alluvial deposits due to local stress relief, vibration, and disruption of the local groundwater (both continuous and perched). Such disruption can occur above the tunnel and laterally away from the tunnel walls. A weakening of the soil properties may not have an effect during or immediately after the tunneling in a static environment; however, in combination with a strong local post-construction earthquake the degradation of properties could cause seismically induced settlement near the tunnel centerline. This would have the most potential impact on historic and critical structures.

**Issue:** Post-construction liquefaction potential from strong seismic ground shaking.

**Comment:** State hazard maps indicate that the entire Phase UR-3 alignment is potentially susceptible to liquefaction, which, as demonstrated in past earthquakes, can contribute to damage of buried pipelines. The initial study strongly suggests that, while a geotechnical investigation shall be conducted to determine areas that will be susceptible to liquefaction, the more likely approach would be forego the more costly design considerations and repair the damaged pipeline after the fact. The consequences of such an approach are not defined in the initial study and must be in order to evaluate the consideration of safety and economic factors.

The construction techniques include grouting of the space between the tunnel liner and surrounding earth to reduce the potential for the pipeline and tunnel to serve as a preferential pathway for groundwater migration. It must be determined if this will alter the local flow paths for subsurface water in a way to create perched zones or to divert water into natural buried channels where it did not previously exist and that might be susceptible to liquefaction.

**Issue:** Potential Mitigations

**Comment:** The following are some examples of potential mitigation measures that are applicable to the Phase UR-3 tunneling and should be required as part of the proposed project:

- Prepare a groundwater assessment of the Phase UR-3 alignment to evaluate the presence and character of perched and continuous groundwater levels, including extent and flow properties.
- Monitor groundwater along the Project alignment before and during construction using a series of groundwater monitoring wells above and adjacent to the tunnel alignment. Use the in-construction monitoring to identify any unusual conditions that might indicate a hazardous condition.

- Model the effects (i.e., water rise in and around subterranean structures, increased liquefaction potential, nuisance water) within the basin of water spreading at the headworks considering the substantial groundwater fluctuations that have occurred during the past 60 to 70 years (since 1982 without spreading) in the adjacent portion of the eastern San Fernando Valley.

**2.1.2 Would the project 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 subsidence or collapse?**

**Issue:** Construction-induced settlements

**Comment:** Construction of the Phase UR-3 tunnel would require that two shaft sites be constructed immediately adjacent to or within the City of Burbank, both of which would be as deep as the tunnel, which we understand would be 25 to nearly 40 feet deep. The potential exists for ground settlement to occur adjacent to the shafts and above/adjacent to the tunnel alignment during construction. It is believed that the entire Phase UR-3 tunnel would be within relatively young, unconsolidated alluvial sediments derived from the local Santa Monica Mountains, the Verdugo Hills, and Tujunga and Pacoima Washes. These materials are considered "soft" from a tunneling perspective and must be accommodated by using special tunnel excavation techniques (TBM—tunnel boring machine) summarized above.

The composition of these soft alluvial sediments is very difficult to predict in advance due to the inherent lateral and vertical variability of these deposits over relatively short distances, and the usual limited pre-construction geotechnical and engineering geology surveys that are performed. State hazard maps indicate that various channel systems may cross the alignment producing heterogeneity. These braided channels can lead to lenticular bedding which usually cannot be correlated between geotechnical borings. Most sand and silty sand layers are loose to medium dense (SPT field N values typically range between 5 and 15), but very loose sands with SPT blow counts as low as 1 were recorded in some boreholes. Alluvial sediments along the Phase UR-3 tunnel are poorly studied, although geotechnical and engineering geology reports for some other projects within the City of Burbank provide insight into this variability.

Geotechnical reports, mostly abundant south of Olive Avenue in the vicinity of the proposed Phase UR-3 tunnel alignment, indicate that alluvial deposits to depths of approximately 40 feet are predominantly unconsolidated fine- to coarse-grained sand with varying amounts of gravel, cobbles, and some boulders. The sand units identified also contain gravel and cobble layers as well as fine-grained silty sand, silty clay, and clayey silt. These units are undoubtedly cross-cut by alluvial channels with locally coarse-grained deposits. Each of these subunits has somewhat different strength characteristics, but the common characteristic is a lack of consolidation, relatively high porosity, and low cohesive strength.

Tunneling in such deposits can further degrade the strength and character of the alluvial deposits due to local stress relief, vibration, and disruption of the local groundwater (both continuous and perched). This disruption is not only above the tunnel, but may extend two to four tunnel diameters laterally away from the tunnel walls. This degradation of properties can lead to settlements of many inches extending away from the tunnel centerline for a substantial distance. With the substantial numbers and types of sensitive and "normal" structures within the zone of influence, the potential for damage and disruption of services is evident.

The environmental studies need to address potential degradation not only above the tunnel but at a sufficient lateral distances.

**Issue:** Construction-induced ground collapse (crater formation)

**Comment:** In addition to the smaller settlements described above, the possibility exists when tunneling in soft ground to cause more sudden and catastrophic failures. Failure mechanisms in soft soil conditions have been generally classified as ground collapse in heading and lining failure before or even after ring closure. The first category can be divided into four subgroups:

- Ground heading is too weak for the excavation method, i.e. invert, bench and crown failures, full or local face failures,
- Crown weakness (vertical fissures, pipes, and manmade features),
- Surface collapse/craters (thin and/or low strength overburden), and
- Running ground or flowing water ingress in tunnel or the shaft.

Once the tunnel lining is in place, the second failure category can include:

- Shear failure,
- Compression failure,
- Combined bending and thrust,
- Punching failure, and
- Watertight connection of segments.

Precautions against such failures can only be made with proper advance investigation, use of appropriate ground treatment methods, and monitoring during the tunnel advance.

The environmental studies should include adequate advance subsurface investigations.



**Issue:** Construction-induced dewatering-related subsidence

**Comment:** Construction of Phase UR-3, based on historically high groundwater levels within this portion of the City of Burbank, could be partially below the regional groundwater surface or may encounter perched water zones due to the presence of low permeability zones within the otherwise permeable alluvial deposits. While it is understood that the TBM method would be chosen to avoid tunnel dewatering, inadvertent contact with local perched water zones (or old groundwater wells) could cause local dewatering of alluvial deposits that could induce subsidence and ground settlement due to the sudden reduction in interstitial pore fluids. Also, liner failures below the groundwater surface could also locally dewater relatively shallow formations within the alluvium leading to the same result.

Dewatering-related subsidence can affect alluvial deposits for at least 100 feet from the tunnel. As with ground settlement or collapse, to preclude such failures proper hydrogeologic investigations, use of appropriate tunnel boring methods, selective ground treatment, and monitoring during the tunneling process are imperative and must be included in the environmental documentation.

**Issue:** Potential Mitigations

**Comment:** The following are some examples of potential mitigation measures that are applicable to the Phase UR-3 tunneling and should be required as part of the proposed project:

- Require a comprehensive preconstruction geotechnical, engineering geology, hydrogeology, and geophysical investigation and analysis of the Phase UR-3 route to define the ground conditions and tunneling environment in sufficient detail to achieve all stated construction and operational objectives with regard to performance standards and public safety as determined in cooperation with the City of Burbank Department of Public Works.
- Investigation and analysis shall not focus strictly on the tunnel centerline, but shall consider areas at a sufficient distance away from the centerline to predict tunneling effects (e.g., settlement, groundwater changes, and changes in alluvial properties).
- Require the construction contractor to limit settlement to 0.5 inch or less in the public right-of-way as a performance standard. Require additional preconstruction geotechnical studies as needed to define the nature of the soils and to refine the means of achieving the performance specification.
- Require the use of compaction grouting or other method to fill voids where appropriate and offset potential settlement when excess material has been removed during excavation.
- Grout the tunnel in advance to provide adequate soil support and minimize settlement as geotechnical conditions require. This shall be required in cases where major structures need settlement criteria more stringent than the 0.5 inch specified earlier.

- Monitor settlement along the tunnel alignment using a series of settlement monuments and other measuring devices above the route of the selected alignment. Leveling surveys shall be conducted before tunneling reaches a given area when the heading is in the immediate vicinity, to monitor possible ground movements.
- Conduct a preconstruction survey of buildings, including dwellings, to establish a baseline against which potential construction-induced damage would be measured.
- Describe and define in the contract specifications for tunnel construction the monitoring requirements for the tunneling operation with regard to performance criteria. During the tunneling operation, the soils encountered shall be monitored relative to the anticipated soil conditions as described in the baseline geotechnical and engineering geology report(s).
- Specify the capability of the earth pressure balance or slurry shield tunneling machines to process large cobbles and boulders to minimize settlement. Tunnel machine selection and method of operation shall be based on anticipated ground conditions.
- Consult and coordinate with the Army Corps of Engineers prior to the start of construction regarding construction methods and performance criteria in the Los Angeles River crossing.

## 2.2 HAZARDS AND HAZARDOUS WASTE

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

**Issue:** Interference with emergency response plan and services.

**Comment:** The tunneling will require shafts to be installed near Riverside Drive south of the 134 freeway and in West Burbank Boulevard west of Clybourn Avenue. Construction activities at both of these locations could result in temporary interference with emergency response or evacuation plans in the event that construction equipment, road closures, or traffic backups interfere with emergency vehicles traveling through the construction area. Traffic control plans would be required, including approval by the City of Burbank Public Works Department, as needed to manage traffic through construction zones, while allowing emergency vehicles and personnel access to the work site.

**Issue:** Encountering contaminated groundwater.

**Comment:** Construction of shaft sites and excavations deep enough to encounter groundwater (such as tunneling) could require dewatering, which could expose the public or the environment to hazardous materials through handling of contaminated groundwater or by locally affecting the extent or flow of an existing contamination plume. Soil and groundwater encountered should be tested and treated prior to removal from the project site and/or discharge, and by using construction methods that minimize dewatering such as earth-pressure-balance tunneling.

In the event that gases or contaminated groundwater are encountered during construction, people or property could be exposed to health hazards as a result of an accidental release or explosion. Protocols for tunneling through gassy zones including probing ahead with gas sensors and monitoring gas in the tunnel should be developed. In the event gases are detected, the gas would be kept at low concentrations so as not to pose an explosion hazard.

**Issue:** Emergency response.

**Comment:** Construction activities could require emergency response from the City of Burbank in the event of an accident during construction, shaft excavation and tunneling, and/or the accidental release of hazardous materials resulting from those activities.

The Burbank Police Department provides police protection services to the City of Burbank. Burbank Police Department headquarters are located at 200 North Third Street.

The Burbank Fire Department, with headquarters at 311 East Orange Grove Avenue, provides fire prevention and suppression, emergency medical services, disaster services, and public education to the City of Burbank. Fire Stations No. 11 (353 E. Olive Avenue) and No. 12 (644 N. Hollywood Way) would most likely be the first responders and serve the area surrounding the proposed shaft sites, drop structures, and tunneling activities.

Construction of shafts and tunneling would occur primarily in public rights-of-way. During the construction period, activities and equipment staging should be confined to the area of the shaft sites and maintenance holes and could result in temporary lane closures and disruption in traffic; however, emergency ingress and egress should be maintained at all times.

## 2.3 HYDROLOGY AND WATER QUALITY

### 2.3.2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a lowering of the local groundwater table level?

**Issue:** Changes in local water levels due to tunnel construction and groundwater spreading.

**Comment:** See sections 2.1.1 and 2.1.2.

## 2.4 NOISE

### 2.4.1 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?

**Issue:** Identification of sensitive receptors.

**Comment:** Land uses that are considered sensitive to noise impacts are referred to as "sensitive receptors." Noise-sensitive receptors include, but are not limited to, schools, religious institutions, residences, libraries, parks, hospitals, and other care facilities.

Sensitive land uses for groundborne vibration include residences, schools, churches, and hospitals. Outdoor park facilities, such as picnic areas or athletic fields, are not considered to be sensitive to groundborne noise or vibration. Certain industrial buildings that use high-resolution imaging equipment, such as electron microscopes and historic structures, are also sensitive to groundborne noise and vibration.

The sensitive receptors discussed below do not constitute a comprehensive list of sensitive uses in the study area but represent a sampling of different types of receptors that would be most affected by noise and vibration from the proposed project components.

The alignment of the proposed project would enter the City south of California Highway 134 and the Los Angeles River at Johnny Carson Park east of Bob Hope Drive. The proposed project would then follow the alignment of an existing LADWP right-of-way in the Whitnall Highway utility corridor northwest, crossing under Riverside Drive to West Burbank Boulevard where it would turn west and follow Burbank Boulevard out of the City into the City of Los Angeles.

The alignment along Whitnall Highway from the Los Angeles River to North Olive Street has numerous sensitive receptors within 0.25 mile on both sides including:

- Johnny Carson Park,
- St. Joseph Hospital,
- Providence High School,
- Disney Studios, and
- NBC Studios.

The portion from North Olive Street to Clark Street has the following sensitive receptors within 0.25 mile:

- Robert Louis Stevenson School,
- Warner Bros Ranch Studios,
- Verdugo Park and Pool,
- Whitnall Highway Park South,
- Theodore Roosevelt School,
- City of Burbank Fire Station No. 12, and
- Numerous residential structures, some built in the late 1940s and early 1950s.

The portion from Clark Street to Magnolia Boulevard includes:

- Numerous residential structures, some built in the late 1940s and early 1950s and
- Residential structure located immediately above the proposed tunnel location

Burbank Boulevard includes the following sensitive receptors:

- Numerous residential structures, some built in the late 1940s and early 1950s and
- Whitnall Highway Park North.

The environmental studies should include an inventory of all sensitive receptors for noise within 0.25 mile on either side of the proposed tunnel alignment through the City of Burbank.

**Issue:** Background noise measurements.

**Comment:** To determine the existing background, or ambient, noise level and to identify existing noise sources at and in the area surrounding, LADWP should obtain noise measurements at each project-level component and nearby sensitive receptors using appropriate calibrated equipment. The measurements should be taken at various sensitive receptor locations between the appropriate hours.

**Issue:** Thresholds of significance (noise).

**Comment:** Adequate thresholds of significance should be established to identify impacts from noise resulting from tunneling and other project activities. Specifically, the following conditions and excerpts from the City of Burbank Municipal Code (Section 21-208) should be required:

(a) DECIBEL LIMIT.

No person shall operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in such a manner as to cause the ambient noise level to be exceeded by more than five (5) decibels.

(b) AMBIENT NOISE BASE LEVEL.

For the purposes of this section only, all ambient noise measurements shall commence at the following ambient noise base levels (measured in decibels on an A-weighted scale [dB(A)]) in the zones and during the times shown:

Base Levels	Time	Zone
45 dB(A)	nighttime	residential
55 dB(A)	daytime	residential
65 dB(A)	anytime	commercial
70 dB(A)	anytime	all other zones

Accordingly, and by way of illustration, the ambient noise level in commercial zones shall be deemed to be 65 dB(A) notwithstanding a lower reading; provided, however, that when the ambient noise base level for the property on which the machinery, equipment, pump, fan, air-conditioning apparatus or similar mechanical device is located is higher than the ambient noise base level for adjacent property, the ambient noise base level for the adjacent property shall apply. Properties separated by a street shall be deemed to be adjacent to one another.

**Issue:** Potential mitigations.

**Comment:** The following mitigation measures should be required as part of the proposed project:

- Construction contracts will specify that all construction equipment will be equipped with mufflers and other suitable noise attenuation devices.
- If construction sites have a line of sight to sensitive receptors, temporary noise curtains will be constructed along the perimeter of the construction sites where the line of sight would occur. The height and placement of the noise curtains will break the line of sight from any sensitive receptors. The noise curtain, in conjunction with other mitigation measures, will provide sufficient noise attenuation to prevent increases in ambient noise levels at adjacent sensitive receptors by 5 decibels or more. Additionally, noise curtains will be installed at all construction sites within 500 feet of a school.
- Prior to the start of construction activities, the contractor will submit a comprehensive noise control plan for review and approval of the project engineer. The noise control plan will identify best possible construction-staging locations and noise-monitoring procedures, evaluate anticipated

construction noise impacts and mitigation measures, and establish reporting requirements and complaint response procedures. For nighttime construction activities, the noise control plan will impose restrictions on the use of equipment with backup alarms or any other devices that typically emit banging, clanging, buzzing, or other annoying noises.

- All residential units located within 2,000 feet of construction sites will be sent a notice regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet also will be posted at the construction site. All notices and the signs will indicate the dates and duration of construction activities, and will provide a telephone number where residents can inquire about the construction process and register complaints. All notices will be posted at least 10 days prior to the start of construction.
- LADWP shall establish a community liaison program designed to provide for two-way communication between the community and the City of Burbank to resolve noise problems that might arise during project construction. The community liaison program will consist of:
  - ~ A 24-hour hotline to enable residents and community members to report noise problems. The hotline will be staffed and operated by persons authorized to coordinate with the construction contractor, the construction manager, the inspector, and the design group to resolve identified issues. A database will be developed to log complaints and document the status of the reported incidents and activities/actions undertaken to address the complaints.
  - ~ The distribution of the construction schedule, and any modifications to it thereafter, to residents, property owners, and local businesses.
- Construction Hours: In accordance with the City of Burbank Municipal Code (Section 21-209), it is unlawful to operate construction equipment or perform any outside construction on buildings, structures or projects (as those capitalized terms are defined in Section 31-203) within the City other than during the following hours:

Sites 500 Feet or Less from a Residential Zone	
Monday – Friday	7:00 AM to 7:00 PM
Saturday	8:00 AM to 5:00 PM
Sunday and Holidays	None

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

Construction could result in groundborne vibration as construction of these alignments would require the use of tunnel-boring machines (TBM) and muck trains, which are used to haul excavated material from the TBM to the shaft site. In addition to airborne noise, construction of this component would result in groundborne vibration. Potential sources of groundborne vibration from tunnel construction include the TBM and muck trains that are used to haul excavated material from the TBM to the shaft site.

Under existing conditions, major sources of groundborne vibration in the City of Burbank area typically include trucks and buses operating on surface streets, and freight and passenger train operations.

**Issue:** Sensitive receptors.

**Comment:** The environmental studies should include an inventory of all sensitive receptors (see previous comments related to sensitive receptors for noise) for groundborne vibration within 0.25 mile on either side of the proposed tunnel alignment through the City of Burbank.

**Issue:** Background groundborne vibration measurements.

**Comment:** LADWP should conduct a preconstruction survey of all structures within of the proposed tunnel alignment to document the condition of buildings (existence of cracks and other damage) within the estimated impact zone of the tunnel.

**Issue:** Thresholds of significance (groundborne vibration).

**Comment:** Adequate thresholds of significance should be established to identify impacts from groundborne vibration resulting from tunneling and other project activities.

The threshold of perception for most people is around 65 velocity decibels (VdB). Vibration levels in the 70- to 80-VdB range are often noticeable but acceptable. Typically, vibration levels must exceed 100 VdB before building damage occurs, except for historic structures, which have a damage threshold of 95 VdB.

The impact threshold for groundborne vibration from the TBM is 80 VdB (rms), which is equivalent to a peak particle velocity (PPV) of 0.04 inch per second; this is based on a crest factor of 4.

**Issue:** Potential mitigations.

**Comment:** The following mitigation measures should be required as part of the proposed project:

- Similar to the noise control plan, the contractor will prepare a vibration control plan to ensure that groundborne vibration does not exceed the applicable levels at locations along the Phase UR-3 alignment. This vibration control plan will be based on ensuring that construction activities (tunneling and tunnel lining) do not exceed "threshold" or "limiting" levels for groundborne noise and vibration. The threshold limits will minimize intrusion and annoyance from tunneling and will apply to sensitive receptors along the tunnel alignments. The threshold for nighttime construction is same as the equivalent groundborne noise impact threshold used in the impact analysis and the daytime threshold is the same as the groundborne vibration impact threshold uses in the impact analysis. The limiting values will help prevent minor cosmetic damage and will apply to all buildings.



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### 3.0 REPORT PREPARATION

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This report was completed by Mr. Joe Gibson, Senior Project Manager, of Impact Sciences, Inc., and Mr. Ken Wilson of Wilson Geosciences under subcontract to Impact Sciences.

Mr. Gibson has 30 years of experience, with a background in environmental geosciences. Mr. Gibson has completed numerous projects involving numerous technical disciplines addressing a wide range of community, political, and public agency concerns. His work has included studies related to nuclear plant siting and waste disposal, expansion and development of ports and harbors, pipelines and transmissions corridors, large-scale developments, cultural and historical structures, transportation corridor assessments, and other projects throughout California and other western states.

Kenneth Wilson is a Registered Geologist (#3175) and Certified Engineering Geologist (#928) in California. Mr. Wilson has over 30 years of technical performance and project experience in critical facilities studies, hazardous waste management, energy plant site licensing, impacts to surface and groundwater resources, waste disposal site development, dams and reservoirs, and numerous other engineered structures.

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February 26, 2007

Sarah Easley Perez  
Environmental Program Manager  
Los Angeles Department of Water and Power, Environmental Services  
111 North Hope Street, Room 1044  
Los Angeles, CA 90012

Dear Ms. Perez:

**SUBJECT: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT ,  
REPORT, RIVER SUPPLY CONDUIT IMPROVEMENT – UPPER REACH**

The Bureau of Engineering, Wastewater Conveyance Engineering Division (WCED) has completed a review of the Notice of Preparation of an Environmental Impact Report (EIR) for the River Supply Conduit Improvement – Upper Reach, dated January 25, 2007.

The following are our concerns and comments:

The EIR should refer to other proposed projects which may have direct construction impacts to the River Supply Conduit Improvement - Upper Reach project. The City of Los Angeles, Department of Public Works' proposed Glendale Burbank Interceptor Sewer (GBIS) project is a critical large diameter gravity-flow sewer that, in part, will pass under Forest Lawn Drive, adjacent to the Headworks Spreading Grounds.

Pre-design and design of GBIS is scheduled from approximately 2007 to 2010 with construction following from approximately 2011 to 2016. The EIR proposed construction schedule for Phase UR3 of the River Supply Conduit Improvement project is from November 2008 to September 2011. During pre-design and design phases of GBIS, there will be exploratory soil boring operations and possibly some monitoring wells installed along the alignment of GBIS. Temporary traffic lane closures may occur during drilling operations and affect traffic in the general area of Phase UR3.

Because of the proposed schedules of these two projects and their interrelationship, it is believed and recommended that adequate coordination during design of Phase UR3 with the City's contact below can adequately address all potential impacts.

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Sarah Easley Perez  
February 26, 2007  
Page 2

Thank you for allowing us to review and comment on this Notice of Preparation of EIR for River Supply Conduit Improvement – Upper Reach. If you have any questions regarding the GBIS project, or this correspondence, please contact Nick Demos of my staff at (213) 485-1636.

Sincerely,



Dan Comorre, Asst. Division Manager  
Wastewater Conveyance Engineering Division  
Bureau of Engineering  
1149 S. Broadway, Ste 620  
Los Angeles, CA 90015

LA PW/ENG/WASTEWATER Fax: 213-485-4590 Feb 26 2007 14:59 P.03

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**CITY OF LOS ANGELES**

INTER-DEPARTMENTAL CORRESPONDENCE

**DATE:** February 27, 2007

**TO:** **SARAH EASLEY PEREZ**, Environmental Program Manager  
Department of Water and Power, Environmental Services  
111 North Hope Street, Room 1044  
Los Angeles, CA 90012

**FROM:** **MICHAEL A. SHULL**, Superintendent  
Department of Recreation and Parks, Planning and Development Division  
1200 W. 7<sup>th</sup> Street, Suite 700  
Los Angeles, CA 90017  
Mail Stop 682

**SUBJECT:** **RIVER SUPPLY CONDUIT IMPROVEMENT—UPPER REACH RESPONSE TO NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT**

My staff has reviewed the Notice of Preparation (NOP) and the Initial Study (IS) for the proposed River Supply Conduit Improvement—Upper Reach pipeline project. It appears that the pipeline alignment could potentially impact the following three park sites that are owned or leased by the Department of Recreation and Parks for public recreational uses:

- Tiara Street Site, 11480 Tiara Street, North Hollywood. Arrangements are currently being made to lease this 1.92 acre site to the Los Angeles Unified School District to use in conjunction with the newly constructed Maurice Sendak Elementary School. Therefore, LAUSD should be notified during the environmental review process. A point of contact is Eileen Ma, Leasing and Asset Management, LAUSD, 1055 W. 7<sup>th</sup> Street, Los Angeles, CA 90017; phone number: (213) 972-3833.
- Whitnall Highway Dog Park, 5801 ½ Whitnall Highway, Los Angeles. This 3 acre site is leased from DWP.
- Buena Vista Park, located between Warner Boulevard and Catalina Street in the City of Burbank. This 9.4 acre site is leased to the City of Burbank to augment their Johnny Carson Park.

Since the proposed project could potentially have an adverse environmental impact on these park sites, particularly Buena Vista Park, it is appropriate to include the City of Los Angeles Department of Recreation and Parks and the City of Burbank Park, Recreation and Community Services in Table 1-5, entitled Permits and Approvals, located in Section 1.11 of the Initial Study. Coordination with these agencies would be necessary to obtain right-of-entry permits and other related approvals.

Thank you for giving us an opportunity to review the NOP/IS for this important project. We would like a copy of the Draft Environmental Impact Report when it is released for agency review. If you have any questions regarding this matter, please contact David Attaway, Environmental Supervisor, at (213) 928-9130.

MAS/DA:ct

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**APPENDIX B**  
**SUMMARY OF MITIGATION MEASURES**

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## Appendix B - Mitigation Measures

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This appendix includes a list of mitigation measures the Los Angeles Department of Water and Power (LADWP) has agreed to implement for the Upper Reach Project. These measures were introduced in the Initial Study (IS) and within this Environmental Impact Report (EIR) in Section 3. The mitigation measures identified for the Upper Reach Project are presented below by environmental issue area. The notation in parenthesis indicates the document where the mitigation measures were identified.

### Aesthetics (IS)

**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.

### Air Quality (EIR)

**AQ-1** LADWP shall implement the following mitigation measures to reduce NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from non-road construction vehicles during construction:

- Tier 1 non-road diesel mobile construction equipment shall be used on-site;
- Construction equipment shall be maintained in tune per manufacturer's specifications; and
- Diesel engine idle time shall be restricted to no more than five minutes, except for construction equipment that needs to be maintained at idle to perform.

### Biological Resources (IS)

**BIO-1** Pre-construction surveys for nesting raptors shall be conducted in areas where above ground construction will be occurring from Johnny Carson Park south to the end of the project alignment. The survey shall be conducted by a qualified ornithologist or wildlife biologist to ensure that no raptor nests will be disturbed during project implementation. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (January through April) or no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the qualified biologist shall inspect all trees in and immediately adjacent to the impact areas for raptor nests. If an active raptor nest is located within 300 feet of the project area, the ornithologist, in consultation with CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest until the young have fledged.

**BIO-2** During construction, the discharge rate of hydrostatic test water within or upstream of soft-bottomed segments of the Los Angeles River (specifically in the soft-bottomed segment adjacent to

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Griffith Park) or its tributaries, 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.

**BIO-3** If mature trees will be directly or indirectly impacted by project construction, LADWP will comply with all Los Angeles City and Burbank City tree ordinances. A mature tree is defined as having a DBH (diameter at breast height) of 4 inches or greater.

### **Cultural Resources (IS)**

**CUL-1** LADWP shall conduct spot-monitoring (the extent and duration will be dependent upon the excavation schedule) along the pipeline alignment located on and south of Burbank Boulevard during construction activities. The extent and locations for spot monitoring will be determined by a qualified historian based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. Monitoring shall be conducted by a qualified historian.

**CUL-2** LADWP shall conduct archaeological monitoring during ground disturbing activities along and south of Burbank Boulevard. The extent and location of monitoring will be determined by a qualified archeologist based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. Archaeological 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 anywhere along the pipeline alignment, 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-3** 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.

**CUL-4** LADWP shall conduct paleontological monitoring during ground disturbing activities (excavation, trenching, boring, drilling, etc.) in the area of the Los Angeles River and the Headworks Spreading Grounds. The extent and location of monitoring will be determined by a qualified paleontologist based on review of the final excavation plan; all monitoring locations will be coordinated with the LADWP. 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.

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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-5** 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.

**CUL-6** 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.

### **Geology and Soils (IS)**

**GEO-1** A geotechnical investigation shall be conducted to determine areas that will be susceptible to liquefaction related phenomena. 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.

### **Hazards and Hazardous Materials (IS)**

**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



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allowed within 100 feet of streams or sites known to contain sensitive biological resources except with the permission of LADWP Environmental Services personnel. 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** Federal, state, and local notification requirements shall be followed for any release of hazardous materials that exceeds the reportable quantity.

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

**HAZ-6** LADWP shall conduct environmental briefings 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 briefings 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.

### **Hydrology and Water Quality (IS)**

**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.

### **Land Use and Planning (IS)**

**L-1** Fifteen days prior to construction, LADWP shall inform property and business owners, schools, medical centers, and other public facilities of the location and duration of construction. Within each construction phase, notification of construction activities shall be provided by placing advertisements in local and/or community newspapers. The advertisement shall state when and where construction will occur and identify construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, and public facilities (e.g., schools and memorial parks). The notice shall also state the type of construction

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activities that will be conducted, duration of construction activities, and provide LADWP contact information for public questions or concerns. If construction delays of more than 30 days occur, an additional notice shall be placed in local and/or community newspapers.

### **Noise and Vibration (EIR)**

**N-1** LADWP or its construction contractor shall provide advance notice, between two and four weeks prior to construction, by mail to all residents or property owners and businesses including the television and recording studios within 300 feet of the pipeline alignment. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than two weeks occur, an additional notice shall be made, either in person or by mail. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. The LADWP shall also publish a notice of impending construction in local newspapers, stating when and where construction will occur.

The notices shall provide a contact person and hotline where residents or business owners can call on a 24-hour basis with questions or comments during the construction period. LADWP or its construction contractor shall promptly respond to all inquiries regarding construction noise and vibration. On-site measurements may be needed to determine if noise or vibration levels are significantly above expected levels.

**N-2** All machinery to be used on-site shall be equipped with the best available exhaust mufflers and any applicable “hush kits.” No machinery shall be allowed on-site which emits noise levels in excess of 75 dBA when measured at a distance of 50 feet from the machine, unless technically infeasible due to the nature of the machine or its operation. LADWP or its contractor shall substitute quieter machinery, wherever feasible.

**N-3** All machinery shall be maintained in good working order and lubricated as necessary to minimize unnecessary squeals, groans, and other noise. All cabinets, panels, covers, shrouds, and similar components shall be securely fastened to ensure that they do not create excessive noise due to vibration.

**N-4** LADWP or its construction contractor shall turn off all unnecessary machinery. Delivery and hauling trucks shall not sit with their engines idling for periods exceeding 5 minutes. The contractor shall post signs advising drivers to turn off idling engines.

**N-5** LADWP or its construction contractor shall erect temporary noise-barriers to shield nearby residences and other sensitive receptors or land uses from direct exposure to airborne construction noise. These barriers shall be erected to reduce construction noise levels to 70 dBA or below and to maintain one-hour average noise levels below 75 dBA at any sensitive receptor or land use. The *RSCI Upper Reach Noise and Vibration Study* (Appendix C) includes recommendations for achieving these noise levels. For example, barriers shall consist of commercially available noise-control curtains, in-situ fabricated sound walls, or equivalent barrier with an overall sound-transmission class rating of STC-28 or higher. All barriers shall be constructed to contain no unnecessary holes or gaps. Where access through the barrier is required, overlapping sections shall

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be constructed to prevent noise escaping through the opening. The most appropriate barrier shall be determined specific to each situation..

- N-6** The use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.
- N-7** LADWP or its construction contractor shall perform noisy work off-site and away from any residential areas wherever feasible. Such off-site activities may include rock-crushing, materials pre-fabrication, and equipment maintenance.
- N-8** All trucking shall be constrained to major roadways (e.g., Lankershim Boulevard, Burbank Boulevard), to the extent feasible, to limit use of residential side streets. The contractor shall establish designated truck routes to serve each project area. All subcontractors shall also be required to adhere to the designated truck routes.
- N-9** LADWP or its construction contractor shall restrict deliveries to those hours permitted by the City of Los Angeles and City of Burbank. Staging areas in the vicinity of sensitive receptors and land uses receivers shall be locked after hours, and shall have signs prominently displaying operating hours.
- N-10** LADWP or its construction contractor shall instruct all personnel, including subcontractor personnel, of the necessity for, and methods of, controlling noise and vibration impacts on sensitive receptors and land uses. Instruction should occur before construction enters any noise-sensitive areas.
- N-11** LADWP or its construction contractor shall monitor noise and vibration under the guidance of an independent qualified acoustical consultant along the project alignment to ensure the measures described in N-1 through N-10 are effectively reducing noise levels. Monitoring shall be conducted quarterly and documented. Monitoring shall include additional spot-checks of the noise and vibration levels near sensitive receptors/land uses including the television and recording studios and any additional measurements to resolve issues reported as part of the 24-hour hotline required as part of Mitigation Measure N-1. LADWP, under the guidance of the acoustical consultant, shall have the authority to cease any construction activity which significantly exceeds noise thresholds or is causing substantial disturbance to sensitive receptors or land use (as determined by the number of concerns received at a specific location) until additional noise or vibration-reducing measures are implemented.
- N-12** LADWP or its construction contractor shall take all reasonable measures necessary to maintain ground-vibration levels below a peak-particle velocity of 0.02 inches per second at any sensitive receptor or land use as verified during periodic monitoring by a qualified acoustical consultant required as part of Mitigation Measure N-11. Such measures may include any of the following:
- Adjust the speed of the TBM cutting wheel (it is possible that the rotational speed of the cutting wheel may coincide with natural frequencies of nearby structures, thus amplifying the induced vibration; increasing or decreasing the wheel speed would likely reduce this impact).

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- Use alternate TBM cutting surfaces (different cutting surfaces, if available, may induce varying levels of vibration into the soil, particularly with regard to soil composition and condition).
  - Minimize the undulations and roughness of muck-train tracks (a muck car which rolls smoothly over its tracks will induce less vibration into the surrounding soils).
  - Minimize the number of junctions in the muck-train tracks (previous experience indicates that muck-train vibration impacts are greatest near junctions in the tracks, where disjoints are likely to occur in the rails).
  - Minimize gaps between adjoining rails.
  - Mount muck-train tracks on resilient pads or springs.
  - Maintain roundness of muck-train wheels.
  - Lessen the load of the muck-trains (lightly-loaded cars will induce less vibration into surrounding soils than heavily-laden cars).

**N-13** No less than 60 days prior to construction, LADWP or its construction contractor shall identify historic and fragile buildings within 200 feet of the tunneling portions of the alignment. Buildings shall be identified in the field and, as necessary, a building inspector or architectural historian may be needed to support the identification of these buildings. If buildings are identified that are in poor condition and therefore may be adversely affected by ground vibration, or buildings are considered historical based on local, state, or federal designations, then additional information shall be documented on those buildings through an exterior evaluation of the condition of the buildings and photo documentation. The purpose of this focused survey is to document the current condition of older buildings along the tunneling portion of the alignment, if any, prior to the start of construction and to assess whether there is any change in the conditions of the buildings during or after construction. If there is reason to believe that a structure may be potentially damaged during project construction, then LADWP in conjunction with its construction contractor will determine if there are measures that can be taken to reduce vibration impacts to the building or structure.

## **Recreation (EIR)**

**R-1** No less than 60 days prior to construction, LADWP shall coordinate construction activities and the project construction schedule with the City of Burbank, Department of Parks and Recreation and City of Los Angeles, Department of Parks and Recreation regarding the use of a portion of Johnny Carson Park as a construction staging area. This coordination shall include consideration of heavy recreational use periods, including major holidays, in construction scheduling, and providing construction notification at park facilities and offices. The notice shall also identify alternate park facilities. In addition, coordination shall include discussion of the schedule and planning for restoration of the affected park area after construction.

## **Transportation and Traffic (EIR)**

**T-1** Prior to the start of construction, LADWP shall submit a Construction Traffic Management Plan to the Los Angeles Department of Transportation and City of Burbank for review and approval prior to the start of any construction work. The plan shall show the location of roadway or lane closures, traffic detours, haul routes, hours of operation, and local access (maintenance of), including bike

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lanes if applicable. The Plan shall also discuss the use of flag persons, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH).

- T-2** Pending approval from the Los Angeles Department of Transportation, the LADWP or its construction contractor shall implement the following roadway measures during construction:
- **Lankershim Boulevard.** Three travel lanes shall be provided during the construction period - two travel lanes in the peak direction of travel. For pit/shaft construction at the Lankershim Boulevard and Hart Street intersection, two lanes of travel may not be possible for the peak travel time/direction (southbound in the a.m. peak period). In order to avoid significant traffic impacts, a recommended alternate route (not a full detour route) shall be established and signed for southbound traffic on Lankershim Boulevard. This route shall utilize eastbound Sherman Way, southbound Tujunga Avenue, and westbound Hart Street.
  - **Burbank Boulevard.** LADWP shall provide narrower rectangular working areas for jacking pit and shaft operations, where feasible, to provide for two travel lanes along the narrower portions of Burbank Boulevard. Work area width shall be reduced to 25 to 30 feet to allow for two 10-foot temporary travel lanes.
  - **Forest Lawn Drive.** Directional capacity (westbound in the a.m. peak and eastbound in the p.m. peak) shall be considered in roadway closure planning. The provision of two travel lanes in the peak direction, while providing one travel lane for the opposite direction of traffic flow, shall be provided. This peak provision may not be possible within the vicinity of the pit/shaft work areas.
- T-3** At the egress point on the eastern side of the Johnny Carson Park staging area site, flag persons shall be provided for truck movements from the site to the SR-134 eastbound on-ramp.
- T-4** So that delays are not significant for motorists on Bob Hope Drive and Riverside Drive, flag persons shall limit truck movements into and out of the site to one or two trucks at a time. Inbound truck movements shall be scheduled to allow this management to be effective, and outbound truck movements should be held if necessary.
- T-5** LADWP shall provide a minimum of 48-hour advance notification of the potential for disrupted access to and parking for any business, residence, or recreational facility that may experience delayed access or reduced parking capacity in the vicinity. The notification shall include information on restoring access and the estimated amount of time that access may be blocked.
- T-6** If vehicular access to businesses, residences, and recreational facilities cannot be restored within eight (8) hours, LADWP or its construction contractor shall provide a one lane temporary vehicular bridge for access (LADWP Specification F01560 - Project Controls, Section 3.07D).
- T-7** The westbound left turn lane into the Forest Lawn cemetery shall be maintained during proposed project construction, as well as the right turn access into the cemetery from the eastbound curb lane.
- T-8** LADWP shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by LADWP of the proposed locations, nature,

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timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provision shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. The Traffic Construction Management Plan (T-1) shall include details regarding emergency services coordination and procedures.

- T-9** LADWP shall coordinate in advance with City of Burbank to avoid restricting movements of public transportation. Notification shall include proposed locations, nature, timing, and duration of any construction activities and any access restrictions that could impact existing bus stops and service routes. The Traffic Construction Management Plan (Mitigation Measure T-1) shall include details regarding public transportation coordination and procedures. Copies of the plan shall be provided to the City of Burbank.
- T-10** LADWP shall ensure bicycle route closure signs are posted at major intersections to the west and east of the construction area (Griffith Park area and Barham Boulevard).