MULHOLLAND WATER PIPELINE PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT

SCH #2000061066

VOLUME I

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PREFACE

The following document constitutes a Final Environmental Impact Report (Final EIR). This Final EIR is comprised of the Draft EIR issued on April 26, 2001 for public review, comments received during the public review period, responses to those comments, and any revisions or clarifications made to the Draft EIR as a result of review period. The review period for the Draft EIR extended from April 26, 2001 to June 11, 2001. Revisions and clarifications to the EIR are indicated as new text (underlined) and deleted text (~~strikethrough~~). Copies of the comment letters received on the Draft EIR, and responses thereto, are provided at Appendices H and I, respectively, of this Final EIR.

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ABSTRACT

The Los Angeles Department of Water and Power (LADWP) is proposing to construct and operate a water pipeline along a portion of Mulholland Drive, in the Woodland Hills area of the City of Los Angeles. The pipeline would connect two existing water distribution service zones along the southern and western rims of the San Fernando Valley. The project has been proposed by LADWP to improve overall water system reliability for current users and approved development in the project vicinity, as well as to provide an additional source of water for fire protection and other emergencies in the surrounding communities from potential brushfires and other emergencies.

The proposed project would consist of the installation of a total of 15,200 linear feet (approximately 2.9 miles) of new 16-inch diameter water distribution pipeline and a regulating station along Mulholland Drive, between Picasso Avenue and Greenbriar Drive, in Woodland Hills. About 13,000 linear feet of new 16-inch diameter, welded steel pipeline would be installed along the unpaved portion of 'Dirt' Mulholland Drive, from Saltillo Street to Greenbriar Drive. This unimproved segment of Mulholland Drive is located within a 200-foot wide dedicated roadway easement; the proposed project would be located within the existing roadway. Approximately 2,200 linear feet of 16-inch diameter ductile iron pipeline would be installed in the paved portion of Mulholland Drive between Saltillo Street and Picasso Avenue. Once the pipeline is constructed, the roadway would be restored to essentially its existing condition. No aspect of the proposed project would necessitate the need to pave the unpaved portion of the existing roadway.

In compliance with the California Environmental Quality Act (CEQA), this focused ~~Draft~~Final Environmental Impact Report (EIR) was prepared to evaluate the extent of environmental impacts associated with the proposed project.[1]

The EIR concludes that, with the implementation of mitigation measures for traffic, biological resources, air quality, and geology and soils, the project would have no significant impacts on the environment.

[1] Pursuant to Section 15358(b) of the CEQA Guidelines, economic effects are not considered environmental effects, and are therefore not addressed in this EIR.

SUMMARY OF IMPACTS AND MITIGATION
MULHOLLAND WATER PIPELINE PROJECT

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
Aesthetics	Construction of proposed project would temporarily obstruct passage of recreational users. Construction activities would constitute a distractive element of the viewshed. Impacts not considered significant because of its temporary impact.	None recommended	None recommended	Less than significant
Agriculture	No impacts identified	None recommended	None recommended	No significant impact
Air Quality	No significant impacts are identified from operation of proposed project. Construction activities would result in elevated fugitive dust (PM10) emissions above SCAQMD standards. Temporary road closures would divert traffic away from the dirt portion of Mulholland Drive and along paved roadways thereby reducing the net amount of fugitive dust emitted.	AIR-1: If not already swept, travel routes between the project site and the West Valley District Office should be swept once a day. AIR-2: Reduce traffic speeds on all unpaved roads to 15 mph or less. AIR-3: The active construction site being excavated and unpaved roads utilized by construction equipment and equipment hauling trucks shall be watered at a frequency sufficient to manage potential dust from surface disturbance. The water truck is assumed to have a standard capacity of about 2,400 gallons. In addition, on excessively windy days (i.e., when wind speed is greater than 25 miles per hour), active construction and road use areas shall be watered on an as needed basis so as to maintain a surface crust for preventing the emission of visible dust. To ensure proper application of water as a dust suppressant, an air quality management plan will be prepared that specifically addresses conditions under which	Compliance with mitigation measures	Implementation of the recommended mitigation measures would reduce fugitive dust (PM10) emissions to below SCAQMD levels resulting in no significant air quality impact.

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
		water shall be applied and the limits of its use so as to protect the roadway and adjacent biota and to maintain air quality conditions.~~Unpaved roads on the project site should be watered down at least three times daily.~~ AIR-4: Truck wheel wells of vehicles leaving the project site should be washed off prior to driving on paved roads. AIR-5: Trucks hauling excavated soils offsite should be securely covered. AIR-6: During construction activities at the westerly terminus of the proposed pipeline alignment, local residential traffic utilizing the unpaved portion of Mulholland Drive shall be diverted onto paved streets. The recommended route shall be clearly marked and posted along Topanga Canyon Boulevard, Dumetz Road, Canoga Avenue, and other residential streets.		
Biological Resources	Rare plants along the embankment may be potentially impacted upon construction of the maintenance holes. Migratory birds and raptor species nesting in the vicinity of the project site may be disturbed during construction activities resulting in the abandonment of their nests. Construction within 25 feet of either oak or walnut trees may	BIO-1: Should construction activities commence during the breeding season (late May – early August), a pre-construction focused survey shall be conducted by a qualified biologist one week prior to construction to identify the location of nesting raptors, and other birds, if any, within close proximity to the proposed construction zone. Should nesting raptors and birds be present, construction of the pipeline within 500-feet of an	Compliance with mitigation measures	Less than significant

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
Biological Resources	adversely affect tree viability given the potential to encounter roots during excavation activities.	active nest shall be avoided until after the breeding season or the birds have fledged. ~~No pre-construction surveys are needed if construction is to occur outside the breeding season.~~ ~~A pre-construction focused survey shall be conducted by a qualified biologist to: 1) identify rare plants, if any, located within 50 feet of either side of the proposed construction zone (must be surveyed between late May and early June) and 2) identify the location of nesting raptors, if any, within close proximity to the proposed construction zone. Should nesting raptors be present, construction of the pipeline within 500 feet of an active nest shall be avoided until after the breeding season.~~ 2 BIO 2: ~~Additional tasks associated with the pre-construction survey efforts include identifying and tagging Coast Live Oaks and California Walnuts which would likely incur root damage as a result of trenching for the proposed pipeline (i.e., those trees with a diameter at breast height (dbh) greater than four inches, located within 25 feet and on the same approximate horizontal plane as that of the approved alignment).~~ In order to mitigate for potential impacts on Coast Live Oaks and California Walnuts, ~~E~~eligible trees shall be replaced at a ratio of 5:1. Replacement of the species shall occur in existing conserved and degraded open space (~~i.e.~~e.g, Santa Monica Mountains		

[2] Rare plant surveys completed. See Appendix E.

[3] Surveys for California Walnut and Coast Live Oak trees potentially impacted have been completed (See Appendix E). Eligible trees for mitigation have been identified and are presented in Appendix E.

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		Conservancy land, State, County, City land) within the general vicinity of the project site. Appropriate planting techniques shall be exercised to ensure the long term viability of the newly planted trees (e.g., use of gel packs to ensure ample water source). Monitoring of the newly planted trees is recommended once every Spring and Fall. 3 BIO-3: All limits of grading and construction activities should be clearly delineated (e.g., with rollout, temporary mesh fencing) so that no native vegetation outside the delineated limits would be disturbed by construction personnel or equipment.		
Cultural Resources	'Dirt' Mulholland Drive is considered eligible for listing on the National Registry. Implementation of the proposed project would maintain the existing conditions of the roadway and, thus, not influence the outcome of the nomination. Recorded archaeological sites and fossil remains within two miles of the site do exist. It is unlikely that construction activities would encounter previously undisturbed archaeological and paleontological resources. The proposed project site has been previously disturbed by similar related pipeline construction.	None recommended	Construction of the project would comply with the conditions and mitigation described in the Draft EIR for the Mulholland Scenic Parkway Specific Plan and Final EIR for the Corbin Tank project, as well as, the Standard Specifications for Public Work Construction in the event that such cultural resources are discovered.	Less than significant
Geology And Soils	The proposed project itself would not induce or increase the potential for seismic shaking. The proposed project would have some	GEO-1: Slope Stability: It is not likely that the proposed project would increase the potential for a landslide to occur. However, an excavation at the toe of a slope may temporarily create a less stable condition until the excavation is backfilled or	The project would be designed, constructed, and operated in accordance with all applicable laws, regulated and formally adopted City	Less than significant

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
	affect on differential seismic settlement. The proposed project may increase the potential for landslides in the event of a pipeline rupture during a seismic event and the subsequent release of water. Because Mulholland Drive is not paved for the majority of the proposed project alignment, there is the potential for increased soil erosion around the perimeter of the maintenance hole covers should they be installed. Such an affect would be relatively small in scale and would not negatively impact the overall site conditions. During construction, the open trench could have some affect on slope stability.	otherwise stabilized. Potential site slope instabilities ~~should~~ will be mitigated by normal construction procedures, which includes monitoring of construction activities by the geotechnical engineer of record or his representatives. GEO-2: Seismically induced flooding: Though the Kittridge Tanks site was not evaluated, the sloshing of water in either the new Topanga or Kittridge Tanks proposed for Alternative 3 ~~should~~ will be considered during design of this alternative. GEO-3: Surface erosion/maintenance: Limited wind and water erosion might occur locally during the construction of the proposed facilities. However, measures commonly employed during construction, such as spraying water to control dust, use of sandbags to control siltation, and drainage control measures such as the covering of soil stockpiles with plastic sheeting during wet weather, ~~should limit~~would greatly reduce the potential for significant wind and water erosion impacts. GEO 4: Surface erosion/ maintenance: Should maintenance hole covers be installed, they will be located adjacent to and on the downhill side of the roadway. The soil around the entrance to the maintenance holes will be landscaped with native vegetation to maintain erosion potential at its current level or better. ~~Should maintenance hole covers be installed the design of the project should consider placing the covers along the embankment~~	standards. Construction would adhere to uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., Standard Specifications for Public Works Construction). The trench backfill will meet a minimum compaction requirement, minimizing the likelihood of large settlement and thus is not considered a significant impact. The release of water from a rupture can be minimized by the installation of shut-off valves, which is planned under the proposed project. Utilization of relatively impervious soils, such as existing native materials, for trench backfill to minimize the occurrence of slope instability. If there were potentially any destabilizing effects, these could be reduced by limiting	

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
		~~and within the existing 200' easement. Soil surrounding the maintenance holes would be landscaped with native vegetation to help minimize erosion.~~	the length of trench that is open at any time and backfilling the trench at the end of every workday.	
Geology and Soils (continued)		GEO-5: Erosion: During the rainy season, the length of excavation and trenching will be minimized to allow for quick and immediate construction of a protective cover over the open trench or for backfilling		
Growth Inducement/ Population And Housing	No impacts identified. The proposed project would not significantly influence the rate of growth to the area given the absence of other infrastructure (i.e., gas and electric lines, paved roads, emergency access, storm drains, sewer lines) to support future development and the existence of zoning ordinances restricting the type and density of residential development. Interest in the area to preserve remaining undeveloped land, as open space is also a deterrent to increases in growth rate. The amount of land already dedicated to open space from previous development agreements and the foreseeable purchase of the Avatar property by the SMMC further deter growth to the area. No significant impacts on the location of growth are identified.	None recommended	None recommended	Less than significant

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
	The proposed project would not provide a substantial increase in water supply beyond projected housing estimates projected in the area community plan that would significantly influence the amount of growth to the area.			
Hazards and Hazardous Materials	Construction could potentially result in the accidental rupture of the existing oil pipeline. Construction of the proposed project would introduce potential hazards associated with the use of diesel powered machinery and possible combustion.	HA-1: Potential fire hazards associated with construction activities would be minimized by the clearing of loose brush and non-native vegetation immediately surrounding active welding sites. Wherever feasible, protective shields shall be erected around such sites. In addition, all construction personnel shall be prohibited from smoking on-site. HA-2: Prior to construction, an Emergency Response Plan addressing accidental spills and/or gas pipeline ruptures shall be prepared. HA-3: Prior to construction, the present owners of the existing gas pipeline shall be consulted.	The Lead Agency would consult with the owners and operators of the oil pipeline prior and during construction to ensure safe placement of the water pipeline in relation to the oil pipeline. Standard Specifications for Public Works Construction would be utilized during project design and construction for protection of the public.	Less than significant
Hydrology and Water Quality	No impacts identified	None recommended	None recommended	No significant impact
Land Use and Planning	No impacts identified	None recommended	None recommended	No significant impact
Mineral Resources	No impacts identified	None recommended	None recommended	No significant impact
Noise	Residences from Canoga Avenue to Picasso Avenue would experience elevated yet short-term noise impacts. Construction activities would result in a temporary increase in existing noise	None recommended	Construction activities will be conducted between the hours of 7:00 – 5:00pm during the week unless a shortened schedule is	Less than significant

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
	levels from delivery trucks transporting material along the designated construction route (i.e.: Greenbriar Drive, Vanalden Avenue, Topanga Canyon Boulevard). Residences located along Mulholland Drive, from Picasso Avenue to Saltillo Street, may experience some groundborne vibration from pavement breaking activities along that portion of the affected roadway. Such impacts are short-term in nature and not considered significant.		advisable to reduce traffic related impacts. No Sunday or evening construction would occur, however, construction may occur on Saturdays.	
Public Services	Construction activities would require temporary closure of the road, 'Dirt' Mulholland Drive, to thru-traffic. Water flow from existing fire hydrants located between Saltillo Street and Picasso Avenue may be temporarily shut off during construction activities along that segment of the pipeline alignment. These impacts are not considered significant.	None recommended	The Lead Agency will notify local fire and police departments at least two weeks prior to the start of construction.	Less than significant
Recreation	Though construction activities would result in a temporary inconvenience to recreational users along the parkway in the form of road closure, this impact is temporary and not considered significant.	None recommended	None recommended	Less than significant
Transportation/ Traffic	Temporary traffic lane closures along both the paved and unpaved portions of Mulholland Drive would likely be necessary during active construction. There would be a slight increase in local	TRANS-1 Construction truck traffic along Topanga Canyon Boulevard and US-101 would be limited to off-peak commute periods.	Unauthorized personnel would not be permitted in active construction areas, and safe pedestrian zones would be maintained during	Less than significant

Impact Category	Summary of Impact	Required Mitigation	Standard Construction Practices To Minimize Non-Significant Impacts	Impact After Mitigation
	traffic resulting from the daily movement of construction vehicles traveling to and from the construction site; however, no changes in local traffic patterns are anticipated. The increase in construction traffic would constitute an approximate 1% increase in existing traffic loads and would not be considered significant.		construction in accordance with Standard Specifications for Public Works Construction. Construction activities not completed by the close of each workday would be secured with open excavations fenced off or covered with steel plates to further ensure public safety. In addition, local emergency providers would be notified prior to project construction to ensure that alternative emergency access routes have been identified.	
Utilities and Service Systems	No impacts identified	None recommended	None recommended	No significant impact

1.0 INTRODUCTION

1.1 OVERVIEW

The Los Angeles Department of Water and Power (LADWP) is proposing to construct and operate a water pipeline along a portion of Mulholland Drive, in the Woodland Hills area of the City of Los Angeles (see Figure 1). The pipeline would connect two existing water distribution service zones along the southern and western rims of the San Fernando Valley. The project has been proposed by LADWP to improve overall water system reliability for current users and to provide for approved development in the project vicinity, as well as to provide an additional source of water for fire protection in surrounding communities from potential brushfires and other emergencies.

The proposed project would consist of the installation of a total of 15,200 linear feet (approximately 2.9 miles) of new 16-inch diameter water distribution pipeline and a regulating station along Mulholland Drive, between Picasso Avenue and Greenbriar Drive, in Woodland Hills. About 13,000 linear feet of new 16-inch diameter, welded steel pipeline would be installed along the unpaved portion of 'Dirt' Mulholland Drive, between Saltillo Street and Greenbriar Drive. This unimproved segment of Mulholland Drive is located within a 200-foot wide dedicated roadway easement. Approximately 2,200 linear feet of 16-inch diameter ductile iron pipeline would be installed along the paved portion of Mulholland Drive between Saltillo Street and Picasso Avenue. The proposed project would be constructed within the existing roadway. For maintenance purposes, a regulating station with control valves and data collection equipment would also be constructed and located along the paved portion of Mulholland Drive. Maintenance hole covers may be installed at specific locations along the roadway for valve access. Once the pipeline is constructed, the roadway would be restored to essentially its existing condition. No aspect of the proposed project would necessitate the need to pave unpaved portion of the existing roadway. Existing and proposed project components are shown in Figure 2 and existing water service zones in Figure 3. Aerial photographs of the project area and scenic corridors are shown in Figures 4 and 5.

The project would improve fire flows to the existing hydrants served by the Topanga Tank service zone that do not meet current Los Angeles Fire Department (LAFD) standards. In addition, although no new fire hydrants are proposed as part of the Mulholland Pipeline Project, the proposed project would provide the ability to install them, per the Mulholland Scenic Parkway Specific Plan, at the discretion of the LAFD.

A Draft Initial Study (IS) and Mitigated Negative Declaration (MND) was prepared for the proposed project in June 2000, for the purpose of identifying potential environmental impacts associated with the project. Upon review of public and agency comments on the Draft Initial Study, it was decided that an ~~Draft~~ Environmental Impact Report (~~Draft~~ EIR) be prepared to further analyze the potential environmental impacts associated with the existing geologic conditions of the site and the proposed project's potential for growth inducement. A Notice of Preparation (NOP) of the EIR was circulated on November 17, 2000. The public comment period on the NOP formally extended through December 26, 2000. Although not required by the California Environmental Quality Act (CEQA), comment letters

received after the closing date were accepted and considered in the subsequent analysis. Copies of the NOP and IS/MND, and copies of public comments received on those documents, are provided in Appendix A, B and C.

Based on the environmental analyses performed to date, as well as review of public and agency comments received on the Draft Initial Study, ~~and~~ NOP, and Draft EIR, this ~~Draft~~Final EIR has been prepared as a Focused EIR, with emphases in biological resources, geology and soils, and growth inducement. Standalone technical reports for biological resources and geology and soils are provided as Appendix E and F, respectively, to this ~~Draft~~Final EIR. Where appropriate, minor clarifications have been made to the existing analyses and conclusions reached in the Draft Initial Study for other environmental parameters (including aesthetics, agricultural resources, air quality, cultural resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, transportation/traffic and utilities and service systems). These topics have been addressed in this EIR as Issues Found Not to be Significant.

1.2 PROJECT BACKGROUND

The LADWP provides water service to communities within the City of Los Angeles via three principal water supply sources: the Los Angeles Aqueduct, local groundwater, and purchased water from the Metropolitan Water District of Southern California (MWD). Water servicing the west end of the San Fernando Valley is piped through the Corbin Tank service zone (1,677-foot elevation), Topanga Tank service zone (1,337-foot elevation), and Kittridge Tanks service zone (1,305-foot elevation) to communities including Topanga, Woodland Hills, West Hills, Chatsworth, and Granada Hills (see Figure 3). The Corbin Tank service zone includes approximately 1,392 acres, primarily located north of Mulholland Drive between Encino Reservoir and Canoga Avenue, south of the Ventura Freeway (US-101). The Topanga Tank service zone includes approximately 610 acres of hillside area adjacent to Mulholland Drive, between Marcos Road and San Feliciano Drive. Presently, water service is not provided along the seven mile unpaved portion of Mulholland Drive ('Dirt' Mulholland Drive) between Marcos Road and Encino Hills Drive, within which a portion of the project would be located. The Kittridge Tanks service zone provides water service to LADWP's customers in the western San Fernando Valley, generally bounded by Topanga Canyon Boulevard to the east, the Ventura County line to the west, Roscoe Boulevard to the north, and the community of Hidden Hills to the south.

In 1981, a Final Environmental Impact Report (EIR) was prepared for the construction of the Corbin Tank. The purpose of the project was to alleviate the existing water supply problems in the Santa Monica Mountains area as well as to meet the demands for water service as a result of planned and approved development in the area. The tank would also provide for emergency water storage in the event of fires and other emergency situations. The Corbin Tank Project called for the construction of a 4-million gallon steel tank and the installation of 12- and 16-inch water mains in Mulholland Drive that would connect the Corbin and Topanga Tank service zones. Since the time of construction of the Corbin Tank, part of the land originally planned for development along 'Dirt' Mulholland Drive has been purchased by the Santa Monica Mountains Conservancy for preservation as open space. Consequently, the amount of buildable land which would be serviced by the Corbin Tank have been reduced, resulting in additional capacity that can new be utilized to provide emergency supply to the Kittridge Tanks service zone.

In 1985, the Final EIR was completed for the Mulholland Scenic Parkway Specific Plan (Specific Plan), which was prepared "to guide the development of a low volume, slow speed, scenic parkway, with associated recreational facilities" (City of Los Angeles, 1985). The proposed project falls within the Mulholland Scenic Parkway Specific Plan planning area. The EIR concluded that implementation of the Specific Plan would result in an increase in recreational activity, consequently increasing the risk of human-induced fires in an area that is considered to support highly combustible vegetation. In order to mitigate for this environmental impact and provide for the minimum fire requirements, the LAFD recommended that new water mains and fire hydrants be installed along 'Dirt' Mulholland Drive (City of Los Angeles, 1985).[4] In 1992, a Final EIR was completed for the Woodland Hills Estates Subdivision of Tract 33454, located on the south side of 'Dirt' Mulholland Drive between Canoga Avenue and Trinidad Road. The project site encompassed approximately 62.25 acres, of which 18.9 acres would be developed as single-family residential use and 43.35 acres would be preserved as open space (39.17 acres of which dedicated as public open space). The EIR concluded that the project would expose people to potential fire hazards given the absence of adequate firefighting facilities and water supply. Implementation of mitigation measures involving improvements to the water system such that maximum flows at 2,000 gallons per minute (gpm) would be provided, as required by the LAFD, were a condition of approval for the tract. (City of Los Angeles, 1992).

1.3 Purpose and Need

The LADWP has received several documented pressure complaints from water service users in the southwestern San Fernando Valley since the early 1990s. The Draft Initial Study prepared in June 2000 for the proposed project identified 31 such complaints (City of Los Angeles, 2000). However, further review by URS Corporation of LADWP Water Trouble System records between 1992 and 1999 resulted in a total of ~~111~~ 86 complaints made regarding "no water" or "low water pressure."

As a result of increased water service demands in the southwestern San Fernando Valley, the Mulholland Water Pipeline has been proposed to create a redundancy feature in the existing water service system. The ability to convey water into a service zone from more than a single source is considered a redundancy feature. By connecting existing water service zones in the area and providing a supplemental source of water, the proposed project would improve overall water system reliability for current users and approved development, as well as ensure the availability of water necessary to protect surrounding communities from potential fires and other emergencies. The proposed project would connect the existing Corbin, Topanga, and Kittridge Tanks water service zones, located along the southwestern rim of the San Fernando Valley.

In addition to improving water system pressures to customers during times of high water usage, the proposed project would also provide a supplementary source of water to the LADWP's Kittridge Tanks service zone during emergencies such as fire and earthquakes. The effects of the recent 1994 Northridge Earthquake reinforced the need to provide a supplementary source to support the water distribution

[4] Future installation of fire hydrants would be made at the discretion of the LAFD. At this time, the LAFD has not made a decision on this matter.

system in this area. As a result of the earthquake, the major water pipeline providing water to the western San Fernando Valley (Granada Trunk Line) was severed. Approximately three days were required to mobilize a sufficient number of LAFD pumper trucks to temporarily provide water service to limited portions of the western San Fernando Valley. The proposed project would reduce the need for this type of emergency measure. Any present outage or shortage on the Granada Trunk Line poses a threat to water service to the western rim of the San Fernando Valley, including Woodland Hills, West Hills, and Chatsworth. While the Corbin Tank service zone is small by comparison, it offers supplementary supply to augment Kittridge Tanks storage and extend the time available for repairs or system changes.

According to the Draft EIR for the Mulholland Scenic Parkway Specific Plan (1985), the proposed project area is susceptible to brushfires given the proximity to residents and human activity (i.e., recreation), as well as the presence of highly combustible vegetation, mostly chaparral. The prevailing weather conditions in Southern California, including that of the "Santa Ana winds," and the existing topography, mainly steep slopes and canyons, increase the fire hazard in this area. Restricted access and lack of a nearby water source exacerbate the fire hazard. The Mulholland Scenic Parkway Specific Plan calls for the installation of "new water mains and fire hydrants.....between Encino Hills Drive and Rosario Road where there presently is no water supply for fire protection use, concurrent with development" (City of Los Angeles, 1985). In addition to improving fire protection service to existing development in the surrounding area, the proposed project would provide the ability to install new fire hydrants along Mulholland Drive, where none currently exists. No new fire hydrants would be installed as part of the proposed project, but rather, would be installed at the discretion of the LAFD, per the Mulholland Scenic Parkway Specific Plan.

The proposed project is also needed to meet the water demands of developments approved by the City of Los Angeles Department of City Planning within the proposed project's service area. These developments include the aforementioned Tract 33454, as well as other development identified in Section 2.4 of this EIR.

1.4 PROJECT OBJECTIVES

Based on the purpose and need presented in Section 1.3, the project would have the following objectives:

- Create a water supply redundancy feature in the existing water service system to the southwestern San Fernando Valley area
- Provide a supplemental water supply source to the Topanga Tank service area thereby improving system pressures to existing users in the Topanga Tank service area to both residences and existing fire hydrants
- Provide a secondary source of water to the western San Fernando Valley area in case of fire or other emergency
- Meet the water demands of developments approved (e.g., Tract 33454) by the City of Los Angeles Department of City Planning within the proposed project's service area

~~1.4~~1.5 RELEVANT PLANS AND PROJECTS

The proposed project is consistent with the following approved projects and plans:

- **Corbin Tank Project (1981):** The Corbin Tank Project was designed to provide regulating and/or emergency water supply to the 1677-, 1337-, and 1240-foot service zones. The proposed project would allow for direct connection to the 1337-foot (Topanga Tank) service zone.

- **Mulholland Scenic Parkway Specific Plan (1985):** The Mulholland Scenic Parkway Specific Plan was prepared to guide the development of a low volume, slow speed, scenic parkway, with associated recreational facilities. The Plan defines "Inner" and "Outer" Corridors that establish restrictions on allowable development in the area (see Figure 5).

  The EIR prepared for the Specific Plan recommended the installation of additional water mains and fire hydrants so as to mitigate the potential for human-induced fires from anticipated increases in recreational users to the area. The proposed project would be consistent with that recommendation. In addition, the Specific Plan allows for the construction of water and gas lines provided that other feasible alternative locations outside the Inner Corridor do not exist and that the facility is designed in such a way so as to minimize visual intrusion on the parkway. The proposed project would be a subterranean structure and thus would not be visually intrusive.

  One alternative (Alternative 1) which is considered herein, is located within the Outer Corridor but outside the Inner Corridor, with the exception of that portion along Mulholland Drive from Canoga Drive to Saltillo Street, and from Saltillo Street to Picasso Avenue. Alternative 2 is located outside both corridors with the exception of that portion along Canoga Avenue and Ellenita Avenue. And Alternative 3, specifically Topanga Tank and the Girard Pumping Station are located within the Inner Corridor.

  Mulholland Gateway Park Master Plan (1991): The Mulholland Gateway Park Master Plan was prepared for the Santa Monica Mountains Conservancy (SMMC) in an effort to help manage the accumulation of properties from developer dedications and from the acquisition of land slated for development. Mulholland Gateway Park is located along the crest of the Santa Monica Mountains between the San Diego (405) Freeway and Topanga Canyon Boulevard. As part of the Master Plan, the SMMC has adopted a Dirt Mulholland Action Plan that targets certain properties for acquisition.

- **General Management Plan (2000):** The General Management Plan was developed by the National Park Service for the protection and management of the Santa Monica Mountains National Recreation Area in which the proposed project is located. The Plan is a cooperative effort between the National Park Service, California State Parks, and the SMMC to protect the natural resources in the area while responding to the increasing need for recreational opportunities.

- **Vesting Tentative Tract No. 33454 Draft Environmental Database (1992):** In 1992, Woodland Hills Estates prepared an EIR for the development of 18.9 acres of its 68.55-acre property. The project proposed the construction of 37 (currently 25) single-family lots and three open space lots along the southern portion of the 21000 block of Mulholland Drive. The EIR for the subdivision of

Tract No. 33454 identified inadequate fire-fighting facilities and water services to the proposed project. In response to the unmitigated adverse impact on water service demand, LADWP claimed that the project could be supplied from its larger municipal system, assuming the unmitigated demand would be placed on the Topanga Tank. The report concluded that "extensive off-site and on-site supply and distribution mains will be required" to supply water from the 1677 system (Corbin Tank) (City of Los Angeles, 1992).

- **Mulholland Hills Estates Addendum EIR (1995):** Mulholland Hills Estates (Tract No. 50784) is proposing the development of ~~338.4~~ 316.9 gross acres to accommodate 66 single family dwelling units within an undeveloped portion of land north of the proposed project site, between Serrania Avenue and Greenbriar Avenue. The project involves the request for a zoning change from RE40-1 to RE40-1-H.

- **Mulholland Gateway Park – Chapter & Natoma (Avatar):** The SMMC is proposing the purchase of 83.80 acres of the Mulholland Hills Estates property currently planned for development as proposed in the Mulholland Hills Estates Addendum EIR (1995) (SMMC 2000). To date, the Conservancy has secured funding and has allocated funding for the purchase of seven of the parcels at the current appraised value (SMMC, 2001). The City of Los Angeles Council District 11 has advised that the sale of the Avatar parcel to the SMMC is considered certain (City of Los Angeles, 2001).

~~1.5~~1.6 ENVIRONMENTAL REVIEW PROCESS

The California Environmental Quality Act (CEQA) requires that the LADWP, as a public agency, comply with both procedural and substantive requirements under Public Resources Code sec. 21080 prior to implementing any public project. Accordingly, the LADWP is the Lead Agency under CEQA for purposes of preparing this EIR. A Lead Agency has the primary responsibility for carrying out or approving a project, and thus is responsible for determining the scope and content of environmental documentation, as well as its preparation and adequacy. In addition, the Lead Agency must ensure that the public is informed and has the opportunity to take part in the environmental review and planning processes.

The purpose of the ~~Draft~~ Final EIR is to identify potentially significant adverse environmental effects as part of the overall consideration of the project's merits in the Lead Agency's discretionary approval process. The EIR must identify and disclose all significant impacts of a project, determine the extent to which those impacts could be reduced or avoided, and identify and evaluate feasible alternatives to the proposed project (CEQA Guidelines, Section 15121). The information provided in this ~~Draft~~Final EIR will be considered by the City of Los Angeles and other agencies in their review and action on the proposed project.

~~This~~ The Draft EIR ~~will~~ was ~~be~~ available for public review for 45 days. During that period, comments on the Draft EIR's accuracy, completeness, and adequacy ~~may be~~ were submitted by state and local agencies, public interest groups, and concerned individuals. Comments received and responses to those comments ~~will be~~ are included in ~~a~~ this Final EIR and will be transmitted to the Board of Water and Power Commissioners for certification and consideration of the proposed project.

~~Written comments should be addressed and sent to:~~

~~Mr. Kelvin Lew~~
~~Environmental Assessment~~
~~City of Los Angeles Department of Water and Power~~
~~111 North Hope Street, Room 1044~~
~~Los Angeles, CA 90012~~

~~1.6~~1.7 PREVIOUS PLANNING ACTIVITIES

In June 2000, LADWP prepared and circulated a Draft Initial Study and Mitigated Negative Declaration (IS/MND) for the Mulholland Water Pipeline Project, along with a Notice of Intent (NOI) to Adopt a Negative Declaration for the project. The NOI was published in the Los Angeles Times on June 15, 2000 and the Draft IS/MND was made available to the public at the West Valley Regional Branch Library in Reseda, California. The public comment period extended from June 12, 2000 to July 14, 2000. This comment period was formally extended until July 28, 2000. During this period, several private residents and interested parties responded in writing to the proposed project. A total of 38 responses were received. A summary of the comments made is contained in Appendix A of this EIR.

Upon review of the comments provided, and to provide a further opportunity for public review of the project, it was decided that an EIR would be prepared to assist in the decision-making process. Thus, on November 17, 2000, LADWP issued a NOP for the Draft EIR for the project. The NOP described the proposed project and two alternatives, pursuant to Section 15126.6 of the CEQA Guidelines. The NOP comment period extended from November 23, 2000 to December 26, 2000. Although not required by CEQA, comment letters received after the closing date were accepted and considered in subsequent analysis. In response to the NOP, a total of seven individuals and interested parties provided written feedback. A summary of comments on the NOP is also included in Appendix A.

2.0 PROJECT AND ALTERNATIVES DESCRIPTION

2.1 PROJECT DESCRIPTION

The proposed project would consist of the installation of a total of 15,200 linear feet, or approximately 2.9 miles, of new 16-inch water distribution pipeline and a regulating station along Mulholland Drive between Picasso Avenue and Greenbriar Drive, in the Woodland Hills area of the City of Los Angeles (see Figure 1 and Figure 2). The proposed pipeline would operate by gravity, whereby it would convey water from the existing Corbin Tank (1677-foot elevation system) to the existing Topanga Tank (1337-foot elevation system) and Kittridge Tanks (1305-foot elevation system) service zones. ~~-~~About 13,000 linear feet of new 16-inch diameter, welded steel pipeline would be installed along the unpaved portion of 'Dirt' Mulholland Drive, between Saltillo Street and Greenbriar Drive. This unimproved segment of Mulholland Drive is located within a 200-foot dedicated roadway easement. The remaining portion, approximately 2,200 linear feet, would be constructed of 16-inch diameter ductile iron pipeline along the paved portion of Mulholland Drive between Saltillo Street and Picasso Avenue. The proposed project would be located within the existing roadway. The existing 12-inch line, located in Mulholland Drive between Saltillo Street and Picasso Avenue, may be abandoned some time in the future. The existing pipeline is still in good condition but it is too small to handle the flows from the new 16-inch line. The operation of both lines would be more efficient where the 16-inch line would be dedicated for emergency purposes while the existing 12-inch line would serve out its useful life by providing ~~provide~~ domestic and fire protection to residents.

Unless otherwise stated, the proposed project would be designed, constructed, and operated in accordance with all applicable laws, regulations and formally adopted City standards. Construction would adhere to uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., Standard Specifications for Public Works Construction) as specifically adopted by the City of Los Angeles.

The pipeline would serve to connect the LADWP's Corbin Tank service zone to the Topanga Tank service zone. The pipeline would enable water to be conveyed westerly along the Santa Monica Mountains from the Corbin to the Topanga and Kittridge Tanks service zones as a supplementary supply, emergency back-up supply, and to boost system pressures in the event of a fire or other emergency. Under normal operations, the proposed project would improve the water pressure within the distribution system to customers during periods of high water usage, and defer the need for additional water storage facilities and the replacement of pipelines within currently developed areas.

The proposed project would also include one above-ground data collection cabinet, a below-ground regulating station, and valves. The cabinet would be visited ~~monthly~~ weekly by LADWP staff for normal maintenance. The regulating station would contain three regulator valves, with sizes of four-inch, six-inch, and 12-inch, that would regulate water pressures between the service zones. These valves would be contained within a maintenance vault, which would be located below ground, and within the roadway near the intersection of Mulholland Drive and Saltillo Street. One valve would be located on Mulholland Drive close to Greenbriar Drive, and the other valve would be located close to the regulating station. Maintenance

hole access covers are typically about 36 inches in diameter and are located directly above the valve or regulating station at the road surface. To avoid potential differential erosion to the road surface, the maintenance holes may be located in the embankment adjacent to the roadway and may need to be approximately two feet above the surrounding ground elevation. The vault would be inspected on a monthly basis by a small crew of one or two individuals. For safety purposes, the traffic lane would be temporarily closed and the vaults vented and tested for air quality prior to human entry. The inspection process typically requires about one or two hours to complete. The design and location of these appurtenant structures for the proposed project would consider such factors as topography, geology, traffic, accessibility, drainage, and best engineering practices. Soil surrounding the maintenance holes would be landscaped with native vegetation to stabilize the ground surface.

No fire hydrants currently exist along 'Dirt' Mulholland Drive between Trinidad Road and Greenbriar Drive. The proposed project would provide for the ability to install new hydrants, as needed, providing fire-protection to this high-risk area of the Santa Monica Mountains. The LAFD has made no determination as to the location and exact number of hydrants needed along this segment. While this optional feature has been previously addressed in the 1985 Final EIR for the Mulholland Scenic Parkway Specific Plan, it is not being considered as part of the proposed project.

Upon implementation of the proposed project, the new pipeline could convey up to 13 cubic feet per second (cfs) (5,850 gallons per minute (gpm)) of water; however, the typical flow would be two to three cfs (900 to 1,350 gpm). Existing LADWP customers and users would receive up to 1,050 gpm, whereas new development for Tract 33454, at 21000 Mulholland Drive, would receive up to 150 gpm for normal domestic use.

2.1.1 Project Location

The proposed project would be located on Mulholland Drive, between Greenbriar Drive and Picasso Avenue, in the community of Woodland Hills, in the City of Los Angeles, California (see Figure 1). The project site is on the Canoga Park Quadrangle USGS 7.5 minute series topographic map (Township 1 North, Range 16 West, Sections 29 and 30, and an unsectioned portion assumed Section 28).

Regional access is provided by US-101 (Ventura Freeway) and State Route 27 (Topanga Canyon Boulevard). The project site (along 'Dirt' Mulholland) is bordered to the immediate north by open space and farther north by residential roads (most of which are not thru-streets), including Natoma Avenue, Chapter Drive, Chatsboro Drive, and Winnetka Avenue; to the east by a mix of open space and roads, including Vanalden Avenue and Greenbriar Drive; to the south by open space and myriad of dirt and residential roads including Santa Maria Road and Summit Pointe Drive; and to the west by residential development along and adjacent to SR-27 (see Figure 4).

2.1.2 Adjacent Land Uses

The proposed project area, which is within the Mulholland Scenic Parkway in the Santa Monica Mountains and is characterized by rugged terrain, steep slopes, and ridges rising up to 1,500 feet supporting a dirt road along a prominent mountain ridge that provides for ocean, mountain, and city

views. The Parkway has an Inner and Outer Corridor (see Figure 5), as defined by the Mulholland Scenic Parkway Specific Plan (City of Los Angeles, 1985).

The Inner Corridor is defined as the Mulholland Scenic Parkway dedicated street right-of-way plus the additional area extending 500 feet outward from the edge of the right-of-way. The Outer Corridor is defined as that area that lies between the Inner Corridor's outermost boundary to one-half mile outward from the right-of-way. The right-of-way of Mulholland Drive is 100 feet wide from east of Laurel Canyon Boulevard to the Hollywood Freeway, and 200 feet wide from west of Laurel Canyon Boulevard to the Los Angeles City-County boundary. The proposed project would be located entirely within the existing right-of-way.

The following land uses are permitted within the Inner Corridor, provided they conform to the requirements of the specific plan: single-family dwellings and related parking; accessory structures; fences, gates, and walls; driveways; night lighting on private property; landscape materials and associated irrigation equipment; and trails and vista points; and utility related structures such as power transmission lines, pumping stations, water tanks, and water lines provided design of the structures 1) meet the approval of the Design Review Board and Director of Planning, 2) no other feasible alternative locations exist outside the Inner and Outer Corridors, and 3) are not visually intrusive on the parkway (City of Los Angeles, 1992). Much of the land along 'Dirt' Mulholland Drive has been purchased by the Santa Monica Mountains Conservancy. The Conservancy's ownership and interest in preserving land as open space has subsequently restricted further build out in this area.

2.1.3 Existing and Supporting Facilities

There are three existing water service zones that comprise the water distribution system that services the southwestern part of the San Fernando Valley, primarily the communities of Woodland Hills, West Hills, Chatsworth and Granada Hills. These are the Corbin Tank, Topanga Tank, and Kittridge Tanks service zones (see Figure 2). The Corbin Tank, located at 17920 Mulholland Drive, has a capacity of approximately 12.3 acre-feet (approximately 4.0 million gallons). In emergencies such as an earthquake, the Corbin Tank is designed to provide additional storage capacity for the 1,240-foot service zone, in addition to the 1337-foot (Topanga Tank) service zone. The proposed project would facilitate provision of this water. The Topanga Tank, located on Topanga Boulevard south of Mulholland Drive, has a capacity of approximately 0.6 acre-feet (approximately 0.21 million gallons). A six-inch pipeline connects the tank to a 16-inch and 12-inch pipeline extending west and eastward to Marcos Road, respectively. Due to increases in water system demand, users have experienced low water pressure. The proposed project would provide additional water to this service zone, thereby ensuring adequate and more reliable water pressure.

The Kittridge Tanks, located at 24640 Kittridge Street, Canoga Park, provides water service to LADWP's customers in the western San Fernando Valley. The combined tanks have a total capacity of 61 acre-feet (approximately 20 million gallons).

In addition to the proposed project, there are other substructures along the project alignment. A 12-inch Tosco (Unocal) oil pipeline is aligned along 'Dirt' Mulholland Drive, and a Shell oil pipeline (operated and maintained by Equilon) crosses 'Dirt' Mulholland Drive at the west end of the project.

2.1.4 Construction Scenario

Construction of the proposed project would occur in essentially two phases: new pipeline installation for the portion along 'Dirt' Mulholland between Greenbriar Drive on the east and Saltillo Street on the west; and new pipeline and regulating station construction along the paved portion of Mulholland Drive between Saltillo Street and Picasso Avenue on the west. It is anticipated that construction activities would begin along the "dirt" portion of Mulholland Drive at the east end working westerly. Construction activities would vary depending on weather conditions and availability of resources.

Construction along 'Dirt" Mulholland Drive would include the installation of approximately 13,000 linear feet of 16-inch diameter steel pipe. The typical pipeline trench would be approximately five-feet wide and five-feet deep. The steel pipe would be surrounded with sand bedding and the excavated material would be placed and compacted back into the trench. Approximately 325,000-cubic feet (12,040–cubic yards) of material would be excavated for the pipeline trenches, 155,350-cubic feet (5,755-cubic yards) of sand would be used for bedding, 152,100-cubic feet (5,635-cubic yards) of the excavated material would be reused, and 173,550-cubic feet (6,430-cubic yards) of excavated materials would be removed from the construction site. Construction is anticipated to take approximately 250 working days to complete the installation of 13,000 linear feet of steel pipe. However, construction of the pipeline within 'Dirt' Mulholland Drive may be delayed during the rainy season. ~~In general, excavation, trenching and pipe laying activities would be scheduled during the dry season between May 15 and October 1.~~

The excavation of the regulating station would be approximately 20-feet by 30-feet by 10-feet deep. About 6,000-cubic feet (225–cubic yards) of excavated material would be removed from the construction site. Approximately 600-cubic feet (25-cubic yards) of concrete slurry would be used as backfill around the regulating station vault and pipes. Construction of the regulating station would take approximately 60 working days to complete.

Construction of the remaining 2,200 linear feet of ductile iron pipeline along the paved portion of Mulholland Drive would be similar to that in the 'dirt' portion. Approximately 3,300 cubic feet (3 feet by 2,200 feet by 6 inches thick) (125 cubic yards) of asphalt and (29,700 cubic feet (3 feet by 4.5 feet deep) (1,100 cubic yards) of soil would be excavated for pipeline trenches and removed from the site. Approximately 24,900 cubic feet (925 cubic yards) of concrete slurry will be used to backfill the trench, 3,300 cubic feet (125 cubic yards) of new asphalt would be used for repavement. The proposed project would generate a total of 212,550 cubic feet (7,875 cubic yards) of soil and material to be exported off-site.

Construction is anticipated to take 40 working days along the paved portion of Mulholland Drive. Upon completion of construction, the roadway would be restored to essentially the same condition as prior to project construction. No aspect of the proposed project would necessitate the need to pave 'Dirt' Mulholland Drive.

Methodology

The open trench method would involve a moving construction zone in the following sequence: 1) excavation (and pipe removal and/or relocation of substructures as applicable), 2) pipe placement,

regulating station construction, 3) backfilling, and 4) surface restoration to condition prior to construction. Surface preparation along Mulholland Drive between Picasso Avenue and Saltillo Street would involve breaking and removing asphalt pavement with asphalt cutters, backhoes and excavators. The broken debris would be hauled to approved landfill sites in the area or recycled at a crusher plant. Approximately, 150 cf (6 cy) of broken pavement per day would be generated requiring approximately 2 trucks per day with 135 cf (5 cy) hauling capacity to transport the material.

Temporary traffic lane closures along both the paved and unpaved portions of Mulholland Drive would be necessary during active construction; however, limited access would be maintained at all times. A temporary detour plan would be implemented, as necessary. Construction activities not completed by the close of each workday would be secured by fencing off open excavations or covering them with steel plates to ensure public safety. Possible staging areas would be located on the existing roadway rights-of-way or at nearby offsite locations, if feasible. An on-site sweeper (for paved roads) or water truck (for unpaved roads) would be used to control minor quantities of fugitive dust associated with excavation and trenching activities.

Equipment, Material, and Labor

Estimated equipment, vehicles, and construction personnel necessary for construction of the project is summarized in Table 2-1. Required materials include about 13,000 linear feet of 16-inch steel piping, and 2,200 linear feet of 16-inch ductile iron piping. Aggregate, asphalt, and concrete materials would be needed for repaving the 2,200 feet segment of Mulholland Drive. It is assumed that each pipe delivery truck would deliver 72 feet of piping to the site per day based on the rate of pipe-laying and resurfacing estimated as described in the schedule.

Recommended Construction Route

The recommended construction route for hauling the necessary construction equipment and materials would be along Vanalden Avenue to Greenbriar Drive and Topanga Canyon Boulevard. Residents living along the proposed construction route would be notified seven days in advance prior to any temporary road obstruction from staging construction equipment. The proposed project is not anticipated to affect pedestrian access or transit stops. However, appropriate safety and traffic control measures will be in placed prior to initiating excavation or trenching.

Table 2-1
Construction Scenario

Equipment Type	Number	Hours/day	Total Hours
(Equipment Mobilization/Materials Laydown)			
Excavator Transport	1	2	2
Crane Transport	1	2	2
Loader/Dozer Transport	3	2	6
Backhoe Transport	1	2	2
Pipe Transport	1	2	2
Sprayer	2	2	4
Loader/Dozer	1	4	4
(Pipeline Installation – Dirt Mulholland)			
Loader/Dozer	3	6	18
Trencher	1	4	4
Roller	1	8	8
Crane	1	6	6
Sprayer Truck	2	8	16
Dumper Truck	5	8	40
Welder	3	6	18
Backhoe	1	8	8
Excavator	1	6	6
(Pipeline Installation and Regulating Station Construction – Paved Mulholland)			
Excavator	1	6	6
Loader/Dozer	1	6	6
Dumper Truck	4	8	32
Asphalt Truck	1	6	6
Welder	2	6	12
Crane	1	6	6
Cement Truck	1	6	6
Sweeper Truck	1	6	6

Schedule

Construction activities for the new pipeline installation are anticipated to commence in mid to late 2001 and would not occur during periods of rain. The duration of construction is anticipated at approximately 350 working days, or about 18 to 20 months. The actual duration may vary in order to accommodate weather considerations or other factors. Working hours would be from 7:00 a.m. to 5:00 p.m. weekdays and Saturdays, as necessary. No Sunday or evening construction would occur. The pace of construction activities (including excavation, pipe laying, and resurfacing) may vary depending upon whether work is conducted on unpaved or paved surfaces. Construction along the dirt portion of the roadway is anticipated

to progress at a rate of approximately 54 to 72 feet per day in the unpaved portion and even faster in the paved portion, with no more than 250 linear feet of construction zone being active at any one time.

2.2 PROJECT ALTERNATIVES

CEQA Guidelines Section 15126 requires that a reasonable range of alternatives to the proposed project be considered and analyzed. The alternatives should be developed with the intent of obtaining most of the project objectives, and be capable of reducing the potentially significant impacts of the proposed project. In addition, the No Project Alternative must be analyzed. The alternatives identified for the Mulholland Pipeline Project include: Alternative 1 – (Tract 50784) Mulholland Gateway Park; Alternative 2 – Ellenita/Wells/Canoga Alignment; Alternative 3 – Topanga Tank Expansion; and No Project Alternative. Figure 6 depicts the proposed location of these alternatives.

2.2.1 Alternative 1 – Mulholland Gateway Park

Alternative 1 would involve the installation of a new 16-inch diameter welded steel water pipeline that would traverse portions of the Mulholland Gateway Park, located along the crest of the Santa Monica Mountains between the San Diego Freeway (I-405) and Topanga Canyon Boulevard. The pipeline would be 16 inches and extend approximately 14,300 feet from Corbin Avenue at Greenbriar Drive on the east, and traverse northwesterly across Winnetka Avenue and west onto Howard Court, to the end of Natoma Estate Drive for connection at the 20800 block of Mulholland Drive. The 16-inch piping would further be extended along Mulholland Drive westward to Picasso Avenue. In 1995, an Environmental Impact Report for the Mulholland Hills Estates Subdivision (Avatar; Tract #50784) was prepared for the development of 63 dwelling units in the Chapter and Natoma Canyons through which Alternative 1 would traverse. The proposed route under Alternative 1 follows the roadway alignment ~~proposed~~ identified under the proposed subdivision connecting the two canyons between Mulholland Drive on the west, Natoma Avenue and Chapter Drive on the east. This alternative would involve excavation in previously undisturbed terrain, obtaining easements for the pipeline and appurtenant structures, and require the construction of a permanent dirt road for maintenance. The new 16-inch pipeline along Mulholland Drive would run parallel to the existing 12-inch pipeline to Picasso Avenue. As with the proposed project, Alternative 1 would also involve the construction of a regulating station and shut-off valves at the same locations identified in the proposed project. This alternative would not satisfy the need for fire protection along 'Dirt' Mulholland Drive.

2.2.2 Alternative 2 – Ellenita/Wells/Canoga Alignment

Alternative 2 would involve the installation of approximately 26,700 linear feet (5.1 miles) of new 20-inch diameter welded steel water pipeline along existing roadway alignments and through existing developed areas. The route would extend from Greenbriar Drive on the east along Ellenita Avenue northerly to Rosita Street and Corbin Avenue, then westerly along Wells Drive to Canoga Avenue south to Mulholland Drive and east to Saltillo Street. Approximately 106,800 square feet of existing asphalt pavement would be removed and reconstructed. Approximately 534,000-cubic feet (19,780 cubic yards) of asphalt and soil would be excavated and exported. This alternative would require the installation of several specialized high-pressure valves to isolate portions of the pipeline for maintenance or

emergencies. As with the proposed project, Alternative 2 would also involve the construction of a regulating station, the precise location of which would be determined at a later date should this alternative be selected. In comparison to the proposed project, this alternative would involve a greater amount of pavement breaking and resurfacing, and workers and equipment, and would likely involve the need for relocation of existing substructures. This alternative also would require more extensive traffic safety coordination than for the project. It is estimated that the construction period for this alternative would take approximately 620 construction days and up to three years. Approximately 54 feet of pipeline installation would be completed per day. This alternative would not satisfy the need for fire protection along 'Dirt' Mulholland Drive.

2.2.3 Alternative 3 – Topanga Tank Expansion

Alternative 3 would increase the water storage in the service area currently served by Topanga Tank to one million gallons. The existing Topanga Tank has a capacity of 0.2 million gallons with approximately 1,000 feet of 6-inch pipeline connecting the tank to the distribution pipelines in Mulholland Drive. Under this alternative, a new tank with a capacity of 0.8 million gallons and a new connecting pipeline along Matisse Avenue would need to be constructed. The tank would be 30 feet in height and approximately 75-feet in diameter, and require approximately 20,000 square feet of surface area.

Under this configuration, several other facilities would need to be constructed. This alternative would involve the construction a new 7.0-million gallon tank at the Kittridge Tanks site to be equivalent to the 11 cfs emergency source that would be available from the proposed project or Alternatives 1 or 2.

A small new pumping station would also need to be constructed near the intersection of Mulholland Drive and Saltillo Road in order to change the hydraulic grades from the 1,337-foot service zone to a new 1,550-foot elevation service zone, to supply water to the approved Tract No. 33454. In order to adequately fill up the new Topanga Tank, additional pumps would need to be installed at the existing Girard Pump Station in order to increase its pumping capacity to the new tank to six cfs, and existing inlet and outlet pipelines would also need to be upgraded to improve system pressures. Approximately 1,250 feet of off-site piping for new inlets and outlets would need to be reconstructed. Approximately 9,500 feet of new 16-inch piping would be installed.

Overall, this alternative would not satisfy the need for fire protection along 'Dirt' Mulholland Drive.

2.2.4 No Project Alternative

Under the No Project alternative, no new pipeline would be installed to connect the Corbin Tank and Topanga Tank systems. Improvements to LADWP's water facilities serving the Woodland Hills community and the greater west end of the San Fernando Valley would not be implemented. Existing water service levels would remain under existing conditions. This would be in conflict with the Los Angeles City Charter that requires DWP to provide adequate, reliable water supply to its customers and to approved developments, such as Tract 33454, which was approved by the City of Los Angeles Department of City Planning in October of 1995. As with Alternatives 1 and 2, this alternative would not satisfy the need for fire protection along 'Dirt' Mulholland Drive, as specified in the Mulholland Scenic Parkway Specific Plan.

2.3 REQUIRED PERMITS AND APPROVALS

The following permits and approvals may be required for the proposed project:

- California Department of Transportation (Caltrans): An Encroachment Permit may be necessary for haul trucks utilizing Topanga Canyon Boulevard.
- City of Los Angeles, Department of Public Works: An Excavation and Class "A" Permanent Resurfacing Permit would be required. The Department of Public Works processes and issues permits for projects within the Mulholland Drive right-of-way.
- City of Los Angeles, Department of Transporation: Haul Route Permit would be required.
- State of California, Regional Water Quality Control Board: Discharge Permit. Although unlikely, a Discharge Permit may be required if groundwater is encountered during excavation activities.
- State of California, Santa Monica Mountains Conservancy: Approval from the Conservancy may need to be acquired if construction traverses Conservancy lands.
- ~~State of California, Santa Monica Mountains Conservancy: An easement may need to be acquired for construction activities along that portion of Mulholland Drive, which traverses State owned lands.~~
- City of Los Angeles, Department of City Planning: Projects located within the Mulholland Scenic Parkway must be evaluated for compatibility with the Mulholland Scenic Parkway Specific Plan by the Design Review Board for approval by the Director of Planning and City Planning Commission.

2.4 CUMULATIVE DEVELOPMENT

CEQA requires that an EIR consider the proposed project in the context of other planned and foreseeable development to determine whether the combined environmental effects would be cumulatively significant. Cumulative development includes those facilities and actions that are under construction, approved, or under agency review, and any additional development that is "reasonably foreseeable." The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone (*CEQA Guidelines, Section 15130*).

Table 2-2 lists those projects considered in the cumulative impact analysis for the proposed pipeline. These cumulative projects include those that: 1) are located within a two-mile radius of the proposed project and alternative sites; 2) would potentially utilize the same construction travel access routes as needed for the proposed project; and 3) would be constructed within the same period as the proposed project (i.e., 2001-2002). The analysis included areas within the City of Los Angeles, unincorporated Los Angeles County, and the City of Calabasas. Cumulative project lists were obtained from the Los Angeles City Council Districts 11 and 3 Planning Deputies, the City of Los Angeles Public Works Department, the County of Los Angeles Planning and Public Works Departments, and the City of Calabasas Public Works and Transportation Departments. Figure 7 depicts the cumulative development study area.

The analysis contained in Sections 3.0 and 4.0 of this EIR considers the cumulative effect of these projects with the individual effects of the proposed project. Baseline conditions, by definition, are not

included in the incremental effects of the proposed project or of cumulative development. Potential growth inducing impacts of the proposed project are presented in Section 4.3.

Table 2-2 Related Projects

Project	Status	Year
County of Los Angeles Planning Department		
Conditional Use Permit for hillside grading at Fairhills Farm property east of Santa Maria Road and south of Mulholland Drive.	Approved – Completion Date Unknown	2000
Conditional Use Permit for construction of three cell sites along Topanga Canyon Boulevard between Entrador Drive and Rubicon Road	Approved – Completion Date Unknown	2000
Conditional Use Permit for dog training facility	Approved – Completion Date Unknown	2000
County of Los Angeles Public Works Department		
Resurfacing of Vanalden Avenue from Vanowen Street to Kittridge Street	Planned	2001/2002
Providencia Street from Alhama Drive to Canoga Avenue	Planned	2001/2002
Providencia Street from Canoga Avenue to Campo Road	Planned	2001/2002
Henshaw Street from Corbin Avenue to Oakdale Avenue	Planned	2001/2002
Hatteras Street from Etiwanda Avenue to Reseda Boulevard	Planned	2001/2002
District 29 Water Distribution Improvements	Planned	Pending
City of Los Angeles Planning Department, District 3		
Warner Center – De Soto, Topanga Canyon, Van Owen, Freeway involves roadway improvements	Under Construction	2001
Lennar Project - De Soto and Oxnard, new building net 800,000 sf office and commercial development project requiring some roadway improvements	Under Construction	2001
Warner Ridge – Mixed commercial and residential development involving roadway improvements	Under Construction	2001
Philiprimm Project – Residential development involving major grading and roadway improvements	Assumed Under Construction	2001
Westfield Project – From Victory Mall to Promenade Mall - mixed commercial and residential development involving roadway improvements, part of mitigation measure for AMC Project approved in 1994	Project Completed except for roadway improvements	2001
Owensmouth Project – Under the Warner Center Plan involving the construction of a transit hub and roadway improvements	Approved Construction to Commence	2000 2001
Rapid Transit Bus System – Along Burbank Branch of Southern Pacific Rail Road involving roadway improvements (i.e., widening and incorporation of bike lanes)	Planning Phase	2001
Ray Art Studios – Expansion of existing movie studio approximately 43,000 sf with roadway improvements	Project Completed except for roadway improvements	2000 2001
Warner Center Marketplace – Victory and Canoga approximately 157,000 sf with roadway improvements	Approved Roadway improvements are assumed under construction	1998 2001
Best Buy – Victory and Owensmouth involving roadway improvements	Completed except for roadway improvements which are assumed pending	2001
Tishman 21st Century Expansion – Owensmouth between Victory and Erwin involving the construction of 11 story office building approximately 200,000 sf with roadway improvements	Completed except for roadway improvements which are assumed pending	2001

Project	Status	Year
Mulholland Scenic Parkway Specific Plan – Public Services/Fire Protection mitigation measure to install new water mains and fire hydrants along 'Dirt' Mulholland Drive per Final Environmental Impact Report (1985)	Adopted – Installation of fire hydrants pending	1992
City of Los Angeles Planning Department, District 11		
Carrizal Road – New construction of three (3), two (2) and three (3) story homes up to 2,988 square feet	Planned	2000
Carrizal Road – New construction of a two (2) story home approximately 2,154 square feet	Conditionally Approved	2000
Bandera Street – New construction of two (2) story home approximately 3,113 square feet	Planned	2000
Ensenada Drive – New construction of two (2) story home approximately 3,743 square feet	Planned	2000
Ensenada Drive – New construction of an approximate 2,643 square foot home	Approved	2000
Canoga Avenue – New construction of two (2), two (2) story homes up to 2,650 square feet	Planned	2000
Azucena Drive – New construction of two (2) story home approximately 4,600 square feet	Planned	2000
Ybarra Road – New construction of two (2), two (2) story homes up to 4,785 square feet	Planned	2000
Alatar Drive – New construction of a two (2) story home approximately 4,933 square feet	Planned	2000
Natoma Estates Drive - New construction of a two (2) story home approximately 7,770 square feet	Planned	2000
Natoma Estates Drive - New construction of a three (3) story home approximately 8,339 square feet	Conditionally Approved	2000
Mulholland Drive - Subdivision of 62.25 acres into 37 single-family lots and three (3) open space lots	Approved by Design Review Board City Planning Commission Review	1999 12/99
Mulholland Hills Estates – Subdivision of 316.9 acres into 66 single-family lots	Approved	1995
Mulholland Highway – widening of Mulholland Highway as mitigation measure for expansion of school at Paul Revere Road and Mulholland Highway	Approved Grading	1999 2000
Iglesia Drive - New construction of a two (2) story home approximately 2,360 square feet	Approved	1999
Pampas Road – New construction of a three (3) home up to 2,820 square feet	Approved	2000
Empis Street - New construction of a home approximately 2,883 square feet	Approved	2000
Canoga Drive – New construction of a three (3) story home approximately 3,966 square feet	Approved	2000
Marcos Road – New construction of an approximate 3,400 square feet home	Conditional Approval	1999
Federal and State Agencies		
National Park Service – easement acquisition of vacant lots along Mulholland Scenic Parkway to promote recreational uses. Areas of primary interest include Cross Mountain Parks and Mission Canyon	Ongoing	

Project	Status	Year
SMMC – acquisition of land within the Mulholland Scenic Parkway corridor (i.e., William O. Douglas Outdoor Classroom Nature Center, Bel-Air Crest, Braemer and GAC East subdivision open space dedications, 21000 Mulholland Drive, Natoma Small Lots, Chapter/Natoma [Avatar], Mulholland Associates II, Haydukovich Lomas & Nettleton)	Ongoing	

3.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA encourages the focusing of environmental documents on potentially significant issues, and provides for the summary treatment of minor issues. Accordingly, this section addresses those environmental disciplines with impacts that are considered less than significant with mitigation, less than significant, or which would have no impacts. The impact determinations are based on an updated review of the environmental analyses performed for the Draft Initial Study, as well as review of public and agency comments received on the Draft Initial Study and NOP. Environmental disciplines discussed in this section include: aesthetics, agricultural resources, air quality, cultural resources, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, transportation/traffic, and utilities and service systems.

Potential impacts of the project on biological resources, geological resources and on growth inducement are given expanded analysis in Section 4.0 of this EIR. Standalone technical reports for biological resources and geology and soils are provided in Appendices E and F. Data used for the growth inducement analysis is contained in Appendix G.

3.1 AESTHETICS

The proposed project, located within the Mulholland Scenic Parkway Specific Plan planning area, was designed "to guide the development of a low volume, slow speed, scenic parkway, with associated recreational facilities" (City of Los Angeles, 1985). Review of aerial photographs of the existing roadway depicts noticeable turn-outs for scenic viewing from designated vista points along the corridor (see Figures 5 and 8). Views include the surrounding mountain range, cityscape, the coastal basin, and several prominent ridges that extend perpendicular to the roadway. The Inner and Outer Corridors of the parkway that fall within the project area contain a large amount of open space compared to segments east of I-405 (San Diego Freeway). Existing and planned subdivisions, located at the east and west ends of the project alignment near Canoga Avenue and Greenbriar Drive, can be viewed from Mulholland Drive. The Mulholland Scenic Parkway ~~Scenic~~ Specific Plan EIR classifies the project area as "distinctive" in its spatial experience during the day and nighttime and as "typical" in its landforms (City of Los Angeles, 1992).

The proposed project, including appurtenant structures, is consistent with the uses outlined in Section 5.A.5 of the Mulholland Scenic Parkway Specific Plan (Ordinance No. 167,943). Construction activities would temporarily obstruct passage of recreational viewers along the segment of 'Dirt' Mulholland Drive during construction. In addition, the temporary presence of construction equipment along the roadway could be a distractive element of the viewshed from either of the designated overlooks within the project area. However, because construction would progressively move forward, sightings of the equipment during the day would be temporary and not considered significant. Though one regulating station and two shut-off valves are proposed for construction, they would not be constructed on or near a designated scenic vista point.

Any exposed structures (e.g., maintenance access cover for the regulating station) would be located within the existing right-of-way and level with the road surface or along the embankment immediately adjacent to the road. Placement of maintenance hole covers along the embankment would have a less than significant impact on such resources and be shielded from view with plantings of native vegetation. Once the piping and appurtenant facilities are in place, the visual character and quality of the site would be retained with the use of native vegetation to screen the structures. Views from the parkway would remain unchanged. No nighttime construction activities would occur; therefore, the proposed project would not result in additional light or glare.

The proposed project would not result in a cumulatively considerable aesthetics impact.

3.2 AGRICULTURAL RESOURCES

Construction activities would occur along an existing roadway. There are no known agricultural resources or operations occurring in the area that would be subject to impact from the proposed project.

3.3 AIR QUALITY

The South Coast Air Quality Management District (SCAQMD) is the regional agency responsible for regulating stationary source emissions. The SCAQMD operates two air monitoring stations located near the Mulholland Scenic Parkway, the West Los Angeles Station, and the Reseda station that record carbon monoxide (CO), ozone (O_2), nitrogen oxides (NO_x), sulfur dioxides (SO_x), particulate matter (PM_{10}), and lead and sulfates. The proposed project site is located in the South Coast Air Basin (SCAB), an area that has exceeded national and state ambient air quality standards for the mentioned pollutants. The entire basin has been designated as a non-attainment area. However, the project site falls within the San Fernando Convergence Zone, and contributes to the area's better air quality when compared to the region as a whole in that sea breezes flow inland from the coast and through the project area taking stagnant air pollutants with it.

Because the air basin is in a non-attainment area, the SCAQMD has established construction and operational emission thresholds for the SCAB. The proposed project would be a subsurface water pipeline. Operations of the pipeline would generate marginal and insignificant emissions from maintenance personnel inspecting the pipeline and traveling along the dirt portion of the roadway. Construction activities, however, would result in equipment related emissions. The SCAQMD emission thresholds for construction are presented in Table 3.3-1.

Table 3.3-1

SCAQMD Daily Construction Emission Thresholds

Criteria Pollutant	Units (lbs/day)
Reactive Organic Compounds (ROC)	75
Nitrogen Oxides (NOx)	100
Carbon Monoxide (CO)	550
Particulates (PM10)	150
Sulfur Oxides (Sox)	150

Construction-related emissions would occur in two forms: 1) Primary effects – emissions from construction related activities, and 2) Secondary effects – emissions resulting from the effects of construction related activities. Overall construction effects are a combination of the primary and secondary effects.

Primary Effects – Construction Emissions

Construction of the proposed project would occur in essentially two phases: 1) Pipeline construction along the 'Dirt' portion of Mulholland Drive, and 2) Pipeline construction and regulating station construction along the paved portion of Mulholland Drive. Prior to the start of construction, some equipment and materials would be transported to the site with some site preparation, such as equipment laydown and rough site preparation. This phasing is represented in Table 3.3-2, which also presents the estimated daily construction equipment and operations.

Table 3.3-2
Summary of Daily Construction Equipment and Operations
Construction Phasing

Equipment Type	Number	Hours/day	Total Hours
(Equipment Mobilization/Materials Laydown)			
Excavator Transport	1	2	2
Crane Transport	1	2	2
Loader/Dozer Transport	3	2	6
Backhoe Transport	1	2	2
Pipe Transport	1	2	2
Sprayer	2	2	4
Loader/Dozer	1	4	4
(Pipeline Installation – Dirt Mulholland)			
Loader/Dozer	3	6	18
Trencher	1	4	4
Roller	1	8	8
Crane	1	6	6
Sprayer Truck	2	8	16
Dumper Truck	5	8	40
Welder	3	6	18
Backhoe	1	8	8
Excavator	1	6	6
(Pipeline Installation and Regulating Station Construction – Paved Mulholland)			
Excavator	1	6	6
Loader/Dozer	1	6	6
Dumper Truck	4	8	32
Asphalt Truck	1	6	6
Welder	2	6	12
Crane	1	6	6
Cement Truck	1	6	6
Sweeper Truck	1	6	6

The SCAQMD's CEQA Air Quality Handbook presents methodology for estimating construction exhaust emission based on the type of construction activity, the period of operation, and the type of equipment utilized. This methodology was used to estimate construction exhaust and fugitive dust emissions from the construction of the proposed project. In order to determine the peak daily construction emissions occurring from the proposed project, calculations were made on the "Dirt" Mulholland phase of the proposed project, which requires the most equipment and would generate the greatest amount of fugitive dust emissions. In addition, construction equipment was conservatively assumed to operate eight hours per day.

Input assumptions representing the peak daily construction scenario were utilized in the estimation of air pollutant emissions and are presented in Table 3.3-3. Total construction exhaust emissions occurring from equipment and material hauling are presented in Table 3.3-4.

Table 3.3-3
Additional Input Assumptions for
Construction Exhaust Emissions

General			
Linear Progression of Construction		72 feet of pipe/day	
Amount of Soil Excavated		67 cubic yards (cy)	
Amount of Sand Imported		32 cy	
Amount of Soil Hauled Away		35 cy	
Amount of Soil Backfilled		32 cy	
Construction Worker (passenger vehicles) Assumptions (per day)		**Materials Transport (i.e., dump trucks) Assumptions (per day)**	
Number of Employees	6	Number of Materials Transport Vehicles	5
Average Vehicle Ridership	1	Average Vehicle Ridership	1
Car Trips Per Day	6 trips/vehicle	Truck Trips Per Day	7*
Travel Distance from an offsite location	15 miles/Round Trip	Travel Distance from an offsite location	15 miles/Trip
Speed	45mph	Speed	45mph
SCAQMD Work Area	Area 2 (Los Angeles County)	SCAQMD Work Area	Area 2 (Los Angeles County)
Emission Factor Type	EMFAC7EP	Emission Factor Type	EMFAC7EP
SCAQMD Table	A9-5-J-6 (Year 2001)	SCAQMD Table	A9-5-K-6
Cold Starts	100 percent each	Cold Starts	100 percent each
Hot Starts	0 percent	Hot Starts	50 percent

* 2 out of the 5 trucks would complete 2 trips resulting in a total of 7 trips/day

Table 3.3-4
Summary of Daily Construction Exhaust Emissions
(Fuel Combustion)

Equipment Type	#	Hrs/Day (calc. assum.)	Total hours	Pounds per Day				
				CO	ROC	NOx	SOx	PM10
Loader/Dozer	3	8	24	1..29	2.58	17.19	1.71	0.86
Trencher	1	8	8	6.67	1.00	7.34	0.67	0.50
Roller	1	8	8	3.19	0.91	9.11	0.91	0.46
Crane	1	8	8	6.01	2.00	15.35	1.33	1.00
Sprayer Truck	2	8	16	5.89	3.68	12.51	1.47	1.10
Dumper Truck	5	8	40	2.10	0.70	7.34	0.70	0.52
Welder	3	8	24	41.58	0.76	6.80	0.76	0.38
Backhoe	1	8	8	44.08	0.88	6.47	0.59	0.29
Excavator	1	8	8	1.75	0.16	3.81	0.32	0.24
Worker Travel – Running Exhaust and Evaporative Emissions (from passenger vehicles travelling to the construction site from the West Valley District Office).				0.96	0.08	0.16	0.03	0.05
Worker Travel – Cold Start Emissions				3.32	0.16	0.10	-	-
Worker Travel – Hot Start Emissions				-	-	-	-	-
Worker Travel – Hot Soak Emissions				-	0.06	-	-	-
Worker Travel – Diurnal Emissions				-	0.19	-	-	-
Haul (Dumper) Truck – Running Exhaust and Evaporative Emissions				1.43	0.13	0.93	0.10	0.09
Haul (Dumper) Truck - Cold Start Emissions				0.34	0.02	0.02	-	-
Haul (Dumper) Truck - Hot Start Emissions				0.04	0.01	0.01	-	-
Haul (Dumper) Truck - Hot Soak Emissions				-	0.01	-	-	-
Haul (Dumper) Truck - Diurnal Emissions				-	0.02	-	-	-
Total Emissions				**118.65**	**13.35**	**87.14**	**8.59**	**5.49**
SCAQMD Threshold				**550**	**75**	**100**	**150**	**150**
Exceedance?				**NO**	**NO**	**NO**	**NO**	**NO**

Source: Table A9-8-B, A9-8-C, A9-8-D, SCAQMD CEQA Handbook

Assumptions: All equipment is diesel operated.
Four pieces of equipment (excavator, crane, backhoe, loader/dozer) would be stored on-site
Calculations assume 8-hrs of operation for construction equipment. Consequently, these results reflect values that are higher than would actually occur during construction activities.

Fugitive dust emissions from construction activities without and with the incorporation of mitigation measures are presented in Tables 3.3-5 through 3.3-7.

Table 3.3-5
Estimated PM10 Emissions from Fugitive Dust During Construction Activity
(No Mitigation Included)

Construction Activity Source	Emissions (lbs/day)
Excavation	1.09
Compaction	0.52
Trench and Storage Pile Emptying	0.22
Trench and Storage Pile Filling	0.85
Truck Filling	0.22
Truck Emptying	0.46
Total Emissions in pounds/day	**3.36**

Note: emissions are based on rate of construction (i.e., 72-feet/day)

Table 3.3-6
Estimated PM10 Emissions from Fugitive Dust
Primary Construction Effects
(No Mitigation Included)

Source	Total VMT/day	Emission Factor	Daily Emissions
Passenger Vehicles (worker travel) on paved roadways. 6 vehicles from the LADWP West Valley District @ 15 miles roundtrip.	90	0.33	29.7
14 Trucks on paved roads. 16 truck trips approximately 15 miles roundtrip from West Valley District.	224	2.0	448
14 Trucks on unpaved roads. 16 trucks trips @ no more than 2 miles roundtrip.	32	23.00	736
Open Storage Piles (sq.ft. of area covered by storage pile/day).	1000 sq.ft.	1.97/1000 sq.ft.	1.97
Earthmoving (cut and cover operation; open trench methodology).	0.015	4.3	0.06
Dirt Hauling with Truck. (total miles travelled/day from source to disposal locations). 7 truckloads/day @ 15 miles to disposal/reuselocation.	105	10	1,050
PM10 Emissions from Construction Equipment Exhaust (Table 3.3-4)			5.71
PM10 Emissions from Construction Activity (Table 3.3-5)			3.36
Total Emissions w/o Mitigation			**1,546.16**
SCAQMD Threshold			**150**
Are the Primary Effects in Exceedance?			**YES**

Source: SCAQMD CEQA Handbook, Table A9-9.

Assumptions: Construction activity would progress at approximately 72 linear feet/day.
Excavated soils not used for backfill are anticipated be taken to a nearby location off-site for later use. However, an average estimate of 15 miles is used for calculation purposes. Contaminated soils are not anticipated.

Table 3.3-7
Estimated PM10 Emissions from Fugitive Dust
Primary Construction Effects
****(Mitigation Measures Included)**

Source	Total VMT/day	Emission Factor	Daily Emissions
Passenger Vehicles (worker travel) on paved roadways WITH STREET SWEEPING. 6 vehicles from the LADWP West Valley District @ 15 miles roundtrip.	90	0.018	1.62
14 Trucks on paved roads WITH STREET SWEEPING. 16 truck trips approximately 15 miles roundtrip from West Valley District.	224	0.40	89.6
14 Trucks on unpaved roads. 16 trucks trips @ no more than 2 miles roundtrip. **(Reduce traffic speeds on all unpaved roads to 15 mph or less – 55% average control efficiency). **Further mitigation includes water-down of unpaved roads at least three times daily – 65% average control efficiency **Further mitigation includes washing of truck wheel wells prior to driving on paved roads – 55% average control efficiency	32	1.6 (23)X(0.45) X(0.35) X(0.45)	51.2
Open Storage Piles	1000 sq.ft.	1.97/1000 sq.ft.	1.97
Earthmoving	0.015	4.3	0.06
Dirt Hauling with truck. 7 truckloads @ 15 miles to disposal/reuse location. **++(securely cover truck beds – 90% control efficiency)	105	1 lbs/mile (10)X(0.1)	105
PM10 Emissions from Construction Equipment			5.71
PM10 Emissions from Construction Activity			3.36
Total Emissions with Mitigation			**258.52**
SCAQMD Threshold			**150**
Are the Primary Effects Still in Exceedance?			**YES**

Source: SCAQMD CEQA Handbook, Tables A9-9 and A11-9-A.
++ (SCAQMD. January 2001). Final EIR for the Los Angeles Department of Water and Power's Installation of Five Combustion Turbines at the Harbor Generating Station, Installation of Three Selective Catalytic Reduction Systems at the Scattergood Generating Station, and the Installation of One Combustion Turbine at the Valley Generating Station.

Secondary Effects – Traffic Diversion

Secondary construction effects are those effects that are not directly related to the construction of the proposed project but would occur as a consequence of an impact that is directly related to construction activity (e.g. traffic). Due to the likelihood of temporary road closures to thru-traffic along the dirt portion of Mulholland Drive, vehicles utilizing Mulholland Drive as a primary access road would utilize alternative routes. Access to driveways would be maintained. The area surrounding this portion of the proposed project is not densely developed, therefore this incremental increase in local traffic on alternate routes is not considered to be significant.

Estimated vehicular emissions for passenger vehicles utilizing alternative routes were calculated using SCAQMD emission factors. These factors and the estimated increase in emissions are presented in Tables 3.3-8 and 3.3-9, respectively. It is noted that the air quality analysis is only applicable to the 'Dirt' portion of Mulholland Drive, as this was considered the most potentially significant of the two phases due to the quantity of equipment and the likelihood of exceeding PM10 thresholds. This was conservatively calculated using the SCAQMD CEQA Air Quality Handbook.

Thru-roads intersecting Mulholland Drive (Santa Maria Road, Canoga Avenue) are generally paved. As such, vehicles travelling to and from surrounding residences in adjacent areas secondarily utilizing these roads instead of unpaved Mulholland Drive would result in a net decrease in fugitive dust. Fugitive dust emissions resulting from this alteration of travel patterns and the estimated net travel distances have been quantified in Table 3.3-10.

Table 3.3-8
Emission Factors for 2001
Vehicles Less Than 6000 Pounds
(Neighborhood Passenger Vehicles)
Area 2 (Los Angeles)

	CO	ROC	Nox	Sox	PM10	PM10	Lead
25 miles/hr (in grams/mile)	3.91	0.99	0.45	0.06	0.005	0.10	N/A

Source: SCAQMD Handbook, Table A9-5-J-6, A9-5-L

Table 3.3-9
Additional Vehicle Emissions from Neighborhood Vehicles
Utilizing Alternative Routes

	CO	ROC	Nox	Sox	PM10	PM10	Lead
Additional running exhaust and evaporative emissions from use of secondary access roads during project construction.	1.38	0.35	0.16	0.02	0.002	0.04	N/A

Source: SCAQMD Handbook, Tables A9-5-J-6, A9-5-L

Assumptions:
- There are 24 homes along Santa Maria Avenue between Mulholland Drive and Topanga Canyon Road with an average number of 3 bedrooms per home.
- Average number of vehicles per home is 2.
- Vehicles closest to Mulholland Drive utilize it as their primary route. 33% of the total vehicles (48) utilize this road daily as their primary access, resulting in 16 vehicles per day that would take Topanga Canyon Boulevard as an alternative route during construction.
- 8 additional miles would be traveled for each of the 16 vehicles via Topanga Canyon Boulevard rather than Mulholland Drive.
- Running Exhaust and Evaporative Emissions = 160VMT X EF (#gms/1VMT)/454 gm/lb.
- No changes in cold start, hot start, or hot soak emissions.

Table 3.3-10
Estimated Secondary Impact of Fugitive Dust Emissions
During Project Construction
from Use of Alternative Access Roads

Source	Total VMT/day	Emission Factor	Daily Emissions
Passenger Vehicles on paved roadways. Assumption of 16 vehicles diverted to local paved streets during project construction @ 10 miles roundtrip.	160	0.33	52.8
Passenger vehicles on unpaved roadways. Assumption of 16 vehicles currently travelling on Mulholland Drive as primary access road @ no more than 2 miles roundtrip will take an alternative paved road during construction period.	32	5.56	-177.92
Net change in Fugitive Dust Emissions from secondary impacts of traffic pattern alteration during project construction.			**-125.12**

Calculations indicate that increases in passenger vehicle exhaust emissions resulting from increased miles traveled would be negligible, and that fugitive dust emissions resulting from vehicles utilizing paved alternative access routes would actually decrease during construction activities.

Overall Construction Emissions – Primary and Secondary Effects

As indicated in Table 3.3-11, overall impacts to air quality from construction of the proposed project would be temporary and intermittent. Emissions are not anticipated to exceed SCAQMD daily emission thresholds for all criteria pollutants except for fugitive dust. Fugitive dust emission control measures (presented in Table 3.3-7) added with the secondary benefit of vehicles travelling on paved roadways (presented in Table 3.3-10) would have net fugitive dust emissions within SCAQMD thresholds, and are therefore not considered to be significant.

Table 3.3-11
Overall Estimated PM10 Construction Emissions
Net Primary and Secondary Effects

Total Emissions from Primary Construction Impacts with Mitigation	258.52
Total Emissions from Secondary Construction Impacts	-125.12
Net PM10 Emissions from Construction Activity	**133.40**
SCAQMD Threshold	**150**
Is There a Net Exceedance from Construction Activity?	**NO**

Without mitigation, cConstruction of the proposed project would result in cumulatively considerable air quality impacts; however, implementation of the recommended mitigation measures would reduce project-specific impacts to below the level of significance. Operation of the proposed project would not alter air quality conditions compared to conditions prior to the project, thereby meeting the *de minimis* criteria and level of insignificance. Overall, the project's contribution to a significant cumulative air quality impact is *de minimis* and thus is not significant.

3.3.1 Mitigation Measures

The following mitigation measures are recommended to reduce potentially significant air quality impacts to below the level of significance.

AIR-1: If not already swept, travel routes between the project site and the West Valley District Office should be swept once a day.

AIR-2: Reduce traffic speeds on all unpaved roads to 15 mph or less.

AIR-3: ~~Unpaved roads on the project site should be watered down at least three times daily.~~ The active construction site being excavated and unpaved roads utilized by construction equipment and equipment hauling trucks shall be watered at a frequency sufficient to manage potential dust from surface disturbance. The water truck is assumed to have a standard capacity of about 2,400 gallons. In addition, on excessively windy days (i.e., when wind speed is greater than 25 miles per hour), active construction and road use areas shall be watered on an as needed basis so as to maintain a surface crust for preventing the emission of visible dust. To ensure proper application of water as a dust suppressant, an air quality management plan will be prepared that specifically addresses conditions under which water shall be applied and the limits of its use so as to protect the roadway and adjacent biota and to maintain air quality conditions.

AIR-4: Truck wheel wells of vehicles leaving the project site should be washed off prior to driving on paved roads.

AIR-5: Trucks hauling excavated soils offsite should be securely covered.

AIR-6: During construction activities at the westerly terminus of the proposed pipeline alignment, local residential traffic utilizing the unpaved portion of Mulholland Drive shall be diverted onto paved streets. The recommended route shall be clearly marked and posted along Topanga Canyon Boulevard, Dumetz Road, Canoga Avenue, and other residential streets.

3.4 CULTURAL RESOURCES

The SMMC has begun the application process to qualify 'Dirt' Mulholland Drive for listing on the National Registry. According to the National Park Services' Cultural Anthropologist, 'Dirt' Mulholland Drive is treated by the agency as a listed resource given its inclusion in the Omnibus Park Bill (1978) as part of the Mulholland Corridor identified as a resource worthy of protection (NPS, 2001). However, finalization of its nomination is pending. In order for the corridor to be successfully nominated, concurrence between the various landowners would be required, including the Santa Monica Mountains Conservancy, private land owners and the City of Los Angeles. As previously indicated, upon completion of project construction, the existing roadway would be restored to essentially its existing condition and is not anticipated to influence the outcome of this nomination.

Archaeology

The Santa Monica Mountains have produced some archaeological remains dating back to 5,500 B.C. that indicated the presences of hunters and gatherers as well as fishing communities. It is possible that the area was inhabited by the Gabrielino Indians. Based on a field survey conducted by the Northridge Archaeological Research Center (NARC) for the Mulholland Scenic Parkway Specific Plan Draft EIR and specifically the 'Dirt' portion of Mulholland Drive, "no surface indication of aboriginal activity was found and that the probability of discovering extensive remains on the [roadway] appears to be quite low" (City of Los Angeles, 1985). Furthermore, given the existing use of the roadway and its previous disturbance for installation of subsurface oil and gas pipelines, the likelihood of encountering new archaeological resources is minimal.

According to the Draft EIR for the Vesting Tentative Tract No. 33454 project, the closest known historical site, CA-LAN-1353, is located one-half mile north of the proposed project at its western end near Canoga Avenue (City of Los Angeles, 1992). The Draft EIR also disclosed one other archaeological site known as the Mulholland site, CA-LAN-246, that lies two miles west of the proposed project's western end. The Final EIR for the construction of Corbin Tank identified one archaeological site, CA-LAN 218, within the boundary of the Corbin Tank site (City of Los Angeles, 1981).

Paleontology

The Draft EIR for the Mulholland Scenic Parkway Specific Plan disclosed that there are a number of known paleontological sites that exist in the general area of Mulholland Drive, but none are known to exist within the roadway right-of-way. Three sites containing fossil remains have been identified within one-half mile of the parkway.

The proposed project site is an existing roadway, which by nature has been previously disturbed. The project site has been further disturbed by the presence of two oil pipelines discussed in Section 3.5. Given the existing terrain and topography of the project site, it is not likely that any archaeological or paleontological resources would be discovered. Construction activities would involve excavation along the existing roadway to an average depth of approximately five feet. Depths may exceed five feet at those locations where the pipeline would be placed under the existing Tosco line. The road surface would be restored to existing conditions upon project completion. Permanent paving of the roadway is not proposed under the project.

In the event that either archaeological or paleontological resources are discovered during project construction, the proposed project would comply with the conditions and mitigation described in the Draft EIR for the Mulholland Scenic Parkway Specific Plan and Final EIR for the Corbin Tank project, as well as the Standard Specifications for Public Works Construction. The applicable conditions require that construction be halted until appropriate recovery measures have been considered.

Overall, impacts to cultural resources would be considered less than significant, and no cumulative impacts are identified.

3.5 HAZARDS AND HAZARDOUS MATERIALS

3.5.1 Existing Hazards

Two oil pipelines are currently located within the proposed project area. One is a Tosco/Union Oil pipeline that runs the length of Mulholland Drive from Topanga Canyon Boulevard to Mandeville Canyon Road, where it turns southerly towards the City of Santa Monica. In the unpaved or "Dirt" Mulholland Drive, the pipeline does not follow the centerline of the roadway, but rather switches from one side to another. A second oil pipeline, owned and operated by Equilon/Shell Oil, crosses Mulholland Drive on the west end of the proposed alignment.

Two high-pressure gas lines operated by Southern California Gas Company are located within the San Vicente Mountain Park area along the unpaved portion of the roadway, but are outside the proposed project boundaries to the east. An abandoned and concrete-filled 10-inch oil pipeline is also known to exist. It, too, is also outside the project boundaries (City of Los Angeles, 1992).

Installation of the proposed water pipeline has the potential to traverse portions of the Union Oil pipeline alignment. As a precaution against potential rupture of the oil pipeline during construction activities, LADWP and its hired contractors would consult with the owners and operators of the existing oil pipeline (Union Oil and Tosco Refining Company) to confirm the precise location of the oil pipeline and to develop appropriate and safe plans for the placement of the water pipeline. Union Oil and/or Tosco Refining Company would review the plans for the proposed project and would make recommendations where potential conflicts may exist. During construction, a representative from Union Oil and/or Tosco Refining Company would be invited on site to assist in the evaluation and direction of trenching and pipe laying activities. Standard Specifications for Public Works Construction would be utilized during project design and construction for protection of the public.

Operation of the water pipeline would not pose any potential hazards to people or to the natural environment. The project would include installation of shut-off valves at both ends of the pipeline. Knowledge of incidental ruptures and subsequent leakage would be noticed via the 1,677 Corbin Tank System that has an associated electronic sensor. The 1,677 systems sits higher than the 1,337 service zone and any leaks 'downstream' would cause a substantial drop in water pressure. The valves would serve as a safety measure in the event of ~~such~~ a rupture during an earthquake or other emergency, thereby minimizing the potential for such water leakage.

3.5.2 Introduced Hazards

The proposed project would involve the use of diesel-powered heavy machinery and equipment along an unpaved segment of Mulholland Drive, traversing the Santa Monica ridgeline with distinct slopes on either side of the roadway. The presence of combustible fueled powered construction equipment poses the increased potential for fire in the event of an accident (such as the slippage of equipment off the roadway). However, the roadway is up to 20 feet in width and is assumed to support the use of such equipment given that it once supported such ~~machinery~~equipment at the time the existing gas pipeline was installed. In addition, movement of such equipment would typically proceed in a one-way direction along a given portion of the route, thereby reducing the risk of slippage from maneuvering in the opposite

direction and thus the spill of diesel fuel. The mitigation measures identified below would be implemented to further avoid the potential for fire and spills.

The school nearest to the project alignment is located west of Topanga Canyon Boulevard, more than 0.5 miles away. The potential for such a sensitive resource, such as a school, to be exposed to hazardous materials resulting from the project is considered less than significant. The project is not near a public use airport or private airstrip.

Construction of the proposed project would occur along an existing road (mostly in the unpaved portion where temporary road closure may be necessary) that would result in a short-term interference with existing local emergency response and evacuation plans. Emergency service providers and local residents would be notified prior to construction activities. This temporary effect is not considered to be significant.

The proposed project is located within portions of publicly owned open space managed through the Santa Monica Mountains Conservancy. The project abuts the 1,100-acre Mulholland Gateway Park and supports native vegetation communities of chaparral and mature trees. The project site is surrounded, primarily on the east and west ends, by residential development. It is also considered a high fire risk area given its proximity to an urbanized area. The presence and use of combustible fuel would potentially expose people to brushfires in the event of an accident and spill. However, the proposed project would facilitate firefighting efforts in the event of a fire emergency. Therefore, the proposed project would be considered to have a beneficial effect on reducing fire risk to people and structures.

Operation of the proposed project would not have a cumulatively considerable hazards impact on the environment.

3.5.3 Mitigation Measures

The following mitigation measures are recommended to reduce potentially significant hazard related impacts to below the level of significance.

HA-1: Potential fire hazards associated with construction activities would be minimized by the clearing of loose brush and non-native vegetation immediately surrounding active welding sites. Wherever feasible, protective shields shall be erected around such sites. In addition, all construction personnel shall be prohibited from smoking on-site.

HA-2: Prior to construction, an Emergency Response Plan addressing accidental spills and/or gas pipeline ruptures shall be prepared.

HA-3: Prior to construction, the present owners of the existing gas pipeline shall be consulted.

3.6 HYDROLOGY AND WATER QUALITY

The proposed project is located within the Los Angeles Region Water Quality Control Basin (Region 4). The nearest surface water resources are located south of the project site, namely Santa Maria Creek and

Sulfur Canyon Creek; however, the project would not impact these creeks, as they are located on the other side of the mountain. Both of these converge into Topanga Canyon, ultimately leading to the Santa Ynez Reservoir. Other streams in the Santa Monica Mountains area are mostly ephemeral. The Draft EIR for the Mulholland Scenic Parkway Specific Plan describes the significance of water quality impacts on coastal resources as a result of upstream activity. The proposed project does not lie within an Area of Special Biological Significance. Though construction of the proposed project has the potential for increased surface runoff from construction activities during a storm event, impacts would be concentrated within the immediate vicinity of the project site and not likely affect downstream coastal waters. Construction related debris would be cleared from the site on a daily basis and be delivered to the nearest landfill or recycling facility, thereby, minimizing the amount of material entering the drainage system in the event of a storm.

The proposed project runs along the crest of the Santa Monica Mountains except for that portion between Santa Maria Road and Topanga Canyon Boulevard where it is farther north of the crest. Runoff during high rains tends to drain away from the road from high to lower elevations; therefore, this segment of 'Dirt' Mulholland Drive receives much of the runoff. Subsequently, water is transported along or across the roadway leading to erosion. Existing drainage areas within the watershed affected by the proposed project site include Topanga Canyon, Caballero Canyon, and portions of Rustic Canyons.

Though the proposed project involves excavation and trenching, construction would occur within the existing surface roadway right-of-way and during non-rainfall periods. 'Dirt' Mulholland Drive does not cross Santa Maria Creek nor Suttphur Canyon Creek. Consequently, no discharge into these waters nor impacts to surface water quality are anticipated.

The proposed project elevation ranges from 1,200 to 1,500 feet, and would have no effect on groundwater quality. Excavation activities would range from three to 10 feet in depth. Groundwater is not expected to be encountered, and consequently no dewatering activities are anticipated to be necessary. Surface runoff patterns during construction would be marginally impacted from excavation and trenching activities. This is considered a temporary and insignificant impact. The impacted roadway would be resurfaced to similar conditions prior to construction. Therefore, existing drainage patterns and surface water flows would be unchanged.

Some construction debris would be generated from the breaking of pavement to install the 16-inch pipe between Saltillo Street and Picasso Avenue. Construction related debris would be cleared from the site on a daily basis and be delivered to the nearest landfill or recycling facility, thereby, minimizing the amount of material entering the drainage system in the event of a storm. The proposed project does not involve housing development and therefore impacts from flooding on people or structures are not a concern. The area of open space just north 'Dirt' Mulholland Drive is identified on the FEMA Flood Insurance Rate Map as Zone C – Areas of minimal flooding (FEMA, 1980). In the event of unusually high rainfall occurrences, construction activities would expose workers and property to the potential for landslides. However, because construction would not occur during or immediately following rainfall events the potential for landslide is unlikely and impacts are not considered significant. No cumulative impacts are identified.

3.7 LAND USE AND PLANNING

The proposed project site is located within the Canoga Park-Winnetka-Woodland Hills community planning area of the City of Los Angeles. The project site is also within an existing roadway designated as the Mulholland Scenic Parkway, in the Mulholland Scenic Parkway Specific Plan (1985). The Specific Plan serves to guide the development of the parkway. The City street portion of the roadway is maintained by the City of Los Angeles Department of Public Works, whereas, the fire road portions of the roadway (Santa Maria Road to east of Greenbriar Avenue) are maintained by the LAFD, and are not accessible to thru-traffic. The roadway leads through private property owned by the Santa Monica Mountains Conservancy, Mulholland Hills Associates and EPAC Woodland Hills Partners, LLC. The City of Los Angeles has right-of-way privileges along the entire length of Mulholland Drive (City of Los Angeles, Department of City Planning, 2001). The Specific Plan identifies the parkway as having Inner and Outer Corridors and imposes development standards to preserve scenic resources while promoting recreational use. According to the Specific Plan, land use designations within the Inner and Outer Corridors are predominantly lower density housing at three to seven units per acre. Single-family residences with accessory fences and structures are allowed in the Inner Corridor.

Zoning designations in the vicinity of the proposed pipeline alignment are primarily R1-One-Family Residential, RE-40-Residential Estate (40,000 square feet/unit), RE-15-Residential Estate (15,000 square feet/unit), RA-Suburban and OS-1XL-Open Space (maximum building height of 30 feet). Residential zoning designations are concentrated primarily north of the project site. The Open Space zoning designation is predominantly to the south of the project site. Figure 9 depicts zoning in the project vicinity.

Land ownership along the project corridor is shown in Figure 10. All of the Mulholland Scenic Parkway is contained within the Santa Monica Mountains National Recreation Area. The National Park Service has developed a General Management Plan and Land Protection Plan for this area that targets vacant land along the parkway for easement acquisition (City of Los Angeles, 1985). The Plan is implemented with the assistance of the Santa Monica Mountains Conservancy (SMMC). SMMC's land acquisition plan, as of October 2000, is provided at on Figure 11.

The proposed project consists of a subsurface water pipeline, and would not physically divide an established community. The project area is surrounded primarily by open space and low density housing at both the east and west ends. Some private open space exists east of Canoga Avenue. There is also much undeveloped open space to the north and south of the proposed project area. The construction of utility-related structures is permitted under the Mulholland Scenic Parkway Specific Plan, and is consistent with the Corbin Tank Project Final EIR (1981) as well as the Canoga Park-Winnetika-Woodland Hills-West Hills Community Plan (1999). There are no known habitat conservation plans or natural community conservation plans specific to the proposed project area, and therefore, no project-related or cumulative impacts are identified.

3.8 MINERAL RESOURCES

The proposed project is located in areas designated as "existing urbanized areas" and "urbanizing areas" by the CDMG (CDMG, 1979). The central Santa Monica Mountains are designated an MRZ-3 area, corresponding to "areas containing mineral deposits the significance of which cannot be evaluated from available data." Four oil wells appear to have been drilled in the vicinity of the proposed project (Munger Map Book, 1999). These wells were constructed between 1921 and 1954 and are noted by Munger Map Book, 1999, as being uncompleted and abandoned. There are no known mineral resources in the project area. Therefore, the proposed project would not likely have an adverse impact on the mineral resources of the State of California. Similarly, no cumulative impacts are identified.

3.9 NOISE

The primary source of noise within the proposed project area is from street traffic generated by local residents. The most heavily traveled local arterial, and main contributor of traffic noise, is Topanga Canyon Boulevard, located about one-half mile west and southwest of the project's westerly terminus. An additional noise source is airplane traffic originating from nearby local airports including Van Nuys Airport, Whiteman Airport, Hollywood-Burbank Airport, and Santa Monica Airport.

The nearest sensitive receptors to the project site are located at the west end of the proposed pipeline alignment along Trinidad Drive, Rosario Road, Mulholland Drive, Monet Avenue, and Picasso Avenue. Recreational users traveling along the parkway at any given time are also considered a sensitive receptor. There are no other sensitive noise receptors (e.g., schools, hospitals, day-care centers, etc.) along the proposed project alignment. However, a private high school is located about one-half mile west, and a public elementary school is located about one mile north, of the project site.

Noise levels generated from excavation activities including pavement breaking along the paved portion of Mulholland Drive is estimated at 81 dBA at distances of 50 feet. Residences from Canoga Avenue to Picasso Avenue are within 50 feet from the roadway, thus residences will experience elevated yet short-term noise impacts (US EPA, 1971).

Construction activities would result in a temporary increase in existing noise levels from delivery trucks transporting material along the designated construction route (i.e.: Greenbriar Drive, Vanalden Avenue, Topanga Canyon Boulevard). The construction truck traffic of approximately 6-7 truck trips per day (given the amount of soil and material to be removed from the site 7,875 cubic yard divided by a 5 cubic yard capacity dump truck to haul the material each day over the construction period) would minimally add to the existing background noise. This translates into 0.6 truck trips per hour during a 8-hour work day (Greene, R.E., 1993). Pedestrians and park patrons in the immediate vicinity of the project may find construction noise annoying, and would be directed away from active construction areas wherever possible. This effect would be temporary and is not considered to be significant. Residences located along Mulholland Drive, from Picasso Avenue to Saltillo Street, may experience some groundborne vibration from pavement breaking activities along that portion of the affected roadway. However, groundborne noise levels would not be excessive and therefore considered a less than significant impact. Upon completion of construction, ambient noise levels would remain the same as without the project;

therefore, no noise impacts would result from project operation. No cumulative noise impacts are identified.

3.10 PUBLIC SERVICES

The entire parkway is serviced by the City of Los Angeles Fire Department (LAFD), which operates six (6) single-engine company fire stations in the area: 3111 North Cahuenga Boulevard, 8021 Mulholland Drive, 12520 Mulholland Drive, 14145 Mulholland Drive, 16500 Mulholland Drive and 5340 Canoga Avenue. According to the LAFD, service to 'Dirt' Mulholland Drive between Topanga Canyon Boulevard and Mandeville Canyon Road is inadequate in response times given that this particular segment must serve as both a fire access road as well as an evacuation road (City of Los Angeles 1985).

The West Los Angeles and the West Valley divisions of the Los Angeles Police Department provide police protection for the proposed project area. The area is patrolled twice a week during the day with some helicopter support.

The project is an element of the approved Corbin Tank Project (LADWP, 1981), and is a recommended mitigation measure for the Mulholland Scenic Parkway Specific Plan as defined in the Plan's EIR (1985). Existing fire and police services would continue to provide protection for the project area during construction activities. The project would not increase demand for fire or police protection, parks, and schools. Rather, the proposed project would enhance the capabilities of LAFD, LADWP, and the SMMC to service and protect the residences and surrounding open space from potential fires and other emergencies requiring a reliable source of water. Construction activities would require temporary closure of the road to thru-traffic and notification to local emergency service providers. Temporary detours may be set up, if needed; however, access would be maintained to points along the road from the west and east of the active construction zone. After project construction, the road surface would be restored to pre-construction conditions. Water flow from existing fire hydrants located between Saltillo Street and Picasso Avenue may be temporarily shut off during construction activities along that segment of the pipeline alignment. Local fire and police departments would be notified at least two weeks prior to the start of construction. This impact is not considered significant. No cumulative public service impacts are identified.

3.11 RECREATION

The proposed project is entirely located within the Santa Monica Mountains Natural Recreation Area which is managed by the National Park Service. It is also within the Mulholland Scenic Parkway Inner Corridor which is governed by the City of Los Angeles Department of City Planning under the Mulholland Scenic Parkway Specific Plan through a right-of-way negotiated with the SMMC. Its maintenance is via the City of Los Angeles Department of Public Works and the LAFD. The nearest public recreational facilities to the proposed project are Serrania Avenue Park and Topanga State Park, located about one mile north and southeast, respectively, from the project site. Private recreational facilities in the project vicinity include the El Caballero Country Club, the Braemar Country Club, and the Woodland Hills Country Club.

Construction of the proposed pipeline would not increase the use of other nearby parks or recreational facilities, nor require the construction of any new facility to meet existing demand. The proposed project would enhance the ability of the City to provide drinking fountains as per the Mulholland Scenic Parkway Specific Plan EIR, however, none are proposed as part of the project. ~~However, the project would enhance the ability of the City to provide drinking fountains as per the Mulholland Scenic Parkway Specific Plan EIR.~~ Though construction activities would result in a temporary inconvenience to recreational opportunities along the parkway in the form of road closure, this impact is temporary and not considered significant. Upon implementation of the proposed project, existing recreational opportunities provided prior to construction would be fully restored. No cumulative recreation impacts are identified.

3.12 TRANSPORTATION/TRAFFIC

3.12.1 Environmental Setting and Impacts

The segment of Mulholland Drive in which the pipeline would be located is an east-west roadway bisected by few north-south roads with noticeable turn-out points for viewing (see Figures 4 and 5). These turn-outs are situated at fire roads connecting to the alignment. Primary north-south connector roads to Mulholland Drive from west to east are Canoga Avenue, Santa Maria Road, and Greenbriar Drive. These roads are not frequently traveled given the rural character and low residential density of the area.

The potential for transportation impacts to occur would be associated with construction activities and not operation of the proposed project. Operation of the proposed project would involve one visit to the site per month. It is assumed that construction of the proposed project would generate six worker related trips per day, up to seven trucks hauling dirt and other materials per day, and approximately 14 other equipment truck related trips per day for a total of 27 added vehicles to the existing daily traffic load or volume. Table 3.3-12 summarizes the Average Daily Traffic (ADT) for key intersections utilized during construction. Counts were taken from 1996 and 1997 sample data (City of Los Angeles, 2001).

Table 3.3-12
Average Daily Traffic (ADT) for Key Intersections

KEY INTERSECTIONS	ADT NORTH/EASTBOUND		ADT SOUTH/WESTBOUND	
Topanga Canyon Blvd. (N/S)/ Mulholland Drive (E/W)	8,335 N	941 E	14,637 S	2,451 W
Topanga Canyon Blvd. (N/S)/ Ventura Blvd. (E/S)	17,367 N	22,216 E	16,532 S	15,627 W
Tampa Ave. (N/S)/ Ventura Blvd. (E/W)	13,466 N	19,237 E	26,145 S	19,443 W
Vanalden Ave. (N/S)/ Ventura Ave. (E/W)	No counts available	25,250 E	No counts available	18,032 W

Construction traffic would travel half of the time along either Topanga Canyon Boulevard and half of the time along Vanalden Avenue to access either end of the project site. Both streets lead primarily through residential neighborhoods. The key intersections are located approximately 1.5 – 2.0 miles north of the

project site. The addition of 27 vehicles to existing traffic loads accounts for an increase of less than one percent (1%) which is not considered significant. The duration of such an increase is also short term in nature and would not be considered significant.

The portion of the proposed pipeline alignment between Santa Maria Road and Greenbriar Drive is currently gated and closed to public thru-traffic. There would be a slight increase in local traffic resulting from the daily movement of construction vehicles traveling to and from the construction site; however, no changes in local traffic patterns are anticipated. Construction truck trips would likely be routed along Topanga Canyon Boulevard to the project site. The project vicinity is not densely populated, and temporary traffic increases on local streets would not be considered significant.

The proposed project is a subsurface pipeline, and would not affect the existing roadway alignment. No unique or unsafe roadway design features are part of the project. To reduce the potential for construction activities to present a hazard or barrier to pedestrians and bicyclists, unauthorized personnel would not be permitted in active construction areas, and safe pedestrian zones would be maintained during construction in accordance with Standard Specifications for Public Works Construction. Construction activities not completed by the close of each workday would be secured with open excavations fenced off or covered with steel plates to further ensure public safety.

Temporary traffic lane closures along both the paved and unpaved portions of Mulholland Drive would likely be necessary during active construction. Local emergency providers would be notified prior to project construction to ensure that alternative emergency access routes have been identified. The proposed project may involve the set up of temporary detours to re-route local thru-traffic. However, there would be no effects on alternative transportation or air traffic patterns of the region.

A dirt turnout at the single vista point located along the portion of the proposed project alignment accessible to thru-traffic (see Figure 5) is assumed to accommodate up to two temporary parking spaces for recreational viewers. Thru-traffic is currently restricted along the remainder of 'Dirt' Mulholland Drive. Construction would not involve any parking closures; however, the staging of construction equipment at these sites would temporarily impact parking. Due to the infrequency of vehicles traveling 'Dirt' Mulholland Drive, no significant parking impacts are anticipated. Construction staging areas would be located along the existing roadway right-of-way. Temporary fencing or cones would be placed along the boundaries of the active work zone to protect adjacent vegetation.

No cumulative traffic impacts are identified, as the project would adhere to the recommended mitigation measures to avoid significant traffic congestion and conflicts.

3.12.2 Mitigation Measures

In order to reduce the potential for traffic congestion along Topanga Canyon Boulevard and US 101, at the recommendation of Caltrans, received during the comment period for the Notice of Preparation, the following mitigation measure would be implemented:

TRANS-1 Construction truck traffic along Topanga Canyon Boulevard and US-101 would be limited to off-peak commute periods.

3.13 UTILITIES AND SERVICE SYSTEMS

The proposed project would be a new water facility owned and operated by LADWP that would connect three existing water service zones (e.g., 1337, 1677, 1305).

Wastewater from existing residential development in the project vicinity is diverted to and treated at the Donald C. Tillman Water Reclamation Plant located in the Sepulveda Basin. The solids are conveyed to Hyperion for further treatment. (Tillman is part of the larger Hyperion Treatment System). Construction and operation of the proposed project would not directly involve the generation or discharge of any wastewater. Project construction would be designed to avoid conflicts with existing substructures such as storm drains or sewers. However, should relocation of existing facilities be necessary during construction, local system users would be notified of any short-term disruptions of service. This effect is unlikely and is not considered significant.

If a secondary use for excavated soils and asphalt cannot be found, the nearest landfill site most likely to receive the construction debris is the open Calabasas Landfill, located at 5300 Lost Hills Road and operated by the Sanitation Districts of Los Angeles County. It has a daily capacity load of 3,500 tons/day and is currently operating at 886 tons/day as of March 9, 2001 (Sanitation Districts of Los Angeles County 2001). The amount of construction debris resulting from pavement breaking activities on the west end of Mulholland Drive is estimated to be approximately 3,300 cubic feet (125 cubic yards) of asphalt and 29,700 cubic feet (1100 cubic yards) of soil. A total of 7,875 cubic yards of debris for the entire length of the project is anticipated. Approximately 1,575 trips by trucks with a 5 cubic yard capacity would be required to haul the material. Construction of the proposed pipeline is not anticipated to have an effect on solid waste disposal services given that the landfill is currently operating significantly below its capacity of 3,500 tons/day. The amount of debris generated by the proposed project is within the operating capacity of the landfill, which would be able to accommodate the ~~648~~182 tons of asphalt 1,485 tons of soil anticipated for disposal.

No cumulative utility and service system impacts are identified.

4.0 PROPOSED PROJECT AND ALTERNATIVES ANALYSIS

4.1 BIOLOGICAL RESOURCES

URS biologists conducted a biological survey along the entire length of the proposed alignment on February 22, 2001 and June 4, 2001 to assess the biological resources on and adjacent to Mulholland Drive, and to assess the potential direct, indirect, and cumulative impacts associated with the proposed project. No surveys were performed along any of the three alternative locations; however, these locations were generally assessed based on low level aerial photographs, observation from Mulholland Drive, and other available information. A Biological Survey Report is provided in Appendix E.

The California Natural Diversity Database (CNDDB) was queried for plant and animal species and habitats considered sensitive by the United States Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), and the California Department of Fish and Game (CDFG) in the Canoga Park United States Geological Survey (USGS) 7.5' minute quadrangle.

4.1.1 Environmental Setting

4.1.1.1 Existing Conditions

The project site consists of the existing roadway (Mulholland Drive), which has three distinct sections: public-paved road (i.e. public vehicle access); public-unpaved road; and private-unpaved road (i.e. no public vehicle access). The public-paved road section extends east from Picasso Avenue to approximately Saltillo Street. Adjacent property along this section of Mulholland Drive is developed with single-family residential dwellings. The public-unpaved portion of Mulholland Drive extends from Saltillo Street to Santa Maria Road. While the private-unpaved road extends from Santa Maria Road to Encino Hills Drive and is closed to through traffic. The topography of the project site is varied, with rolling hills, terraces, and steep slopes.

The existing dirt road was not found to support native vegetation. The vegetation adjacent to the road is dominated by coastal sage scrub, southern mixed chaparral, coast live oak woodland, California walnut woodland, and disturbed vegetation. Areas of disturbed vegetation were particularly notable along the public-unpaved section of the project site. These areas of disturbance are parallel to the roadway, forming a soft shoulder. The disturbed areas range in width from 2 to 15 feet and are dominated by ruderal species (non-native, invasive broad-leaved weeds). In contrast, the private-unpaved section supports dense native shrubs with no shoulder between the road and the adjacent native vegetation.

The Alternative 1 route consists of a mix of developed and undeveloped land dominated by chaparral, coastal sage scrub, and woodlands. The Alternate 2 route includes developed public roadways. The Alternative 3 location is currently developed with a water tank and an asphalt-paved pad, and surrounded by chaparral vegetation and residential development.

Plant Communities

A list of the floral species observed on the project site is provided in Appendix E, along with a figure depicting the vegetative communities located in the vicinity of the proposed alignment. Seven plant communities were observed adjacent to the project site and consist of the following: Coastal sage scrub, Chaparral, Non-native Grassland, Developed/Ornamental, Disturbed/Ruderal Habitat, Coast Live Oak Woodland, and Southern California Walnut Woodland. Individual Coast Live oaks and Southern California walnuts are the dominant species that make up the identified woodland communities.

Wildlife

Wildlife species, or their sign, were identified throughout the project site and include mammals such as mule deer, coyote, bobcat, rabbits, and rodents. Various species of birds including songbirds and raptors were identified. Domestic dogs are also present on the project site. A list of the species detected on the project site is provided in Appendix E.

Sensitive Habitats

Sensitive habitats are plant communities or species that are considered rare or seriously declining within the region, are listed by the CNDDB, or are habitats that support sensitive plants or wildlife. Sensitive habitats adjacent to the project site include Coastal sage scrub, Coast Live Oak Woodland, and California Walnut Woodland. The Coastal sage scrub and California Walnut Woodland are given the highest priority by the CNDDB.

***Coastal Sage Scrub*:** Coastal sage scrub is considered sensitive by the CNPS, CDFG, and USFWS, and is present on the project site. Impacts on coastal sage scrub habitat are considered significant since this habitat is ranked as "very threatened" by the CNDDB.

***Coast Live Oak Woodland*:** Oak woodlands in southern California have been substantially reduced and are considered important habitat for a diverse list of plant and wildlife species.

***California Walnut Woodland*:** California Walnut Woodland habitats are considered significant due to its relative rarity. This habitat is categorized as "endangered" by the CNDDB.

Sensitive Plants

Though not listed in the CNDDB as threatened or endangered, Coast Live oak and California walnut were observed adjacent to Mulholland Drive. These species are considered sensitive by URS and other jurisdictions as sensitive due to their high wildlife habitat value and contribution to habitat diversity within the local landscape. No CNDDB sensitive plant species were found, however, the winter-season timing of the surveys precluded detection of spring/summer flowering herbaceous species. The CNDDB for the Canoga Park quadrangle lists four sensitive plant species:

Santa Susana tarplant (*Deinandra* (*Hemizonia*) *minthornii*; CNPS List 1B): This July-November flowering deciduous species inhabits chaparral and rocky coastal sage scrub areas and is known from Los Angeles (Santa Susana Mountains) and Kern counties. There is a low potential for this plant to occur immediately adjacent to Mulholland Drive.

Braunton's milk vetch (*Astragalus brauntonii*; Federal endangered): This March-July flowering perennial herb inhabits chaparral, coastal sage scrub, valley foothill grasslands and coniferous forests. There is a moderate potential for this plant to occur immediately adjacent to Mulholland Drive.

San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; CNPS List 1B): This April-June flowering annual herb occurs in sandy coastal sage scrub areas. There is a moderate potential for this plant to occur immediately adjacent to Mulholland Drive.

Plummer's mariposa lily (*Calochortus plummerae*; CNPS List 1B): This May-July blooming perennial bulb has been found in chaparral, coastal sage scrub, grasslands, and coniferous forests. The flowering stalk of a species of *Calochortus* was observed immediately adjacent to Mulholland Drive during the survey, but the condition of the dead stem precluded accurate identification. There is moderate potential for this plant to occur immediately adjacent to Mulholland Drive.

Sensitive Wildlife

General surveys were conducted for wildlife species that are considered sensitive by the CNDDB in the vicinity of the project site. No sensitive wildlife species were observed during the survey. According to a letter prepared by Friends of Caballero Canyon dated June 11, 2001, cougar/mountain lions (*Felis concolor)* have been sighted by several area residents. The most recent official record of such a sighting occurred on November 20, 2000 at Corriganville State Park (adjacent to the 118 Freeway) and in Cheseboro Canyon on Sulphur Springs Trail in the Agoura Hills near the 101 Freeway. Both areas are greater than five miles from the project site to the north and west, respectively.

Birds of prey (raptors), such as northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), white-tailed kite (*Elanus leucurus*), and Cooper's hawk (*Accipiter cooperii*), potentially use the habitat adjacent to the project site. A pair of American Kestrel (*Falco sparverius*), a pair of Red-tail hawk (*Buteo jamaicensis*), and a Cooper's Hawk were detected onsite. No raptor nests were observed during surveys, but nesting activity likely occurs in the project vicinity.

Wildlife Movement

The dirt road portion of Mulholland Drive likely supports local movements of common terrestrial wildlife species, including coyote, bobcat, and deer. Signs (i.e., tracks and scat) of coyote and deer were detected during the survey.

4.1.2 Impacts

Significance Criteria

Direct impacts occur when sensitive biological resources are altered or destroyed during the course of, or as a result of, project implementation. Examples of such impacts include removal of sensitive vegetation, filling of wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may occur due to elevated levels of noise or lighting, change in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive wildlife species.

The State CEQA Guidelines define "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." The CEQA Guidelines further indicate that there may be a significant effect on biological resources if the project will:

- Substantially affect an endangered, rare, or threatened species of animal or plant or the habitat of the species;
- Interfere substantially with the movement of resident or migratory fish or wildlife species to the extent that it adversely affects the population dynamics of the species;
- Substantially diminish habitat for fish, wildlife, or plants; or
- Affect a substantial portion of the distribution of plant communities defined as threatened or very threatened by the Nature Conservancy Heritage Program or as designated in the CNDDB.

4.1.2.1 Direct Impacts

Vegetation

The construction of the water pipeline would occur within the existing road, and potentially the embankment should it be decided that maintenance hole covers not be installed in the roadway (for aesthetic or geologic reasons). Based on the biological survey, the existing road does not support native vegetation. Native trees such as Coast ~~L~~live oak (*Quercus agrifolia*)and California walnut (*Juglans californica*) with a diameter at breast height (dbh) greater than 4-inches, located adjacent to the road, may have roots that extend under the existing dirt road. Most of the root system of oak trees occurs within the top three feet of the soil. According to the Oak Tree Foundation, the most critical area of the oak is half the distance from the trunk to the dripline. If there are trees within a close enough distance to the roadway, the tree roots would likely extend under the roadway. Thus, there exists the potential for such roots to be severed during trenching and excavation activities, thereby, constituting a potentially significant impact. On June 4, 2001 and August 14 and 15, 2001 a tree survey was conducted to determine the number of trees potentially impacted by the project (See Appendix E). The survey concluded that up to 46 trees (34 California walnuts and 12 Coast live oaks) could be directly impacted requiring mitigation should the pipeline be constructed at either edge of the roadway. ~~Therefore, any excavation operations within 25 feet of either oak or walnut trees may adversely affect tree viability. Any direct impacts (i.e., severing of roots) resulting from excavation activities should be avoided where practicable or, if necessary, can be mitigated.~~[5]

Sensitive Species

Based on the biological survey, the existing road does not provide suitable habitat for sensitive species. Therefore, no significant direct impacts to sensitive species would occur if the proposed project is implemented as proposed and if maintenance hole covers are not installed. However, a pre-construction rare plant survey is recommended so that any directly adjacent sensitive plant populations existing along the embankment can be identified, so that they can be protected and monitored during the construction process.

[5] See Appendix E for discussion of revision.

Wildlife Movement

The proposed construction process would consist of a progressing construction zone that would be limited to 250 linear feet of active construction along 'Dirt' Mulholland Drive. Construction activities would be limited to day-time hours. Construction activities are not expected to impede local wildlife movement in the vicinity of the project site. Potential impacts to wildlife movement are less than significant.

4.1.2.2 Indirect Impacts

There is the potential for indirect impacts to occur as a result of construction of the proposed project. The areas where potential indirect impacts have the potential to occur could extend 150 feet from the development edge into the adjacent habitat. Construction activities could potentially introduce invasive exotic plant species into the project area due to disturbance of the soil along the embankment, and the opportunity for weeds and seeds to be transported by the vehicles and other means (i.e., wind, birds, people). Additionally, migratory birds and raptor species nesting in the vicinity of the project site may be disturbed during construction activities potentially resulting in the abandonment of their nests.

Since the construction of the pipeline would occur in the existing roadway, the opportunity for invasive species to become established is less than significant. As for the potential to disturb nesting birds, construction activities would occur as a 250-foot moving construction zone, taking approximately 10-days to pass a given location. There exists the potential for nesting raptors to be disturbed during construction activities, however, the disturbance of nesting migratory birds is considered not significant given their much larger net population and density than raptors. Mitigation to identify the absence and/or presence of nesting raptors during the breeding season prior to construction, if construction is anticipated to commence during the nesting season, would reduce impacts to such bird species to a less than significant level.

4.1.2.3 Cumulative Impacts

In determining the potential for the proposed project to result in cumulative biological impacts, the projects listed in Table 2-2 were considered with emphasis on the implementation of the Mulholland Scenic Parkway Specific Plan (Plan) and SMMC purchase of the Avatar property (Tract 50784) given that the Plan encompasses all of the proposed project area and adjacent undeveloped land. As discussed in Sections 4.1.2.1 and 4.1.2.2, the proposed project alone would not result in significant impacts on biological resources upon implementation of mitigation measures. When considered with the potential development of Tract 50784 and the various elements of the Plan, may have a cumulatively significant impact on biological resources in the area. However, given the likelihood of the SMMC acquiring the property to Tract 50784, the severity of this impact is not significant and is not considered to be cumulatively considerable.

~~The only other approved or proposed project with the potential to affect biological resources within this portion of Mulholland Drive is the Mulholland Scenic Parkway Specific Plan (Plan). The Plan calls for the installation of fire hydrants along 'Dirt' Mulholland as mitigation to address the potential for increased fire hazards resulting from implementation of the Plan. This impact, however, is not considered significant, as the hydrants would be located in disturbed areas immediately adjacent to the roadway, and~~

~~the area of disturbance for a given hydrant location would be very small. Should maintenance hole covers be installed, they would typically follow the alignment of the new pipeline which would remain within the existing roadway. Therefore, no significant cumulative impact to roadside vegetation would occur. Impacts to biological resources associated with the potential development of Tract 33454 are evaluated in that project's EIR. With the implementation of mitigation measures identified below for the proposed pipeline project, potential cumulative impacts on biological resources would be insignificant.~~

4.1.3 Alternatives Analysis

In addition to the proposed project site along 'Dirt' Mulholland Drive, the LADWP has selected three alternatives to the water pipeline. No focused surveys were performed along any of the alternative locations nor at the Kittridge Tank location, a project element of Alternative 3; however, based on a review of recent low elevation aerial photographs, observations from Mulholland Drive, and available information, the assessment of the biological resources associated with each of the alternatives is as follows:

Alternative 1 - Mulholland Gateway Park

Biological resources would incur significant direct and indirect impacts since this alternative alignment would proceed directly through intact Coastal Sage Scrub, Chaparral, Oak Woodland and Walnut Woodlands, and potential habitat of rare plant species.

Alternative 2- Ellenita/Wells/Canoga Alignment

This route is located on existing paved streets with Coast Live oaks at various locations alongside the alignment. Alternative 2 would result in similar impacts to sensitive tree species and subsequently wildlife habitat as identified for the proposed project

Alternative 3- Topanga Tank Expansion

The current tank pad would require modification and expansion. The construction of both a new Topanga Tank and Kittridge Tank would require the removal of a mixed community of Coastal Sage Scrub and Chaparral. This would be considered significant if loss of native vegetation, including oaks and walnuts exceeds 5 acres. Thus, Alternative 3 would result in greater biological impacts than the proposed project.

No Project Alternative

The No Project alternative would avoid any adverse biological impacts in that no use of heavy machinery would occur within or alongside the roadway. Existing vegetation would remain in tact and wildlife present in the vicinity would remain undisturbed.

4.1.4 Mitigation

The proposed project would not have significant impacts on biological resources. However, to ensure the minimization of potential adverse impacts, the following mitigation measures are recommended.

BIO-1: Should construction activities commence during the breeding season (late May – early August), a pre-construction focused survey shall be conducted by a qualified biologist one week prior to

construction to identify the location of nesting raptors, and other birds, if any, within close proximity to the proposed construction zone. Should nesting raptors and birds be present, construction of the pipeline within 500-feet of an active nest shall be avoided until after the breeding season or the birds have fledged. ~~No pre-construction surveys are needed if construction is to occur outside the breeding season.A pre-construction focused survey shall be conducted by a qualified biologist to: 1) identify rare plants, if any, located within 50 feet of either side of the proposed construction zone (must be surveyed between late May and early June) and 2) identify the location of nesting raptors, if any, within close proximity to the proposed construction zone. Should nesting raptors be present, construction of the pipeline within 500 feet of an active nest shall be avoided until after the breeding season.~~[6]

BIO-2: ~~Additional tasks associated with the pre-construction survey efforts include identifying and tagging Coast Live Oaks and California Walnuts which would likely incur root damage as a result of trenching for the proposed pipeline (i.e., those trees with a diameter at breast height (dbh) greater than four inches, located within 25 feet and on the same approximate horizontal plane as that of the approved alignment).~~ [7]In order to mitigate for potential impacts on Coast Live Oaks and California Walnuts, ~~E~~eligible trees shall be replaced at a ratio of 5:1. Replacement of the species shall occur in existing conserved and degraded open space (~~i.e.,~~e.g., Santa Monica Mountains Conservancy land, State, County, City land) within the general vicinity of the project site. Appropriate planting techniques shall be exercised to ensure the long term viability of the newly planted trees (e.g., use of gel packs to ensure ample water source). Monitoring of the newly planted trees is recommended once every Spring and Fall.

BIO-3: All limits of grading and construction activities should be clearly delineated (e.g., with rollout, temporary mesh fencing) so that no native vegetation outside the delineated limits would be disturbed by construction personnel or equipment.

4.2 GEOLOGY AND SOILS

4.2.1 Environmental Setting

4.2.1.1 Topography

The proposed project and project alternatives are located on the northern flank of the Santa Monica Mountains in the Woodland Hills area of the City of Los Angeles, California. The Santa Monica Mountains form the southernmost boundary of the geologically complex and seismically active Transverse Ranges physiographic province of Southern California. East-west trending mountain ranges and valleys characterize the Transverse Ranges physiographic province. This topographic pattern is formed by north-south crustal compression acting across numerous east-west trending active faults. The north-south compression affecting the province is generated by the westward bend in the northwest-trending San Andreas fault system.

[6] Rare plant surveys completed. See Appendix E.

[7] Surveys for California Walnut and Coast Live Oak trees potentially impacted have been completed (See Appendix E). Eligible trees for mitigation have been identified and are presented in Appendix E.

The proposed project alignment extends along Mulholland Drive from the intersection with Greenbriar Drive at the eastern end of the project area to Picasso Avenue at the western end of the project area. This section of Mulholland Drive appears to have been constructed primarily as a cut into the slope just below local crests in the north flank of the Santa Monica Mountains. The existing road generally follows the east-west trending topography and crosses several north-south trending ridgelines and drainage channels along its alignment. Elevations along the proposed alignment range from approximately elevation 1,575 feet above mean sea level (MSL) at Greenbriar Drive to a low of about elevation 1,160 feet above MSL at Picasso Avenue.

The proposed project is characterized by undeveloped slopes that are located adjacent to most of the existing 'Dirt' Mulholland Drive roadway between Greenbriar Drive and approximately Saltillo Street. Most of this segment of Mulholland Drive is also not paved. The undeveloped slopes have inclinations ranging from about 1:1 (horizontal: vertical) to about 5:1. Locally, slopes with inclinations as steep as about ¾:1 occur, primarily in cut slopes above the roadway. The natural slopes are generally covered with moderate to dense vegetation.

Alternative 1 – Mulholland Gateway Park

The Alternative 1 alignment is the same as the proposed project over about the western one-third of the project alignment and the remainder is located north from the eastern portion of the proposed project. From its eastern terminus, the Alternative 1 alignment extends downslope and west from Greenbriar Drive at approximately elevation 1,300 feet MSL, to Howard Court at approximately elevation 1,140 feet MSL, and then upslope to Mulholland Drive, at about elevation 1,400 feet above MSL. The remainder of the Alternative 1 alignment then follows Mulholland Drive along the same alignment as the proposed project to its western terminus at Picasso Avenue at approximately 1,160 feet above MSL.

With the exception of the eastern terminus, a segment along the central part of the alignment that is in a developed area abutting existing cul-de-sacs, and the segment from Blanca Road to Picasso Avenue, most of Alternative 1 traverses undeveloped slopes. This alignment crosses several small drainage channels and intervening ridges along its route. The slopes have inclinations ranging from about 1:1 to over 5:1, with the steeper slopes generally in the eastern portion of this alternative. The natural slopes are generally covered with moderate to dense vegetation. There are no existing access roads along the section of this alternative alignment that traverses the undeveloped slopes.

Alternative 2 – Ellenita/Wells/Canoga Alignment

The Alternative 2 alignment follows existing city streets in residential developments. The Alternative 2 alignment follows Ellenita Avenue from the intersection with Greenbriar Drive at approximately elevation 1,100 feet MSL to sections of Rosita Street, Corbin Avenue, Wells Drive (to a low elevation of approximately 900 feet MSL), Serrania Avenue, Dumetz Road, Canoga Avenue, and along Mulholland Drive to its intersection with Picasso Avenue at approximately 1,160 feet above MSL. The proposed route is situated in hillside development along most of its alignment, with the exception of sections along Wells Drive, Serrania Avenue, and Dumetz Road, which crosses the southern margin of the San Fernando Valley. Alternative 2 would be constructed within the right-of-way of the existing paved city streets.

Alternative 3 – Topanga Tank Expansion

Alternative 3 consists of supplementing the existing 208,000-gallon Topanga Tank with an additional 0.8 million gallon water storage tank, constructing an additional new seven (7.0) million gallon water storage tank at the Kittridge Tanks site, constructing a new small pumping station near the intersection of Mulholland Drive and Saltillo Street, upgrading the existing Girard Pump Station, and upgrading existing pipelines in the area. Off-site improvements (i.e., additional Kittridge Tank, Girard Pump Station upgrades) were not geologically evaluated for this alternative. The proposed Topanga water storage tank would be constructed on a building pad developed to the south of the existing tank pad. Construction of this building pad would likely involve acquiring two or three of the adjacent residential properties and the removal of the homes.

The existing tank site is located at approximately elevation 1300 feet MSL on a cut pad excavated into a north-south trending ridgeline. These slopes have inclinations ranging from about 1:1 to over 4:1.

4.2.1.2 Geology

This province is one of California's most seismically active regions and north-south compressional tectonic forces in the province have lead to active east-west trending folds and reverse, thrust, and left lateral-oblique slip faults. The rocks underlying the Santa Monica Mountains have been folded into a large anticline that has experienced several stages of growth and deformation since the Jurassic geologic time period (136 to 190 million years before present). A consequence of these recurrent episodes of deformation is that the Santa Monica anticline is no longer a simple fold; much of it has been refolded and disrupted by faults.

The main soil and bedrock materials along the proposed project and alternatives include artificial fill, landslide deposits, alluvium, an unnamed shale, and sedimentary rock of the Monterey Formation. The following paragraphs provide brief, generalized descriptions of these materials, based primarily on geologic mapping performed by Dibblee (1992).

Artificial Fill [af] - Artificial fill is defined as human-placed material. The local composition varies with source materials. Artificial fill was not observed to be present along the proposed project alignment or the alternatives. However, this does not preclude the potential for localized deposits in the project area. Additionally, artificial fill is likely to be present along the existing oil pipeline within Mulholland Drive.

The proposed project would involve the excavation and backfilling of native soils in addition to the use of sand as a bedding material for the proposed project, thereby increasing the amount of artificial fill in the area.

Landslide Deposits [Qls] - Numerous historic and prehistoric landslides exist along the routes of the proposed project and Alternative 1. In addition to the landslides mapped by Dibblee (1992), the City of Los Angeles (1982) has mapped landslides in the area of the proposed project and Alternative 1, as shown on Figure 3 in Appendix F. The City of Los Angeles (1982) also mapped several small landslides along the route of Alternative 2 and on the slopes below the existing Topanga Tank site (Alternative 3). The landslides are Holocene (within about the last 11,000 years) and possibly late Pleistocene (greater than

11,000 years before present) in age, with variable lithology dependent on the nature of the source materials, which may include both bedrock and surficial units.

The larger landslides mapped by the City of Los Angeles (1982) along the proposed project and Alternative 1 are noted by the City of Los Angeles as being prehistoric or having the appearance of being old landslides. Incised drainage channels through the displaced mass of these landslides suggests that these are old features that likely have not had recent movement.

In addition to the mapped landslides, recent surficial slumping was observed along Mulholland Drive in the slopes above and below the roadway. The surficial slumps occur primarily in the cut slopes above Mulholland Drive but were also observed at several locations on the natural slopes below the roadway. The location of one of the surficial slumps above the roadway coincides with the location of a landslide mapped by the City of Los Angeles (1982) (see Figure 3, Appendix F) However, the apparent lateral limits of this surficial slump extend beyond the limits of the landslide mapped by the City of Los Angeles.

Geologic mapping by the City of Los Angeles (1982) indicates the proposed Alternative 2 alignment crosses several landslides and possible landslides. However, it is likely that some remediation of the landslides along the route of Alternative 2 was performed during grading of the surrounding residential development. There are no known landslides directly underlying the proposed location of Alternative 3. Geologic mapping by the City of Los Angeles (1982) indicates two possible landslides on the slopes to the west and northeast of the existing tank and a small landslide to the north.

Young Alluvium [Qa] - Surficial alluvial sediments consisting of gravel, sand, and clay. The materials are Holocene in age (deposited within about the last 11,000 years) and are generally unconsolidated (not cemented) and undissected to slightly dissected by drainage channels. The young alluvium is located primarily in the drainage channels and valley areas. The alignment of the proposed project does not cross any mapped deposits of young alluvium. The alignments of Alternatives 1 and 2 cross deposits of young alluvium. Alternative 3 is situated on a ridgeline and alluvium is not present.

Older Alluvium [Qoa] - Surficial alluvial sediments consisting of pebble-gravel, sand, and silt-clay. The materials are Late Pleistocene in age (greater than 11,000 years before present) and are generally unconsolidated to weakly consolidated (not cemented to weakly cemented) and dissected (where elevated) by drainage channels. The older alluvial materials were derived from the Santa Monica Mountains. A mapped deposit of older alluvium underlies the western terminus of the proposed project and Alternatives 1 and 2.

Unnamed Shale (upper member of Modelo Formation of Hoots, 1931) [Tush, Tuss] – Rock generally consisting of claystone and siltstone (Tush) (moderately to vaguely bedded) and diatomaceous clayey shale (Tuss) (thin bedded soft, chalky to somewhat platy, and semi-siliceous). The rock is Late Miocene in age (5.3 to 11.2 million years before present), marine clastic and biogenic (produced by physiological activities of organisms). This rock would be encountered only along parts of the alignment of Alternative 2.

Monterey Formation (lower member of Modelo Formation of Hoots, 1931) [Tm, Tmss] – Rock generally consisting of siliceous shale (Tm) (platy, moderately hard, locally porcelaneous, and may include

thin interbeds of clay shale, siltstone, and silty fine-grained sandstone) and sandstone (Tmss) (semi-friable, bedded, fine- to medium-grained, with some interbedded siltstone and shale). The rock is middle to late Miocene in age (5.3 to 15.1 million years before present), marine clastic and biogenic. This rock would be encountered along the proposed project and the project alternatives.

4.2.1.3 Faults and Seismicity

Southern California is crossed by numerous northwest-trending active, sufficiently active, and well-defined faults and underlain by several "blind" thrust faults (i.e., a low-angle reverse fault with no surface exposure). The locations of the proposed project and alternatives, the nearest of the known active, sufficiently active, and well-defined faults and epicenters of earthquakes with magnitudes of 3.5 or greater are shown on the Regional Fault and Epicenter Map, Figure 4 in Appendix F. The California Division of Mines and Geology (CDMG) (1997) defines an active fault as one that has had surface displacement within Holocene time (about the last 11,000 years), and a sufficiently active fault as one that has evidence of Holocene surface displacement along one or more of its segments or branches. The CDMG considers a fault to be well defined if its trace is clearly detectable as a physical feature at or just below the ground surface.

No known active, sufficiently active, or well-defined faults traces have been recognized as crossing the proposed project or alternatives, and the CDMG (1997) does not delineate any part of the proposed project or alternatives as being within an Alquist-Priolo Earthquake Fault Zone. To be zoned under the Alquist-Priolo Act, a fault must be considered active or both sufficiently active and well-defined (CDMG, 1997).

The closest known active faults to the proposed project and alternatives are segments of the 50-kilometer-long, north-dipping, reverse Santa Monica Mountains fault system. Well-defined faults and epicenters of earthquakes with magnitudes of 3.5 or greater are shown on Figure 4, Regional Fault and Epicenter Map in Appendix F. The Santa Monica Mountains fault system, as defined by Dolan, et al. (1995), consists of a series of mapped surface faults individually known as the Malibu Coast, Santa Monica, and Hollywood faults. The Santa Monica Mountains fault system also includes the Santa Monica Mountains thrust fault, a low-angle reverse fault with no surface exposure. The Santa Monica Mountains thrust fault is postulated to dip shallowly, approximately 20 degrees, to the north beneath the Santa Monica Mountains (Dolan, et al., 1995). The activity of the Santa Monica Mountains thrust fault is uncertain (Dolan et al., 2000).

Faults that could contribute to the total seismic shaking hazards at the site are listed below, together with the estimated maximum magnitude earthquakes. The table is based on the requirements of the Uniform Building Code for determination of near-source factors (International Conference of Building Officials, 1997), but also includes faults mapped within approximately 25 kilometers of the site and the San Andreas fault. At this site, faults located beyond approximately 25 kilometers would not be expected to cause higher levels of shaking than those faults located within 25 kilometers. The approximate distance to each of the seismic sources is estimated from Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada (International Conference of Building Officials, 1998) using the definition of distance given in that publication. The Santa Monica Mountains thrust fault is not included in the table

because it was not included as a near-source factor in International Conference of Building Officials (1998).

The tectonic forces acting on the faults in the Transverse Ranges province are also expressed in the historic seismicity. The most recent earthquake causing significant ground motion in the project area was the 1994 magnitude 6.8 (M_w) Northridge Earthquake generated by the "blind" Northridge thrust fault, which is located north of proposed project beneath the San Fernando Valley. Prior to the 1994 Northridge earthquake, the largest earthquake to strike the Transverse Ranges region was the 1971 magnitude 6.6 San Fernando earthquake. The earthquake resulted from a 10 mile- (15 kilometer-) long rupture of the San Fernando fault and caused substantial damage in the northern San Fernando Valley (Ziony and Yerkes, 1985). No documented earthquake-induced landslide or damage to 'Dirt' Mulholland Drive or project vicinity was found.

Table 4.2-1
Faults Contributing to Seismic Hazards

Fault or Fault Segment	Approx. Distance to Site (km)	UBC Seismic Source Type[1]	Fault Type[2]	Approx. Fault Length (km)[3]	Est. Slip Rate (mm/yr.)[4]	Estimated Maximum Credible Earthquake[5]
Malibu Coast	9	B	R	37	0.3	6.7
Santa Monica	11	B	O/LL, R	28	1	6.6
Hollywood	15	B	O/LL, R	17	1	6.4
Santa Susana	18	B	R	27	5	6.6
Palos Verdes	19	B	O/RL	96	3	7.1
Verdugo-Eagle Rock system	20	B	R	29	0.5	6.7
Sierra Madre system (San Fernando)	20	B	R	57	3	7
Northridge	21	B	BT	31	1.5	6.9
Newport-Inglewood Zone (onshore)	23	B	RL	64	1	6.9
Simi – Santa Rosa	25	B	R	30	1	6.7
San Andreas Fault	59	A	RL	345	35	7.8

Notes: (1) Defined in International Conference of Building Officials (1998).
(2) RL = Right Lateral Strike-Slip Fault; O/LL = Oblique Left-Lateral Fault; R = Reverse Fault; BT = Blind Thrust
(3) Fault lengths from CDMG (1996).
(4) Slip-Rates from CDMG (1996). Plus and minus factor not included in table.
(5) Maximum credible earthquake values reported as maximum moment magnitude by the CDMG (1996).

4.2.1.4 Groundwater Conditions

The depth to a regional groundwater table beneath the proposed project and the alternatives is not known. Based on the topography and the stratigraphy at the project site, it is unlikely that there is a near-surface regional groundwater table that would be encountered by the relatively shallow excavation for pipeline construction.

The nearest groundwater basin to the project area is the San Fernando Basin, located north of the proposed project (Los Angeles County, undated). The proposed project and Alternatives 1 and 3 do not lie within this groundwater basin. Several segments of the Alternative 2 alignment cross the southern margin of the San Fernando Basin. The depth to groundwater at the locations where Alternative 2 crosses the basin is approximately 100 feet below the ground surface (Watermaster, 1999) based on small-scale mapping.

4.2.2 Impacts

Appendix F of this ~~Draft~~Final EIR, evaluates the potential for the proposed project to expose people or structures to a variety of geologic related hazards. Such hazards include ground shaking, liquefaction, ground lurching, surface fault rupture, tsunami, seichi, differential seismic settlement, seismically induced landslides, and seismically induced flooding. The geotechnical assessment also considers other impacts such as subsidence, volcanic hazards, landslides, erosion, corrosion, collapsible soils, expansive soils, slope stability and changes to groundwater conditions. A more detailed discussion and description of the hazards mentioned is contained in Appendix F. Only those hazards that are identified in the appendix as potentially being affected by the proposed project are addressed in this section.

Based on the findings in Appendix F, the proposed project would be subject to seismic shaking in the event of an earthquake. However, the project would be designed, constructed, and operated in accordance with all applicable laws, regulated and formally adopted City standards. Design and construction would adhere to uniform practices established by the Southern California Chapter of the American Public Works Association (APWA) (e.g., Standard Specifications for Public Works Construction) and American Water Work Association (AWWA). The proposed project itself would not induce or increase the potential for seismic shaking. Of the related geologic hazards addressed in Appendix F, the proposed project would have some affect on differential seismic settlement. The proposed project would involve the use of sand bedding and the backfill of native materials along the entire length of the proposed alignment. This may result in differential settlement between the backfilled trench and the native material. However, the trench backfill will meet a minimum compaction requirement, minimizing the likelihood of large settlement and thus is not considered a significant impact.

The potential for both seismically induced landslides and naturally occurring landslides is high along 'Dirt' Mulholland Drive based on apparent previous occurrence of landslide movement, site topography, and the geologic condition. The proposed project may increase the potential for landslides in the event of a pipeline rupture during a seismic event and the subsequent release of water. The release of water from a rupture can be minimized by the installation of shut-off valves, which is planned under the proposed project. Similarly, the proposed project would have a less than significant impact on the potential for seismically induced flooding given the inclusion of shut-off valves into the design plans.

Other potential hazards associated with the proposed project include the potential for erosion. Because Mulholland Drive is not paved for the majority of the proposed project alignment, there is the potential for increased soil erosion. Should maintenance hole access covers be installed within the dirt portion of the roadway, the potential for soil erosion and/or differential erosion may occur around the perimeter of the cover during a storm event depending on the directional flow of water in the roadway. Such an affect

would be relatively small in scale and would not negatively impact the overall site conditions. However, to avoid potential differential erosion to the road surface, the maintenance hole access covers may be located in the embankment adjacent to the roadway and may need to be approximately two-feet above the surrounding ground elevation. Soil surrounding the maintenance holes would be landscaped with native vegetation to help minimize erosion. The erosion potential would be relatively minor and is not considered to be a significant impact.

The potential for slope instability to occur could result from trench backfill materials serving as a conduit for infiltration of surface water. Utilization of relatively impervious soils, such as existing native materials, for trench backfill would minimize such an occurrence. In addition, during construction, the open trench could have some effect on slope stability. The effect, whether stabilizing or destabilizing, would depend on the location and dimensions of the trench relative to the topography of the area within which it lies. If there were potentially any destabilizing effects, these could be reduced by limiting the length of trench that is open at any time and backfilling the trench at the end of every workday.

No other geologic related hazards were identified as a result of implementation of the proposed project.

4.2.2.1 Cumulative Impact

The only other approved or proposed project with the potential to result in geologic related hazards within this portion of Mulholland Drive is the Mulholland Scenic Parkway Specific Plan (Plan). The Plan calls for the installation of fire hydrants along 'Dirt' Mulholland as mitigation to address the potential for increased fire hazards resulting from implementation of the Plan. Such fire hydrants would likely be placed along the embankment of the roadway. Geologic related hazards associated with this element of the Plan in conjunction with the proposed project would result in an insignificant cumulative impact.

4.2.3 Alternatives Analysis

Appendix F of this ~~Draft~~Final EIR also evaluates the potential for the project alternatives to expose people or structures to those geologic related hazards identified for the proposed project, including ground shaking, liquefaction, ground lurching, surface fault rupture, tsunami, seichi, differential seismic settlement, seismically induced landslides, and seismically induced flooding. The supporting geotechnical assessment also evaluates the project alternatives influence on subsidence, volcanic hazards, landslides, erosion, corrosion, collapsible soils, expansive soils, slope stability and alterations to groundwater conditions.

Alternative 1 – Mulholland Gateway Park

Implementation of Alternative 1 would not result in adverse impacts on ground lurching potential, surface fault rupture, tsunamis or seiche, subsidence, volcanic hazards, corrosion, collapsible or expansive soils or alterations in groundwater conditions. A more detailed description and characterization of these geologic related hazards is contained in Apendix F as they relate to Alternative 1.

Alternative 1, however, may exert some influence on the potential for liquefaction. Two small sections along the alignment of Alternative 1 are delineated by the CDMG (1998) as being in areas having the potential for earthquake-induced liquefaction. The remaining sections of Alternative 1 are generally

located on rock, outside of the liquefaction hazard zones, and therefore are not considered at high risk for potential liquefaction during a seismic event. Furthermore, trench backfill activities will meet a minimum compaction requirement in addition to the use of sand bedding. Therefore, construction activity would not result in an increase in the potential for liquefaction.

As with the proposed project, the backfill material would meet minimum compaction requirements. Thus, less seismic settling would occur along the Alternative 1 alignment than its surroundings. This effect is not considered to be significant.

As with the proposed project, the potential for seismically induced landslides is high along the alignment of Alternative 1.

As with the proposed project, in the event of an earthquake, accidental rupture of the pipeline and release of water may occur resulting in the potential for a seismically induced flood. However, shut-off valves would be incorporated into Alternative 1, which would reduce the potential for such an incidence to occur.

Erosion could also affect sections of Alternative 1 where the alignment crosses the undeveloped slopes. Similarly, as with the proposed project, the construction of Alternative 1 would expose excavated materials to erosion during a major storm event. Once construction is completed, conditions would be essentially the same as they are now. This temporary effect is not considered to be significant.

Alternative 1 would have similar slope instability affects as with the proposed project.

Alternative 2 – Ellenita/Wells/Canoga Alignment

Implementation of Alternative 2 would not result in adverse impacts on ground lurching potential, surface fault rupture, tsunamis or seiche, subsidence, volcanic hazards, erosion, corrosion, expansive soils, slope stability or alterations in groundwater conditions. A more detailed description and characterization of these geologic related hazards is contained in Appendix F as they relate to Alternative 2.

Approximately two-thirds of the alignment of Alternative 2 are delineated by the CDMG (1998) as being in areas having the potential for earthquake-induced liquefaction. The remaining sections of Alternatives 2 are generally located on rock, outside of the liquefaction hazard zones, and therefore are not considered at high risk for potential liquefaction during a seismic event. Construction activity would involve the use of sand bedding for Alternative 2, in addition to backfilling of native materials to minimum compaction requirements. This activity would not result in an increase in the potential for liquefaction.

As with the proposed project, the backfill material would meet minimum compaction requirements. Thus, less seismic settling would occur along the Alternative 2 alignment than its surroundings. This effect is not considered to be significant.

Alternative 2 is less likely to be impacted by a seismically induced landslide, based on the alignment following previously graded and well-established developments.

As with the proposed project, Alternative 2 would not expose people or structures to seismically induced flooding in that no dams, rivers, water tanks or other significant water retention structures lie within the drainage basin occupied by the project. Shut-off valves would be incorporated into Alternative 2, which would reduce the potential for seismically induced flooding.

During construction of Alternative 2, excavated materials could be subjected to erosion. Once completed, conditions would be essentially the same as they are now. This temporary effect is not considered to be significant.

Collapsible soils could occur along Alternative 2 where the alignment crosses alluvial soils. However, a collapse occurrence along the Alternative 2 alignment has probably already taken place as a result of construction activities for the existing development. In addition, construction of Alternative 2 would involve the compaction of backfill materials to minimum compaction requirements. Therefore, collapsible soil conditions would not result.

Alternative 3 – Topanga Tank Expansion

Implementation of Alternative 3 would not result in adverse impacts on liquefaction potential, surface fault ruptures, tsunamis, differential settlement, subsidence, volcanic hazards, collapsible soils, expansive soils, or alterations in groundwater conditions. A more detailed description and characterization of these geologic related hazards is contained in Appendix F as they relate to Alternative 3.

Due to the high relief of the Alternative 3 site, ground lurching may represent a potential hazard. However, the potential for ground lurching would not increase as a result of this alternative.

Unlike the proposed project, Alternative 3 would involve the construction of two enclosed reservoirs, and thus seiche is a potential seismic hazard in the event of an earthquake.

The potential for seismically induced landslides is high at the location of Alternative 3. Similarly, seismically induced flooding could impact Alternative 3 if the existing Topanga Tank were to rupture. In addition, there is the potential for seismically induced flooding, should either or both of the new 0.8 million gallon Topanga Tank or the new 7.0 million gallon Kittridge Tank rupture during a seismic event.

Alternative 3 would also have the potential to induce landslides should rupture of either of the tanks occur. Such a tank rupture without the ability to immediately contain flows would have the potential to induce landslides and could be potentially significant.

The affects of erosion upon implementation of Alternative 3 could not be evaluated because the details of proposed site layout are unknown at this time.

It is assumed that Alternative 3 would result in the creation of additional impermeable area due to the size of the pad that would need to be constructed for the tanks, thus decreasing the potential for erosion. This effect is also not considered to be significant. For Alternative 3, the effect on stability will depend greatly on the details of design, which are unknown. Impacts to slope stability would be evaluated as appropriate should Alternative 3 be selected.

No Project Alternative

Existing geologic conditions would remain the same under the No Project alternative and thus have no significant impact.

4.2.4 Mitigation

The proposed project and alternative sites appear suitable for the proposed project or alternatives. Potential geologic hazards resulting from the proposed project are not considered to be significant. However, the following mitigation measures are recommended to further minimize any potential impact:

GEO-1: Slope Stability: It is not likely that the proposed project would increase the potential for a landslide to occur. However, an excavation at the toe of a slope may temporarily create a less stable condition until the excavation is backfilled or otherwise stabilized. Potential site slope instabilities ~~should~~ will be mitigated by normal construction procedures, which includes monitoring of construction activities by the geotechnical engineer of record or his representatives.

GEO-2: Seismically-Induced Flooding: Though the Kittridge Tanks site was not evaluated, the sloshing of water in either the new Topanga and Kittridge Tanks proposed for Alternative 3 ~~should~~ will be considered during design of this alternative.

GEO-3: Surface Erosion/Maintenance: Limited wind and water erosion might occur locally during the construction of the proposed facilities. However, measures commonly employed during construction, such as spraying water to control dust, use of sandbags to control siltation, and drainage control measures such as the covering of soil stockpiles with plastic sheeting during wet weather, ~~should limit~~would greatly reduce the potential for significant wind and water erosion impacts.

GEO-4: Surface Erosion/Maintenance: Should maintenance hole covers be installed, they will be located adjacent to and on the downhill side of the roadway. The soil around the entrance to the maintenance holes will be landscaped with native vegetation to maintain erosion potential at its current level or better. ~~Should maintenance hole covers be installed, the design of the project should consider placing the covers along the embankment and within the existing 200' easement. Soil surrounding the maintenance holes would be landscaped with native vegetation to help minimize erosion.~~

GEO-5: Erosion: During the rainy season, the length of excavation and trenching will be minimized to allow for quick and immediate construction of a protective cover over the open trench or for backfilling.

4.3 GROWTH INDUCEMENT/POPULATION AND HOUSING

4.3.1 Environmental Setting

Section 15126.2 (d) of the State CEQA Guidelines provides that EIRs must consider and discuss the potential growth-inducing impacts of a given project. Specifically, the EIR should:

> "Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

Growth inducing impacts are typically associated with the installation or expansion of infrastructure (e.g., sewer mains and treatment plants, power lines, water mains, roadways, solid waste disposal centers), or the construction or expansion of public service facilities and community services (e.g., fire stations, police stations, schools, libraries, hospitals, churches, airports, public transportation). Such infrastructure and services can be considered "pull" factors for growth in a particular area, since people are often inclined to relocate to an area with established public services and utilities. However, it can be argued that the presence of such services and facilities are in response to existing population pressures and that the size of a given population in an area spurs the need for such services and facilities, thus defining the sequence of growth.

This analysis of growth inducing impacts considers both direct and indirect changes in the population and housing of the area, as well as the potential for change in the type of use. Consideration is given to the potential for developers to target undeveloped property in the canyons and hills for development based on the presence of such infrastructure as a water pipeline. The presence of a water pipeline would technically be viewed as a cost savings to developers. However, the likelihood of more houses on the private land because of the water line is contingent upon existing zoning designations and the outcome of environmental review should a zoning change be pursued. The geographic area considered for potential growth inducing impacts comprises the undeveloped land adjacent to 'Dirt' Mulholland, from Saltillo Street to Greenbriar Drive.

For purposes of the analysis, growth is defined by both short-term and long-term increases in population to the area beyond projections estimated in the local area land use plan. Population, employment, and housing projections contained in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan are applicable to the project. Growth inducing impacts would be considered to occur if the project would accommodate growth in excess of that permitted under the Community Plan. A more-detailed description of the methodology used to determine the potential growth inducing impacts of the project is provided in Section 4.3.2. Environmental Setting.

4.3.1.1 Historical Growth Patterns

The proposed project area lies within the Canoga Park-Winnetka-Woodland Hills-West Hills planning area, which represents about six percent of the land in the City of Los Angeles. Historically, the area was

predominantly agricultural cattle oriented. Over the last 50 years or so, the area has been developed with residential and commercial land uses characteristic of the urbanized San Fernando Valley.

Three specific plans have been developed in efforts to better guide the area in its growth and development: the Ventura/Cahuenga Boulevard Corridor Specific Plan, the Mulholland Scenic Parkway Specific Plan, and the Warner Center Specific Plan. These plans are an integral component to the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan.

Over the years, development has increasingly encroached upon open spaces, spurring grassroots efforts in preserving natural open areas that serve as habitat for wildlife. The proposed project site is located within the Santa Monica Mountain National Recreation Area, characterized by a natural landscape with prominent ridges and hillsides. The Santa Monica Mountains Conservancy (SMMC), an environmental advocacy group, has actively pursued the acquisition of land within the Santa Monica Mountains for the protection of open space with the adoption of the Mulholland Gateway Park Master Plan in 1992. To date, the SMMC has acquired a total of approximately 1,100 acres of the Santa Monica Mountains, adjacent to the proposed project site/within the Woodland Hills community. The SMMC has adopted plans in pursuit of acquiring six additional privately-owned parcels adjacent to the Park (SMMC, 2000).

4.3.1.2 Existing Housing and Population Trends

Review of Year 2000 U.S. Census data indicates a total of 12,390 households within the seven tracts surveyed. The number of households within the study area, including the seven census tracts, is projected to increase by approximately 6% between 2000 and 2005. Two census tracts encompassing the project site show negative household growth projections (Census Tract 137504 - -0.67%; Census Tract 139802 - -0.29%), and one tract shows household growth at less than one percent (Census Tract 138000 – 0.24%). A more detailed list of census data is presented in Appendix D.

4.3.1.3 Relationship to Adopted Plans/Policies

Under state planning law, each city must adopt its own General Plan for areas within its jurisdictional boundaries as well as for land outside the city but within its sphere of influence (Gov't Code §65300). General Plans are intended to guide and manage the development of housing, traffic, open space, safety, land uses, and public facilities. General Plan objectives for population, housing, and employment growth must be developed concurrent with infrastructure development to ensure adequate public services to planned areas. Planning and development policies defined in General Plans often serve to minimize the impact growth may have on the natural environment and on local residents.

The proposed project falls within the City of Los Angeles. The City of Los Angeles Department of City Planning divides the City into 37 planning areas each with their separate community plans. General Plan land use and zoning designations established by the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan and Mulholland Scenic Parkway Specific Plan are depicted on Figure 9.

Existing land uses in the area include residential and open space. Planned land uses as designated in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan range from Very Low, Low, and Minimum Residential Development. Zoning restrictions limit the type of residential development in the

project area. Minimum Residential Development and Open Space are the dominant zoning designations along the project alignment.

Canoga Park-Winnetka-Woodland Hills-West Hills/Encino-Tarzana Community Plan

The proposed project is within the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan and portions of the Encino-Tarzana plan area boundary. The policies contained in these plans that relate to growth in the area are:

- Protect existing stable single family and low density residential neighborhoods from encroachment by higher density residential and other incompatible uses
- Continue the implementation of the Citywide Hillside Ordinance and the Mulholland Scenic Parkway Specific Plan
- Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas
- Preserve the existing recreational facilities and park space
- Encourage the retention of passive and visual open space which provides a balance to the urban development of the Plan area
- Require development in major opportunity sites to provide public open space
- Ensure that fire facilities and protective services are sufficient for the existing and future population and land uses
- Endorsement of the City's Bicycle Plan which designates Mulholland Drive (east of Mulholland Highway) as a Class II bike lane (City of Los Angeles, 1999a)

Mulholland Scenic Parkway Specific Plan

The Mulholland Scenic Parkway Specific Plan identifies Mulholland Drive as a scenic parkway. The Plan essentially guides the development of this roadway as a low volume, slow speed, scenic parkway providing recreational opportunities. Development within the parkway is constrained by policies which aim "....at minimizing the impacts of new structures, preserving the recreational and open space facilities and resources in the area, and promoting the preservation of existing native vegetation consistent with the natural environment which surrounds it" (City of Los Angeles, 1992). The Plan imposes use, environmental protection, grading, and building restrictions on both the Inner and Outer Corridors of all of Mulholland Drive, including the proposed project area. Regulations that are associated with the potential for growth are listed below. Such restrictions may serve to deter growth within the area regardless of implementation of the proposed project.

- Protection of prominent ridges, streams, projects near parklands, oak trees, and archaeological and paleontological resources.
- One (1) cubic yard per four (4) square feet of lot area per lot is allowed in the Inner Corridor and two (2) cubic yards per four (4) square feet of lot area per lot.
- 15 feet height restriction on buildings in the Inner Corridor that abut the Mulholland Drive right-of-way.
- 40 feet height restriction on buildings in the Outer Corridor visible from the parkway.

- No changes or improvements may be made to the alignment or design of Mulholland Drive without the prior approval of the City Council. An exception to this is for road resurfacing and street maintenance.
- Mulholland Drive must remain at its existing alignment.
- The width of the right-of-way must remain the same.
- No sidewalks or curbs shall be permitted.
- No grading of existing slopes is allowed if they are stable.
- Existing fire resistant, native-type plants and trees shall be preserved.
- Oak trees shall not be removed or they shall be replaced with a two (2) to one (1) ratio.

The Plan establishes a Design Review Board comprised of Mulholland area residents and construction/design professionals. Any planned development within the parkway's Inner and Outer Corridor and/or modifications to the roadway must be reviewed by the Board for consistency with the intent of the Plan and approved. This process serves as a check on the rate, location and amount of development or growth that can occur in the project area.

The Mulholland Scenic Parkway Specific Plan also identifies the opportunity to acquire vacant land for publicly-owned open space through County, State, and Federal agency coordination (City of Los Angeles, 1999a).

EIR - Mulholland Scenic Parkway Specific Plan

The proposed project is linked to the EIR for the Mulholland Scenic Parkway Specific Plan (Mulholland Plan) in that the proposed project satisfies the mitigation measure recommended to reduce fire and hazard related impacts associated with the Plan. The EIR identified the need to extend the water distribution system along the unpaved portion of Mulholland Drive for fire protection, landscape irrigation and recreational development (City of Los Angeles, 1985). Because the Mulholland Plan would actually encourage people to frequent the area, an increase in the potential for fire is expected. In order to reduce this risk, the following mitigation measure is recommended in the EIR:

- New water mains and fire hydrants will be installed between Encino Hills Drive and Rosario Road where there presently is no water supply for fire protection use, concurrent with development (City of Los Angeles, 1985).

The Mulholland Plan also calls for the implementation of land use provisions consistent with six of the community and district plans for the City of Los Angeles, including the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan. Though residential development is not entirely prohibited from the project area, the Plan "would result in a reduction in the ultimate number of units built, and thus permanent population in the area" (City of Los Angeles, 1985).

For the purpose of reducing the potential for increases to surface water run-off from more intense recreational activities, the following mitigation measure is recommended in the EIR that may have some influence on growth trends in the area.

- Design standards for all recreational improvements to the parkway will emphasize open areas planted with native plants with a minimum of paved areas.

The EIR concluded that the Mulholland Plan's regulations on use, environmental protection, grading and building height restrictions did not coincide with the City zoning ordinances and, in fact, were more strict. Mitigation measures recommended in the plan allowed for certain types of exemptions, particularly in the event of a disaster and for structures with architectural and historical integrity.

General Management Plan and Land Protection Plan for the Santa Monica Mountains National Recreation Area

The Mulholland Scenic Parkway Specific Plan EIR concluded that the Mulholland Plan was consistent with the General Management Plan and Land Protection Plan for the Santa Monica Mountains National Recreation Area (City of Los Angeles, 1985). Thus, consistency with the Mulholland Plan is, by definition, consistent with the Santa Monica Mountains National Recreation Area Plan.

4.3.1.4 Related Projects

EIR Development Tract 33454

In 1992, a Final EIR for the Woodland Hills Estates Subdivision of Tract 33454, located on the south side of 'Dirt' Mulholland Drive between Canoga Avenue and Trinidad Road was prepared and submitted to the City for review and approval. As discussed in Section 1.2, Tract 33454 encompasses approximately 62.25 acres, of which 18.9 acres would be developed as single-family residential use and 43.35 acres would be preserved as open space (39.17 acres of which dedicated as public open space). The EIR concluded that the project would expose people to potential fire hazards given the absence of adequate firefighting facilities and water supply. Approval of the project was contingent upon implementation of mitigation measures that included improvements to the water system that would provide maximum flows at 2,000 gallons per minute (gpm) as required by the City of Los Angeles Fire Department. The approval of the tentative tract map and EIR certification was granted in 1995.

EIR Development Tract 50784/Mulholland Gateway Park

In 1995, a Draft EIR and subsequent addendum was prepared for the development of 338.4 gross acres to accommodate 66 single family dwelling units within an undeveloped portion of land north of the proposed project site, between Serrania Avenue and Greenbriar Avenue. Since that time, the Santa Monica Mountains Conservancy (SMMC) has been negotiating with the developer for purchase of this property and has already secured funding for the purchase of seven parcels at the appraised value (SMMC, 2001). The City of Los Angeles Council District 11 has advised that the sale of the Avatar parcel to the SMMC is considered certain (City of Los Angeles, 2001).

4.3.2 Impacts

For purposes of this analysis, the project would be considered to have growth-inducing impacts if it were to clearly facilitate increases in the local population beyond projections estimated in the local area land use plan. Projects that would facilitate growth at levels consistent with the land use plan would not comprise a significant impact; only those projects that would induce growth beyond that established by

the plan would be considered growth inducing. Consideration is given to the potential for developers to target undeveloped property in the canyons and hills for development based on the presence of such infrastructure as a water pipeline. The presence of a water pipeline would technically be viewed as a cost savings to developers in that cost of off-site construction to install such piping would be reduced. However, the likelihood of more houses on the private land because of the water line is contingent upon existing zoning designations and the outcome of environmental review should a zoning change be pursued. Again, the number of dwelling units permissible in the area of concern is guided by existing land use and zoning designations adopted by the City of Los Angeles and not solely by the presence and/or absence of one type of service facility.

The methodology used to evaluate impacts considers the potential rate of growth, location of growth, and amount of growth. The project area's historical growth patterns, existing housing and population trends, and adopted City plans and policies and other related plans were reviewed. Plans include the City of Los Angeles General Plan, Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan, the Mulholland Scenic Parkway Specific Plan, the Encino-Tarzana Community Plan, the General Management Plan and Land Protection Plan for the Santa Monica Mountains National Recreation Area, and adopted Habitat Conservation and Natural Community Conservation Plans for the project area. Policies were evaluated to identify any existing and planned land use inconsistencies assuming that the plans are adequate to sufficiently manage growth and protect the various resources in the area. A records search of census tract data within two miles from the proposed project and alternatives was conducted to characterize the population density in the area and the potential for growth. In addition, approved tract developments having legal water rights agreements with the City were considered. Calculations used in support of this analysis are provided at Appendix G.

Rate of Growth

The rate at which growth in the area may occur is partially dependent upon the availability of infrastructure-related services including roads, water, sewer, drainage, electricity, fire protection, and schools. These services and facilities are prevalent about 1.5-miles north of the proposed project site along US Hwy 101 and between Topanga Canyon Boulevard and De Soto Avenue. The area surrounding this economic hub is extensively built-out.

Review of U.S. Census Tract data for census tracts along the project and alternative pipeline routes is provided in Table 4.3-2. The data indicates that population and household growth rates projected between 1990-2005 are very low – less than 1% - for the three census tracts in the immediate vicinity of the proposed project and Alternatives 1 and 3. Projected growth rates along the Alternative 2 alignment are slightly higher, suggesting the tendency for greater development in an already built environment compared to that of the proposed project site and Alternatives 1 and 3 with minimal to no existing development. Any development to occur in the Chapter and Natoma Canyons would likely be serviced by existing water lines and not by the new pipeline.

Table 4.3-1
U.S. Census Data Population and Housing Estimates

Tract	Population per Sq Mile	Households per Sq Mile	Projected Population Growth 2000-2005	Projected Population Growth 1990-2005	Projected Household Growth 2000-2005	Projected Household Growth 1990-2005
Adjacent to Project and Alternatives 1 & 3						
138000	2,651	1,017	4.51%	0.39%	4.65%	0.24%
137504	1,681	524	0.50%	-0.56%	0.64%	-0.67%
139802	1,339	428	2.46%	-0.14%	2.66%	-0.29%
Adjacent to Alternative 2						
137401	5,023	2,171	8.47%	1.80%	8.64%	1.63%
137502	5,481	2,262	9.88%	2.47%	10.26%	2.31%
137102	5,934	2,870	6.07%	0.91%	6.20%	0.74%
137501	3,731	1,476	6.20%	0.95%	6.47%	0.81%
Source: Claritas, 2001.						

Installation of the new pipeline would ease the connection of future development to an existing water source should new subdivisions be approved immediately adjacent to the roadway. Although the improved availability of water would potentially attract new development to the project area, this is not considered to be a substantial factor influencing the rate of growth in the area. The proposed project site is deficient in a number of infrastructure related services and facilities (i.e., unpaved and inadequate roadways for emergency fire access, absence of storm drains, lack of sewers, gas and electrical services) which serve to deter the rate of growth in the area. Other factors hindering the acceleration of growth to the area include restrictions on land use imposed by existing zoning ordinances and the fact that the proposed project alignment is within a special planning area with specific standards for development.

In addition, the rate of growth is likely to be minimized by the ongoing efforts of the Santa Monica Mountains Conservancy (SMMC) to purchase property in the area. The SMMC has extensive land holdings which include approximately 1,100 acres of Mulholland Gateway Park. The SMMC intends to acquire approximately 876 acres of private land comprising six acquisition projects, as listed in Table 2-2 (see Figure 10). Land purchases would ultimately be turned over, in-full or in-part, to the State Department of Parks and Recreation for preservation as open space (SMMC, 2001). It is possible that the project may affect the future cost of land desired by the SMMC for acquisition. Fire suppression capabilities would be facilitated by the proposed project further protecting existing and planned development situated in the Chapter and Natoma Canyons; however, such an economic assessment is outside the scope of this CEQA analysis.

Location of Growth

Factors influencing the location of growth are similar to those affecting the rate of growth, but include additional emphasis on physical conditions such as topography and the availability of vehicular access. Local zoning and land use regulations typically consider these conditions when establishing applicable land use designations. The specific plans and community district plans (i.e., Mulholland Scenic Parkway Specific Plan, Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan) adopted by the City

of Los Angeles serve to ensure that open space areas, as well as low density residential developments in the project vicinity, are protected from encroachment of higher density residential and other incompatible land uses.

Based on the above, the project would be anticipated to have the greatest potential for drawing growth to those areas with existing residential land use and zoning designations. Such areas are located north of Mulholland Drive between Trinidad Road and Corbin Avenue which is currently zoned RE-40-1, and south of Mulholland Drive between Canoga Avenue and Double EE Ranch Road, which is zoned RE-15-1-H. The installation of a new pipeline may encourage developers to seek subdivisions and ultimately changes in zoning designations to accommodate numerous smaller lots given the proximity of an existing water source. However, such actions have already taken place in the absence of the pipeline in the case of Tract 33454 and Tract 50784 approval. Tract 33454 is owned by Woodland Hills Estates and is adjacent to the roadway immediately to the south at the western most terminus of the project. Tract 50784 is owned by Mulholland Hills Estates and is located immediately to the north of the roadway between Serrania Avenue to Greenbriar Drive.

In principle, the new pipeline would have a tendency to influence the location of new development. However, the Mulholland Scenic Parkway Specific Plan imposes fairly strict regulations on the extent of development that can occur within 3,140 feet of the roadway. In addition, area land use and zoning restrictions contained in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan, the Encino-Tarzana Community Plan, and the Mulholland Scenic Parkway Specific Plan would further deter development within the area. ~~There exists two (2) residential development projects that have already been approved: the Mulholland Estates Tract 33454 and Mulholland Hills Estates Tract 50784 (Avatar). Each of these~~ The two projects already approved (Tracts 33454 and 50784) have contributed a combined total of approximately 119.17 acres of open space held by either the City of Los Angeles or the ~~Santa Monica Mountains Conservancy~~ (SMMC). The Tract 33454 development is currently under construction and Tract 50784 has been scaled down in size. In light of on-going negotiations between the SMMC and the two property owners, Woodland Hills Estates (Tract 33454) and Mulholland Hills Estates (Tract 50784), the severity of its growth-inducing impact is considered insignificant. ~~, whereas, the Santa Monica Mountains Conservancy is actively pursuing the purchase of Tract 50784.~~The amount of land already dedicated to open space from these developments and the foreseeable purchase of the Avatar property by the SMMC further deters growth within the area.

Amount of Growth

The amount of growth anticipated for a given geographical area is directly related to the location and density of development allowed by local land use plans. Calculation of maximum "build out" in the project vicinity is not readily presented in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan, nor in the City of Los Angeles Zoning Ordinance. Rather, this must be calculated by estimating the acreage of various land uses and identifying the number of dwelling units allowed within a given zone.

Table 4.3-3 summarizes the maximum "build out" estimated in the Topanga Tank and Corbin Tank service zones. The number of water service connections needed to accommodate full build out is

assumed to be equal to the number of dwelling units allowed under existing zoning designations within those service zones.

As shown in Table 4.3-3, approximately 4,529 connections would be needed to accommodate full build-out of the Topanga Tank and Corbin Tank service zones. Under existing (i.e., No Project) conditions, LADWP would not have the capability to provide water service at full build-out given that the General Plan would allow for up to 5,272 dwelling units within the service zone. With the connection of the Topanga and Corbin Tanks as proposed by the project, LADWP would have the capability to provide an adequate level of service, including water pressure at acceptable standards of 43 psi, to accommodate existing customers. The system, however, would be strained should development reach the area's build-out potential. Under present conditions, maximum build-out is unlikely given the amount of open space already dedicated through private development.

Table 4.3-2
Estimated Total Build-Out of Area for Zones 1337 and 1677

	Area (Acres)	Existing No. Of Service Connections [1]	Additional Connections To Accommodate Full Build Out [2]	Total Allowable Connections (Existing plus Additional to Accommodate Full Build Out)	Maximum Build-out Projections/ Maximum Dwelling Units Under General Plan
Topanga Tank	610	1,921	200	2,121	2,121
Corbin Tank	1,392	1,908	500	2,408	3,151
TOTAL	2,002	3,829	700	4,529	5,272

Notes:

1 Existing No. of Service Connections is as of April 2000.

2 The 'Additional Connections Needed to Accommodate Full Build Out' is based on available water from pumping stations and tanks in the area [See Appendix D for calculations and zoning designation restriction].

Although the proposed project would facilitate future build-out in accordance with the local community plan, the pipeline would not be considered sufficient to facilitate growth beyond that established by the plan, or to materially affect the pace or extent of future growth. Rather, the pipeline would comprise just one of many factors (including the availability of other infrastructure) considered necessary to allow growth in the area. Most notably, the presence of a development-oriented (e.g., residential, commercial) land use/zoning designation is considered a prerequisite for growth. The project proposes no such changes in existing land use designations from open space to residential. Moreover, the active and ongoing land acquisition efforts of the SMMC and American Land Conservancy (ALC) are intended to preserve the amount of undeveloped open space land along 'Dirt' Mulholland Drive. Given all of these factors, the project would have a negligible impact on the amount of growth anticipated in the project vicinity.

Overall, the proposed project would potentially allow for greater ease of connection to a water source, thereby potentially inducing development in the area. However, development restrictions imposed by local community plans and the Mulholland Scenic Parkway Specific Plan, and the absence of other

infrastructure-related facilities, collectively, are even a greater barrier to development in the area. Therefore, the degree to which the pipeline would influence the rate, location, and amount of growth is not considered significant.

Cumulative Impacts

Based on the above analysis, the proposed project would have insignificant growth-inducing impacts. The cumulative projects identified in Table 4.3-1 are scattered throughout the Woodland Hills/West San Fernando Valley area. Although the proximity of planned commercial development may spur interest to increase residential development in the project vicinity, such development is anticipated to occur at locations and densities consistent with the local area plan. In addition, existing zoning and local open space conservation efforts would contribute to guiding development away from designated open space land uses. Overall, cumulative impacts would be less than significant.

4.3.3 Alternatives Analysis

Alternative 1 - Mulholland Gateway Park

Alternative 1 would have similar growth inducing impacts when compared to the proposed project. Under this alternative, the project could slightly affect the location of growth in that the pipeline would be installed closer to existing development and public infrastructure such as roadways and utility structures. The proximity of such facilities would provide for greater ease of connection for new residential development in the undeveloped areas north of the project site and at the easternmost part of the site. However, the rate and amount of growth would remain about the same as for the proposed project.

Alternative 2 - Ellenita/Wells/Canoga Alignment

Alternative 2 would have similar impacts on the rate and amount of growth when compared to the proposed project. The proposed alignment would traverse existing development, and thus would have a less than significant impact on the location of growth. Growth would likely be concentrated in existing developed areas, thereby relieving potential development pressures on existing undeveloped land north of the project site.

Alternative 3 - Topanga Tank Expansion

Alternative 3 would marginally influence the rate and amount of growth to the general area in that public service infrastructure already exists in the area and would be greatly enhanced. Alternative 3 would provide for an even greater supply of water to area residents. Substantial increases in water resources that Alternative 3 would provide would potentially prompt greater interest in development in the project area than the proposed project. This alternative would not affect the location of growth.

No Project Alternative

Under the No Project Alternative, the project would not be built. Existing deficiencies in water pressure to local residents would persist. There would be no impacts on current trends affecting the rate, location, or amount of growth. Growth would be anticipated to be consistent with the census tract projections presented in Table 4.3-2. Overall, the undeveloped area between Santa Maria Road and Greenbriar Drive

would likely experience sustained to no growth. The area west of Santa Maria Road would experience a growth rate of less than one percent (1%).

4.3.4 Mitigation

The proposed project and alternatives would have no significant growth-inducing impacts. Thus, no mitigation measures are required.

5.0 SUMMARY OF MITIGATION MEASURES

The following mitigation measures, presented in Sections 3.0 and 4.0, would reduce potential project-related impacts on air quality, traffic, biology, and geology and soils to a level of insignificance:

AIR-1: If not already swept, travel routes between the project site and the West Valley District Office should be swept once a day.

AIR-2: Reduce traffic speeds on all unpaved roads to 15 mph or less.

AIR-3: The active construction site being excavated and unpaved roads utilized by construction equipment and equipment hauling trucks shall be watered at a frequency sufficient to manage potential dust from surface disturbance. The water truck is assumed to have a standard capacity of about 2,400 gallons. In addition, on excessively windy days (i.e., when wind speed is greater than 25 miles per hour), active construction and road use areas shall be watered on an as needed basis so as to maintain a surface crust for preventing the emission of visible dust. To ensure proper application of water as a dust suppressant, an air quality management plan will be prepared that specifically addresses conditions under which water shall be applied and the limits of its use so as to protect the roadway and adjacent biota and to maintain air quality conditions.

~~**AIR-3:** Unpaved roads on the project site should be watered down at least three times daily.~~

AIR-4: Truck wheel wells of vehicles leaving the project site should be washed off prior to driving on paved roads.

AIR-5: Trucks hauling excavated soils offsite should be securely covered.

AIR-6: During construction activities at the westerly terminus of the proposed pipeline alignment, local residential traffic utilizing the unpaved portion of Mulholland Drive shall be diverted onto paved streets. The recommended route shall be clearly marked and posted along Topanga Canyon Boulevard, Dumetz Road, Canoga Avenue, and other residential streets.

BIO-1: Should construction activities commence during the breeding season (late May – early August), a pre-construction focused survey shall be conducted by a qualified biologist one week prior to construction to identify the location of nesting raptors, and other birds, if any, within close proximity to the proposed construction zone. Should nesting raptors and birds be present, construction of the pipeline within 500-feet of an active nest shall be avoided until after the breeding season or the birds have fledged. ~~No pre-construction surveys are needed if construction is to occur outside the breeding season. A pre-construction focused survey shall be conducted by a qualified biologist to: 1) identify rare plants, if any, located within 50 feet of either side of the proposed construction zone (must be surveyed between late May and early June) and 2) identify the location of nesting raptors, if any, within close proximity to the proposed construction zone. Should~~

~~nesting raptors be present, construction of the pipeline within 500 feet of an active nest shall be avoided until after the breeding season.~~[8]

BIO-2: ~~Additional tasks associated with the pre-construction survey efforts include identifying and tagging Coast Live Oaks and California Walnuts which would likely incur root damage as a result of trenching for the proposed pipeline (i.e., those trees with a diameter at breast height (dbh) greater than four inches, located within 25 feet and on the same approximate horizontal plane as that of the approved alignment).~~ [9]In order to mitigate for potential impacts on Coast Live Oaks and California Walnuts, ~~E~~eligible trees shall be replaced at a ratio of 5:1. Replacement of the species shall occur in existing conserved and degraded open space (~~i.e.,~~e.g., Santa Monica Mountains Conservancy land, State, County, City land) within the general vicinity of the project site. Appropriate planting techniques shall be exercised to ensure the long term viability of the newly planted trees (e.g., use of gel packs to ensure ample water source). Monitoring of the newly planted trees is recommended once every Spring and Fall.

BIO-3: All limits of grading and construction activities should be clearly delineated (e.g., with rollout, temporary mesh fencing) so that no native vegetation outside the delineated limits would be disturbed by construction personnel or equipment.

GEO-1: **Slope Stability:** It is not likely that the proposed project would increase the potential for a landslide to occur. However, an excavation at the toe of a slope may temporarily create a less stable condition until the excavation is backfilled or otherwise stabilized. Potential site slope instabilities ~~should~~ will be mitigated by normal construction procedures, which includes monitoring of construction activities by the geotechnical engineer of record or his representatives.

GEO-2: **Seismically-Induced Flooding**: Though the Kittridge Tank site was not evaluated, the sloshing of water in either the new or existing Topanga and Kittridge Tanks proposed for Alternative 3 ~~should~~ will be considered during design of this alternative.

GEO-3: **Surface Erosion/Maintenance:** Limited wind and water erosion might occur locally during the construction of the proposed facilities. However, measures commonly employed during construction, such as spraying water to control dust, use of sandbags to control siltation, and drainage control measures such as the covering of soil stockpiles with plastic sheeting during wet weather, ~~should limit~~would greatly reduce the potential for significant wind and water erosion impacts.

GEO-4: **Surface Erosion/Maintenance:** Should maintenance hole covers be installed, they will be located adjacent to and on the downhill side of the roadway. The soil around the entrance to the maintenance holes will be landscaped with native vegetation to maintain erosion potential at its current level or better. ~~Should maintenance hole covers be installed, the~~

[8] Rare plant surveys completed. See Appendix E

[9] Surveys for California Walnut and Coast Live Oak trees potentially impacted have been completed (See Appendix E). Eligible trees for mitigation have been identified and are presented in Appendix E.

~~design of the project should consider placing the covers along the embankment and within the existing 200' easement. Soil surrounding the maintenance holes would be landscaped with native vegetation to help minimize erosion.~~

GEO-5: **Erosion:** During the rainy season, the length of excavation and trenching will be minimized to allow for quick and immediate construction of a protective cover over the open trench or for backfilling.

HA-1: Potential fire hazards associated with construction activities would be minimized by the clearing of loose brush and disturbed vegetation immediately surrounding active welding sites. Wherever feasible, protective shields shall be erected around such sites. In addition, all construction personnel shall be prohibited from smoking on-site.

HA-2: Prior to construction, an Emergency Response Plan addressing accidental spills and/or gas pipeline ruptures shall be prepared.

HA-3: Prior to construction, the present owners of the existing gas pipeline shall be consulted.

TRANS-1: ~~Restrict construction truck traffic along Topanga Canyon Boulevard and US-101 to off-peak commute periods.~~Construction traffic along Topanga Canyon Boulevard and US-101 would be limited to off-peak commute periods.

6.0 ORGANIZATIONS AND PERSONS CONSULTED

California State Parks and Recreation - Angeles District Office
Susan Good, Ecologist

City of Calabassas, Public Works Department
Andrew Martinez, Assistant Civil Engineer

City of Calabasas, Transportation Department
Robert Yalda, Transportation Engineer

City of Los Angeles, Department of City Planning
Nelson Rodriguez, Community Planner
~~Duke Perrin, Planning Deputy for Council District and Planning Area 3~~
~~Lisa Levy, Planning Deputy for Council District and Planning Area 11~~
Anna Vidal, Planner for Mulholland Scenic Parkway Specific Plan, District 11

City of Los Angeles, 3rd Council District
Duke Perrin, Planning Deputy

City of Los Angeles, 11th Council District
Lisa Levy, Planning Deputy

City of Los Angeles, Department of Recreation and Parks
James Ward – Acting Superintendant

City of Los Angeles, Department of Water and Power
Kelvin Lew, Environmental Supervisor - Corporate Environmental Services

City of Los Angeles Fire Department
Joe Johnson, Inspector – Hydrant Unit

Claritas
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Counter Staff

County of Los Angeles, Public Works Department
Issa Kattan, Civil Engineer I

National Park Service
Denise Kamradt, GIS

Gary Busteed, Wildlife Biologist
Ray Sauvajot, Chief of Planning - Science and Resources Management, Santa Monica Mountains National Recreation Area

Santa Monica Mountains Conservancy
Rory Skei, Deputy Director
Paul Edelman, Division Chief of Natural Resource Planning
Marc Shore, Project Analyst II
Libby Trietsch, Project Assistant

7.0 REFERENCES

California State Department of Parks and Recreation. 2001. Personal Communication. Susan Good, Ecologist. Angeles District Office. 1925 Las Virgenes Road, Calabassas, California 91302.

California State Department of Parks and Recreation. 2001. Personal Communication. Marvin Bradey. March 5, 2001.

California Environmental Quality Act (CEQA) Statutes. 1998. Public Resources Code, Division 13, Sections 21000-21177.

California Environmental Quality Act (CEQA) Guidelines. 1999. Part of the California Code of Regulations.

CDMG. 1979. Mineral Land Classification of the Greater Los Angeles Area, Special Report No. 143.

CDMG. 1997. -Fault Rupture Hazard Zones in California, Special Publication 42, Revised 1997.

CDMG. 1998. Official Map of Seismic Hazard Zones, Canoga Park Quadrangle, 1 February.

City of Los Angeles. Department of City Planning. 1985. Draft Environmental Impact Report Mulholland Scenic Parkway Specific Plan and Associated Recreational and Roadway Improvements. City of Los Angeles Planning Department. 200 North Spring Street, Room 655 City Hall, City of Los Angeles, CA 90012

City of Los Angeles, Department of City Planning. 1992. Draft Environmental Data Base Vesting Tentative Tract No. 33454 Environmental Impact Report No. 87-563-SUB. Applicant: Woodland Hills Estates 2899 Agoura Road, No. 106, Westlake Village, California 91361.

City of Los Angeles, Department of City Planning. 1992. Final Environmental Impact Report Woodland Hills Estates Subdivision EIR No. 87-563-SUB. Applicant: Woodland Hills Estates 2899 Agoura Road, No. 106, Westlake Village, California 91361. Prepared by: Environmental Review Section, Los Angeles City Planning Department, 200 North Spring Street, Room 655, City Hall City of Los Angeles, California 90012

City of Los Angeles, Department of City Planning. 1992. Final Environmental Impact Report Woodland Hills Estates Subdivision. City of Los Angeles Planning Department. 200 North Spring Street, Room 655 City Hall, City of Los Angeles, CA 90012

City of Los Angeles, Department of City Planning. 1992. Mulholland Scenic Parkway Specific Plan. Ordinance 167,943 Summary of Provisions. City of Los Angeles, Department of City Planning.

City of Los Angeles, Department of City Planning. 1993. Draft Environmental Impact Report. Mulholland Hills Estates EIR No. 91-0325(SUB)(ZC). Applicant: Mulholland Hills Associates, 201 Alhambra Circle, Coral Gables, Florida 33134. June 1993.

City of Los Angeles, Department of City Planning. 1995. Mulholland Hills Estates Addendum. Los Angeles City EIR No. 91-0325 (SUB)(ZC). Canoga Park-Winnetika-Woodland Hillsand Encino-Tarzana District Plans, Council District 11. Applicant: Mulholland Hills Associates 201 Alhambra Circle, Coral Gables, Florida 33134. February 1995.

City of Los Angeles. Department of City Planning. 1999a. Canoga Park-Woodland Hills-West Hills Plans – A Part of the General Plan of the City of Los Angeles. City of Los Angeles Planning Department. 220 N. Figueroa Street, Los Angeles, CA 90012.

City of Los Angeles, Department of City Planning. 2001. Personal Communication. Anna Vidal. 6251 Van Nuys Boulevard, Van Nuys, California 91401-2711.

City of Los Angeles, ~~Department of City Planning~~11th Council District. 2001. Personal Communication. Lisa Levy.

City of Los Angeles, Bureau of Engineering. 2001. Personal Communication.

City of Los Angeles, Department of Water and Power. 1997. Mulholland Pipeline [Staff] Report. City of Los Angeles Department of Water and Power, Water Engineering Services Section. November 4, 1997.

~~City of Los Angeles. Department of City Planning. 1999a. Canoga Park-Woodland Hills-West Hills Plans – A Part of the General Plan of the City of Los Angeles. City of Los Angeles Planning Department. 220 N. Figueroa Street, Los Angeles, CA 90012.~~

City of Los Angeles. Department of Transportation (DOT). 2001. Personal Communication. Brenda, DOT Survey Section. April 18, 2001.

City of Los Angeles, Department of Water and Power. 1999. Mulholland Pipeline [Staff Report]. City of Los Angeles Department of Water and Power, Water Engineering Services Section. November 2, 1999.

City of Los Angeles, Department of Water and Power. 1981. Final Environmental Impact Report Corbin Tank. Los Angeles Department of Water and Power. August 1981.

City of Los Angeles, Department of Water and Power. 2000. Notice of Intent to Adopt a Negative Declaration For the Mulholland Water Pipeline Project. Prepared by City of Los Angeles, Department of Water and Power, Manager of Corporate Environmental Services (Mr. Mark J. Sedlacek). June 12, 2000.

City of Los Angeles, Department of Water and Power. 2000. Soil Classification Report for the Mulholland Water Pipeline Project. Prepared by City of Los Angeles, Department of Water and Power, Geotechnical Engineering.

City of Los Angeles, Department of Water and Power. 2000. Draft Negative Declaration and Initial Study for the Mulholland Water Pipeline Project. Prepared by City of Los Angeles, Department of Water and Power, Manager of Corporate Environmental Services (Mr. Mark J. Sedlacek). June 12, 2000.

Claritas. 2001. Query of Census Tracts 138000, 137401, 137502, 137504, 137501, 139802, 137102.

Dibblee, T. W., Jr., 1992. Geologic map of the Topanga And Canoga Park quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map #DF-35, Dibblee Geological Foundation, Santa Barbara, California.

Federal Emergency Management Agency (FEMA). 1980. FIRM Flood Insurance Rate Map. City of Los Angeles, California, Los Angeles County. Panel 060137 0042 C.

Greene, R.E. 1993. Metropolitan Water District of Southern California and US Forest Service. DEIR/EA, Central Pool Augmentation and Water Quality Project. Report No. 1059, Noise Section 4, p. 4-272.

Munger Map Book. 1999. California – Alaska Oil and Gas Fields, Fortieth Edition, June.

National Park Service (NPS). 2001. Personal Communication. Phil Holmes, Cultural Anthropologist. National Park Service 401 W. Hillcrest Drive, Thousand Oaks, California 91360.

Sanitation Districts of Los Angeles County. 2001. Personal Communication. Sal Cabanayan, Engineer. March 9, 2001.

Santa Monica Mountains Conservancy (SMMC). 2001. Personal Communication. Paul Adelman. March 28, 2001.

Santa Monica Mountains Conservancy (SMMC). 2001. Personal Communication. Rory Ska. March 1, 2001.

Santa Monica Mountains Conservancy. 2000. Dirt Mulholland Action Plan. Santa Monica Mountains Conservancy 5750 Ramirez Canyon Road, Malibu, California 90265. October 23, 2000.

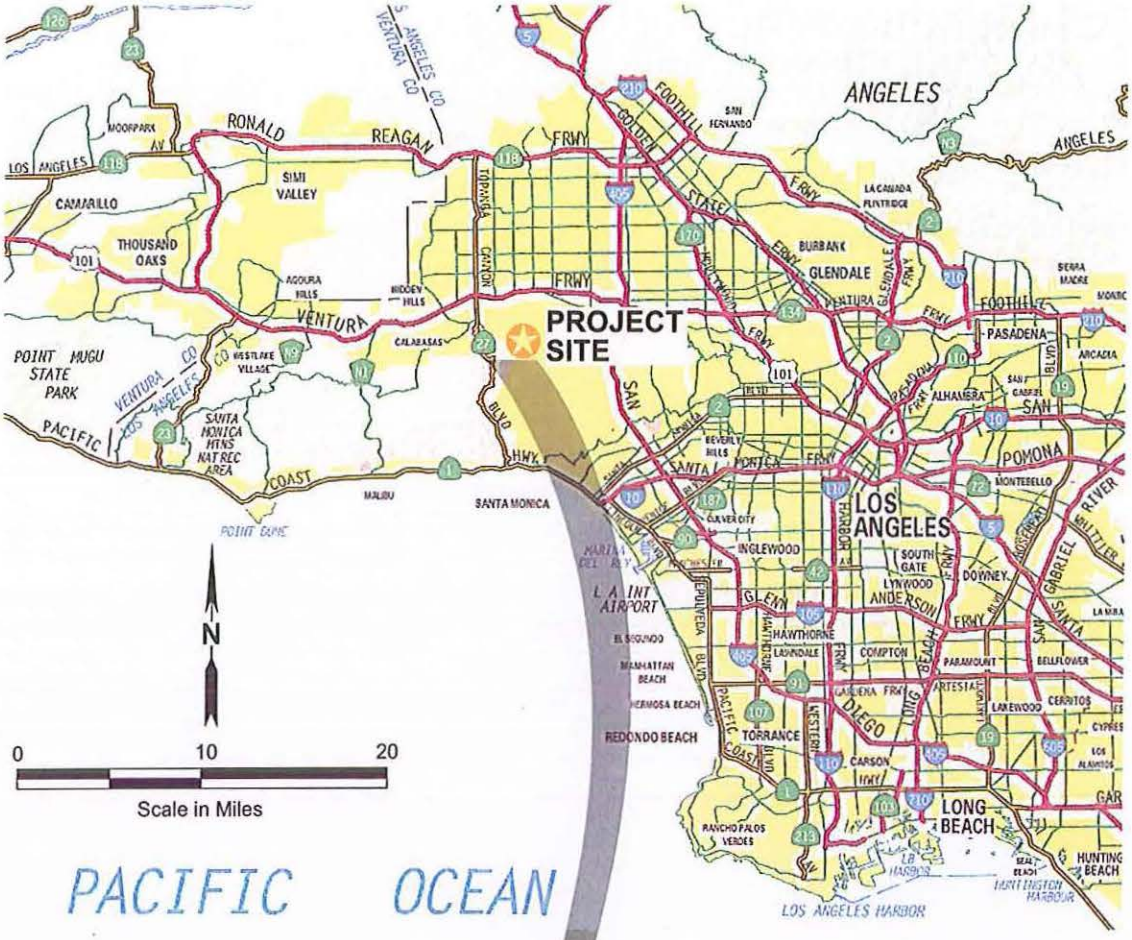
Santa Monica Mountains Conservancy. 2000. Mulholland Gateway Park Master Plan. Santa Monica Mountains Conservancy 5750 Ramirez Canyon Road, Malibu, California 90265

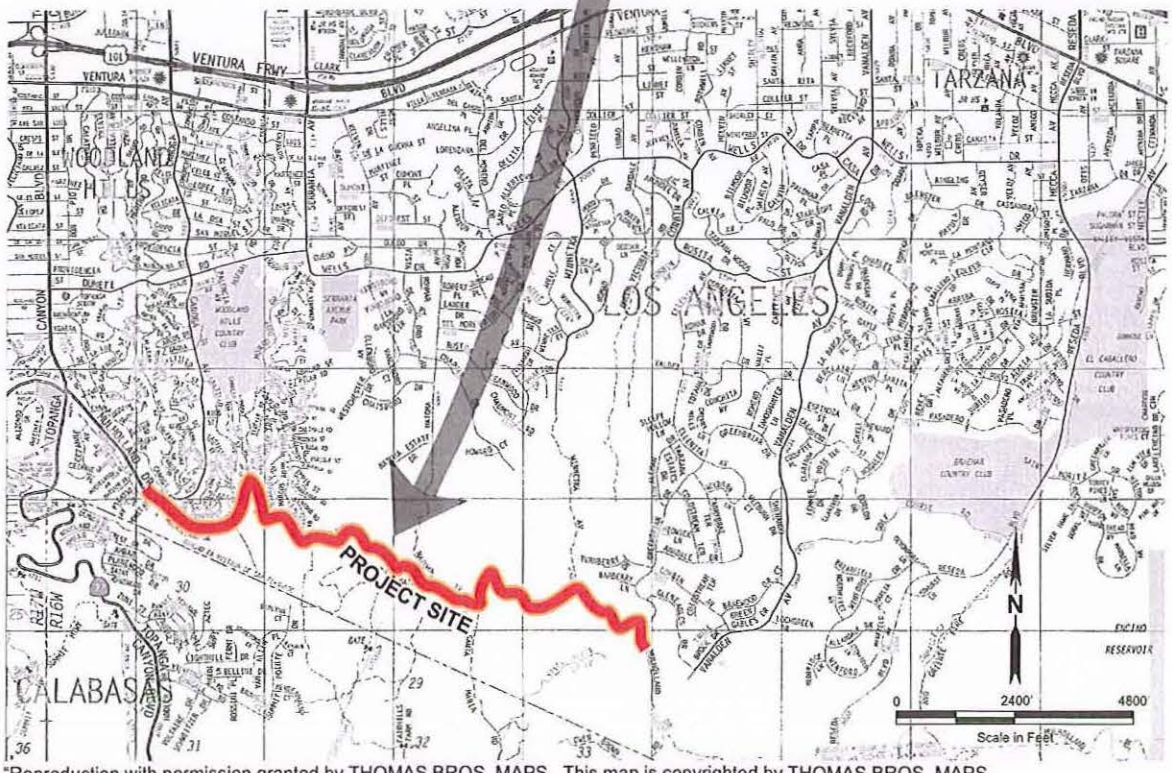
Santa Monica Mountains Conservancy. 2000. Mulholland Gateway Park Additions Project Plan. Santa Monica Mountains Conservancy 5750 Ramirez Canyon Road, Malibu, California 90265 October 23, 2000.

Tosco Refining Company. 2001. Personal Communication. Steve Van Winkle. Tosco Refining Company 9645 Santa Fe Springs Road P.O. Box 2628 Santa Fe Springs, CA 90670-0628.

U.S. Environmental Protection Agency (USEPA). 1971, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances. (Prepared under contract by Bolt, et. al., Bolt, Beranek & Newman, Boston, MA). Washington, DC.

FIGURES





REGIONAL AND SITE LOCATION MAP

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 1

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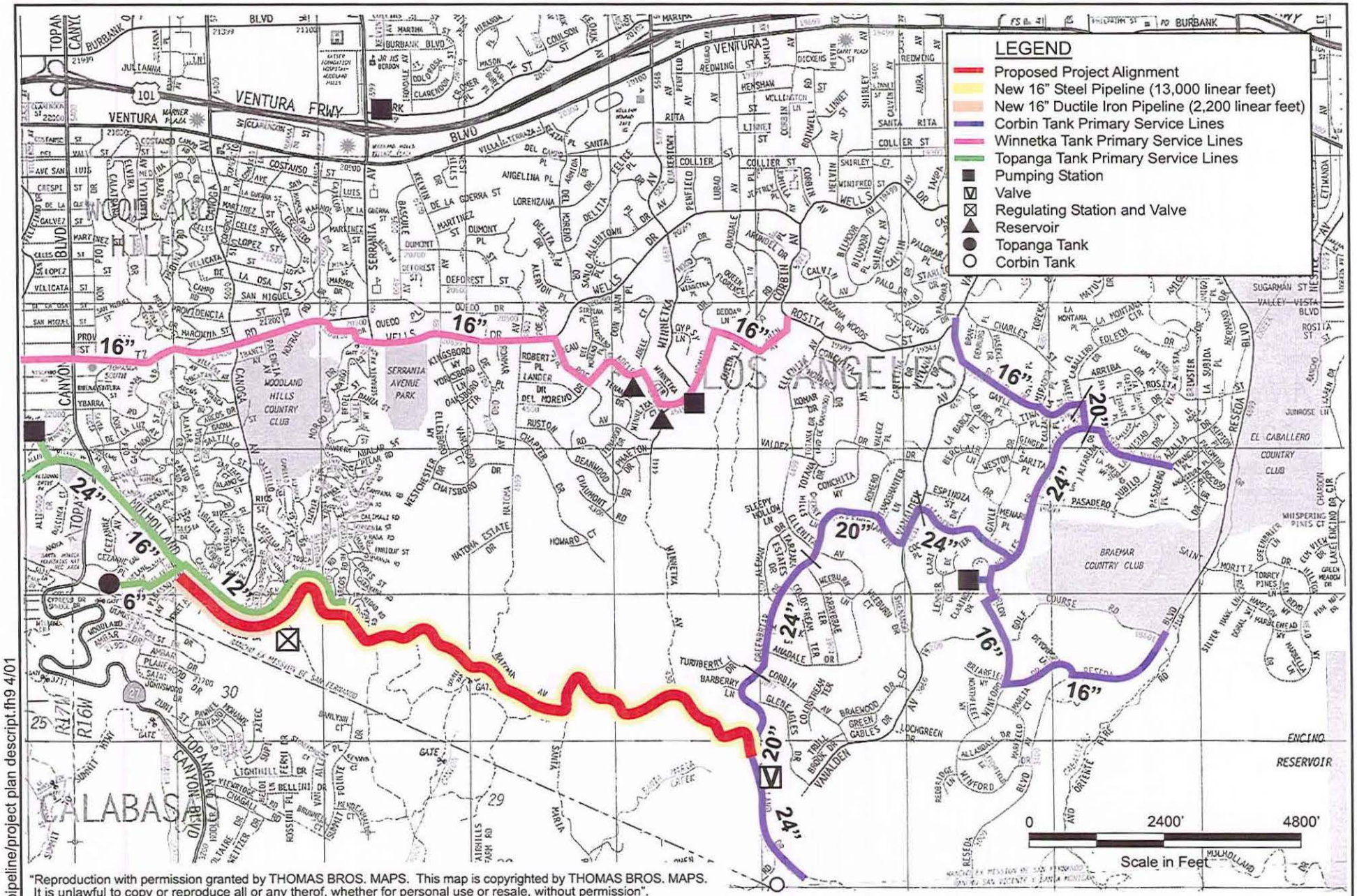

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EXISTING AND PROPOSED PROJECT COMPONENTS

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 2

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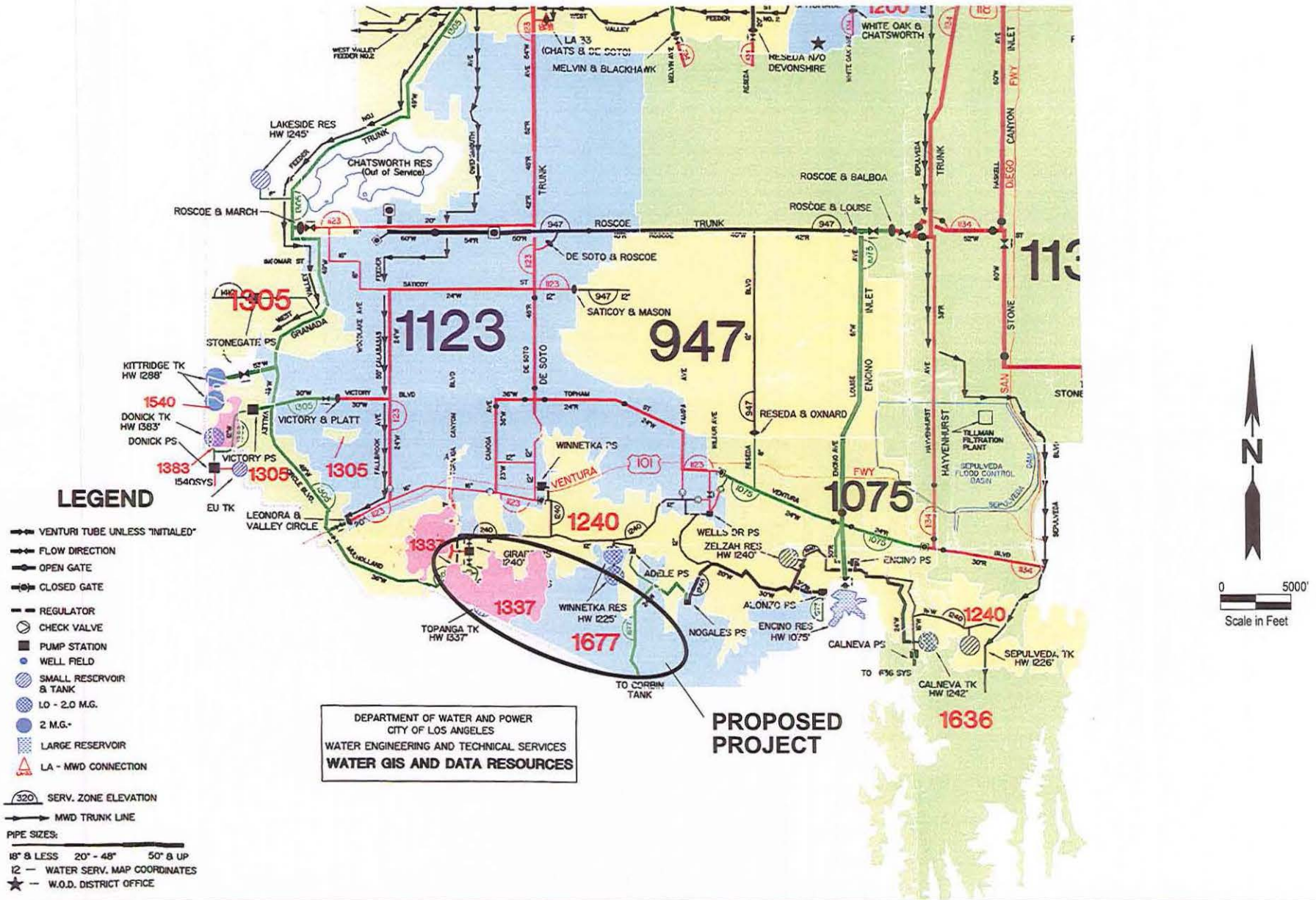

WATER DISTRIBUTION SERVICE ZONES

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 3

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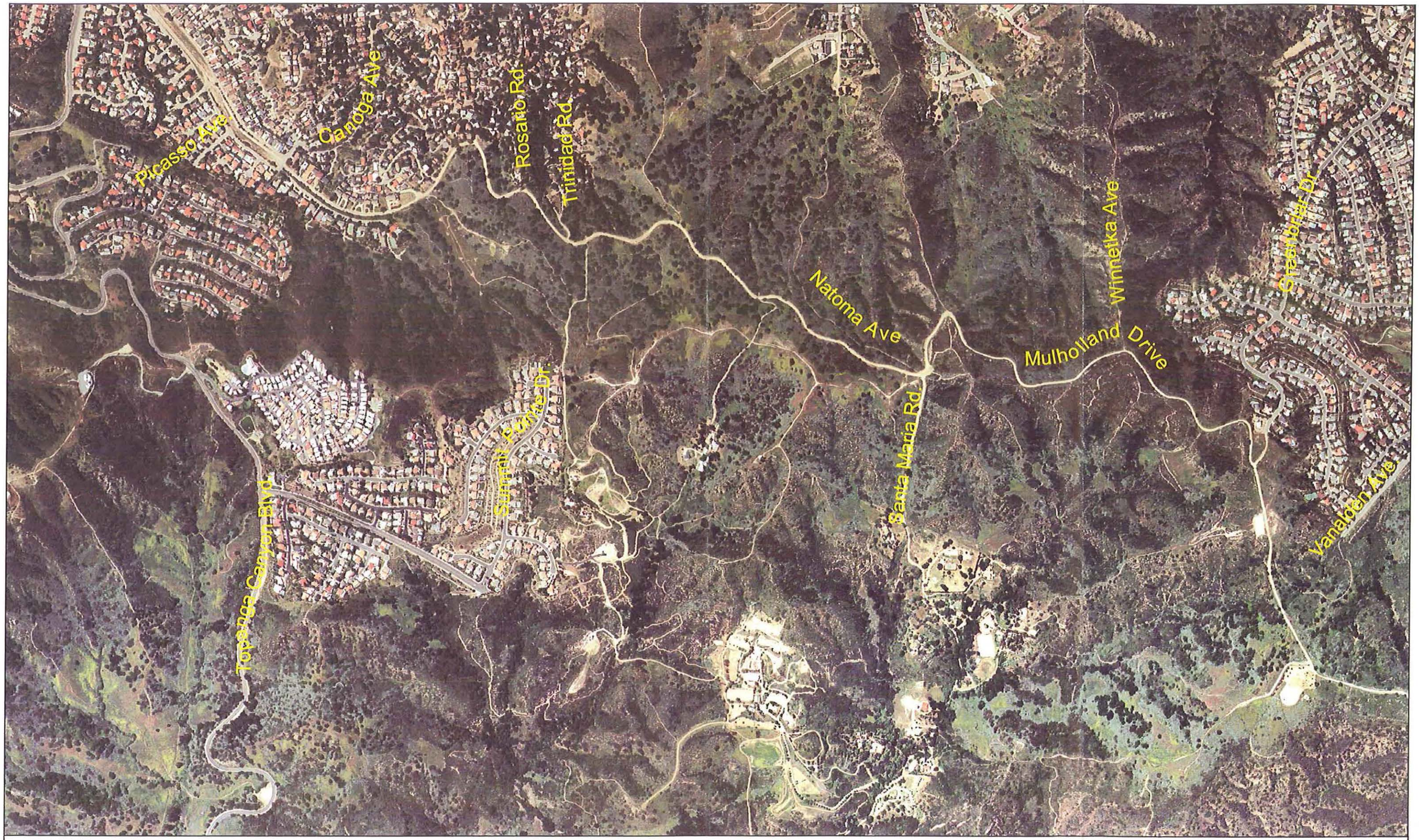

AERIAL VIEW OF PROJECT AREA

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 4

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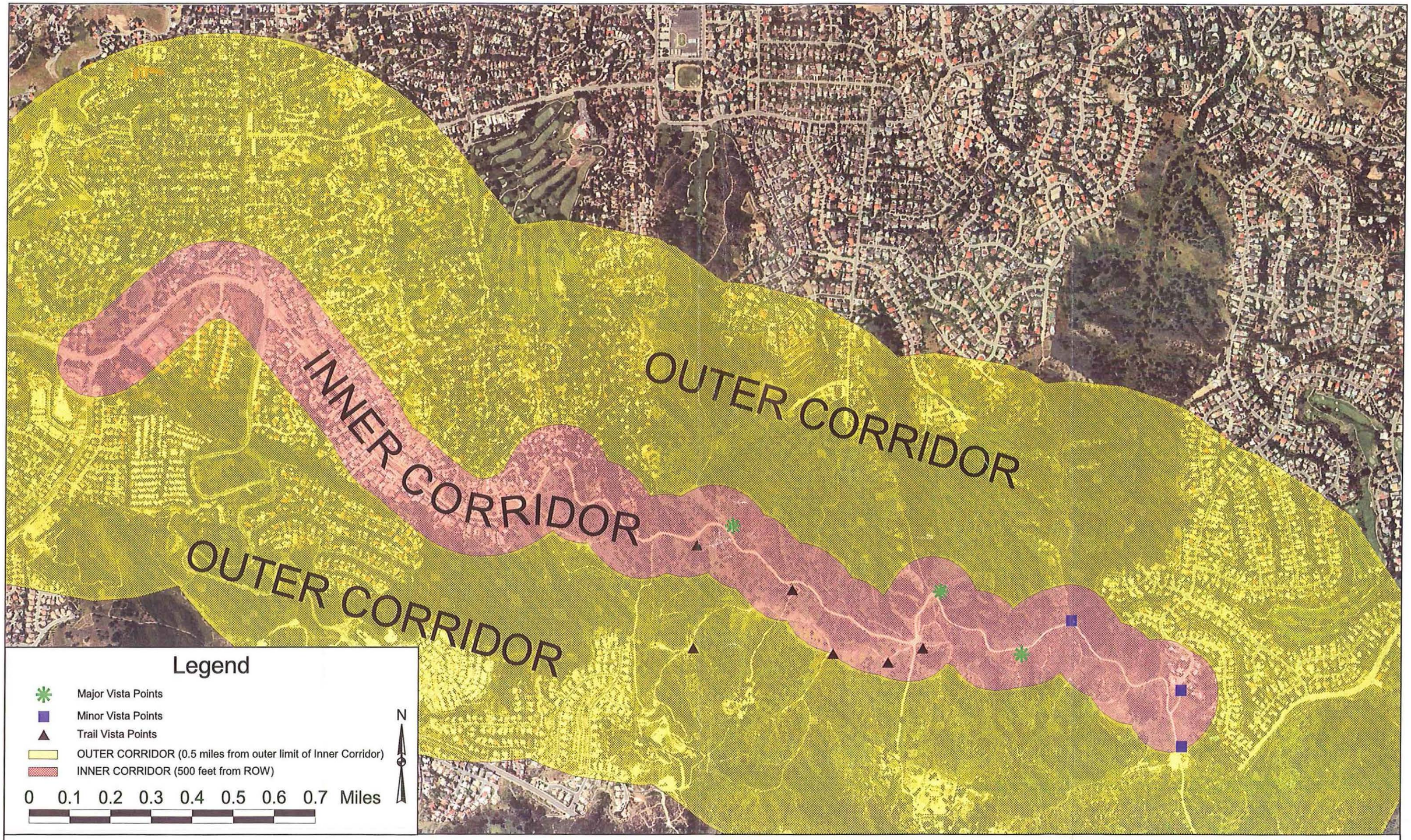

MULHOLLAND SCENIC PARKWAY SPECIFIC PLAN CORRIDOR

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 5

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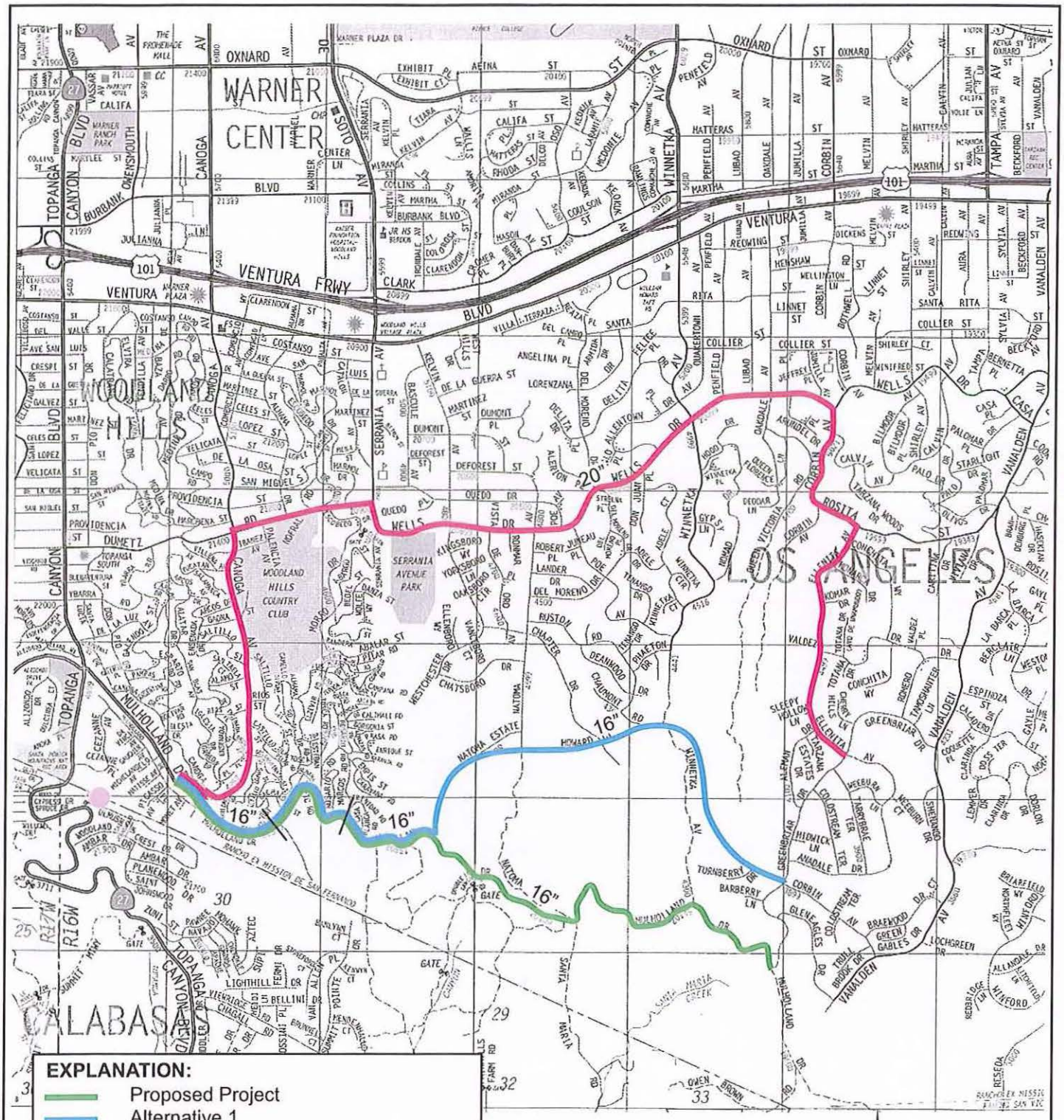

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PROJECT ALTERNATIVES ALIGNMENT

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 6

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EXPLANATION:

- Proposed Pipeline
- Alternative 1
- Alternative 2
- Alternative 3

Note: Kittridge Tank is located approximately 3.75 miles to the NW of Topanga Tank at the end of Victory Boulevard which is beyond the limits of this map.

N

0 2400' 4800'

Scale in Feet

CUMULATIVE DEVELOPMENT STUDY AREA

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 7

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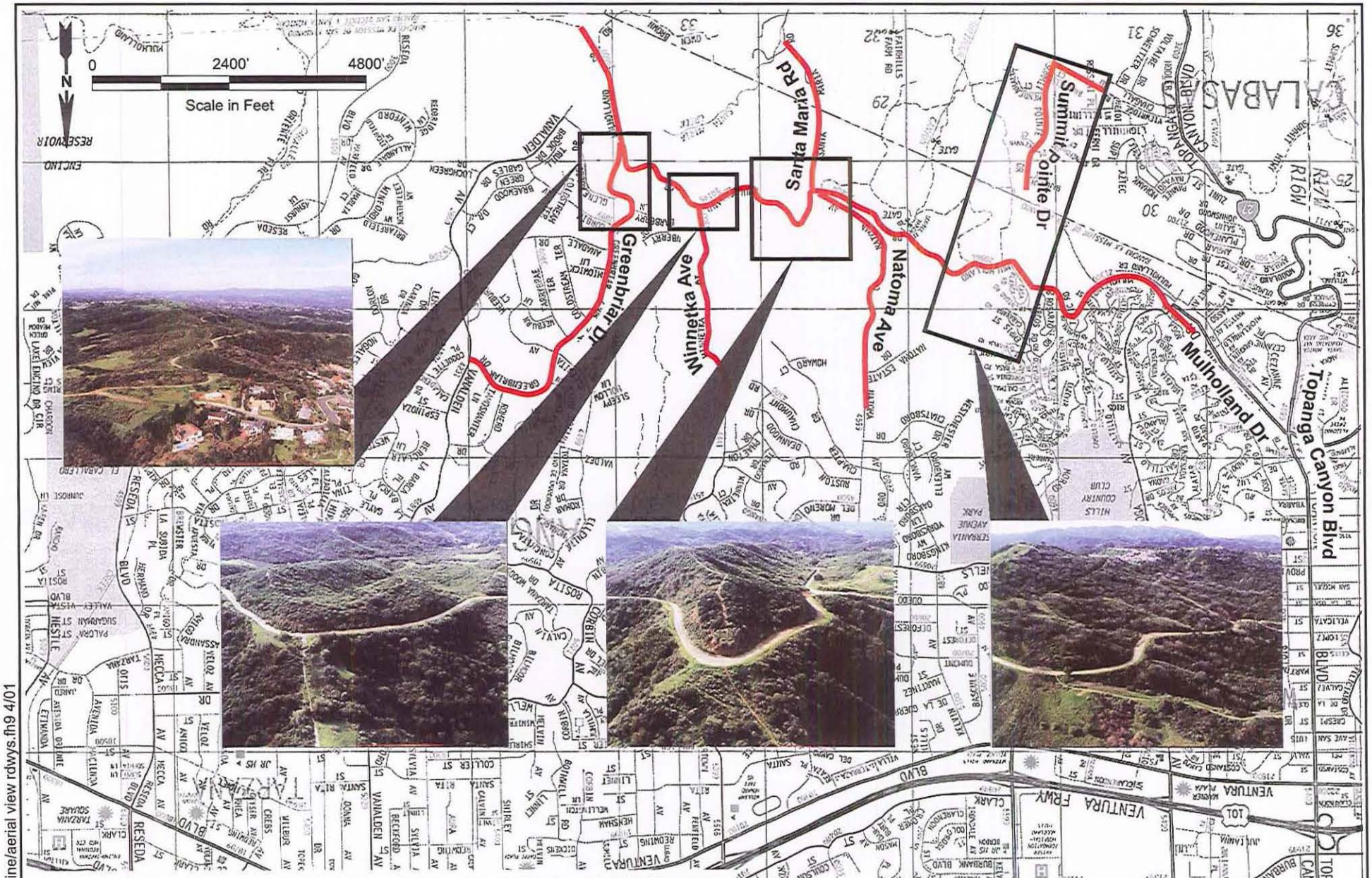

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AERIAL VIEW OF SELECTED ROADWAYS

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 8

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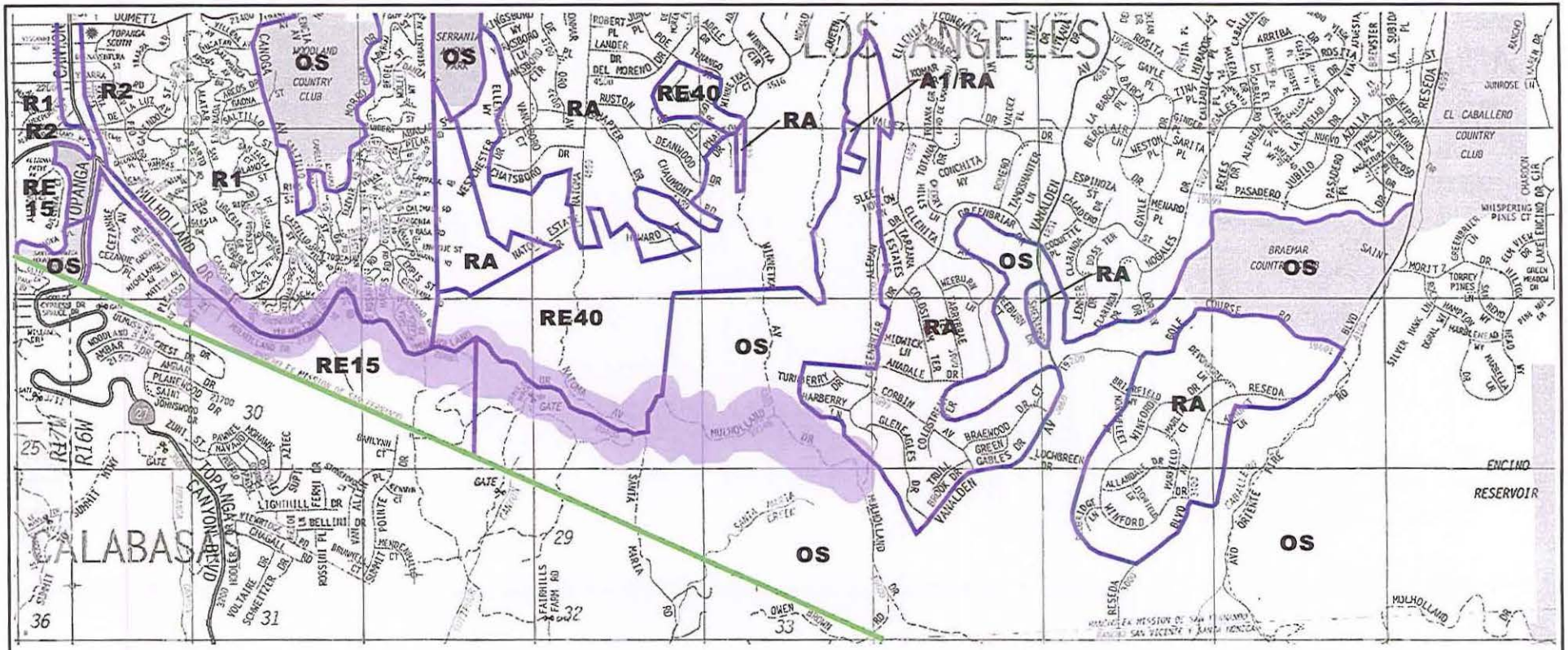

LEGEND

A1 Agricultural	Zoning Boundary
RA Suburban	City Boundary
R1 One Family Residential	Proposed Project
R2 Two Family Dwelling	
RE15 Residential Estate (15,000 sq. ft.)	
RE40 Residential Estate (40,000 sq. ft.)	
OS Open Space	

N

0 2400' 4800'

Scale in Feet

GENERAL PLAN ZONING DESIGNATIONS

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 9

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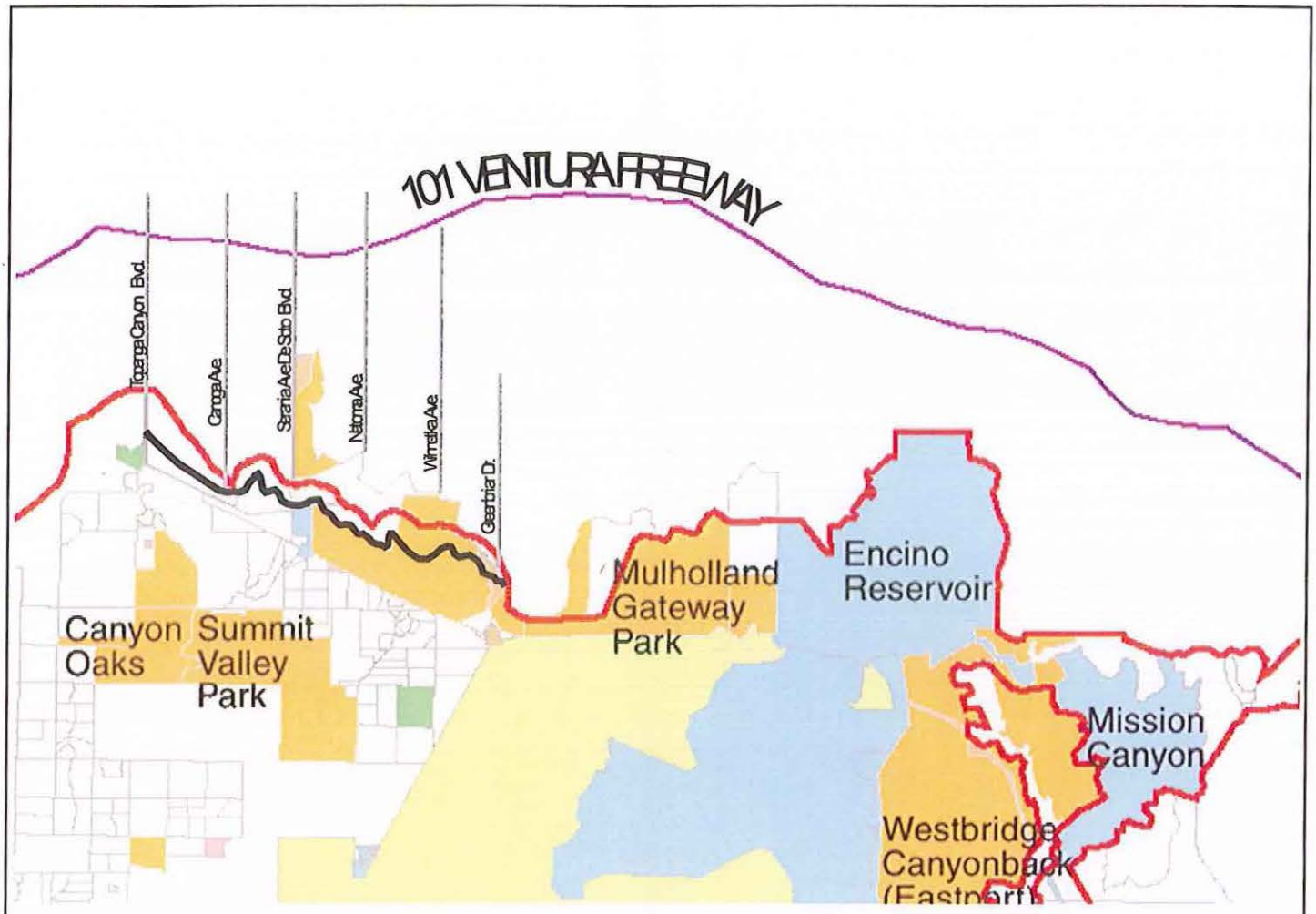

SANTA MONICA MOUNTAIN NATIONAL RECREATION AREA BOUNDARY (NORTHERN LIMIT)

MULHOLLAND DRIVE

NATIONAL PARK SERVICE LAND

STATE OF CALIFORNIA PARKLAND

MOUNTAIN RECREATION CONSERVATION AUTHORITY LAND
SANTA MONICA MOUNTAINS CONSERVANCY LAND

LOS ANGELES COUNTY PARKLAND
VENTURA COUNTY PARKLAND

COSCA
RANCHO SIMI DEPT. PARKS & REC.
CITY OF LOS ANGELES PARKLAND
CITY OF THOUSAND OAKS PARKLAND
CITY OF CALABASAS PARKLAND

OTHER FEDERAL AND STATE LAND
LOS ANGELES COUNTY LAND
CITY OF LOS ANGELES LAND
MISC. PUBLIC LAND
CALIFORNIA COASTAL CONSERVANCY LAND
UNIVERSITY OF CALIFORNIA RESERVE
LAS VIRGENES MUNICIPAL WATER DISTRICT

MOUNTAINS RESTORATION TRUST

PRIVATE LAND WITHIN NRA BOUNDARY

CITY OF LOS ANGELES AND PRIVATE LAND OUTSIDE NRA BOUNDARY

N

LAND OWNERSHIP

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 10

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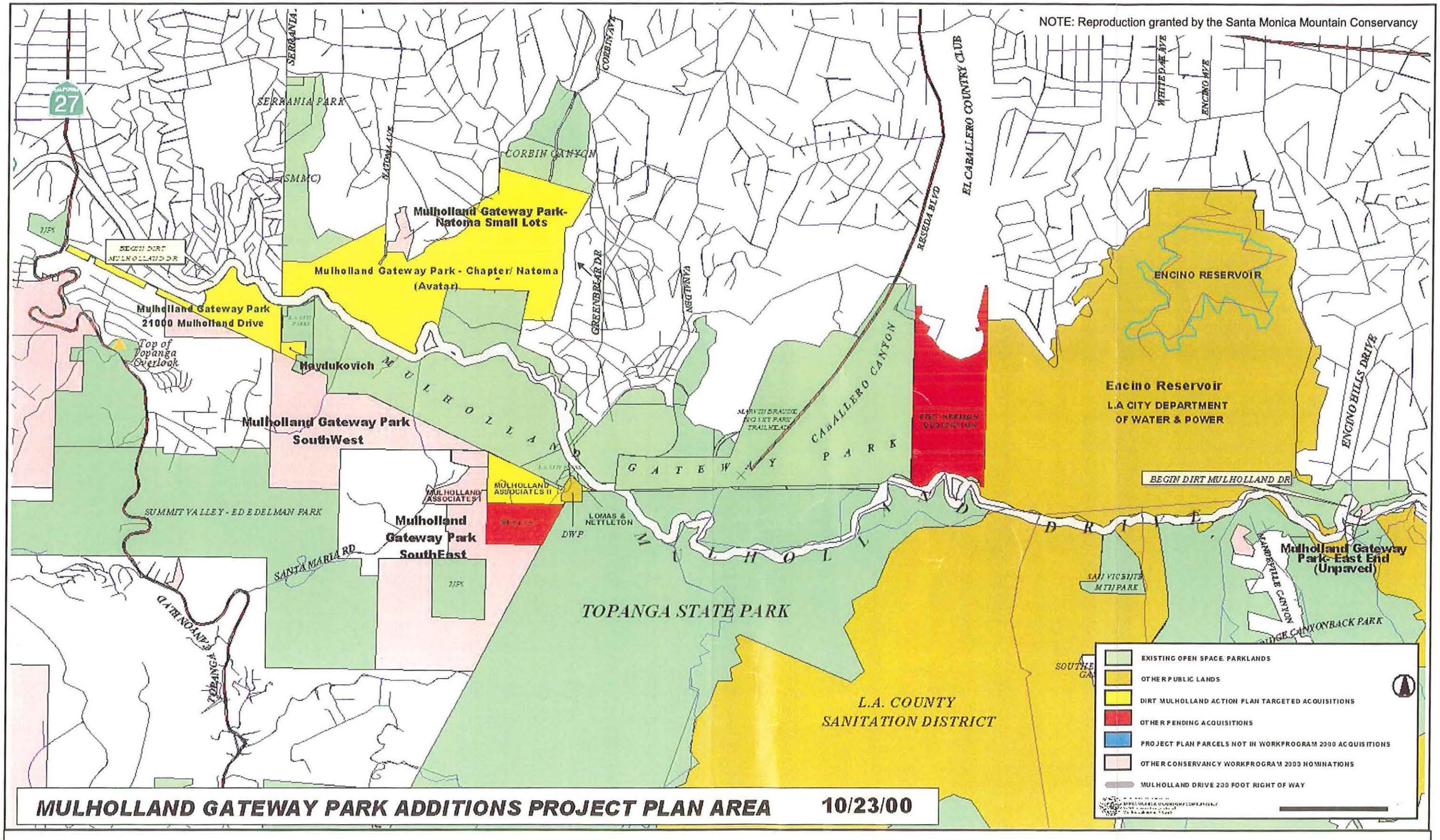

MULHOLLAND GATEWAY PARK ADDITIONS PROJECT PLAN AREA 10/23/00

SANTA MONICA MOUNTAINS CONSERVANCY ACQUISTION PLAN AS OF 10/23/00

Project No.: 5700170019.02	Date: APRIL 2001	Project: MULHOLLAND WATER PIPELINE	Figure 11

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