Mitigated
Negative Declaration

Hansen Area
Water Recycling Project

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

October 2005

Attachment A - Letter from Scott Williams, GolfLinks, to Ms. Dorothy Meyer, CDM, August 25, 2004

August 28, 2004

Ms. Sarah Easley
Department of Water & Power
111 North Hope Street, Room 1315
Los Angeles, CA 90012

Dear Ms. Meyer:

The following report and the contents within are a compilation of acquired information and how it will pertain to the proposed use of recycled/reclaimed water at Angeles National Golf Club (ANGC) and potential effects to surrounding areas. I toured the ANGC site and discussed the operation phase with the President of Cosmo World Group, David Hueber and Director of Golf and Development / Maintenance, John Reidinger. The course was constructed to handle potential issues related to the use of recycled water. The course construction has truly raised the bar for environmental accomplishments. There are no courses that come to mind that successfully addressed as many issues as ANGC.

In a USGA sponsored book, it is documented by the U.S. Water Resources Council that if the western half of the U.S. is to continue to grow, develop and expand as it has in the past, it must find additional sources of water.[1] Seventeen western states contain 85% of the land irrigated for agricultural purposes. There also is a large portion of the Western United States that is rapidly increasing in population. Where will the needed water come from? Certainly the geopolitical implications of unequal rainfall distribution and allocation of surface and ground waters are enormous! And although schemes abound for redistribution from east and north to the west and southwest, none at present are plausible or economically feasible.

[1] USGA, "Wastewater Reuse for Golf Course Irrigation"

Felicia Marcus, Regional Administrator for the EPA Region IX has stated, "Water recycling is a critical element for managing our water resources. Through water conservation and water recycling, we can meet environmental needs and still have sustainable development and a viable economy"[2]. "Currently there are 15% of southern California golf courses that are utilizing reclaimed water. The trend indicates many more courses are retrofitting annually for the use of reclaimed water. Agricultural irrigation uses 48.3 % of reclaimed water and landscape irrigation uses 16.1% of the annual available amount of reclaimed water"[3].

Golf courses offer great potential as environmentally desirable use sites for recycled water. Maintained turfgrass offers excellent filtration for recycled water since thatch layers can collect and hold particulate matter, allowing pollutants to degrade slowly and naturally. Recycled water used for golf courses throughout the country is cleansed by this natural filter system before it is returned to lakes, streams and groundwater. ANGC has the potential to play an important role in protecting the water quality of surrounding watersheds. Utilizing recycled water for golf course irrigation offers several other advantages. In addition to conserving potable water supply, it guarantees a water source for irrigation during drought conditions. It also contains a steady supply of nutrients that can reduce the use of commercial fertilizers.

In relation to potable water, recycled water is known to have higher amounts of sodium, boron, chlorides and other trace elements. Water, containing sodium content greater than 3.0 dS/m, can reduce turfgrass quality and growth. Sodium levels in recycled water could eventually cause displacement of calcium and magnesium on the exchange sites of soil particles resulting in a breakdown of the physical soil structure. However, with proper management practices such as irrigation monitoring, aerification and fertilizing based on lab results from soil samples, this will not occur.

Sodium accumulation in soils can also be controlled through the use of soil amendments such as gypsum and elemental sulfur. The amount of material to be applied depends on how much sodium is attached to the cation exchange sites. The exchange site is where negative and positive charged ions attract.

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[2] www.epa.gov/region9/water/recycling
[3] www.USGA.org

Sodium is attracted to the charged soil particle and, if allowed to accumulate, will interfere with soil structure and inhibit normal nutrient uptake by the plant. The calcium in gypsum replaces the sodium on the soil particle allowing the sodium to be leached away from the root zone and through the soil profile.

Sodium levels are monitored regularly at ANGC from on-site soil testing and sent to a credited lab for detailed reports to prevent sodium build-up. ANGC has a sulfur burner unit in place that treats the water and reduces the pH and bicarbonate levels greatly improving water quality and the efficiency of its' use throughout the course.

Another element found in recycled water is boron. Boron typically enters the recycled water through the use of soaps and detergents. It is a micronutrient that is required for plant growth and development in very small amounts. It is water soluble but can accumulate to toxic levels in soils by forming chemical complexes that are not readily leachable. The recommended level of boron is under 2 milligrams per liter for maintaining healthy turf. The major symptom of excess boron is often necrosis in the leaf tips where boron concentrates; however, turfgrass is fairly resistant to the water with high boron because of regular mowing, which removes leaf tips. The subsoil of ANGC consists of sandy loam soil, which allows for moderate drainage and should not represent a problem with regard to boron accumulation.

Clarifying boron-leaching concerns, boron is not readily retained in the soil because it is an anion (negatively charged particle). Boron compounds or borate are moderately held by soil cation exchange sites. In order to leach boron it would require twice the amount of water required for other soluble salts to leach. There is ongoing testing being done at ANGC to determine if there are threshold concerns. Boron leaching through the turf root zone is not considered a major concern as most boron accumulates in the leaf tips of the turf. As turf is mowed regularly under standard golf course maintenance practices, the boron is mowed off and removed from the system and, therefore, is unable to become problematic.

Chlorides, in recycled water, move freely into vegetation and are directly absorbed by roots and leaves. Plant sensitivity occurs when chloride levels exceed 5 meq/L. The current maintenance practices that are used at ANGC have been implemented to remedy any all concerns related chloride levels and their accumulated thresholds.

Drainage and runoff are essential on all golf courses in order to maintain quality playing surfaces. At ANGC, the property is graded to drain to the lowest area where a lake captures most surface runoff. In the occurrence of heavy rainfall this lake will also serve the course as a holding area where runoff and drainage water is stored and eventually utilized through the irrigation system.

There is also a subgrade drainage system beneath putting greens, tees and various areas in roughs and fairways. The drainage system at ANGC is designed to carry water away from areas on the course for storage in the lake. Under normal operating conditions, all water being used for irrigation stays within the property.

Many key factors need to be observed when describing water quality. The quality of water directly influences the growth, development and performance of a golf course. Most irrigation water contains dissolved salts and other chemicals, detrimental effects occur when certain concentrations are exceeded and the resulting damage varies depending on the turf species and cultivar. Regular testing of water quality for total salt content, sodium hazard, toxic ion, bicarbonate and pH are recommended. There are two monitoring stations in place at ANGC that report groundwater conditions above-stream and downstream of the site. The monitoring results are documented regularly to ensure that conditions are remaining constant.

Water reports, from Donald C.Tillman Water Reclamation Plant, documented the levels of boron averaging .8 mg/L. The threshold at which moderate leaf burn can occur is above 2mg/L. This level is within safe guidelines for use on plant material. Sodium levels were measured as EC (electrical conductivity) or TDS (total dissolved solids) in the report. The results indicated the TDS ranges from 500-600 as tested at the Tillman Plant.

The standard guidelines for recycled water indicate an average of 729 as a working level of salinity for manageable turf quality. Both elements are within safe levels in the recycled water, which can thus be utilized effectively at ANGC without negative impact to surrounding areas.

There are recommended procedures when using recycled water. One is referred to as the leaching fraction. Nitrogen loss from leaching is a primary concern with recycled water because it is assumed that some water movement beyond the turf root system will occur.

Many tests have been done over the years measuring the leachate. Overall, turf is able to remove at least 90% of the nitrogen delivered by the recycled water up to a 41% leaching fraction. A leaching fraction of 41% that was used as an extreme test represents the amount of additional water that would be required to leach salts below the root zone. It is an equation using the EC tolerance of the turf type and EC of irrigation water used on site to determine the percentage of additional water required for leaching salts beyond the root zone.

Because the water destined for ANGC has a TDS of 500-600 and the selected bermudagrass has the highest EC tolerance of turf varieties, the leaching fraction that will be required for ANGC will be less than 10%. On going ground water monitoring ensures that nitrogen accumulation in groundwater from irrigation at the golf course will not be significant over time.

The amount of irrigation required depends on weather, turf type, soils, topography and water quality. To monitor and control irrigation, ANGC has installed a Toro irrigation system with state of the art technology, coupled with weather monitoring devices and a central computer control. The weather station reports data to the central computer and a calculation is given for the amount of irrigation required for that day. The weather station reports heat, Et (evapotranspiration rate), wind speed, solar radiation and humidity when calculating run times for the irrigation system, maximizing water use and minimizing waste. This is one of the greatest tools that ANGC superintendents can utilize in their daily efforts to maximize course conditions.

When irrigating with any water source the golf course superintendent should check the system daily for maximized efficiency. This includes distribution uniformity, correct nozzle sizes and sprinkler head spacing. Catch can tests are conducted on an annual basis or on an as needed basis to ensure efficiency. By utilizing this technology ANGC golf course superintendents can apply water to site specific areas throughout the golf course to optimize turf quality. It maximizes water efficiency and allows monitoring of water output for projecting annual water usage and budgeting.

Currently there is no significant concern with the quality of the proposed recycled water to be used at ANGC, but there is an option if the quality of recycled water does not meet site specific standards. Blending recycled water with potable water within the irrigation system can be done to create a custom mix that exceeds the recommended quality standards for recycled water.

By blending the two types of water, site specific water quality that can be achieved which meets the current needs of the course and surrounding areas.

Regardless of the overall quality, ANGC turf managers would take into account the additional nutrients that are being provided with recycled water and utilize this to promote healthy turf and efficient irrigation to minimize any potential for nutrient leaching.

In closing, based on scientific data, turf managers and past experience it appears that recycled water can be used effectively on the Angeles National Golf Club. Most data indicate that the benefits of recycled water far outweigh the disadvantages.

Sincerely,

Scott Williams, President
GolfLinks Consulting, Inc.

Attachment B - Response by LADWP to Los Angeles City Council, June 21, 2004

FILE COPY

June 21, 2004

The Honorable City Council
Office of the City Clerk
200 North Spring Street, Room 395
Los Angeles, CA 90012

Attention: Councilmember Tony Cardenas
Chairperson, Commerce Energy and Natural Resources Committee

Honorable Members:

Subject: Hansen Area Water Recycling Project Community Outreach – File No. 04-0870

The enclosed report was prepared in response to the City Council Motion adopted May 11, 2004 requesting the Los Angeles Department of Water and Power to report on community outreach efforts related to the Hansen Area Water Recycling Project. The report addresses: (1) the steps taken to inform the City Council staff, community organizations and Neighborhood Councils, (2) the feedback to the Initial Study/Draft Mitigated Negative Declaration, (3) information on alternatives to the proposed project, and (4) the status of the planning process and future of water recycling in the City.

If you have any further questions, please contact me at (213) 367-1338 or have a member of your staff contact Ms. Winifred J. Yancy, Government Affairs Representative, at (213) 367-0025.

Sincerely,

ORIGINAL SIGNED BY
FRANK SALAS
Frank Salas
Acting General Manager

Enclosures

SAO:me

c: Councilmember Janice Hahn
Vice Chairperson, Commerce, Energy and Natural Resources Committee

Councilmember Cindy Miscikowski
Member, Commerce, Energy and Natural Resources Committee

Ms. Maria L. Espinoza, Legislative Assistant
Commerce, Energy and Natural Resources Committee

The Honorable Wendy Greuel
Councilmember, Second District

The Honorable Alex Padilla
Councilmember, Seventh District

Mr. William T Fujioka, City Administrative Officer
Mr. Ronald F. Deaton, Chief Legislative Analyst
Ms. Winifred J. Yancy, Government Affairs Representative, LADWP

bc: Frank Salas, Acting General Manager
Frank Salas, Chief Administrative Officer
Gerald A. Gewe
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TAO
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THOMAS M. ERB
JUN - 9 2004

City Council Report
Hansen Area Water Recycling Project

Introduction

This report is prepared in response to City Council Motion No. 04-0870 adopted May 11, 2004 requesting the Los Angeles Department of Water and Power (LADWP) to report on the community outreach efforts to the Hansen Area Water Recycling Project (Hansen Project).

Included is background information on the overall plan and goal of water recycling in the East San Fernando Valley as well as related efforts with the City's Water and Wastewater Integrated Resources Plan (IRP). Detail of the community outreach and response as well as the environmental review process is also given.

Background

The drought of the late 1980s emphasized the need for additional water sources for the City. In response, the City established the Office of Water Reclamation to promote recycled water use. In 1990, based upon the recommendations of the office of Water Reclamation, the Los Angeles City Council directed LADWP and the Bureau of Sanitation (BOS) to aggressively pursue the development of recycled water as a supplemental source of water for the City. The Office of Water Reclamation was later absorbed into LADWP's Water Resources Business Unit to optimize the integration and coordination of water resource related programs Citywide.

Using recycled water to irrigate the land in and around the Hansen Dam Recreation Area has been part of LADWP's planning for a number of years. In the late-1980s, LADWP began planning the East Valley Water Reclamation Project (EVWRP) as a means to deliver water from the Donald C. Tillman Water Reclamation Plant (Tillman Plant) to the Sunland-Tujunga/Sun Valley areas for irrigation, industrial, and groundwater recharge purposes. The Hansen Dam Recreation Area and surrounding lands were considered as potential recycled water irrigation sites. The Hansen Project (see Attachment 1-a Brief Project Summary) fulfills the goal to bring recycled water to this area.

In September 1990, LADWP released the Initial Study/Checklist of a Draft Environmental Impact Report (EIR) for the EVWRP and conducted a public meeting to receive questions and comments. In January 1991, LADWP contacted local property and business owners in the areas near the proposed EVWRP pipeline route and the Hansen Dam Recreation Area in order to assess the marketability of recycled water to replace potable water used for irrigation and industrial needs.

In March 1991, LADWP released the EVWRP Draft EIR and conducted public meetings on the potential project. The Draft EIR identified the Valley Generating Station and the Hansen Dam Recreation Area as potential sites for recycled water use. In July 1991, the Final EIR for the EVWRP was prepared and approved by the Board of Water and Power Commissioners.

During the 1990s, LADWP constructed the EVWRP and pursued the use of the recycled water for groundwater recharge. State and federal funding was obtained because the use of recycled water would offset the loss of imported water supplies from the Mono Basin in the Eastern Sierras. With the decision to stop pursuing groundwater recharge, LADWP refocused its efforts and began accelerating the development of the necessary infrastructure to use the recycled water for irrigation and industrial purposes.

The state and federal funding agencies for the EVWRP provided their funding assistance based on recycled water offsetting the City's need for imported water supplies. The groundwater recharge aspect was designed to utilize 10,000 acre-feet per year (AFY). As of today, the funding agencies have agreed not to require a refund (approximately $39 million total) as long as LADWP continues to progress developing irrigation and industrial projects utilizing the infrastructure built as part of the EVWRP and offsetting the same quantity of potable water.

Recycled Water and the Wastewater Integrated Resources Plan

In 1999, BOS approached LADWP with its idea of using a public involvement process to plan for the necessary improvements to the wastewater system under the Clean Water Act. This approach would integrate the wastewater, storm water management, recycled water, and water conservation planning functions. LADWP has now partnered with BOS in this IRP Stakeholder Process.

Over a six-month period, more than 1,100 organizations, agencies, associations, institutions, and individuals were directly contacted to determine their ability and willingness to participate in the planning process. Initially, 58 people committed to being members of the Steering Group, which would ultimately be responsible for guiding the planning process and developing the planning policy recommendations. Of this group, 31 members, representing organizations totaling more than 67,000 people, participated in the key interview process and formed the basis for policy recommendations.

A second group, the Advisory Group, totaled 75 members representing over 68,000 people. The Advisory Group provided feedback to the City and Steering Group through quarterly meetings discussing the direction of the planning process. A third group, the Information Group had 62 members representing over 16,500 people and 17 governmental agencies. The Information Group received regular updates of the progress of the planning process.

During the initial two-years of this planning process, the use of recycled water was discussed many times, including the use of recycled water to irrigate areas in and around Hansen Dam. Tours of the Tillman Plant and EVWRP facilities were provided for the stakeholders on July 25, 2000, September 23, 2000, and June 19, 2001 during which the use of the recycled water for irrigation of the Sunland-Tujunga and Hansen Dam Recreation Area was discussed. At the end of the initial process, the stakeholders recommended the following planning policy:

> "Producing and using as much recycled water as possible from existing and planned facilities."

As the planning process has moved into the development of the Integrated Resources Plan for Wastewater Facilities, the participation in the Stakeholders Group has increased. Today, there are approximately 121 members of the Steering Group representing over 870,000 people. The Advisory and Information Groups have also increased to 177 and 232 members, respectively. Approximately 530 people are in some way involved in the stakeholder process representing nearly 2,400,000 citizens.

During the January 28, 2003 workshop, Steering Group members were updated on the planning of the Hansen Project. On March 26, 2003, an additional tour of the Tillman Plant was provided to discuss the wastewater treatment process, the recycled water quality, and its use.

During September 2003, a series of Advisory Group meetings were held to discuss the IRP's progress including the development of water recycling projects. One of these meetings was held at the Lakeview Terrace Community Center on September 11, 2003. This meeting was attended by several members of the local community including representatives of the Shadow Hills Property Owners Association, the Tujunga Watershed Stakeholders, and the Sun Valley Area Neighborhood Council. During this meeting, the Hansen Project was brought up by the community members. LADWP informed the group that an environmental evaluation was being conducted and a draft environmental document was being prepared for public input/comment.

The IRP Stakeholder Process is ongoing and LADWP will continue as a partner as future water recycling plans are developed.

Hansen Area Water Recycling Project Environmental Review Process

On January 27, 2004, the Initial Study/Proposed Mitigated Negative Declaration (IS/PMND) was sent via overnight mail to the field offices of the Second, Sixth, and Seventh City Council Districts as advance notice that the public review and comment period would begin on January 29. Copies were also sent to regulatory agencies and other City departments.

On January 29, 2004, the IS/PMND was distributed for public review and comment. Recognizing the importance of the Hansen Project to the local community, LADWP went beyond the minimum requirements for public notification under the California Environmental Quality Act. Public notification was provided via direct mailing to over 1,200 addresses along the proposed project route and by public notification in the Los Angeles Times. Copies of the document were made available on the LADWP website, the Sun Valley Branch Library, the Second Council District's Sunland-Tujunga District Office and the Sixth Council District's Sun Valley Field Office. The public comment period was originally scheduled to close on February 27, 2004. Although solicited by LADWP, pipeline infrastructure projects, including recycled water irrigation projects, typically have generated little public input in the past few years.

As a result of the public notification, on February 11, 2004, representatives of the LADWP and Tujunga Watershed Stakeholders met on location to discuss the Hansen Project. During this meeting, the community members requested additional time to provide written comments. The close of the comment period was subsequently extended to March 12, 2004.

On March 3, 2004, a meeting was held at the proposed site of the one-million-gallon tank on the property of the Angeles National Golf Club. Representatives of the Riverwood Ranch Homeowners Association and the Shadow Hills Property Owners Association met with LADWP representatives to discuss the Hansen Project and the tank location in particular. Subsequent to this meeting, the comment period was extended to March 26, 2004.

Following the March 3 meeting, LADWP staff had a number of telephone conversations with Field Deputies of the Second Council District Office and it was decided to extend the comment period to April 16, 2004. The added time was necessary to accommodate two additional meetings with the community before the close of the public comment period.

On March 23, 2004, LADWP met with Councilmember Alex Padilla and members of his staff to discuss the Hansen Project. Councilmember Padilla requested information regarding the selection of the proposed project route, the possibility of delivering water to Lopez Canyon Landfill, other locations using recycled water for irrigation, and the nature of the public comments. Following the meeting with the Seventh Council District, LADWP staff submitted a packet of information regarding the project with the Sixth Council District staff for their review.

On March 31, 2004, the Second Council District staff conducted a meeting in the field office with representatives of LADWP, the Tujunga Watershed Stakeholders, and Shadow Hills Property Owners Association. During this meeting, LADWP was invited to participate in a discussion of the Hansen Project to be held on April 6, 2004.

On the evening of April 6, 2004, LADWP participated in an open meeting sponsored by the Tujunga Watershed Stakeholders. Approximately 45 people attended the meeting including representatives of the Foothill Trails Neighborhood Council.

On April 13, 2004, LADWP provided written information to the Seventh Council District relative to the process of selecting the project route and the locations throughout Los Angeles County using recycled water. LADWP was still compiling the public comments as the close of the comment period had been extended to April 16.

On April 13, LADWP staff contacted the Foothill Trails Neighborhood Council to request the Neighborhood Council's input. The Neighborhood Council's representative suggested LADWP attend the meeting on April 15 to start a dialogue.

On April 15, 2004, LADWP attended the Foothill Trails Neighborhood Council meeting. During the meeting, LADWP offered to present information on the Hansen Project at their May 20, 2004 meeting and extend the comment period until May 28, 2004 in order to allow this Neighborhood Council to provide written comments.

During the month of April, LADWP staff worked with the Seventh Council District staff to set dates for meetings with the Seventh Council District constituents. Unfortunately, the meetings set for May 4 and 14 were canceled by the Seventh Council District staff.

On May 10, 2004, LADWP initiated contact with the Pacoima, Sunland-Tujunga, and Sun Valley Area Neighborhood Councils to invite their comments on the Hansen Project.

On May 12, 2004, LADWP staff contacted the Sunland-Tujunga Neighborhood Council and the Pacoima Neighborhood Council. The Sunland-Tujunga Neighborhood Council suggested attending that evening's meeting and addressing their board during the open forum agenda item. The Pacoima Neighborhood Council suggested attending their upcoming May 19 meeting.

On May 12, 2004, LADWP attended the Sunland-Tujunga Neighborhood Council meeting to invite their input into the Hansen Project. The Neighborhood Council asked two of their board members to review the project with LADWP and then a formal presentation and discussion may be scheduled for their June 9, 2004 meeting.

On May 19, 2004, LADWP made a brief presentation of the Hansen Project to the Pacoima Neighborhood Council (Pacoima Council). The Pacoima Council moved to establish an ad hoc committee chaired by their Vice-President, Steve Love, to work with LADWP to better understand the nature of the project and examine how the project may be a benefit to their community.

On May 20, 2004, LADWP was ready to make a presentation to the Foothill Trails Neighborhood Council; however, the meeting was canceled when the Neighborhood Council determined that conducting the meeting as scheduled may result in a violation of the Brown Act.

On May 27, 2004, LADWP extended the comment period to July 2, 2004 to allow additional time for the Neighborhood Councils to consider the Hansen Project.

On June 15, 2004, LADWP met with Mr. Steve Love, Vice President of the Pacoima Neighborhood Council, to discuss the proposed project. Mr. Love expressed interest in developing a long-term relationship with LADWP beyond the Hansen Project.

On June 17, 2004, due to a misunderstanding of the closing date of the comment period, the agenda for the Foothill Trails Neighborhood Council meeting was published without including a discussion of the Hansen Project. Therefore, no presentation was made at the meeting

Upcoming Community Meeting

July 14, 2004 - LADWP is scheduled to make a presentation on the Hansen Project to the Sunland-Tujunga Neighborhood Council.

Written Comments on the Draft IS/PMND

As of April 26, 2004, LADWP has received 31 letters from 29 entities regarding the proposed Hansen Project. The attached matrix (Attachment 2) summarizes the nature of the comments. Most of the comments mirrored each other. The majority of the comments are relative to either a concern over the use of recycled water, a suggestion to use the water at Lopez Canyon Landfill as an alternative project, or a concern over the adequacy of a mitigated negative declaration thus requesting the preparation of an EIR. LADWP is currently preparing individual written responses to the comments.

- ***Potential Effects of Using Recycled Water*** - One of the issues raised during the review period is the potential effect of using recycled water to irrigate the Angeles National Golf Club and its effect on the sensitive plant and animal species in the Tujunga Wash. Testing conducted in 2001 indicates that the Tillman Plant recycled water does not contain pharmaceutical residuals of concern. The water does have a higher concentration of salts than drinking water. The golf course irrigation system is designed to only irrigate the turf areas of the greens, tee boxes, and fairways. No artificial irrigation of the natural areas is allowed under the golf club's conditional use permit. The course's drainage system is designed to collect surface runoff from the fairways and subsurface flows from the greens and tee boxes and direct these flows into the irrigation ponds, which are the water source for the irrigation system. The ponds have been designed to allow blending of recycled water with potable water and the return drainage flows.

Periodically, the turf areas may be irrigated with potable water to flush any buildup of salts from the plant root zone. This flushing will eventually push the salts well below the root zone of the sensitive plant species.

The Tujunga Wash above Hansen Dam was recently federally listed as a designated habitat for the Santa Ana Sucker, which is listed as a threatened species. As a point of reference, the Santa Ana River in Orange County, which supports a large healthy population of Santa Ana Suckers, is predominantly recycled water during the summer months. Research on the habitat within the Santa Ana River conducted by the Santa Ana Watershed Project Authority indicates that the chemical constituency of recycled water does not have a negative impact on the Santa Ana Sucker. The water's temperature and clarity, along with the river depth and local sediment characteristics, are the factors most relevant to the fish reproduction and survivability.

- ***Alternative Routes and Users*** - The Hansen Project was developed to deliver the greatest quantity of recycled water for irrigation at the lowest unit cost. Alternative routes traversing Wentworth Street and/or Wheatland Avenue would not have been able to displace as much potable water used for irrigation as the proposed route because the majority of service connections for irrigating the Hansen Dam Golf Course and Recreation Area, as well other private properties are located along Osborne Street and Foothill Boulevard west of the Angeles National Golf Club location. A pipeline installed within Wentworth Street to supply the Angeles National Golf Club would have to be extended west along Foothill Boulevard and also south on Osborne Street in order to serve the same amount of water. The proposed route also allows for potential future expansion of the pipe system toward the Lopez Canyon Landfill.

  The use of recycled water at the Angeles National Golf Club has been considered since the Los Angeles Golf Club Draft EIR was distributed for comment in February 1996. In that Draft EIR, the use of recycled water was considered a potential mitigation measure to offset the golf course's heavy use of potable water. The final mitigation-monitoring program required the golf course to investigate using recycled water for irrigation as well as dual plumbing the facilities for use in other non-potable applications such as toilet flushing. This mitigation-monitoring program was then adopted by the Los Angeles City Council as part of the Conditional Use for the project on April 28, 1998.

Media Coverage of the Project

In addition to the published notice of availability of the IS/PMND, LADWP has worked with both the Daily News and the Foothill Sentinel on news stories covering the Hansen Project. The newspaper articles announced some of the public meetings discussing the project as well as the extended date for submitting written comments.

Future of Water Recycling in the City

Los Angeles' water conservation and recycling programs have contributed to the City's current water use being the same as it was some 20 years ago. However, future population growth combined with increasing demands on our current potable water sources necessitates additional conservation and recycling.

Through the IRP Stakeholders process, the public has recommended a vision for the future of Los Angeles. Refining their vision, the Stakeholders specifically recommended the following:

> "Maximize water recycling whenever possible. Focus efforts on irrigation and industrial demands, while continuing to develop environmental enhancement and groundwater recharge uses."

LADWP will continue to work with the Stakeholders while a recycled water master plan for the City is being developed under the IRP. Currently, there are ten projects in LADWP's capital improvement program envisioned to utilize recycled water to replace potable water used for irrigation and industrial demands. Four of those projects, the South Valley Water Recycling Facilities, the Sepulveda Basin Water Recycling Project, the Hansen Project, and the East San Fernando Water Recycling Project would utilize recycled water produced at the Tillman Plant and deliver the water promised under the various funding agreements. The remaining projects are located in other parts of the City using the waters from the Los Angeles/Glendale Water Reclamation Plant, the Terminal Island Wastewater Treatment Plant, and the Hyperion Treatment Plant.

Conclusion

LADWP must continually plan for and invest in water resource projects to insure a continued reliable source of water for Los Angeles. Water recycling is a key resource, and the projects to develop it are vital. Public participation is a necessary and desirable component of project planning. This report has demonstrated the ongoing efforts to include community concerns in the Hansen Project. LADWP is committed to continuing these efforts through construction of the Hansen Project.

Hansen Area Water Recycling Project – A Brief Project Summary

Project Purpose:

Under the California Urban Water Management Planning Act, the Los Angeles Department of Water and Power (LADWP) is required to develop a water management plan every five years to identify short- and long-term water demand measures to meet growing water demands. The plan includes identifying alternative sources of water, such as recycled water. As part of its efforts to promote the efficient use and management of its water resources, LADWP has proposed the Hansen Area Water Recycling Project. The proposed project has been developed to provide an alternative water supply for irrigational uses, and is an extension of the East Valley Water Recycling Project whereby recycled water generated at the Tillman Water Reclamation Plant is conveyed to the east side of the San Fernando Valley. Water reclamation/recycling is defined as the beneficial use of treated wastewater for such planned uses as irrigation, industrial cooling, recreation, groundwater recharge, environmental enhancement, and other uses permitted under California law. The Governor of California, U.S. Environmental Protection Agency – Region 9, California Water Resources Control Board, California Department of Health Services, and the U.S. Bureau of Reclamation have adopted statements in support of water recycling as an important element of California's water supply policy. The Los Angeles City Council has adopted a goal of reusing 250,000 acre-feet of water per year (AFY) by the year 2010.

Project Description:

The Hansen Area Water Recycling Project would consist of the construction of approximately 31,900 linear feet of ductile iron pipeline, a booster pump station, and a one-million-gallon recycled water storage tank. Construction of the proposed project would occur along existing street rights-of-way or within open space. The proposed project would also include the construction of appurtenant structures in public rights-of-way, such as flow meters, maintenance access holes, valves, and/or vaults, as necessary for the operation and maintenance of the pipeline.

Once completed, the proposed project would expand the utilization of reclaimed/ recycled water for irrigation of the Hansen Dam Recreation Area and the newly opened Angeles National Golf Course (ANGC), and thus, reduce the amount of potable (drinking) water required for non-potable uses, ensuring that the best and purest sources of water will be reserved for the highest use – public drinking water. Using recycled water for non-potable uses, such as irrigation, also provides for improved availability, and therefore reliability, of the City's potable (drinking) water supply. The proposed project would ultimately provide recycled water to the new distribution infrastructure to serve other recycled water customers within the eastern San Fernando Valley.

Project Location:
The proposed pipeline alignment from south to north is as follows:

- LADWP Valley Generating Station (VGS) from the connection to a seven-million-gallon, recycled water storage tank and new booster pump station, southeast to Truesdale Street (which is an LADWP service road through the VGS site);
- Northeast along Truesdale Street to its intersection with Glenoaks Boulevard (through LADWP property);
- Glenoaks Boulevard from Truesdale Street northwest to Osborne Street;
- Osborne Street from Glenoaks Boulevard to Foothill Boulevard;
- Foothill Boulevard from Osborne Street to Conover Street; and
- Conover Street (via Conover fire road) to the connection to a new one-million-gallon, recycled water storage tank just north of ANGC.

The proposed booster pump station would be located entirely within the LADWP VGS facility. The proposed recycled water storage tank would be located in an open space area just north of ANGC that would be donated to the City by ANGC as part of the golf courses dedication of utility easements. The ANGC was required to investigate the potential use of recycled water for irrigation as part of their Conditional Use Permit issued by the City. The proposed location of the tank would not be a part of the 40 acres of the northerly slopes directly adjacent to the golf course that AGNC has committed to dedicate to the Santa Monica Mountains Conservancy.

Construction Activities:
If approved, the construction of the proposed project is anticipated to commence in November 2005 and would be completed by May 2008.

Construction of the pipeline portion of the proposed project would occur at the LADWP VGS facility, along existing street rights-of-way, and within open space areas using an open trench excavation method, except at busy intersections (e.g., Glenoaks Boulevard at Osborne Street, and Osborne Street at Foothill Boulevard), where the proposed pipeline may be installed using the jacking method. The pipeline segment along Glenoaks Boulevard across Tujunga Wash would be installed by either the pipe jacking method, or it may be suspended from the existing bridge.

The open trench method involves site preparation, excavation, and shoring of an open trench, pipe installation, backfilling, and street and/or landscape restoration. Construction would progress along the alignment with the maximum length of open trench at one time being approximately 500 feet in length with a work area of approximately 2,000 linear feet.

The jacking method involves site preparation, excavation, and shoring of jacking and receiving pits, pipe installation, backfilling, and street and/or landscape restoration. Pipe-jacking is an operation in which the soil ahead of the steel casing is excavated and brought out through the steel casing barrel while the casing is being pushed forward by a horizontal, hydraulic jack which is placed at the rear of the casing. Once the casing is placed, the pipe is installed inside the casing. Although the installation of pipeline using the jacking method avoids the continuous surface disruption common to the open trench method, some surface disruption is unavoidable because jacking and receiving pits are required and may be located in the street right-of way.

Both construction methods would require an off-site staging area. Since the publication of the Initial Study/Mitigated Negative Declaration (IS/MND), LADWP has determined that it will not use the vacant parcel south of Interstate 210 at Wheatland Avenue as a staging area, and has

proposed an area adjacent to the Hansen Dam Sports Complex bordered by the I-210 Osborne offramp on the north and Foothill Blvd on the south and west that is currently leased to Valley Crest for tree storage as an alternate location.

Construction of the booster pump station would occur within the bermed area surrounding the existing seven-million-gallon storage tank at the LADWP VGS facility. Construction of the station would occur entirely on LADWP property and include grading, foundation work, trenching for pipeline sections, and construction of the pump station facility.

Construction of the one-million-gallon storage tank would consist of grading/excavation for the new tank, tank construction, backfilling, and site restoration, including landscaping. Construction of the tank would also involve the minor improvement of the Conover Fire Road for maintenance access, cut and fill slopes to comply with building codes, a down slope berm and landscaping to help conceal the tank from local views, and surface drainage benches to control erosion from surface runoff. The proposed tank would also be installed partially below grade to help conceal the tank from community view. Actual construction methods and activities associated with the construction of the storage tank would be developed primarily with the engineer and the contractor consistent with criteria developed by jointly by LADWP and the affected community representatives. Conover Fire Road would remain unpaved and trail access would be maintained during and after completion of project construction.

Construction of the proposed project would also be conducted in accordance with:

- Compliance with Standard Specifications for Public Works Construction (Greenbook);
- Compliance with City of Los Angeles Work Area Traffic Control Handbook (WATCH);
- Compliance with traffic control plans approved by the Los Angeles Department of Transportation to allow acceptable levels of service, traffic safety, and emergency access for the local community;
- Compliance with South Coast Air Quality Management District (SCAQMD) applicable requirements, including Rule 403 concerning fugitive dust emissions;
- Compliance with all applicable water quality rules, regulations, and standards (e.g., Clean Water Act, California Water Code, Basin Plan for the Los Angeles Region);
- Monitoring by a qualified archaeologist during construction in sensitive areas;
- Monitoring by a qualified paleontologist during construction in sensitive areas;
- Proper maintenance and operation of muffling devices on all construction equipment;
- Use of noise control devices, such as equipment mufflers, enclosures, and barriers;
- Staging of construction operations as far from noise-sensitive uses as possible; and
- Maintenance of effective communication with local residents during construction including keeping them informed of the schedule, duration, and progress of construction.

Recycled Water Quality Information:

Recycled water use is encouraged in the State of California to preserve other higher-quality water supplies for other uses. The State Legislature has established a goal of using 1,000,000 AFY of recycled water by the year 2010. The California Water Code states that the use of potable domestic water for non-potable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscape areas, and industrial and irrigation uses, is a waste and unreasonable use of water if recycled water is available that meets specified conditions for its use.

The State of California has specific regulations regarding use of recycled water. These laws comprise sections of the State Health and Safety Code, Water Code, and the California Code of Regulations (CCR). CCR, Title 22, Sections 60301 through 60355 contain the Water Recycling

Criteria. CCR, Title 17, Sections 7583 through 7586 and 7601 through 7605 set forth criteria for protecting the potable water system from cross-connections with non-potable supplies. The State of California Department of Health Services (DHS) has set water recycling criteria (Title 22), and the Regional Water Quality Control Board enforces the Title 22 regulations and issues the necessary permits for the production, testing, and operations of recycled water facilities, such as the Tillman Water Reclamation Plant, to assure all regulations and conditions are met.

The City of Los Angeles has been successfully using recycled water for irrigation purposes since 1979 when the Department of Recreation and Parks began irrigating with recycled water in portions of Griffith Park. Today, LADWP, County Sanitation District, Las Virgenes Municipal Water District, and West Basin Municipal Water District serve recycled water to nearly 500 different sites for irrigation and industrial purposes throughout Los Angeles County. Some of the sites within the City currently using recycled water for irrigation include:

- Sepulveda Basin Wildlife Lake;
- Lake Balboa;
- Loyola Marymount University;
- Universal Studios;
- Charles Neilson Youth Park;
- Griffith Park (Wilson and Harding Golf Course and Gene Autry Museum Area);
- Los Angeles International Airport; and
- Lakeside Golf Club.

The recycled water to be distributed through the proposed Hansen Area Water Recycling Project facilities would meet or exceed all state and federal water quality criteria for recycled water supplies. Disinfected, tertiary treated wastewater, such as would be used in the proposed project, is approved for uses including the following:

- Food crops, including edible root crops;
- Parks and playgrounds;
- School yards;
- Residential landscaping; and
- Unrestricted access golf courses.

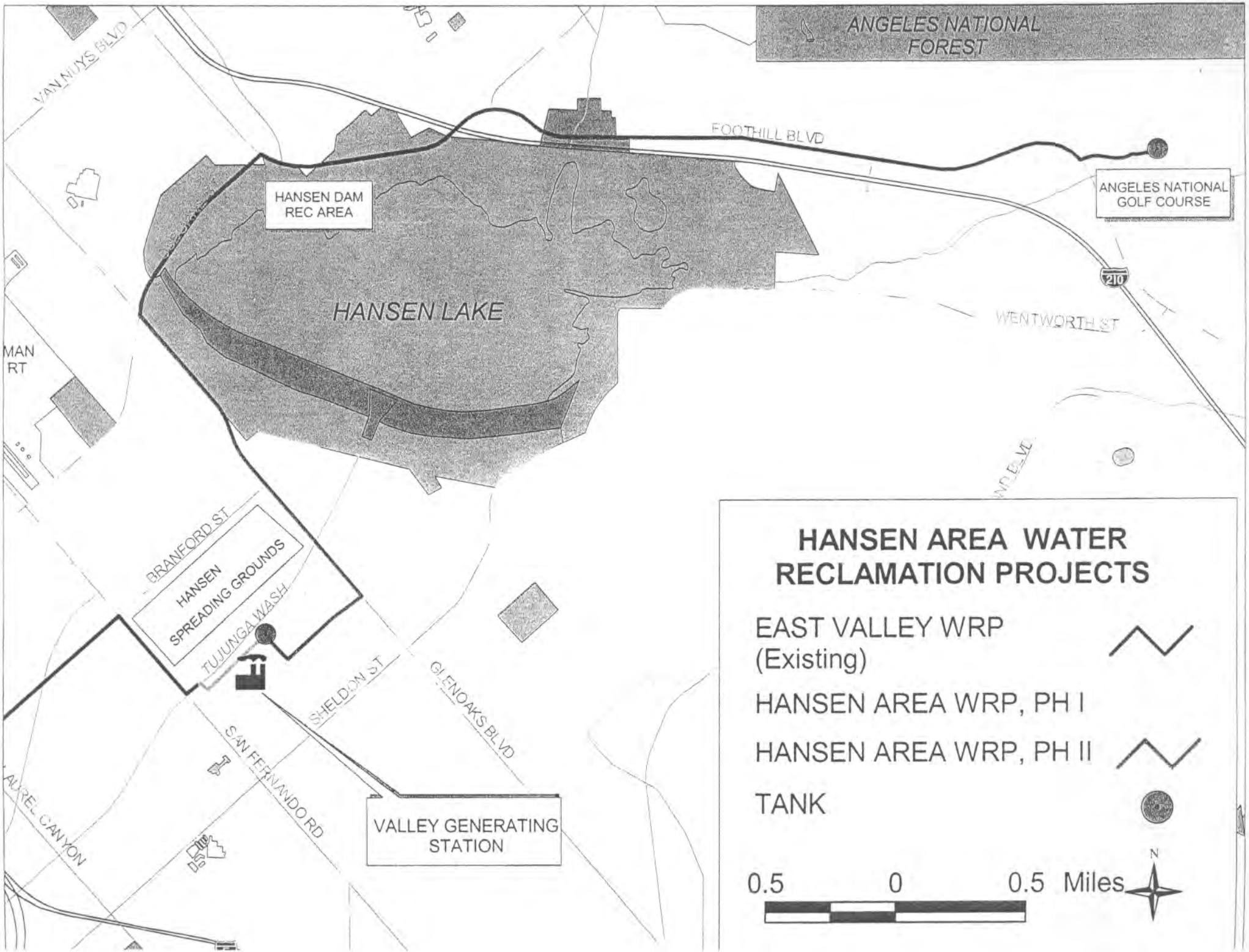
The State code would allow private (restricted access) golf courses, such as ANGC, to be irrigated with disinfected secondary water, but full tertiary treatment and disinfection, which produces higher quality water, would be performed on all water used as part of this project.

LADWP has tested its water supplies for the presence of pharmaceutical compounds including the recycled water from the Tillman Plant. The water was analyzed for 29 pharmaceutical compounds heavily prescribed in the United States. No drug residues were detected in any of the water supplies. LADWP continues to work with the health and regulatory agencies to ensure the water delivered to its customers meets all regulatory requirements.

Contact Information

For additional information on the Hansen Water Recycling Project, please contact Mr. Steve Ott at (213) 367-4187 or Ms. Sarah Easley at (213) 367-1276.

May 2004


ANGELES NATIONAL FOREST
VAN NUYS BLVD
FOOTHILL BLVD
HANSEN DAM REC AREA
HANSEN LAKE
ANGELES NATIONAL GOLF COURSE
210
WENTWORTH ST
BRANFORD ST
HANSEN SPREADING GROUNDS
TUJUNGA WASH
SHELDON ST
GLENOAKS BLVD
SAN FERNANDO RD
VALLEY GENERATING STATION
HANSEN AREA WATER RECLAMATION PROJECTS
EAST VALLEY WRP (Existing)
HANSEN AREA WRP, PH I
HANSEN AREA WRP, PH II
TANK
0.5 0 0.5 Miles
N

Hansen Area Water Recycling Project
Comment Letter Analysis

6/8/2004

		Concerned About the Impacts of the Use of Recycled Water	Requested the Preparation of an EIR	Proposed the Use of Lopez Canyon as an Alternative Project Location	Concerned with Accuracy/ Thoroughness of Information in MND	Concerned About the Impacts of Construction Activities	Concerned About Aesthetics, Safety or Location of Proposed Tank	Requested/ Expressed Concern Over Notification of Public Agencies	Concerned About Community Notification/ Requested Extension of Comment Period	Concerned that Existing Regulations/ Plans Will Not Be Adhered To	Concerned About the Cumulative Significance of Project Impacts	Concerned About Project Funding/ That Costs to LADWP Are Not Justified	Supports the Beneficial Use of Recycled Water/ Would Like to Use Recycled Water at Their Facility	Provided Agency Guidance Regarding Construction or Permitting	Concerned that Project Will Encourage Increased Local Development
1	Agnew	X	X	X								X			
2	Baumann (1)	X	X		X	X			X		X				
	Baumann (2)			X			X	X		X					
3	Beeson	X	X	X			X								
4	Benson (1)				X	X	X	X	X	X	X				
	Benson (2)	X	X	X											
5	Bowling						X								
6	Bronner	X	X			X									
7	Brown		X		X		X								
8	Buswell, California Department of Transportation													X	
9	Clark	X	X					X							
10	Cole								X						
11	Drucker	X	X	X	X	X									
12	Eick, Shadow Hills Property Owners Association	X	X		X		X	X		X		X			
13	Garrett, Natural History Museum of Los Angeles County					X	X	X							
14	Ghezzi	X	X	X		X									
15	Grossman, Pacoima Beautiful	X	X	X	X	X									
16	Hake-Church			X	X		X								
17	Hanson	X	X		X										
18	Harder	X	X	X	X	X									
19	Harding	X	X												
20	Johnson, Memorial Park and Mortuary												X		
21	Kruger	X	X	X	X		X	X							
22	Leu	X		X	X										
23	Markes	X	X												
24	McGregor		X	X											
25	O'Keefe, CA Department of Health Services												X	X	
26	Parkin	X	X	X	X	X									
27	Petrinka	X							X						X
28	Sekulic	X	X	X											
29	Tarnowski		X			X									
30	Whitakes	X	X		X										
31	Yore	X													
	totals: (x/31)	21	21	14	13	10	9	6	4	3	2	2	2	2	1

ATTACHMENT 2

Attachment C - Draft IS/MND for the Hansen Area Water Recycling Project, January 2004

Initial Study/Proposed Mitigated Negative Declaration

Hansen Area Water Recycling Project

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

January 2004

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Appendices

SECTION 1.0

PROJECT DESCRIPTION

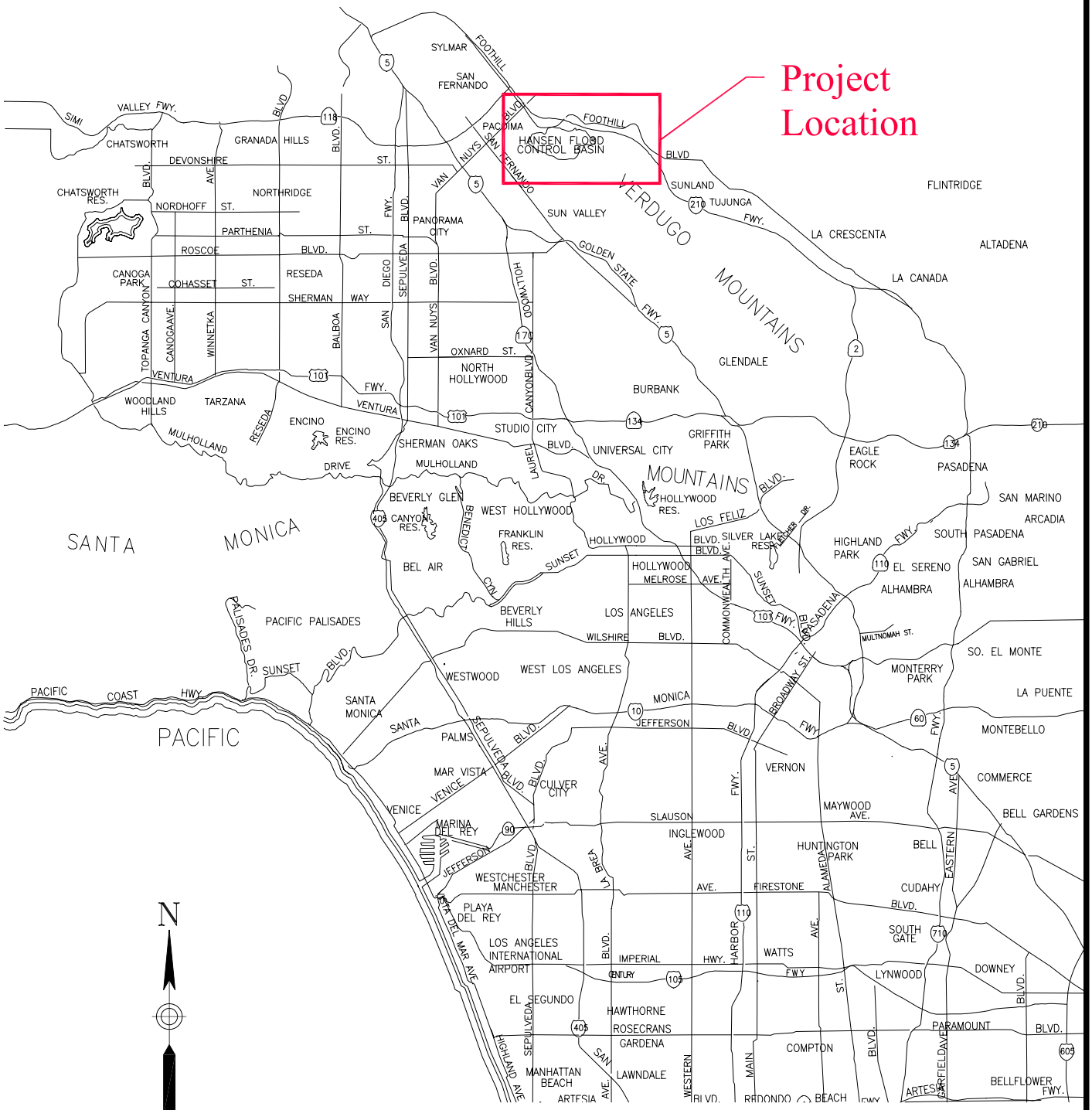
1.1 Project Location

The Los Angeles Department of Water and Power (LADWP) is proposing a new recycled water conveyance pipeline, a booster pump station, and a 1 MG recycled water storage tank, known as the Hansen Area Water Recycling Project (proposed project), which would be located in the Sun Valley, Pacoima, and Lakeview Terrace communities of the City of Los Angeles. The area through which the project is proposed to be constructed is bounded by Interstate 5 (Golden State Freeway) to the southwest, U.S. Highway 118 (Ronald Reagan Freeway) to the northwest, Sheldon Street/Wentworth Street to the southeast, and the Angeles National Forest to the north/northeast (*See Figure 1, Project Vicinity Map*). The alignment of the proposed project, from south to north, is as follows (*See Figure 2, Proposed Alignment)*:

- LADWP Valley Generating Station (VGS) site from the connection to a 7 million gallon (MG) recycled water storage tank and new booster pump station, southeast to Truesdale Street (which is an LADWP service road through the VGS site);
- Northeast along Truesdale Street to its intersection with Glenoaks Boulevard (through LADWP property);
- Glenoaks Boulevard from Truesdale Street northwest to Osborne Street;
- Osborne Street from Glenoaks Boulevard to Foothill Boulevard;
- Foothill Boulevard from Osborne Street to Conover Street; and
- Conover Street (via the Conover fire road/equestrian trail) to the connection to a new 1 MG recycled water storage tank in an open space area just north of the Angeles National Golf Course.

1.2 General Setting

The proposed project is located within an urbanized area in the City of Los Angeles. Land uses in the vicinity of the proposed project are predominantly open space, public facilities, and residential, though limited commercial and industrial uses occur along the proposed alignment. No schools or hospitals occur in close proximity to the approximately 6-mile alignment (i.e., within ½ mile), with the exception of the Lakeview Terrace Special Care Center sanitarium, near the northern terminus of the project alignment.



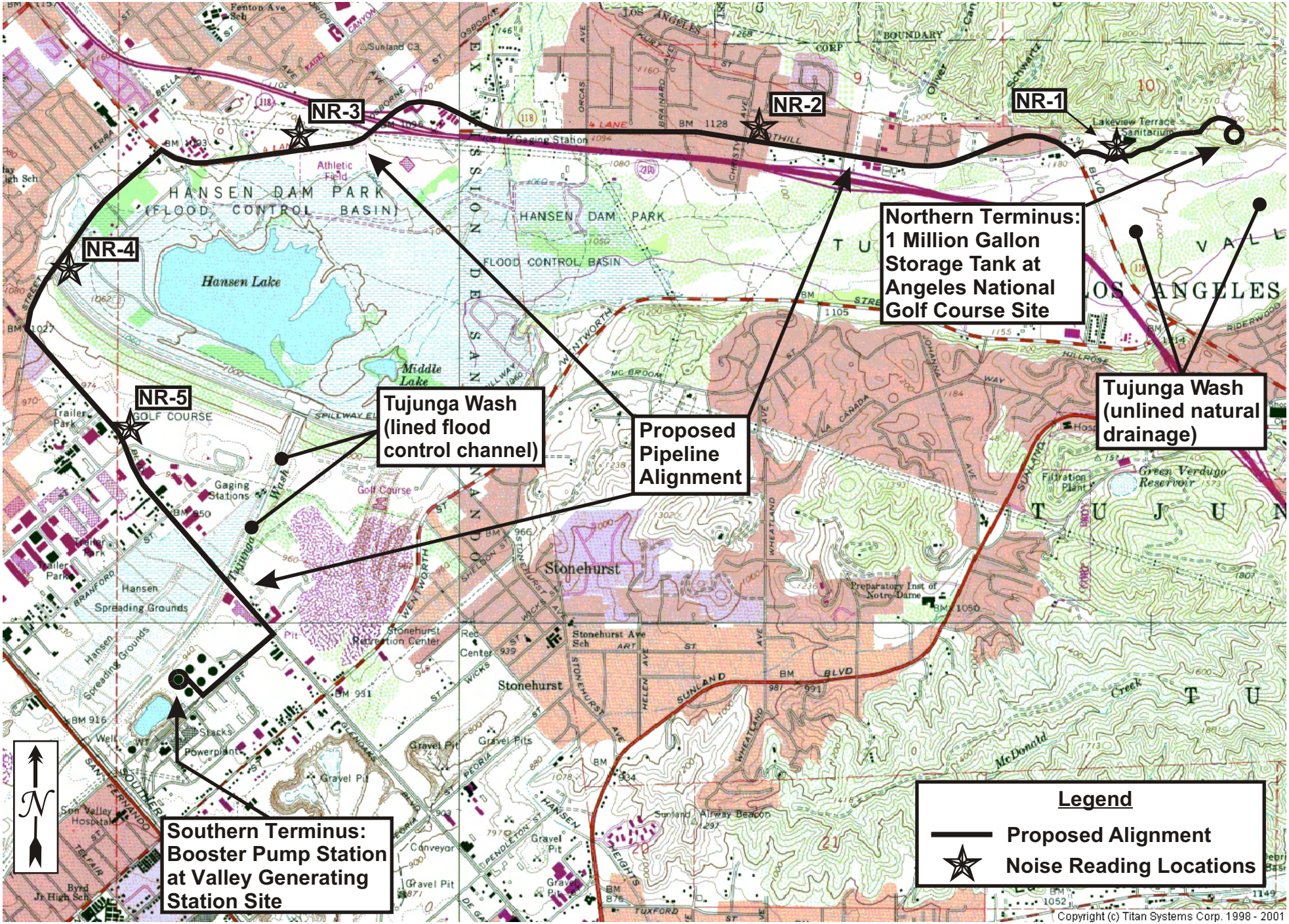
LOS ANGELES DEPARTMENT OF WATER AND POWER
HANSEN AREA WATER RECYCLING PROJECT

Project Vicinity Map

CDM

Figure 1

DATE: Nov 24, 2003 1:20pm XREFS:
DWG: P:\3031\39909 Hansen Area WRP\Hnsn-Fig01-VicMap.dwg USER: negretegd



3031-38423-RT.DRAFT 12/19/2003

LOS ANGELES DEPARTMENT OF WATER AND POWER
HANSEN AREA WATER RECYCLING PROJECT

CDM

Proposed Alignment

Figure 2

1.3 Project Objectives

The objectives of the proposed project include the following:

- Improve the reliability of the City's potable water supply through water recycling and conservation programs.
- Utilize reclaimed water generated by the Donald C. Tillman Water Reclamation Plant (TWRP) for irrigation at the Angeles National Golf Course and the Hansen Dam Recreation Area (HDRA).
- Serve as part of an aggressive water recycling program, which may be expanded to serve more areas of the eastern San Fernando Valley.

1.4 Historical Perspective

The LADWP recognizes the need to improve the reliability of the water supply for the City of Los Angeles by increasing the use of recycled water. LADWP has established a goal of meeting increased water demand through aggressive water recycling and conservation programs. The proposed project has been developed to provide an alternative water supply for irrigation uses (and potential future industrial uses). The proposed project is an extension of the East Valley Water Recycling Project (EVWRP), whereby water produced at the TWRP is conveyed to the east side of the San Fernando Valley. Prior to construction of the proposed project, a new 30-inch diameter pipeline connection to the existing EVWRP 54-inch pipeline and new 7 MG recycled water storage tank (located at the LADWP VGS site) would be completed by LADWP.

1.5 Project Description

The proposed project would involve the construction of approximately 26,900 linear feet of 20-inch diameter and 5,000 linear feet of 16-inch diameter ductile iron pipeline (total of about 6 miles), a booster pump station, and a 1 MG recycled water storage tank. Construction of the pipeline components of the proposed project would occur within the LADWP VGS site, along existing street rights-of-way, or within open space areas using the open-trench method, except at busy intersections (e.g., Glenoaks Boulevard at Osborne Street, and Osborne Street at Foothill Boulevard), where the pipeline may be jacked. Construction of the booster pump station would occur entirely within the LADWP VGS site and would not affect any surrounding uses. The 1 MG storage tank would be constructed within an open space area to the north of the Angeles National Golf Course. The proposed pipeline also includes construction of appurtenant structures (e.g., maintenance/access holes, flow meters, valves, and/or vaults). The pipeline, booster pump station, and storage tank would be constructed sequentially, such that only one project component would be under construction at any given time throughout the construction period.

The proposed project would provide recycled water to the Angeles National Golf Course and the HDRA, but is ultimately planned to provide recycled water to new distribution

infrastructure to serve other recycled water customers within the eastern San Fernando Valley.

1.6 Construction Methods

1.6.1 Pipeline Construction

Construction of the pipeline portion of the proposed project would occur at the LADWP VGS site, along existing street rights-of-way, and within open space areas using the open-trench method, except at busy intersections (e.g., Glenoaks Boulevard at Osborne Street and Osborne Street at Foothill Boulevard), where the proposed pipeline may be installed using the jacking method. In sequence, the general process for both methods consists of site preparation, excavation and shoring, pipe (and/or appurtenant structure) installation and backfilling, and street restoration (where applicable). Both construction methods would require an off-site staging area to temporarily store supplies and materials. Possible staging areas identified for the proposed project include: the LADWP VGS facility and vacant parcel(s) south of Interstate 210 at Wheatland Avenue along the north side of the Tujunga Wash (unlined natural drainage).

Open-Trench Excavation

Open-trench excavation is a construction method typically utilized to install pipelines and its appurtenant structures, which include maintenance holes, flow meters, valves, and vaults. In general, the process consists of site preparation, excavation and shoring, pipe installation and backfilling and street restoration (where applicable). Construction usually progresses along the alignment with the maximum length of open trench at one time being approximately 500 feet in length with a work area of up to approximately 2,000 linear feet. The following is a description of the phases of construction for trenching:

Site Preparation. Traffic control plans, where necessary, are first prepared in coordination with the Los Angeles Department of Transportation (LADOT) to detour and delineate the traffic lanes around the work area. The approved plans are then implemented. The existing pavement along the pipeline alignment is then cut with a concrete saw or otherwise broken and then removed using jackhammers, pavement breakers, and loaders. Other similar equipment may be used. The pavement is removed from the project site and recycled, reused as a backfill material, or disposed of at an appropriate facility.

Excavation and Shoring. A trench is excavated along the alignment using backhoes, excavators, or other types of excavation equipment. Portions of the trench adjacent to some utilities may be manually excavated. The excavated soil may be temporarily stored in single rows adjacent to the trenches, stored at off-site staging areas, or immediately hauled away off-site.

The size of the trench for the proposed 16- and 20-inch diameter pipeline would be approximately 4 feet wide by 500 feet long. In addition, depending on the depth of adjacent substructures along the alignment, the depth of the trench would range from approximately 7 feet to 25 feet below the ground surface**.** As the trench is excavated,

the trench walls are supported, or shored, typically with hydraulic jacks or trench boxes.[1] Steel or wood sheeting between H-beams (e.g., beam and plate) may also be used for shoring. Other similar shoring methods may be utilized. Utilities not relocated prior to trenching are supported as excavation and shoring occurs.

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

Pipe Installation and Backfilling. Once the trench has been excavated and shored, pipelaying begins. Bedding material (such as sand or slurry) would be placed on the bottom of the trench. Pipe segments would then be lowered into the trench and placed on the bedding. The segments would be connected to one another at the joints. The amount of pipe installed in a single day varies, but is expected to range from 40 to 120 feet per day for the proposed project. Prior to backfilling, appurtenant structures would be installed as necessitated by design. After laying the pipe and securing the joints, the trench is immediately backfilled with native soils, crushed miscellaneous bases, or cement slurry. Not more than 500 feet of trench, or the amount of open trench in one day, is left unbackfilled.

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

Jacking Method

Pipe-jacking, which is a form of tunneling, may be the method utilized in the proposed project when open-trenching is not feasible, to avoid large substructure utilities, or to avoid the disruption of busy intersections (e.g., Glenoaks Boulevard at Osborne Street and Osborne Street at Foothill Boulevard). Although the installation of pipelines using jacking techniques avoids the continuous surface disruption common to open-trench construction, some surface disruption is unavoidable because jacking and receiving pits are required and may be located in street rights-of-way.

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

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

[1] Trenches greater than 5 feet deep require shoring to prevent the sides from caving in or collapsing (an OSHA requirement).

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

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

For the proposed project, the size of the jacking pit would be approximately 40 feet long, 12 feet wide and 25 feet deep. The size of the receiving pit would be approximately 18 feet long, 10 feet wide, and 25 feet deep. The pits are excavated with backhoes, cranes, and other excavation equipment. The excavated soil is immediately hauled away. As excavation occurs, the pits are shored utilizing a beam and plate shoring system.

Pipe Installation. Once the pits are constructed and shored, a horizontal hydraulic jack is placed at the bottom of the jacking pit. An approximate 30-inch diameter steel casing is lowered into the pit with a crane and placed on the jack. A simple cutting shield is placed in front of the pipe segment to cut through the soil more easily. As the jack pushes the steel casing and cutting shield into the soil, soil is removed from within the leading casing with an auger or boring machine, either by hand or on a conveyor. Once the segment has been pushed into the soil, a new segment is lowered, set in place, and connected to the casing that has been pushed. Installation of the 30-inch diameter steel casing is expected to progress at approximately 20 feet per day. Once the casing has been installed, the 16- and/or 20-inch diameter carrier pipe is then lowered and placed on the jacks, which push the pipe into the steel casing. Installation of the 16- and/or 20-inch diameter pipe is expected to progress at approximately 40 feet per day.

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

1.6.2 Storage Tank Construction

Construction of the 1 MG storage tank at the northern terminus of the proposed alignment would consist of grading/excavation for the new tank, tank construction, and backfilling and site restoration (including landscaping). The new tank would be partially below grade, and would be built using pre-stressed concrete on the slopes just north of the Tujunga Wash (unlined natural drainage) on the Angeles National Golf Course site. Tank construction would include the following activities:

- Construction of new surface water diversion channels to accommodate tank location (construction of formwork and placing of pre-stressed concrete sections);

- Excavation to accommodate tank and related construction activities including excavation for a gradually descending access road (to be backfilled after construction);
- Removal of excavated material;
- Delivery of construction materials;
- Foundation work (drill shafts or other foundation possibly requiring removal of existing material and subsequent compaction);
- Placing of forms and concrete for the foundation;
- Construction of the tank 85 feet in diameter and 25 feet in height (10 feet of this height would be below grade) using pre-stressed concrete sections;
- Backfilling around below-grade portion of completed tank; and
- Site restoration, including landscaping.

Construction of the tank would also include construction of an access road for maintenance access, cut and fill slopes to the south and north of the tank site (to achieve a 2:1 [horizontal to vertical] slope per Los Angeles Building Code), a down slope berm with trees and other landscaping (to help conceal the tank from local views), and surface drainage benches located 25 feet apart to control erosion from surface runoff.

Actual construction methods and activities associated with construction of the storage tank would be developed primarily by the engineer and the contractor consistent with criteria developed jointly by LADWP and the affected community representatives.

1.6.3 Booster Pump Station Construction

Construction of the booster pump station would occur within the bermed area surrounding the existing 7 MG storage tank at the LADWP VGS site. Construction of the booster pump station would include grading, foundation work, trenching for pipeline sections, and construction of the pump station facility. Specifically, booster pump station construction would include the following activities:

- Excavation and removal of excavated materials;
- Delivery of construction materials;
- Foundation work (drill shafts or other foundation requiring removal of existing material and subsequent compaction);
- Construction of forms and placing of main floor concrete below grade;
- Delivery and installation of suction manifold and connection to outlet line;
- Delivery and installation of surge tanks;
- Construction of above-grade structure (mezzanine level, crane, roof, etc.)

- Delivery and installation of equipment (pumps, piping, instruments, ventilation, etc.); and
- Final alignment of access road.

As would be the case with the proposed storage tank, actual construction methods and activities associated with construction of the booster pump station would be developed primarily by the engineer and the contractor consistent with criteria developed jointly by LADWP and the affected community representatives.

1.7 Construction Schedule

If approved, the construction of the proposed project is anticipated to commence in November 2005 and would be completed by May 2008.

1.8 Land Use Consistency

Construction and operation of the proposed project would be consistent with all surrounding land use designations within the project site.

1.9 Environmental Setting

As mentioned previously, the area surrounding the proposed project is characterized by public facilities and open space, as well as residential and limited industrial and commercial development. There are very limited, if any, sensitive natural resources along the majority of the project alignment (i.e., near existing roadways and public facilities), though some sensitive wildlife resources may exist in proximity to some areas near the proposed project, such as the Tujunga Wash Natural Resource Preserve (designated as an Ecologically Important Area in the City of Los Angeles General Plan).

1.10 Environmental Safeguards

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

1.11 Required Permits and Approvals

Permits and/or necessary approvals may be required from the following agencies for the activities described:

- City of Los Angeles, Department of Transportation – approval for temporary lane closures and traffic/transportation-related issues during construction;
- Federal/California Occupational Safety and Health Administration (OSHA/Cal OSHA) – approval for pipe-jacking operations (with reference to harmful substances in tunnels);

- California Department of Transportation (Caltrans) – encroachment permit for trenching activities near Interstate 210 on- and off-ramps at Foothill Boulevard;
- County of Los Angeles, Department of Public Works – coordination of jacking activities beneath various intersections (utility locations);
- County of Los Angeles, Department of Health Services – coordination of design and construction involving activities that might potentially affect water supplies;
- City of Los Angeles, Department of Public Works, Bureau of Engineering – approval for trench excavation activities within public right-of-way;
- City of Los Angeles, Department of Recreation and Parks – coordination of construction activities within the Hansen Dam Park Flood Control Basin
- United States Army Corps of Engineers – coordination of construction activities within and near the Hansen Dam Park Flood Control Basin (also called the Hansen Dam Recreation Area by the City of Los Angeles Department of Recreation and Parks); and
- Los Angeles Regional Water Quality Control Board – approval for general construction runoff and/or construction dewatering discharges under National Pollutant Discharge Elimination System (NPDES).

SECTION 2.0

INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2003) to determine if the project may have any significant effect on the environment.

A brief explanation is provided for all determinations. A "No Impact" or "Less than Significant Impact" determination is made when the project will not have any impact or will not have a significant effect on the environment for that issue area based on a project-specific analysis.

CEQA ENVIRONMENTAL CHECKLIST FORM AND INITIAL STUDY

Project Title:

Hansen Area Water Recycling Project

Lead Agency Name and Address:

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

Contact Person and Phone Number:

Charles Holloway
Supervisor of Environmental Assessment
Los Angeles Department of Water and Power
(213) 367-0285

Project Location:

Public street rights-of-way, open space areas, and City of Los Angeles Department of Water and Power (LADWP) Valley Generating Station (VGS) property within the Sun Valley, Pacoima, and Lakeview Terrace communities of the City of Los Angeles (see Section 1.1 for details).

Council District:

Districts 2, 6, and 7

Project Sponsor's Name and Address:

Los Angeles Department of Water and Power
Water Resources Business Unit – Water Recycling Group
111 North Hope Street, Room 1315

Los Angeles, CA 90012

General Plan Designation:

The Hansen Area Water Recycling Project (proposed project) would directly affect the following general plan designations: single-family residential, commercial, industrial, public facilities, and open space.

Zoning

The zoning designations vary along the proposed alignment.

Description of Project:

The proposed project would involve the construction of approximately 26,900 linear feet of 20-inch diameter and 5,000 linear feet of 16-inch diameter (about 6 miles) ductile iron pipeline, a booster pump station, and a 1 million gallon (MG) recycled water storage tank. Construction of the pipeline components of the proposed project would occur within the LADWP VGS site, along existing street right-of-way, or within open space areas using the open-trench method, except at busy intersections (e.g., Glenoaks Boulevard at Osborne Street and Osborne Street at Foothill Boulevard), where the pipeline may be jacked. Construction of the booster pump station would occur entirely within the LADWP VGS site and would not affect any surrounding uses. The 1 MG storage tank would be constructed within an open space area north of the Angeles National Golf Course site. The proposed project also includes construction of appurtenant structures (e.g., maintenance/access holes, flow meters, valves, and/or vaults). The proposed project would provide recycled water to the Angeles National Golf Course and the Hansen Dam Recreation Area (HDRA), but is ultimately planned to provide recycled water to new distribution infrastructure to serve other recycled water customers within the eastern San Fernando Valley.

Surrounding Land Uses and Setting:

The proposed project is located within an urbanized area in the City of Los Angeles. Land uses in the vicinity of the proposed project are predominantly open space, single-family residential and public facilities, though limited commercial (near the northern terminus) and industrial (near the southern terminus) uses occur along the proposed alignment. Several existing and proposed schools, and one hospital (i.e., the Lakeview Terrace Special Care Center sanitarium) are located in proximity (i.e., within ½ mile) to the approximately 6-mile alignment.

Agencies that may have an interest in the proposed project:

<u>Responsible/Trustee Agencies</u>

- Federal/California Occupational Safety and Health Administration
- City of Los Angeles Department of Transportation
- Los Angeles Regional Water Quality Control Board
- City of Los Angeles Department of Public Works

- California Department of Transportation
- California Department of Fish and Game

Reviewing Agencies

- United States Army Corps of Engineers
- California Department of Health Services
- County of Los Angeles Department of Health Services
- County of Los Angeles Department of Public Works
- City of Los Angeles Police Department
- City of Los Angeles Department of Recreation and Parks
- City of Los Angeles Fire Department

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, including at least one impact that is a "Potentially Significant Impact" as indicated by the Environmental Checklist below, and discussed in Section 3.0, .

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

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Thomas C. Wailor For — 1/22/04

Signature — Date

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

ENVIRONMENTAL CHECKLIST

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				**X**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			**X**	
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			**X**	
II. AGRICULTURE RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				**X**
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan [e.g., the South Coast Air Quality Management District (SCAQMD) Plan or Congestion Management Plan]?				**X**

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X

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

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	
IX. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
X. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing,				X

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
necessitating the construction of replacement housing elsewhere?				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII. PUBLIC SERVICES --				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	
XIV. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management			X	

Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
agency for designated roads or highways?				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

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

SECTION 3.0

DISCUSSION OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

INTRODUCTION

The following discussion addresses impacts to various environmental resources, per the Initial Study Checklist questions contained in Appendix G of the State CEQA Guidelines, as summarized above in Section 2.0, Initial Study Checklist. In some instances, one response addresses two or more checklist questions.

I. AESTHETICS

Would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed project is located within an urbanized area surrounded by single- and multi-family residential, industrial, open space, and commercial uses, as well as various public facilities (e.g., power plant, flood control basin/recreation areas, and other drainage infrastructure). No scenic vistas exist within the area of the proposed project; therefore, the construction and operation of the project would not have any effect on scenic vistas. No impacts are expected, and no mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. No scenic resources (including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway) exist along or near the proposed project. Roadways that provide scenic views within the state of California are classified by California Department of Transportation (Caltrans) as officially designated scenic highways.[2] The proposed alignment is not located in the vicinity of a state scenic highway. The closest officially designated state scenic highway to the proposed project is State Route 2, which is located approximately 9 miles southeast of the project at the closest point. Roadways that provide scenic views within and around the City of Los Angeles are classified by the City of Los Angeles as designated scenic highways.[3] The City of Los Angeles has classified two roadway segments within the proposed project vicinity designated scenic highways: Interstate 210 and Wentworth Street. However, the proposed project would not

[2] California Department of Transportation website: *http://www.dot.ca.gov/hq/LandArch/scenic_highways/*. "Officially Designated State Scenic Highways (Los Angeles County)". Updated July 25, 2000.
[3] City of Los Angeles Department of City Planning. *Transportation Element of the General Plan, Map E: Scenic Highways in the City of Los Angeles.* June 1998.

permanently adversely affect views from these roadways, as the proposed project within these areas would be buried below grade. Therefore, no impacts to state scenic highways would result from construction or operation of the proposed project and no mitigation is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The proposed project would involve the construction of approximately 6 miles of underground recycled water pipeline with appurtenant structures, a booster pump station (at the existing LADWP VGS facility), and a 1 MG storage tank north of the Tujunga Wash (unlined natural drainage) on the Angeles National Golf Course site. Visual impacts to the surrounding community would occur temporarily during the construction phase, and only for a maximum of about three months in any one location (within the viewshed of any one residence or business), with the exception of the construction of the storage tank, which would occur for approximately 12 months at the proposed tank site. Because the pipeline would be placed underground, operation of the pipeline would not affect the visual character of the community in the vicinity of the project. Some of the appurtenant structures (such as air vacuum valves and cabinets), the booster pump station, and a large portion of the 1 MG storage tank would be located aboveground. The pipeline appurtenances would be located within the sidewalk portion of the public right-of-way (for on-street segments of the pipeline) or in other open space areas along the proposed alignment, and are necessary for the operation and maintenance of the pipeline. These structures would be placed, as necessary, along the alignment. The booster pump station would be located within the LADWP VGS site, which is a power plant facility that contains various structures similar in appearance and function to the proposed booster pump station (i.e., the power plant currently utilizes booster pumps for boiler feed water). The 1 MG storage tank would be located within an open space area north of Tujunga Wash (unlined natural drainage) on the Angeles National Golf Course property, and would be placed such that impacts to the visual character of the golf course and surrounding property would be minimized (i.e., the storage tank would be mostly buried belowground, and the aboveground portion would be obscured from view by a downslope berm and landscaping, including trees and other vegetation); it is anticipated that such landscaping would reduce or avoid any adverse visual effects of the proposed storage tank. These structures are common elements of the urban environment, and although they may be placed aboveground in proximity to, though not within, roadways designated as scenic highways by the City of Los Angeles General Plan Transportation Element, they are not anticipated to significantly impact the visual character of the surrounding community. Therefore, impacts to the visual character of the surrounding area would be less than significant, and no mitigation is required.

d) Create new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The pipeline portion of the proposed project would be located below ground along roadways (Local and Secondary Streets and Major Class II Highways) and in open space areas surrounded by a dense mixture of several urban uses, including residential, industrial, and commercial uses and various public facilities. The proposed booster pump station and a portion of the 1 MG storage tank would be located aboveground at the LADWP VGS site, and in an open space area north of Tujunga Wash (unlined natural drainage) on the Angeles National Golf Course property, respectively. External and internal night and day illumination is already in place within the project area, where necessary. The proposed project would involve the construction of a below ground recycled water pipeline and the associated aboveground appurtenant structures, booster pump station, and 1 MG storage tank; the construction phase would be temporary and activities would only occur during daylight hours. However, traffic control and safety measures, such as barriers, reflective signs, and flashing warnings would be implemented, as necessary, and could introduce sources of light and/or glare into the surrounding area, but only on a temporary basis during construction. Operation of the pipeline portion of the proposed project would occur below the ground surface of the existing grade; therefore, no light or glare impacts would occur from pipeline operation. Operation of the pipeline appurtenant structures, the booster pump station, and the storage tank would not create or require new sources of light or glare. No significant impact is anticipated from the construction and operation of the proposed project and no mitigation is required.

II. AGRICULTURE RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

See item c) below.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

See item c) below.

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

No Impact. The proposed project would be located in an urbanized area of the City of Los Angeles, which is surrounded by single-family residential, open space, commercial, public facility, industrial uses. No agricultural operations, aside from small-scale greenhouse agriculture, occur in the vicinity of the pipeline portion of the proposed project. Operation of the

proposed pipeline would occur passively below ground along the alignment, operation of the booster pump station would occur within the developed LADWP VGS site, and operation of the 1 MG tank would occur within an open space area north of the Tujunga Wash (unlined natural drainage) on the Angeles National Golf Course property (characterized by native chaparral vegetation); no agricultural operations occur at the LADWP VGS site, the open space area north of the Angeles National Golf Course, or along the proposed pipeline alignment. Construction of the proposed project is not expected to interfere with any agricultural activities. Therefore, there would be no potential for the construction or operation of the project to convert farmland, either directly or indirectly, to non-agricultural use. No piece of land in the surrounding vicinity is zoned specifically for agricultural uses or enrolled in a Williamson Act contract. The construction and operation of the proposed project does not involve changes to the existing environment that could result in the conversion of Farmland to non-agricultural use. No impacts are expected and no mitigation is required.

III. AIR QUALITY

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., the SCAQMD Plan or Congestion Management Plan)?

No Impact. Within the project area, the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) have responsibility for preparing an Air Quality Management Plan (AQMP),[4] which addresses federal and state Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality and establishes thresholds for daily operational emissions. Environmental review of individual projects within the region must demonstrate that daily construction and operational emissions thresholds as established by SCAQMD would not be exceeded, nor would the number or severity of existing air quality violations be increased. The construction and operation of the proposed project is being undertaken to help meet the needs of LADWP for water system operational flexibility and reliability. The implementation of the proposed project would not affect population, housing units, or employment, and would thus be consistent with SCAG's Growth Management Plan. The proposed project would not have an impact on the type, size, or location of transportation infrastructure in the long-term, and would thus be consistent with SCAG's Regional Mobility Plan. The construction and operation of the proposed project is not anticipated to exceed the AQMP's daily emissions thresholds (as discussed in items b) and c) below), and would therefore not conflict with or obstruct implementation of the AQMP. There are no Los Angeles County Metropolitan Transportation Authority (MTA)

[4] The AQMP is developed using SCAG population data, as included in SCAG's Growth Management Plan (GMP) and Regional Mobility Plan (RMP). The AQMP estimates regional air pollutant emissions based on per capita emissions, as determined by historic AQMD air monitoring data. Inasmuch as SCAG population growth data is used to develop the AQMP, GMP and RMP SCAG and SCAQMD base regional traffic, as associated air quality, conditions on per capita impacts.

Congestion Management Plan (CMP) arterial corridors or intersections within or along the proposed project site. No such arteries, intersections, or freeway onramps or offramps would be affected by project construction activities or by operation of the proposed project (see Section XV, Transportation/Traffic, starting on page 3-48, for further discussion of the CMP and related traffic issues). As such, no impacts to the local or regional air quality or congestion management plans would occur, and no mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

See item c) below.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The proposed project would be located in the Los Angeles County sub-area of the South Coast Air Basin (Basin). Los Angeles County is designated as a "non-attainment" area for ozone (O_3), particulates (PM_{10}), carbon monoxide (CO) and a "maintenance" area for oxides of nitrogen (NO_x), which denotes that it had once been a non-attainment area for the pollutant. SCAQMD, the regional agency that regulates stationary sources, maintains an extensive air quality monitoring network to measure criteria pollutant concentrations throughout the Basin. The closest air monitoring station to the project is the East San Fernando Valley Air Monitoring Station, located in the City of Burbank, near the intersection of West Magnolia Boulevard and Interstate 5. The latest air quality data at this station (1999-2001) is summarized in Table 1.

State and federal agencies have set ambient air quality standards for various pollutants. Both California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) have been established to protect the public health and welfare (See Table 2). SCAQMD has prepared the *CEQA Air Quality Handbook* to provide guidance to those who analyze the air quality impacts of proposed projects. Based on Section 182(e) of the Federal Clean Air Act, SCAQMD has set significance thresholds for five criteria pollutants. The SCAQMD significance threshold criteria are shown in Table 3.

Table 1
Ambient Air Quality Monitoring Summary,
East San Fernando Valley Air Monitoring Station 1999-2001

Pollutant/Standard	Number of Days Threshold Were Exceeded at Monitoring Station and Maximum Levels During Such Violations		
	1999	**2000**	**2001**
Ozone			
State 1-Hour ≥ 0.09 ppm	13	16	15
Federal 1-Hour > 0.12 ppm	0	3	2
Federal 8-Hour > 0.08 ppm	3	11	5
Max. 1-Hour Conc. (ppm)	0.12	0.15	0.13
Max. 8-Hour Conc. (ppm)	0.10	0.12	0.10
Carbon Monoxide			
State 1-Hour > 20 ppm	0	0	0
State 8-Hour > 9.0 ppm	0	0	0
Federal 8-Hour > 9.5 ppm	0	0	0
Max 1-Hour Conc. (ppm)	9	8	6
Max. 8-Hour Conc. (ppm)	9.0	6.1	4.9
Nitrogen Dioxide			
State 1-Hour > 0.25 ppm	0	0	0
Max. 1-Hour Conc. (ppm)	0.18	0.17	0.25
Sulfur Dioxide			
State 1-Hour > 0.25 ppm	0	0	0
Max. 1-Hour Conc. (ppm)	0.01	0.01	0.01
Inhalable Particulates (PM10)[b]			
State 24-Hour > 50 µg/m^3	35	23	23
Federal 24-Hour > 150 µg/m^3	0	0	0
Max. 24-Hour Conc. (µg/m^3)	82.0	74.0	86.0
Fine Particulates (PM2.5)[b]			
Federal 24-Hour > 65 µg/m^3	0.9	4.3[a]	3.4
Max. 24-Hour Conc. (µg/m^3)	79.5	84.4[a]	94.7

ppm = parts per million
µg/m^3 = micrograms per cubic meter
NM = Not Measured
[a] Less than 12 full months of data and may not be representative.
[b] Percent of samples exceeding standard.

Source: South Coast Air Quality Management District, Current Air Quality Trends (Tables). http://www.aqmd.gov/smog

Table 2
State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone (O_3)	8-Hour	N/A	0.08 ppm (157 µg/m^3)	Same as Primary
	1-Hour	0.09 ppm (180 µg/m^3)	0.12 ppm (235 µg/m^3)	Same as Primary
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	1-Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	N/A
Nitrogen Dioxide (NO_2)	Annual	N/A	0.053 ppm (100 µg/m^3)	Same as Primary
	1-Hour	0.25 ppm (470 µg/m^3)	N/A	N/A
Sulfur Dioxide (SO_2)	Annual	N/A	0.030 ppm (80 µg/m^3)	N/A
	24-Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	N/A
	3-Hour	N/A	N/A	0.5 ppm (1300 µg/m^3)
	1-Hour	0.25 ppm (655 µg/m^3)	N/A	N/A
Respirable Particulate Matter (PM_{10})	AAM	20 µg/m^3	50 µg/m^3	Same as Primary
	24-Hour	50 µg/m^3	150 µg/m^3	Same as Primary
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	15 µg/m^3	Same as Primary
	24-Hour	N/A	65 µg/m^3	Same as Primary
Lead (Pb)	Quarterly	N/A	1.5 µg/m^3	Same as Primary
	Monthly	1.5 µg/m^3	N/A	N/A
Sulfates	24-Hour	25 µg/m^3	N/A	N/A

ppm = parts per million (by volume).
N/A = Not applicable.
µg/m^3 = micrograms per cubic meter.
mg/m^3 = milligrams per cubic meter.
AAM = Annual arithmetic mean.

Source: California Air Resources Board, Ambient Air Quality Standards (California and Federal), Available: http://www.arb.ca.gov/aqs/aaqs2.pdf [September 8, 2003].

Table 3
SCAQMD Air Quality Impact Significance Thresholds

Pollutant	Construction Phase		Operational Phase
Air Pollutant	***(lbs/day)***	***(tons/quarter)***	***(lbs/day)***
Reactive Organic Compounds (ROCs)	75	2.50	55
Carbon Monoxide (CO)	550	24.75	550
Nitrogen Oxides (NO_x)	100	2.50	55
Sulfur Oxides (SO_x)	150	6.75	150
Particulates (PM_{10})	150	6.75	150

Source: SCAQMD, CEQA Air Quality Handbook, 1993

Construction Emissions

The air quality impacts of construction and operations were evaluated using methods recommended in the latest SCAQMD *CEQA Air Quality Handbook* (April 1993). This analysis also used emission factors from the California Air Resources Board EMFAC2002 (Version 2.2) model for mobile source emissions (construction worker commute vehicles, on-site welder's truck and pick-up trucks [light trucks], and heavy diesel truck haul trips). Construction equipment emissions factors were obtained from Table A9-8-A and A9-8-B of the SCAQMD *CEQA Air Quality Handbook*. The following air quality analysis assumes that all proposed project components are constructed sequentially (individually), in order to minimize air quality impacts to the surrounding community. Refer to Appendix A for emissions and load factors, assumptions, and calculations.

Pipeline Construction

Air contaminant emissions would result from the use of construction equipment, construction worker vehicles, and truck haul trips during construction of the pipeline component of the proposed project. Site preparation and construction activities would primarily consist of operation of the following: one excavator, one water truck, one welder's truck, three pick-up trucks, one dump truck, one loader, one backhoe, one crane, one compactor, one paver, and several (24 assumed) construction worker vehicles that would be traveling to and from the proposed project site from the nearest LADWP facility. On a typical workday, workers would travel directly to one of the predetermined staging areas, where they would gather equipment and proceed in work crews to the construction site along the alignment. Additionally, diesel emissions would result from truck trips associated with supply delivery (including pipeline sections and construction equipment), transport of excavated soil from trenching (soil would be transported to the closest appropriate LADWP facility, as is standard LADWP

practice, for reuse or ultimate disposal), and transport of backfill and paving materials to the site. It is assumed that such truck operations would require 6 trucks to travel 20 miles per day, or an equivalent mix of trucks and trips, to a maximum of 120 miles per day.

Project-related construction traffic and operation of diesel equipment would have a temporary effect on air quality in the vicinity of the proposed pipeline alignment. Construction worker vehicles and diesel-powered equipment would emit ROCs, CO, NO_x, SO_x, and PM_{10}. These emissions would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards.

The air quality emissions calculations for the pipeline component of the proposed project assume 24 employees would drive 20 miles round-trip each day. Under these assumptions, air emissions from worker commutes would not exceed SCAQMD significance threshold criteria. This is due to the fact that these emissions would represent a very small percentage of the total emissions projected to result from pipeline construction activities, with the exception of CO and ROCs. Worker commute emissions for these pollutants would be 7.1 lbs/day of CO (11.5% of total CO daily pipeline construction emissions) and 0.7 lbs/day of ROC (7.0% of total ROC daily pipeline construction emissions). Haul trips associated with soil transport, paving material transport, and equipment/pipeline deliveries would result in a relatively small increase in criteria pollutant emissions for mobile equipment, with the exception of NO_x. Haul trip emissions for NO_x would be 5.5 lbs/day (5.9% of the total daily NO_x pipeline construction emissions). See Table 4 for daily construction emissions totals for the pipeline component of the proposed project (i.e., from stationary [off-road] construction equipment operation, on-site light truck trips, heavy diesel haul truck trips, and worker commutes).

Pipeline construction activities are not anticipated to generate significant amounts of PM_{10}. The emissions estimates in Table 4 for PM_{10} include dust from site preparation activities and from operation of on-site gasoline and diesel construction equipment. The dust generation factor used (assuming worst-case conditions) is 0.42 tons per acre-month, which is recommended by SCAQMD.[5] It is estimated that the pipeline construction activities would emit approximately 5.9 pounds per day of PM_{10} resulting from dust generation. This estimate is based on an LADWP work area 2,000 feet long and 4 feet wide (for 16- and 20-inch pipeline), yielding an exposed area of 8,000 square feet, or approximately 0.184 acre. This dust generation estimate represents approximately 57.2% of the total PM_{10} emissions projected to result from pipeline construction activities, which is 10.4 pounds per day, including gasoline and diesel emissions (see Appendix A for detailed calculations). Although dust generation accounts for a large percentage of PM_{10} emissions,

[5] Midwest Research Institute. *Improvement of Specific Emission Factors (BACM Project No. 1) Final Report, for SCAQMD* (for PM_{10} dust emissions). March 29, 1996.

the daily emissions of this pollutant would be well below SCAQMD significance thresholds, as indicated in Table 4.

Table 4
Estimated Air Emissions From Pipeline Construction

Air Pollutant	Estimated Emissions (lbs/day)	SCAQMD Threshold (lbs/day)
Reactive Organic Compounds (ROCs)	9.58	75
Carbon Monoxide (CO)	62.04	550
Nitrogen Oxides (NO_x)	93.50	100
Sulfur Oxides (SO_x)	7.57	150
Particulates (PM_{10})	10.38*	150

Source: SCAQMD, *CEQA Air Quality Handbook*, April 1993; EMFAC2001.
Notes: *Includes a worst-case dust generation factor of 0.42 tons/acre-month for PM_{10} during site preparation, based on SCAQMD's recommendations for conservative assessment.

Booster Pump Station/Storage Tank Construction

As would be the case with pipeline construction, air contaminant emissions would result from the use of construction equipment, construction worker vehicles, and truck haul trips during booster pump station and storage tank construction. The daily air contaminant emissions resulting from storage tank construction also apply to the construction of the booster pump station, despite the fact that the booster pump station would require substantially less construction activity to complete relative to the storage tank. This is due to the similarity in construction equipment mix for the two components; the storage tank will require approximately the same type and number of pieces of equipment as the booster pump station, but the booster pump station will require considerably less intensive use of equipment and less overall time to complete. As such, the emissions estimates for the booster pump station are considered conservative.

Site preparation and construction activities for the booster pump station and storage tank would primarily consist of operation of the following: one bulldozer, two water trucks, one welder's truck, three pick-up trucks, two dump trucks, one loader, one backhoe, one crane, one compactor, one grader, one concrete mixer, and several (24 assumed) construction worker vehicles that would be traveling to and from the proposed project site from the nearest LADWP facility (the work crew that would construct the pump station and storage tank would follow the same procedures as during pipeline construction activities). Diesel emissions would also result from truck trips associated with supply delivery (including storage tank sections, booster

pump station components, and landscaping materials for storage tank site) and transport of excavated soil from grading for booster pump station and storage tank construction. As is the case for the pipeline component, it is assumed that truck operations would also require, 6 trucks to travel 20 miles per day, or an equivalent mix of trucks and trips, to a maximum of 120 miles per day.

Project-related construction traffic and operation of diesel equipment would have a temporary effect on air quality in the vicinity of the pump station and storage tank sites. Construction worker vehicles and diesel-powered equipment would emit ROCs, CO, NO_x, SO_x, and PM_{10}. These emissions would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards.

As indicated above, similar to pipeline construction activities, the air quality emissions calculations for the pump station and storage tank assume 24 employees would drive 20 miles round-trip each day. As such, worker commute-related emissions would be essentially the same as those for the pipeline component. Worker commute emissions for CO and ROC, relative to the overall emissions for booster pump and storage tank construction, would be 7.1 lbs/day of CO (11.8% of total CO daily pump station/storage tank construction emissions) and 0.7 lbs/day of ROC (6.2% of total daily ROC pump station/storage tank construction emissions). Haul trips associated with soil transport, storage tank and pump station component transport, and other equipment deliveries would result in a relatively small increase in criteria pollutant emissions for mobile equipment, with the exception of NO_x. Haul trip emissions for NO_x would be 5.5 lbs/day (6.7% of the total daily NO_x pump station/storage tank construction emissions). See Table 5 for daily pump station/storage tank construction emissions totals (i.e., from stationary [off-road] construction equipment operation, on-site light truck trips, heavy diesel haul truck trips, and worker commutes).

It is estimated that the pump station/storage tank construction activities would emit a maximum of approximately 34.1 pounds per day of PM_{10} resulting from dust generation. This estimate is based on an area of disturbance of approximately 46,000 square feet (approximately 1.056 acres), which includes the area for slope improvements, access road, and the tank site itself. This estimate also applies to (and is conservative for) construction of the booster pump station because the pump station, as indicated above, is anticipated to require considerably less area of ground disturbance/soil exposure (i.e., the storage tank would be substantially larger than the booster pump station). This dust generation estimate represents approximately 91.3% of the total PM_{10} emissions projected to result from pump station/storage tank construction activities, which is 37.4 pounds per day, including gasoline and diesel emissions (see Appendix A for detailed calculations). Although dust generation accounts for a large percentage of PM_{10} emissions, the daily emissions of this pollutant would be well below SCAQMD significance thresholds, as indicated in Table 5.

Table 5
Estimated Air Emissions From Booster Pump Station/Storage Tank Construction

Air Pollutant	Estimated Emissions (lbs/day)	SCAQMD Threshold (lbs/day)
Reactive Organic Compounds (ROCs)	10.94	75
Carbon Monoxide (CO)	60.02	550
Nitrogen Oxides (NO_x)	81.81	100
Sulfur Oxides (SO_x)	6.71	150
Particulates (PM_{10})	37.37*	150

Source: SCAQMD, *CEQA Air Quality Handbook*, April 1993; EMFAC2001.
Notes: *Includes a worst-case dust generation factor of 0.42 tons/acre-month for PM_{10} during site preparation, based on SCAQMD's recommendations for conservative assessment.

As indicated in Tables 4 and 5, all criteria pollutants for all project components would be below SCAQMD significance thresholds for construction activities. Furthermore, construction emissions would be short-term in nature, and would be limited only to the time period when construction activity is taking place (i.e., 3 months for pipeline, and up to 12 months for storage tank construction). Additionally, the construction emissions analysis incorporated conservative assumptions. For example, all 24 workers were assumed to drive their own vehicle 20 miles round-trip each workday, daily construction equipment emissions for booster pump station construction were considered to be the same as those for construction of the storage tank, and worst-case conditions for fugitive dust generation were assumed (i.e., high wind conditions with minimal, if any, soil stabilization). As such, construction emissions are not expected to add to long-term air quality degradation. Further, the proposed project would implement standard SCAQMD-approved construction procedures, such as those provided in Tables 11-2 and 11-3 of the *CEQA Air Quality Handbook* (for exhaust emissions), and comply with applicable provisions of the most recently-adopted SCAQMD Rule 403 (Fugitive Dust). Adherence to such procedures and provisions of the SCAQMD are standard practice for any construction project in the South Coast Air Basin (SCAB), and are not project-specific mitigation measures, as project-related construction emissions impacts were found to be less than significant, as discussed above. Procedures listed in Tables 11-2 and 11-3 and the provisions of Rule 403 are summarized as follows:

Mitigation for On-Road Mobile Source Emissions - Construction:

1. Configure construction parking to minimize traffic interference;
2. Provide temporary traffic control during all phases of construction activities to improve traffic flow (e.g., flag person);
3. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 p.m. and 6:00 a.m. and between 10:00 a.m. and 3:00 p.m.);
4. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees;
5. Implement a shuttle service to and from retail services and food establishments during lunch hours;
6. Develop a construction traffic management plan that includes, but is not limited to:
    a. Rerouting construction trucks off congested streets
    b. Consolidating truck deliveries
    c. Providing dedicated turn lanes for movement of construction trucks and equipment on- and off-site
7. Prohibit truck idling in excess of two minutes.

Mitigation for Off-Road Mobile Source Emissions - Construction:

1. Methanol-fueled pile drivers;
2. Suspend use of all construction equipment operations during second stage smog alerts;
3. Prevent trucks from idling longer than two minutes;
4. Use electricity from power poles rather than temporary diesel power generators;
5. Use electricity from power poles rather than temporary gasoline power generators;
6. Use of methanol or natural gas on-site mobile equipment instead of diesel; and
7. Use of propane- or butane-powered on-site mobile equipment instead of gasoline.

Rule 403 Provisions:

1. A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source.
2. A person conducting active operations within the boundaries of the South Coast Air Basin shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.
3. A person conducting active operations outside the boundaries of the South Coast Air Basin may utilize reasonably available control measures in lieu of best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.
4. A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:
    a. Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.
    b. Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
5. Any person in the South Coast Air Basin shall:
    a. Prevent or remove within one hour the track-out of bulk material onto public paved roadways as a result of their operations; or
    b. Take at least one of the actions listed in Table 3 of Rule 403 and:
        i. Prevent the track-out of bulk material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations; and
        ii. Remove all visible roadway dust tracked-out upon public paved roadways as a result of active operations at the

conclusion of each work day when active operations cease.

Based on the above, with implementation of the applicable adopted SCAQMD Rules and procedures, construction-related emissions impacts would not be considered significant and no mitigation is required.

Operation Emissions

Operation of the proposed project (including the pipeline, storage tank, and pump station) would not generate any emissions of criteria pollutants, as it would operate as a closed system and would only store and transport recycled water. As such, no operational air quality impacts would result from the proposed project and no mitigation is required.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The proposed project would, for the most part, not be immediately bordered by sensitive receptors, namely single- and multi-family residences and other pollutant-sensitive uses (e.g., public and private schools and hospitals). Daily construction emissions would be below significance thresholds, as noted above. Furthermore, construction activities would generally occur in one location for a maximum of approximately 3 months for pipeline construction, or up to 12 months for storage tank construction, such that any one sensitive receptor, if present, would be exposed to pollutants from construction activities for a limited period of time (the storage tank site is relatively remote, with very limited populations located within ¼ mile). As such, impacts to sensitive receptors from construction-related air emissions would be less than significant. To further ensure that impacts are less than significant, the measures listed above under item c) would be implemented. The operation of the proposed project would not result in a significant impact to adjacent sensitive receptors, due to the fact that operation of the proposed project would not generate vehicle trips or produce air emissions. No significant impacts are anticipated and no mitigation is required.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Any odors (e.g., odors from construction vehicle emissions) would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions). Other than construction vehicle operation, no activities are anticipated to occur, and no materials or chemicals would be stored on-site, that would have the potential to cause odor impacts during the construction and operation of the proposed project (including the pipeline and any appurtenant structures, the booster pump station, and storage tank). Also, the operation of the proposed project would not include any activity that would create odors. Therefore, no significant odor impacts would occur and no mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. A search of available literature was conducted to identify special status plants, wildlife, and habitats known to occur in the vicinity of the proposed project by reviewing the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2003), *Federal Register* notices and final rules, a compendia of special status species published by the California Department of Fish and Game (CDFG), the California Natural Diversity Database (CNDDB, 2003) as well as other resources as appropriate (see Appendix B, Biological Resources Technical Memorandum). [6]

This review provided current or historic records of 15 plant species: Nevin's barberry (*Berberis nevinii*), Plummer's mariposa lily (*Calochortus plummerae*), many-stemmed dudleya (*Dudleya multicaulis*), Davidson's bush mallow (*Malacothamnus davidsonii*), Braunton's milk-vetch (*Astrgalus brauntonii*), Southern tarplant (*Centromadia parryi* ssp. *australis*), San Fernando Valley spineflower (*Chorizanthe parryi* ssp *fernandina*), Greata's aster (*Aster greatea*), Parish's brittlescale (*Atriplex parishii*), Lewis's evening primrose (*Camissonia lewisii*), slender-horned spineflower (*Dodecahema leptocerus*), Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), San Gabriel linanthus (*Linanthus concinnus*), and California orcutt grass (*Ocuttia californica*) and 13 animal species: Santa Ana speckled dace (*Rhinichthys ossulus* ssp. *3*), Santa Ana sucker (*Catostomuis santanae*), arroyo toad (*Bufo californicus*), western spadefoot toad (*Scaphiopus hammondi*), mountain yellow-legged frog (*Rana muscosa*), silvery legless lizard (*Anniella pulchra pulchra*), orange-throated whiptail (*Cnemidophorus hperythrus beldingi*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), southwestern pond turtle (*Clemmys marmorata pallida*), yellow-billed cuckoo (*Coccyzus americanus occidentalis*), California gnatcatcher (*Polioptila californica*), least Bell's vireo (*Vireo bellii pusillus*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) in the vicinity of the project. Not one of these species was observed during surveys, and none are expected to occur due to lack of potentially supporting habitat within the proposed alignment.

No adverse direct or indirect effects from construction and operation of the proposed project are expected and no mitigation is required.

[6] BonTerra Consulting. *Biological Letter Report for the Los Angeles Department of Water and Power Hansen Area Water Reclamation Project (Tujunga Wash Alignment), City of Los Angeles, California*. January 9, 2004

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The literature search recorded the current or historic presence of 5 sensitive habitats within the project vicinity: California walnut woodland, Southern sycamore alder riparian woodland, Southern cottonwood-willow riparian forest, South coast live oak riparian forest, and Riversidian alluvial fan sage scrub. Riversidian alluvial fan sage scrub was observed within the Tujunga Wash (unlined natural drainage), proximal to the proposed alignment. Nonetheless, the proposed project would not affect any such sensitive habitat, as construction activities near the northern terminus of the alignment would occur at considerable distance from the Tujunga Wash and associated habitat areas. Furthermore, direct impacts to any of these habitats that occur near the proposed alignment would be avoided through limiting the construction footprint to within existing roadway rights-of-way or other disturbed/developed areas (including Conover fire road/equestrian trail near the northern terminus of the proposed alignment). The proposed project would operate as a closed system; therefore, no impacts are anticipated to occur on riparian or other sensitive natural habitats or communities. No adverse direct or indirect effects from construction and operation of the proposed project are expected and no mitigation is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?

No Impact. Though a formal jurisdictional wetland delineation was not conducted in support of the survey effort, the Tujunga Wash (unlined natural drainage) in the project vicinity exhibits function and value typical of jurisdictional waters or wetlands protected by Section 404 of the federal Clean Water Act. No other potential jurisdictional waters or wetlands were identified within or proximal to the proposed project during surveys. As indicated in item b) above, construction and operation of the proposed project would not occur within the bed or bank of jurisdictional waters or wetlands associated with the Tujunga Wash; therefore, no potential impacts to jurisdictional waters or wetland habitat from the proposed project are anticipated and no mitigation is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery/breeding sites?

No Impact. The proposed project vicinity and region has been substantially urbanized and/or developed for decades; therefore, with the exception of

Tujunga Wash (unlined natural drainage), virtually all of the viable wildlife movement that historically occurred through the area (e.g., drainages, canyons and ridgelines) has been constrained by existing land uses and development. Tujunga Wash provides some function and limited value as a wildlife movement corridor, while the area immediately behind Hansen Dam provides potential wildlife movement function and value for migratory birds. The proposed project would avoid impacting habitat in Tujunga Wash and Hansen Dam through limiting construction activities to existing city street rights-of-way or other developed/disturbed areas (including the LADWP VGS site and Conover fire road/equestrian trail); as such, the proposed project would be expected to avoid impacting the movement of any native resident or migratory fish or wildlife species, any established native resident or migratory wildlife corridors, or any native wildlife nursery/breeding site in the project area. The proposed project would mostly operate below ground; therefore, it is not anticipated that impacts would occur from the project on movement of native resident or migratory wildlife. No impacts are expected and no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees)?

No Impact. It is anticipated that biological and other natural resources protected by local resource protection ordinances and policies in the proposed project vicinity have already been impacted or modified by existing land uses. Since the proposed project is an underground pipeline, booster pump station, and storage tank, any potential conflicts with local ordinances would apply mainly to construction and maintenance of the proposed project components. As discussed above, the proposed project would avoid impacting Tujunga Wash (unlined natural drainage), which is considered Significant Ecological Area No. 24 by Los Angeles County. It is anticipated that implementation of the proposed project within street rights-of-way would result in only temporary removal of landscaping planted along these corridors (where applicable). The proposed project would be operated and maintained consistent with all local policies and ordinances protecting natural resources. The proposed project's avoidance of natural areas would result in the expectation that no impact would occur; therefore, no mitigation would be required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. With the exception of Tujunga Wash (i.e., Los Angeles County Significant Ecological Area No. 24), no species or habitats covered within any Habitat Conservation Plans, Critical Habitat Designations, Natural Community Conservation Plans, Significant Ecological Areas, or other approved

conservation plans have been identified within the project vicinity. Similarly, potential "take" or impacts to endangered, threatened, or other special status plants, animals or habitats, are not expected to occur with implementation of the proposed project.

The proposed project is located within a substantially developed urban area. Construction, operation and maintenance activities are expected to be limited to the existing street rights-of-way or other developed/disturbed areas. Any necessary staging or spoil areas are expected to be located within underutilized parcels along the alignment or LADWP property (e.g., LADWP VGS site). Since these potential staging areas are expected to occur within a historically urbanized area that would not support sensitive or special status species or their habitats, no impacts to sensitive biological resources are anticipated. The proposed project is not located within an area affected by or subject to an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed project would operate as a closed system; therefore, no impacts are anticipated to occur on the Tujunga Wash unlined natural drainage area. No impacts are expected and no mitigation is required.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?

No Impact. The proposed project would not cause any adverse change to above-ground historical resources (buildings or structures that are eligible for the National Register of Historic Places or the California Register of Historical Resources). A search of the Historic Property Data File (HPDF),[7] maintained by the State Office of Historic Preservation showed that two structures built in the 1920s are located along the pipeline route on Foothill Boulevard. Both have been evaluated as ineligible for the National Register of Historical Places and the California Register of Historical Resources. No structures would be demolished as a result of the project. In addition, since the project is entirely below-ground, there would be no impacts to the setting of any historical resources. Therefore, no impacts to historical structures are expected and no mitigation is required.

[7] The Historic Property Data File maintains a list of historic resources designated under the National Register of Historic Places, California Register of Historic Resources, State Historic Landmarks, and State Historic Points of Interest.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?

Potentially Significant Unless Mitigation Incorporation. A records search performed at the South Central Coastal Information Center of the California Historical Resources Information System showed that three prehistoric and six historic archaeological sites have been recorded within one half mile of the project (see Appendix C for the Cultural Resources Report). A portion of one of the prehistoric sites, CA-LAN-167, is in the impact area on Foothill Boulevard and has been identified as the Gabrielino village of Tujunga. In addition, structures dating to the nineteenth century (no longer extant) are indicated in this area on the 1900 edition of the USGS Fernando Quad. One of the historic archaeological sites, CA-LAN-2313H is directly adjacent to the pipeline route on the south side of Conover Street. However, it is at the base of a slope below the level of the road. Trenching in the road will not impact the site. No archaeological resources were identified as a result of the field survey. It is possible that significant archaeological resources associated with CA-LAN-167 or with the nineteenth century structures, could be encountered during trenching for pipeline installation. However, with implementation of the following mitigation measure, impacts to archaeological resources would be reduced to a level less than significant.

Mitigation Measure:

M-1 *All trenching along Foothill Boulevard between the eastern boundary of the Lakeview Terrace Recreation Center (where it intersects the north side of Foothill Boulevard) and Brainard Avenue shall be monitored by a qualified archaeologist. In the event archaeological resources are discovered during excavation or construction, activity shall cease until the qualified archaeologist can assess the potential significance of such finds and/or remove the items. If significant, mitigation would consist of avoidance or data recovery.*

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Unless Mitigation Incorporation. A records search and literature review performed by the San Bernardino County Museum show that sediments underlying the Hansen Basin area (i.e., HDRA) consist of the Monterey Formation, the recent alluvium, and the older Pleistocene Alluvium. The Pleistocene Alluvium is found underlying the recent alluvium. The Monterey Formation and the Pleistocene Alluvium have high paleontologic sensitivity. The Monterey Formation has produced numerous Miocene marine vertebrates and invertebrates. The older Pleistocene alluvium has

yielded fossil remains of mastodon, horse, camel, and bison. It is possible that significant paleontologic resources associated with the Monterey Formation or the older Pleistocene alluvium could be encountered during trenching for pipeline installation, and excavation for the booster pump station and storage tank (i.e., fossils may be encountered in areas near the HDRA where Monterey Formation and Pleistocene Alluvium occur). However, with implementation of the following mitigation measure, impacts to paleontological resources would be reduced to a level less than significant.

Mitigation Measure:

M-2 *All trenching in the Monterey Formation and the older Pleistocene Alluvium shall be monitored by a qualified paleontological monitor. In the event paleontologic resources are discovered during excavation or construction, construction activity shall cease until they can be removed by the paleontologist. All recovered specimens shall be prepared to the point of identification and curated in an accredited museum repository. A report of findings will be prepared by the paleontologist and submitted to the Lead Agency.*

d) Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Unless Mitigation Incorporation. The proposed project would not impact known cemeteries. However, prehistoric village sites usually have cemeteries. Archaeological site CA-LAN-167, which could be impacted by trenching, may contain burials. However, with implementation of the following mitigation measure, impacts to human remains would be less than significant.

Mitigation Measure:

M-3 *All trenching between along Foothill Boulevard between the eastern boundary of the Lakeview Terrace Recreation Center (where it intersects the north side of Foothill Boulevard) and Brainard Avenue shall be monitored by a qualified archaeologist. In the event human remains are encountered during excavation or construction, activity in the area of the find shall cease, and the County Coroner shall be contacted. The County Coroner shall assess the find, and advise whether the remains are of modern or prehistoric origin. If modern, the Coroner will assume jurisdiction. If prehistoric, the Coroner will contact the Native American Heritage Commission in accord with Section 7050.5 of the Health and Safety Code so that the requirements of Section 5097.98 of the Public Resources Code can be implemented.*

VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Two portions of the proposed project alignment are located within the boundaries of a state-designated Alquist-Priolo Special Study Zone and/or Fault Rupture Study Area.[8] The southern terminus of the proposed project is located immediately adjacent to an Alquist-Priolo Fault Rupture Study Area, and the northern terminus of the alignment passes through an Alquist-Priolo Special Study Zone. The proposed project consists of an underground pipeline, booster pump station, and storage tank, which would serve to store and convey recycled water to various users in the eastern San Fernando Valley, construction and operation of which would not increase risks to people or structures from earthquake activity or fault rupture, since the project would not involve new buildings or populations. The proposed storage tank would be located within a hillside area adjacent to the Tujunga Wash (unlined natural drainage); earthquake fault impacts to the tank could, at worst, result in tank failure, in which case recycled water could be released very rapidly. Under this scenario, the released recycled water would drain into the Tujunga Wash (i.e., the Tujunga Wash is directly downstream of the proposed tank site), which is an unlined flood control drainage channel. No populations or structures are located in the path of such floodwaters, were a release to occur as a result of seismic activity. The construction and operation of the proposed project would therefore not expose people or structures to potential significant adverse effects from the rupture of a known earthquake fault, and no mitigation is required.

ii) Strong seismic ground shaking?

Less Than Significant Impact. Seismic activity at area faults may result in groundshaking at the project site. Seismic hazards from groundshaking are typical for many areas of Southern California. Along the proposed pipeline alignment, the potential for seismic activity would not be greater than for much of the City of Los Angeles. Furthermore, all pipeline structures and elements, the booster pump station, and the storage tank would be constructed to meet all applicable Uniform Building Code and seismic safety standards, including the earthquake-resistant standards

[8] City of Los Angeles Department of City Planning. *City of Los Angeles General Plan, Safety Element. Exhibit A: "Alquist-Priolo Special Study Zones & Fault Rupture Study Areas In the City of Los Angeles."* March 1994.

required by the LADWP Engineering Standards Manual. The fact that the proposed pipeline would be constructed and operated underground minimizes the potential for aboveground impacts, and belowground impacts would be limited to the area surrounding the point of pipe failure to a shallow depth, if failure were to occur. The booster pump station would be constructed and operated entirely within a bermed area adjacent to the existing 7 MG storage tank at the LADWP VGS site. Damage to the booster pump station in the event of strong seismic ground shaking is not anticipated to pose a risk to people or structures, since no people work within the bermed area where the pump station would operate, and the pump station could not foreseeably cause damage to the adjacent 7 MG storage tank. As discussed in item i) above, any damage to the proposed 1 MG storage tank (north of the Tujunga Wash unlined natural drainage) from a seismic event (including strong seismic ground shaking) would not pose a significant risk to people or structures, even if the tank were to fail and all its contents released. Therefore, the proposed project is not expected to increase the risk of exposure of people or structures to strong seismic ground shaking and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Depending on the levels of ground shaking, groundwater conditions, the relative density of soils, and the age of the geologic units in the area, the potential for liquefaction varies throughout the City of Los Angeles. Seismic-related ground failure, including liquefaction, occurs when saturated, granular deposits of low relative density are subject to extreme shaking and, as a result, lose strength or stiffness due to increased pore water pressure. The consequences of liquefaction are typically characterized by settlement or uplift of structures, and an increase in lateral pressure on buried structures. The majority of the proposed alignment is located within a liquefaction hazard area.[9] However, the proposed project components would be constructed to meet all applicable Uniform Building Code and seismic safety standards. Additionally, all trenches (including storage tank excavation) would be backfilled with engineered fill, which meets proper compaction and shear strength requirements, and therefore has little liquefiable potential. The proposed pipeline would operate as an underground structure and portions of the booster pump station and storage tank would operate below-grade; however, due to the application of engineered fill during construction, damage to the pipeline structure and/or underground portions of the booster pump station and storage tank from an increase in lateral pressure is not expected. Additionally, as discussed above, the proposed pipeline, booster pump station, and storage tank would be constructed and operated in compliance with standards required by the LADWP Engineering Standards Manual. As

[9] City of Los Angeles Department of City Planning. *City of Los Angeles General Plan, Safety Element. Exhibit B: "Areas Susceptible to Liquefaction In the City of Los Angeles".* October 1993.

such, seismic ground failure impacts that could expose people or structures (including the proposed project) to risk of substantial adverse effects (e.g., from liquefaction) would be less than significant, and no mitigation is required.

iv) Landslides?

Less Than Significant Impact. The proposed project site, although the northern terminus would be constructed and operated in a designated hillside area, is not located in an area susceptible to landslides.[10] Landslides or mudflows are not anticipated to occur in the general area of the proposed project due to the flatness of the terrain and the fact that the pipeline, booster pump station (the pipeline components of the pump station), and a large portion of the storage tank would be constructed below native grade. The storage tank would be constructed utilizing retaining walls and engineered slopes to minimize the potential for landslide impacts from storage tank construction and operation. Impacts would be less than significant and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The construction and operation of the proposed project would occur along previously disturbed areas, which consist of sections of paved streets, the LADWP VGS facility, and open space areas (e.g., fire roads/equestrian trails and open space north of the Tujunga Wash unlined natural drainage on the Angeles National Golf Course property). During construction, short-term erosion impacts could occur as a result of grading/excavation from construction activities. These exposed soils could potentially cause erosion impacts during windy conditions and from construction vehicles traveling through the site. Precipitation during the storm events could cause the exposed soils to run off into public rights-of-way and/or storm drainage systems. The contractor would be required to develop and implement a plan to control erosion of soil from the site during construction. Because the on-street portions of the proposed project site have been previously excavated, and because the open space portion of the alignment would represent a small proportion of the overall construction project, with implementation of an erosion control plan significant losses of topsoil are not anticipated. The development and implementation of the erosion control plan would keep impacts resulting from construction to less than significant levels, particularly in off-street portions of the alignment. The proposed project would operate as a closed system, and the majority of the project components would operate below grade; therefore, no additional impacts relative to soil erosion or loss of topsoil are expected and no mitigation is required.

[10] City of Los Angeles Department of City Planning. *City of Los Angeles General Plan, Safety Element. Exhibit C: "Landslide Inventory & Hillside Areas In the City of Los Angeles"*. June 1994.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. The project area, with the exception of the northern terminus (i.e., the hillside open space area north of the Tujunga Wash unlined natural drainage on the Angeles National Golf Course site), is characterized by relatively flat topography. Most of the alignment is located on a geologic unit or soil that is unstable when subject to strong seismic ground shaking (i.e., the majority of the alignment is subject to liquefaction). However, lateral spreading, subsidence, and collapse are not expected to occur along the proposed alignment, because the majority of the route was graded when the streets were originally developed. Additionally, as indicated in item a) above, there is no landslide hazard at the site, and any liquefaction hazards would be minimized or avoided by application of engineered fill, and by compliance with applicable Uniform Building Code and other seismic safety and engineering standards during pipeline, booster pump station, and storage tank design and construction. Therefore, construction and operation of the proposed project are not expected to cause the local geologic units or soils to become unstable, or result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, and no mitigation is required.

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

Less Than Significant Impact. The proposed project alignment is located in an urbanized area that is currently developed, and construction activities and operation of project components would occur along previously disturbed street rights-of-way and in open space areas. The shallow soils in the vicinity of the project area are alluvial deposits, mostly Quaternary Alluvium. Such soils can exhibit shrink-swell potential (as is characteristic of expansive soils) when exposed to moisture (e.g., groundwater and/or percolating surface runoff). However, as discussed above, the proposed project would be constructed to meet all applicable Uniform Building Code and seismic safety standards, and would incorporate engineered backfill during construction. No significant impacts are anticipated and no mitigation is required.

e) Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project area does not contain soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. The project area is serviced by a sewer system operated and maintained by the City of Los Angeles Department of Public Works. Construction and operation of the proposed project would not affect any existing, or hinder future, septic tanks or alternative wastewater disposal systems, or the soils that would adequately support those systems.

Therefore, no impacts related to soil compatibility with septic or other alternative wastewater systems would occur and no mitigation is required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No Impact. Though construction of the proposed project would involve the excavation and transport of paving materials (e.g., asphalt, concrete, road bed fill materials) that could possibly be contaminated by vehicle-related pollution (e.g., oil, gasoline, diesel, other automotive chemicals), the project does not involve the routine transport, use, or disposal of hazardous materials. All such paving and road bed materials would be transported and disposed of in accordance with applicable codes and regulations. Such transport and disposal is not expected to create a significant hazard to workers or the surrounding community. Operation of the proposed project would involve the storage and conveyance of recycled water, and would not require the use, storage, or disposal of hazardous substances. Therefore, the proposed project would not create impacts related to the routine transport, use, or disposal of hazardous materials, and no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. Implementation of the proposed project would not involve the use, storage, or disposal of hazardous substances that could result in an upset and accident condition. Before commencing any excavation, the construction contractor would be required to obtain an "Underground Service Alert Identification Number". To minimize potential damage to any existing utilities, the contractor would not be allowed to excavate until all utility owners are notified, and all substructures are clearly identified. As the proposed project would convey and store recycled water, operation would not create a significant hazard to the public or environment involving the release of hazardous materials (i.e., recycled water is treated and, as such, is not considered hazardous). No reasonably foreseeable upset or accident conditions that could involve the release of hazardous materials into the environment are anticipated during construction or operation. Therefore, no impacts are anticipated and no mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. As discussed in the Air Quality section (starting on page 3-4), operation of construction equipment would produce air contaminant emissions. None of these emissions are expected to be

generated at levels that are considered hazardous. Construction of the proposed project would also involve the excavation and transport of paving materials (e.g., asphalt, concrete, road bed fill materials) that could possibly be contaminated by vehicle-related pollution (e.g., oil, gasoline, diesel, other automotive chemicals). All such materials would be transported and disposed of in accordance with applicable codes and regulations. Such transport and disposal is not expected to involve acutely hazardous materials, substances or waste. Although several existing and proposed schools are located within one-quarter mile of the proposed project, construction and operation of the proposed project is not anticipated to have an adverse effect on these facilities, since construction activities (as mentioned above) and operation would not involve hazardous emissions or materials. The proposed project would store recycled water at the Angeles National Golf Course, and convey it under pressure along existing public rights-of-way and within open space areas. If there were any emergency condition related to the proposed project, the result would involve the release of recycled water, which poses no immediate health threats; therefore, impacts to schools are anticipated to be less than significant and no mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. A government records search[11] was conducted for the proposed project alignment that identified hazardous materials sites listed pursuant to Government Code Section 65962.5. The EDR search was designed to meet the government records search requirements of the American Society for Testing and Materials' (ASTM's) Standard Practice for Environmental Site Assessments. A summary of the results of the search is as follows (See Appendix D for a summary of the EDR report, including a map, and an explanation of acronyms):

- **Federal ASTM Standard** – 25 RCRIS Small Quantity Generator, 4 RCRIS Large Quantity Generator, 2 CERCLIS, 1 RCRIS TSD, and 1 CERC-NFRAP site;
- **State ASTM Standard** –24 CA FID UST, 21 HIST UST, 18 Cortese, 13 LUST, 10 UST, 7 CHMIRS, 4 State Landfill, 4 WMUDS/SWAT, 2 VCP, 1 Cal-Sites, and 1 AWP site;
- **Federal ASTM Supplemental** – 34 FINDS and 2 TRIS sites;
- **State or Local ASTM Supplemental** – 63 HAZNET, 8 EMI, 2 CA SLIC, 2 NFE, 2 Los Angeles County HMS, and 1 AST site; and
- **Brownfields Databases** – 2 VCP sites.

[11] Environmental Data Resources, Inc. The EDR Corridor Study Report: Study Area Hansen Area Water Recycling Project, Los Angeles, California 91352. October 2, 2003.

The proposed project alignment contains several utility pipelines under the street surface, none of which transport hazardous materials. Based on the EDR database search, several sites have been identified in the surrounding area that are listed in various databases compiled pursuant to Government Code Section 65962.5. Ten of these sites are located on, or immediately adjacent to, the proposed project alignment (see Appendix D). These sites (Sites 4, 6, 7, 8, 9, 10, 12, 13, 16, and 20 on the EDR map) are listed, for the most part, because they handle small quantities of identified hazardous materials (e.g., automotive repair shops recycling motor oil and handling solvents and other automotive fluids) or operate underground storage tanks (e.g., gas stations).

Seven of these sites (Sites 4, 6, 7, 8, 9, 12, and 13), although located immediately along the proposed alignment, were not listed in the records search as having had releases of hazardous materials, but are listed because they are regulated by applicable agencies for the handling, treatment, storage, and/or disposal of hazardous materials. As such, these seven sites are not discussed in further detail, as they do not have the potential to pose a threat related to releases of hazardous materials (i.e., from proposed project construction activities in proximity to these sites). Three of the ten sites (Sites 10, 16, and 20), however, have had releases of hazardous materials, and the particular events and status of such releases are described as follows:

An underground gasoline storage tank leak was discovered at Site 10 in April 1992, and remedial action (contamination characterization and cleanup) was begun in September 1997. The Los Angeles Regional Water Quality Control Board (RWQCB) is the lead agency overseeing the cleanup process, since groundwater was affected by the contamination. Currently, remedial action is underway, which includes excavation and disposal of contaminated soil. The RWQCB last reviewed the remedial activities in September 2002, and remediation is ongoing.

Site 16 includes several facilities that are listed due to releases of hazardous materials. The Los Angeles County Metropolitan Transit Authority (MTA) facility (formerly the Southern California Rapid Transit District – Division 15 facility) was the site of a gasoline leak from an underground storage tank in April 1984, which affected soil at the site (no groundwater was affected). Nonetheless, the RWQCB required ongoing pollution characterization to ensure that no groundwater is affected, and such characterization is ongoing at the facility. A release of crude oil (i.e., an oil slick) was reported in a storm drain near Site 16 in January 1994, but was contained and cleaned up by the City of Los Angeles Department of Public Works. The cause of crude oil release was not determined, though illegal dumping was suspected. At an industrial facility near Site 16, 2 personnel were contaminated with several (more than 2) unreported hazardous compounds in January 1991. However, the contamination was resolved the same day, and the personnel were successfully decontaminated. At the HR Textron facility near Site 16, poor waste handling procedures were observed by RWQCB staff, which led to

sampling in which petroleum hydrocarbons and volatile organic compounds (VOCs) were discovered at depths of 120 feet below grade. The California Environmental Protection Agency (CalEPA)'s Department of Toxic Substances Control (DTSC) required a health risk assessment in response to the discovery of contamination. In June 1993, based on the risk assessment, DTSC determined that no further action would be required to protect public health. Also at the HR Textron site, a historic release of stoddard solvent (within the last 25-30 years) from a leaking underground storage tank was discovered during concrete repair work. The RWQCB required remediation of the contamination utilizing the vapor extraction method in April 1988, and the case was closed in March 1996. The last facility near Site 16 was the former Ledger Landfill, in which mixed wastes (including hazardous materials) were dumped into the landfill. Two (2) soil sample borings taken at the site indicated that petroleum hydrocarbons and VOCs were present at depths of 120 feet below grade, but it is not clear if this contamination was the result of contamination from the nearby HR Textron facility (discussed above) or from waste dumped at the landfill, since information regarding the two sample borings was very limited. As of January 2001, a DTSC-mandated health risk assessment is ongoing.

The LADWP VGS facility was listed as Site 20, at which releases of petroleum hydrocarbons, polychlorinated biphenyls (PCBs), asbestos, and lead were discovered in shallow soils. Approximately 1,200 tons of contaminated soil were excavated and transported to a disposal facility. The remaining contamination is approximately 125 feet wide by 225 feet long by 7 feet deep. Due to evidence of a release, DTSC recommended a preliminary risk assessment, and currently a remedial action workplan is pending, which is due to be completed by December 2004.

Given that the contamination at these sites was remediated, or is otherwise being addressed, to the satisfaction of the applicable regulatory agencies, or were not considered hazardous enough to require remediation, there exists limited potential of the listed sites immediately adjacent to the alignment to present a risk to human health (to nearby residents/employees or construction workers). Furthermore, all other listed sites (i.e., those sites not specifically addressed above) are located at considerable distance from the proposed alignment, and would not have the potential to affect, or be affected by, proposed project construction activities or operation. Therefore, given the status and location of the sites, it is concluded that the potential for environmental impacts to the proposed project relative to these sites is low. If, during construction or operation of the proposed project, contamination is discovered with the potential to create a significant hazard to the public or the environment, the applicable regulatory agency would be contacted and the appropriate corrective actions undertaken to eliminate the hazard. No significant impacts are anticipated and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less Than Significant Impact. Although not located within the boundaries of an airport land use plan, the southern terminus of the proposed alignment is located approximately 1 mile southeast of Whiteman Airpark (a public airport). Nonetheless, construction of the proposed project would not affect airport activities, due to the limited scale and temporary nature of construction activities. Once completed, the proposed pipeline would operate underground in public rights-of-way (e.g., roadways) or open space areas (e.g., fire roads/other areas near Angeles National Golf Course). The proposed booster pump station would be constructed and operated at the LADWP VGS facility, which is characterized by power generation structures and associated equipment that are much greater in height and bulk than the proposed pump station. The proposed storage tank would be located to the north of the Angeles National Golf Course, at considerable distance from the airport. Despite the proximity of the southern terminus of the alignment to Whiteman Airpark, none of the project components would have the potential to interfere with, nor be affected by, airport operations. Therefore, neither construction nor operation of the proposed project would have a significant impact on the nearby airport and no mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The proposed alignment is not located in the vicinity of a private airstrip. As such, the project would have no potential to affect, or be affected by, private airstrip operations. No impacts to, or from, private airstrips are anticipated and no mitigation is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agency's emergency evacuation plan, except for possible short-term periods during construction of the proposed project, when roadway access may be limited in some areas. The on-street construction activities would conform to all City of Los Angeles Department of Transportation (LADOT), Los Angeles Police Department (LAPD), and Los Angeles Fire Department (LAFD) access standards to allow adequate emergency access. The booster pump station would be constructed and operated entirely within the LADWP VGS facility (adjacent to the existing 7 MG storage tank); it is anticipated that the operation of the booster pump station at the VGS site would be incorporated into the existing emergency response/evacuation plan currently in-place for the VGS facility, and would not impair implementation or physically interfere

with the existing plan. The 1 MG storage tank would be located in an open space area north of the Tujunga Wash (unlined natural drainage), and the pipeline would be located underground within public rights-of-way (e.g., roadways). Thus, the pipeline and storage tank would not interfere with any existing emergency response or evacuation plans. No adverse impacts to emergency response or emergency evacuation plans are anticipated and no mitigation is required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. Portions of the project site are located within selected wildfire hazard areas, namely City of Los Angeles Fire Buffer Zones and Mountain Fire District areas.[12] However, the proposed project would not involve the placement of people or populated structures within these areas. Furthermore, the structures to be constructed as part of the proposed project (e.g., booster pump station, storage tank, and pipeline appurtenant structures) would not pose a risk of loss, injury, or death that could result from wildland fires, as these structures would store and convey recycled water. As such, construction and operation of the proposed project would not expose any people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, no impacts are expected and no mitigation is required.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:

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

Less Than Significant Impact. The construction and operation of the proposed project would not generate any wastewater or significantly increase urban runoff into existing storm drains. While dewatering would be unlikely for the majority of construction, due to the shallow depth at which it is planned to be placed, some dewatering may be necessary for jacking under the Tujunga Wash flood control channel (lined portion downstream of Hansen Dam) and/or busy intersections. This would generate minimal quantities of discharge water, which would be pumped into the flood control channel directly, or into existing storm drains nearby. Also, hydrotesting and/or cleaning of the inside of the tank would generate water that would need to be discharged. This discharge water is not expected to contain any contaminants that would cause its release to violate any water quality standards or waste discharge requirements. All dewatering discharges would be carried out in accordance with all applicable requirements of RWQCB. The water that the proposed project would supply would meet all applicable

[12] City of Los Angeles Department of City Planning. *City of Los Angeles General Plan, Safety Element. "Exhibit D: Selected Wildfire Hazard Areas in the City of Los Angeles".* April 1996.

water quality standards. Therefore, no significant impacts to water quality from construction or operation are anticipated and no mitigation is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. During construction, the only groundwater impacts that the proposed project could cause would be from dewatering activities. Groundwater may be encountered during construction, due to the fact that the depths to groundwater in area surrounding the HDRA vary and may be relatively shallow. In the event that groundwater is encountered during construction, dewatering is not expected to occur in quantities that would substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The proposed project would serve to increase the reliability and adaptability of the existing LADWP water supply system, and would not contribute to the depletion of groundwater supplies, interfere substantially with groundwater recharge, or lower the groundwater table. No adverse impacts to groundwater supply or recharge are expected and no mitigation is required.

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

See item d) below.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

No Impact. The proposed project would be constructed along public streets and rights-of-way and through open space areas, and would not permanently alter the drainage pattern of the area. The proposed project would cross the Tujunga Wash flood control channel (concrete-lined channel); however, construction at this location would be carried out using the jacking method. Construction of the proposed project would not alter the course of a stream or river, and an erosion control plan would be developed and implemented for all project components, which would minimize the potential for erosion or siltation on- or off-site. Neither open-trench nor jacking construction methods would substantially increase the rate or amount of surface runoff, or result in flooding on- or off-site. Operation of the proposed project would occur below grade within public rights-of-way and through open space areas, and would

not affect the course of a stream or river. Therefore, no impact is anticipated and no mitigation is required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Dewatering that may be required for jacking would contribute minimal amounts of discharge water. This dewatering discharge water is not expected to be released in substantial quantities and is not expected to exceed the existing or planned capacity of the local stormwater drainage system. Furthermore, as mentioned above, the discharge water is not anticipated to contain significant quantities of contaminants, and would be of limited volume. The proposed project would operate as a closed system that would not create or contribute runoff water. Consequently, impacts to stormwater systems from increased runoff volumes or polluted runoff due to construction and operation of the proposed project would be less than significant and no mitigation is required.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Potential short-term erosion effects could occur during site excavation and construction activities associated with the proposed pipeline, booster pump station, and 1 MG storage tank that could affect surface water quality with runoff. Due to the linear nature of the area of the proposed pipeline and limited area of ground disturbance associated with its construction, this effect is expected to be minimal. Construction of the proposed booster pump station would require limited excavation, and construction activities would occur entirely within a bermed area immediately adjacent to the existing 7 MG storage tank at the LADWP VGS facility. Given the limited area of ground disturbance, and the fact that booster pump station construction would occur within a contained (bermed) area, impacts to water quality from construction-related runoff are expected to be minimal. Construction activities associated with the proposed storage tank would result in a substantially larger area of disturbed soil (i.e., approximately 1 acre) for a period of approximately 12 months. However, as would be the case with the pipeline and booster pump station components, an erosion control plan would be developed and implemented during construction activities that would minimize transport of soil materials off-site. On-site soils would be stabilized and drainage structures (temporary and permanent) would be constructed, as applicable, to control the flow of runoff and minimize the potential for erosion. If dewatering is necessary during construction, the water would be treated, as necessary, and discharged into the nearby storm drain system or flood control channel. Operation of the proposed project would be a closed system and therefore not substantially degrade or affect water quality. All construction and operational activities that would potentially affect water quality will be performed under all applicable rules, regulations and standards (e.g., Clean Water Act, California Water Code, and Basin Plan for the Los Angeles

Region). A less than significant impact is anticipated relative to water quality and no mitigation is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

See item i) below.

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

See item i) below.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. The construction and operation of the proposed project would not involve the placement of people or structures (including housing) within a 100-year flood hazard area, or impede or redirect flood flows. Although portions of the project alignment traverse 100-year flood zones,[13] construction activities near such areas would not interfere with the movement of water (i.e., pipeline would be jacked), and operation of the proposed pipeline would occur passively below grade. The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding. In the event the pipeline fails, safety valves throughout the water distribution system may be shut off (as deemed necessary by LADWP) in response to a loss of pressure and to isolate the break. The volume of recycled water released in such an event would be limited to the amount of water contained in the section of pipeline between the shut-off valves, which is not expected to yield enough water to pose a threat to life or property. As discussed previously, any event involving rupture or failure of the proposed storage tank would result in a worst-case scenario of all the contents of the tank (when full) being released suddenly. During such an event, all 1 million gallons of recycled water would be released and would flow downgradient into the Tujunga Wash (unlined natural drainage), located immediately adjacent to, and downhill from, the proposed storage tank site. Because the Tujunga Wash is a large-capacity, unlined flood control drainage channel, the volume of water released from the tank under this scenario is not expected to cause flooding such that a significant risk of loss, injury or death would result. Therefore, flooding impacts are expected to be less than significant and no mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. The proposed project is not subject to seiche- or tsunami-related inundation as it is not located within the range of a

[13] City of Los Angeles, *General Plan Safety Element Exhibit F: "100-Year & 500-Year Floodplains In the City of Los Angeles".* March 1994.

seiche hazard zone or tsunami hazard zone.[14] However, given the proximity of the northern terminus (i.e., storage tank location) to the Tujunga Wash (unlined natural drainage) and its location on a hillside area, there may be some potential for mudflows during storm events. Nonetheless, given that the storage tank and pipeline segments in this area would be designed and constructed to meet applicable building codes and would incorporate stormwater drainage infrastructure, the potential for impacts to the tank and/or pipeline from mudflows is expected to be very low. Therefore, the potential impact on or to the proposed project, during either construction or operation, from inundation by seiche, tsunami, or mudflow would be less than significant, and no mitigation is required.

IX. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. Construction impacts from the proposed project would be short-term and would occur entirely within street rights-of-way, the LADWP VGS facility, and open space areas near the Angeles National Golf Course. The construction would not transverse any established communities, and the proposed project would operate passively as a closed system within the aforementioned areas; therefore, it would not physically divide any community. No impacts are expected and no mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. Construction and operation of the proposed project would occur within public rights-of-way and open space areas, and the majority of project components would be buried underground. The aboveground portions of the project would be located either within the LADWP VGS facility (an industrial site) or within a relatively remote open space area (i.e., at a substantial distance from other land uses). Thus, the project is not anticipated to affect any land uses along or near the proposed alignment, or conflict with any General Plan designations or zoning ordinances. No impacts are expected and no mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed alignment is not located within an area subject to a habitat conservation plan or natural community conservation plan. The booster pump station would be located entirely within the LADWP VGS facility

[14] City of Los Angeles, *General Plan Safety Element Exhibit G: "Inundation & Tsunami Hazard Areas In the City of Los Angeles."* March 1994.

(an industrial site), and the majority of the pipeline alignment would be located within existing streets. The northern terminus of the proposed alignment traverses near the northern boundary of a designated City of Los Angeles Natural Resource Preserve (i.e., the Tujunga Wash, considered an "Ecologically Important Area") along an existing fire road/equestrian trail; however, the construction of the pipeline and storage tank in this area is not anticipated to adversely affect the preserve area, as construction activities would occur well outside the Preserve boundaries. Furthermore, operation of the pipeline and tank in this area would occur passively as a closed system, and would not have the potential to adversely affect the preserve or conflict with any applicable conservation plans. Therefore, the construction and operation of the proposed project would not conflict with, or adversely impact, any habitat or natural community conservation plans, and no mitigation is required.

X. MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less Than Significant Impact. Development of the proposed project would involve the use of construction materials, which include negligible quantities of non-renewable resources. Construction of the proposed project would follow industry standards and would not use non-renewable resources in a wasteful or inefficient manner. Although the proposed project is located within the vicinity of a Significant Mineral Aggregate Resources Area as designated by the State of California Department of Conservation (i.e., the Sun Valley Production Area), construction of the proposed booster pump station, storage tank, and pipeline would not affect mineral mining operations. Therefore, the proposed project would not result in the loss of availability of any mineral resource that would be of value to the region and the residents of the state. Once constructed, the proposed project would not affect known mineral resources, due to the passive nature of its operation. Impacts to known mineral resources (i.e., aggregate resources and/or petroleum fuels) from construction and operation of the proposed project are expected to be less than significant and no mitigation is required.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project is located in an area designated as containing locally important mineral resources.[15] However, construction and operation of the proposed booster pump station, storage tank, and pipeline

[15] City of Los Angeles Department of City Planning. *Los Angeles Citywide General Plan Framework Draft Environmental Impact Report*. January 1995.

would not prevent, or otherwise restrict, access to any such mineral resources in the project vicinity. Therefore, the construction and operation of the proposed project would not result in the loss of availability of any mineral resource and no mitigation is required.

XI. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Unless Mitigation Incorporation. Sound is defined as any pressure variation detected by the human ear. Noise is defined as any unwanted sound. The preferred unit for measuring sound is the decibel (dB). The dB expresses the logarithmic ratio of the amount of energy radiating from a source in the form of an acoustic wave.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Sound intensity is measured in decibels that are A-weighted (dBA) to correct for the relative frequency response of the human ear. L_{eq} is the equivalent sound level, which is used to describe average noise levels over a specified period of time. On average, noise attenuates (lessens) at a rate of 6 dBA for every doubling of distance from a source, depending on environmental conditions (e.g., atmospheric conditions, noise barriers, ground covering, etc.).

The proposed project is located in an area primarily consisting of residential uses, with some religious, commercial, industrial, and open space uses (See Figure 2).

From the northern terminus of the alignment, the pipeline would enter the public right-of-way at the east end of Conover Street. Conover Street includes the “Lakeview Terrace Special Care Center” sanitarium as well as three single-family residential units.

The pipeline would then proceed west along Foothill Boulevard. This section includes both single- and multi-family residential units, schools, places of worship, riding stables, and commercial greenhouses. While single-family homes are located along the entirety of Foothill Boulevard, the multi-family units are clustered near Osborne Street. Schools are located along the north side of the street, while greenhouses tend to be on the south side. The western portion of the pipeline is to pass the HDRA. The HDRA represents an open space/recreational area.

The pipeline would then turn southwest along Osborne Street. A public library is located toward the southeast corner and multi-family residential units are located along the west side of the roadway.

The pipeline would then veer southeast upon reaching Glenoaks Boulevard. Glenoaks Boulevard includes a variety of land uses. The Hansen Dam Golf Course lies at the northeast portion of the alignment. Both multi-family residential units and a trailer park are located across from the golf course. However, all land uses southeast of Montague Street are commercial or industrial, none of which would be considered as noise-sensitive land uses/receptors. The route would then turn southwest at Truesdale Street, entering the LADWP VGS facility.

Residences, schools, hospitals (i.e., the Lakeview Terrace Special Care Center sanitarium), and churches, all of which qualify as noise-sensitive land uses, would be exposed to noise generated from on-site construction activities. Sensitive land uses within the project area typically have extended setbacks from the road, but the distance from the boundary of the proposed construction activities to the closest sensitive receptors is less than 100 feet.

To determine ambient noise levels, noise monitoring was conducted on Tuesday, October 14, 2003 using a Quest Technologies Model 2900 Type 2 Integrating/logging Sound Level Meter. The unit meets the American National Standards Institute Standard S1.4-1983 for Type 2, International Electrotechnical Commission Standard 651-1979 for Type 2, and International Electro-technical Commission Standard 651-1979 for Type 2 sound level meters. The unit was field calibrated at 10:33 a.m. using a Quest Technologies QC-10 calibrator immediately prior to the readings. The calibration unit meets the requirements of the American National Standards Institute Standard S1.4-1984 and the International Electrotechnical Commission Standard 942: 1988 for Class 1 equipment. The calibration was re-checked at 1:59 p.m. after the readings and no meter “drift” was noted.

The field study included five noise readings. The L_{eq}, L_{02}, L_{08}, L_{25}, L_{50}, L_{min}, and L_{max} values were recorded. The L_{eq} value is representative of the equivalent noise level or logarithmic average noise level obtained over the measurement period. The L_{02}, L_{08}, L_{25}, and L_{50} values represent the levels that are exceeded 2, 8, 25, and 50 percent of the time, or for periods of 1, 5, 15, and 30 minutes during a 1-hour period (if the reading was extrapolated out for a duration of 1 hour). The L_{min} and L_{max} represent the minimum and maximum root-mean-square noise levels obtained over a period of 1 second. The monitoring locations are shown in Figure 2 and the readings are included in Table 6 and summarized below.

Table 6
Ambient Noise Levels Along the Proposed Pipeline Alignment

Location	L_{eq} (dBA)	L_{02} (dBA)	L_{08} (dBA)	L_{25} (dBA)	L_{50} (dBA)	L_{max} (dBA)	L_{min} (dBA)
NR-1	54.7	61.0	57.4	55.1	53.7	64.2	47.7
NR-2	65.7	71.2	68.7	66.4	64.2	78.9	59.8
NR-3	64.0	71.7	68.7	64.6	60.1	76.2	48.2
NR-4	68.8	77.0	73.0	69.3	65.5	82.8	45.0
NR-5	68.6	75.6	72.3	69.2	66.1	82.1	54.1

NR-1 – The pipeline (starting at the northern terminus) would initially enter the public right-of-way at the east end of Conover Street to the east of Foothill Boulevard. This noise reading was obtained at the eastern terminus of Conover Street at the base of the "Lakeview Terrace Special Care Center." This point represents the easternmost position of the proposed pipeline to be located on public land.

The meter was placed along the northern curb line at the distance of approximately 178 feet east of the eastern curb line of Foothill Boulevard immediately south of the Center. Three single-family residential units are also located along the north side of the street, the nearest of which is approximately 75 feet from the centerline of the road. The south side of the street includes undeveloped open space with a golf course being constructed to the south of the open space area (i.e., Tujunga Wash unlined natural drainage). A 15-minute reading was taken starting at 10:36 a.m.. Skies were clear and winds were calm. The primary source of noise was that from vehicles on the Foothill Freeway and Foothill Boulevard, but aircraft overflights and bird calls also added to the reading. Conover Street traffic included three cars all passing within approximately 15 to 20 feet of the meter.

NR-2 - This noise reading was obtained along the north side of Foothill Boulevard 65 feet east of Christy Avenue. The meter was placed at a distance of 50 feet north of the centerline of travel of Foothill Boulevard's outer westbound lane. The reading is indicative of what is typically experienced by the residents located along the north side of Foothill Boulevard and north of the I-210 Freeway. Sensitive receptors, including residents and churches located along the south side of Foothill Boulevard could receive slightly more freeway noise, while those located to the east of

Foothill Place could receive slightly less noise as they are somewhat further from the freeway with an obscured view of the lanes. A 15-minute reading was taken starting at 11:06 a.m. The main source of noise was that from vehicles on freeway, but Foothill Boulevard traffic was also readily audible. East-bound Foothill Boulevard traffic included 44 automobiles and one medium truck. West-bound traffic consisted of 40 automobiles, one medium truck, and one heavy truck.

NR-3 - This noise reading was performed along the north side of Foothill Boulevard across from the Hansen Dam Park approximately ¼ mile west of the I-210 under crossing. The meter was placed along the north side of the street at a distance of 50 feet from the centerline of the outer, westbound lane. The 16-minute reading began at 11:47 a.m. The main source of noise was that from traffic traveling along Foothill Boulevard; however, the freeway was also audible in the background. Aircraft overflights, including one helicopter, also added to the ambient noise. Eastbound traffic included 68 automobiles, six medium trucks, and three heavy trucks. Westbound traffic consisted of 80 automobiles, five medium trucks, and two heavy trucks.

NR-4 - This noise measurement was obtained along the east side of Osborne Street in the parking area at the top of the dam. Multi-family units are located along the west side of the street on either side of the slope. The meter was placed at a distance of 50 feet from the centerline of the outer, northeast-bound lane. A 15-minute measurement was taken starting at 1:05 p.m.. The main source of noise was that from traffic traveling along Osborne Street. This noise was elevated due to the grade of the road over the dam that raises truck engine noise. Aircraft noise, including a helicopter, was also noted. Additionally, one car passed within approximately 10 feet of the meter within the parking area. Northeast-bound traffic included 114 automobiles, five medium trucks, and six heavy trucks. Southwest-bound traffic consisted of 103 automobiles, four medium trucks, and four heavy trucks.

NR-5 - This noise reading was obtained along the northeast side of Glenoaks Boulevard, 81 feet northwest of Montague Street. The meter was placed at a distance of 50 feet northeast of the centerline of travel of Glenoaks Boulevard's outer, northwest-bound lane. The reading represents the noise level potentially experienced by residents (both multi-family and trailer park) located across Glenoaks Boulevard to the northwest. The 15-minute reading was obtained starting at 1:36 p.m. The main source of noise was that from vehicles on Glenoaks Boulevard, but aircraft noise was also noted. Southeast-bound Glenoaks Boulevard traffic included 168 automobiles, 11 medium trucks, and seven heavy trucks. Northwest-bound traffic consisted of 156 automobiles, nine medium trucks, and eight heavy trucks.

The proposed project is located within the City of Los Angeles and is thus subject to its General Plan and noise ordinances. In assessing the impact of construction noise upon the environment, the provisions set forth in the noise ordinances (within the City's Municipal Code) address noise generated at

construction sites. For example, Section 41.40 of the Los Angeles Municipal Code (LAMC) indicates that no construction or repair work that makes loud noises to the disturbance of persons occupying a residence shall be performed between the hours of 9 p.m. and 7 a.m. on any day. No person, other than an individual homeowner engaged in the repair or construction of his single family dwelling, shall perform any construction or repair work of any kind before 8 a.m. or after 6 p.m. on any Saturday or federal holiday, nor at any time on Sunday within 500 feet of residential property.

Within the City of Los Angeles, as stated in the City of Los Angeles Draft LA CEQA Thresholds Guide (Thresholds Guide),[16] a project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use;
- Construction activities lasting more than 10 days in a three-month period which exceed the existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or
- Construction activities which exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday.

Construction noise levels at and near the proposed project would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Table 7 shows noise levels associated with various types of construction-related machinery. According to this table, noise levels as high as 88 dBA could be experienced at a distance of 50 feet from the construction effort. While most receptors have an extended setback from the road, the most proximate could be on the order of 75 feet and noise at this distance is estimated at approximately 84 dBA if noise attenuation is not used. Noise-attenuated sites and equipment could produce noise levels as high as 79 dBA.

[16] City of Los Angeles, *Draft L.A. CEQA Threshold Guide*, May 14, 1998.

Table 7
Demolition and Construction Equipment Source Noise Levels

Equipment Type	Typical Equipment at 50 ft. (in dBA)	Quieted Equipment at 50 ft. (in dBA)[1]
Air Compressor	81	71
Backhoe	85	80
Concrete Pump	82	80
Concrete Vibrator	76	70
Concrete Breaker	82	75
Truck Crane	88	80
Dozer	87	83
Generator	78	71
Loader	84	80
Paver	88	80
Pneumatic Tools	85	75
Water Pump	76	71
Power Hand Saw	78	70
Shovel	82	80
Trucks	88	83

Source: Bolt, Beranek, and Newman, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, U.S. Environmental Protection Agency*, 1971.

Notes: [1] Quieted equipment can be designed with enclosures, mufflers, or other noise-reducing features.

The proposed project would be expected to last more than 10 days in a three-month period and ambient exterior noise levels exceeded by more than 5 dBA at a noise sensitive use. Therefore, construction of the proposed project has the potential to create a significant impact on adjacent noise sensitive uses (e.g., near the Lakeview Terrace Special Care Center [NR-1], where ambient noise levels are particularly low) could be potentially significant. However, the exposure of persons to a periodic increase in ambient noise levels would generally be short-term (i.e., construction in any one location/area would occur for approximately 3 months for pipeline construction, and up to 12 months at the storage tank construction site). Construction activities at the storage tank site would employ noise-dampening screens and/or walls and any other feasible measures (see mitigation measures below), in order to minimize noise impacts to the Lakeview Terrace Special Care Center sanitarium and/or nearby residences. In addition, construction would be carried out in compliance with all applicable City of Los Angeles noise regulations (e.g., construction hours would be limited to normal working hours when most residents are away from their homes). Adherence to noise regulations/ordinances would reduce potential noise impacts. However, the mitigation measures provided below would further reduce noise impacts from construction activities to a level less than significant.

Mitigation Measures:

M-4 *All construction equipment, stationary and mobile, shall be equipped with properly operating and maintained muffling devices.*

M-5 *Use noise control devices, such as equipment mufflers, enclosures, and barriers as technically feasible or practicable.*

M-6 *Stage construction operations as far from noise sensitive uses as possible.*

M-7 *Effective communication with the local residents shall be maintained during construction including keeping them informed of the schedule, duration, and progress of the construction to minimize public complaints regarding noise levels.*

Due to the passive nature of pipeline operation (and operation would occur underground), and the fact that operation of the booster pump station and storage tank would occur at a substantial distance from any potential sensitive receptors, no noise impacts to the surrounding community would occur as a result of the operation of the proposed project and no mitigation is required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Groundborne vibration is measured in terms of the velocity of the vibration oscillations. As with noise, a logarithmic decibel scale (VdB) is used to quantify vibration intensity. When groundborne vibration exceeds 75 to 80 VdB, it is usually perceived as annoying to building occupants. The degree of annoyance is dependent upon type of land use, individual sensitivity to vibration, and the frequency of the vibration events. Typically, vibration levels must exceed 100 VdB before any building damage occurs.[17]

It is not anticipated that construction of the proposed project would involve pile-driving activities. The use of jackhammers and/or pavement breakers associated with construction, and pipe jacking under the Tujunga Wash (concrete-lined flood control channel) and various intersections would be temporary and therefore would not affect a given location for more than a few days. In addition, the use of such equipment would generally be limited to daytime hours. As a result, although construction of the proposed project would include use of heavy equipment, it is unlikely that construction would result in perceptible, let alone excessive, groundborne vibration or groundborne noise levels. Operation of the proposed pump station would occur entirely within a bermed area at the LADWP VGS facility, and noise generated by the pumps would be minimal, if even perceptible, relative to the

[17] Office of Planning, Federal Transit Administration, *"Traffic Noise and Vibration Impact Assessment, Final Report"*, April 1995.

ambient noise levels at the facility. The proposed storage tank would not require the operation of pumps or other noise-generating equipment; as the tank operation would be passive, no noise would be generated. Likewise, operation of the proposed pipeline would occur passively underground and would therefore not cause substantial groundborne vibration or noise. No significant impacts would occur and no mitigation is required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. Operation of the proposed pipeline would occur belowground, operation of the booster pump station would occur within the LADWP VGS facility (an industrial site), and operation of the storage tank would occur within an open space area at a substantial distance from any potential sensitive receptors. The pipeline and storage tank would operate passively (i.e., they would generate no noise), and the booster pump station would result in an imperceptible noise increase from pump operation relative to the ambient noise at the LADWP VGS facility. Therefore, no substantial permanent increase in ambient noise levels would occur in the project vicinity above levels existing without the project. No impacts are expected and no mitigation is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Unless Mitigation Incorporation. As discussed in item a) above, construction noise levels at and near the project site would fluctuate depending on the particular type, number and duration of use of various pieces of construction equipment. Construction would generate a temporary increase in ambient noise levels in the project vicinity. The exposure of persons to the periodic increase in noise levels would be short-term (i.e., construction in any one location would occur for approximately 3 months for pipeline construction, and up to 12 months at the storage tank site). Nonetheless, with adherence to the noise ordinance and the mitigation measures listed above under item a), the impact of the proposed project on temporarily increasing ambient noise levels in the project vicinity would be reduced to a level less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact. No portion of the proposed project alignment is located within an airport land use plan or in the immediate vicinity of any airport or private airstrip. At its most proximate point, the pipeline is located approximately 0.7 mile to the northeast of Whiteman Airpark runway. The most recent noise analysis for the airpark was prepared in 1980. The study showed that to the southeast, toward the project area, the 65 dBA CNEL

contour (i.e., the imaginary line at which distance one would experience the 65 dBA CNEL) was contained within the confines of the airpark. The 65 dBA CNEL contour extended just beyond the airpark to the northwest away from the project area. Current contours could extend slightly further, but the project is still well outside of the 65 dBA CNEL contour. Therefore, the construction of the proposed project would not expose residents or workers to excessive noise levels and no mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. No portion of the proposed project alignment is located in the vicinity of a private airstrip. Therefore, no impacts to, or from, private airstrip operations would occur and no mitigation is required.

XII. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. Construction and operation of the proposed project would serve to increase the reliability of water supply in the LADWP service area, and would not increase the available supply of potable water in the region (i.e., the application of recycled water would offset the use of potable water, but would not increase overall supply). As such, the project would not induce population growth in the area, either directly or indirectly. No growth-inducing impacts are anticipated to result from the proposed project, as the project would accommodate existing LADWP water customers; therefore, no mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The construction and operation of the proposed project would occur within public street rights-of-way and open space areas, and staging areas would be located at existing nearby LADWP facilities or vacant/undeveloped lots along the northern edge of the Tujunga Wash (unlined natural drainage), south of the I-210 freeway. No housing is to be removed as part of the proposed project. Therefore, construction and operation of the proposed project would not have any impacts on the number or availability of existing housing in the area and would not necessitate the construction of replacement housing elsewhere and no mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As mentioned in item b) above, the construction and operation of the proposed project would not displace any housing, and therefore would not result in the displacement of people and no mitigation is required.

XIII. PUBLIC SERVICES

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

i) Fire protection?

Less Than Significant Impact. Construction of the proposed project could have the potential to reduce access for emergency vehicles at locations along the project alignment. However, all construction activities would be carried out in accordance with all applicable LADOT and LAFD emergency access standards, and access would be maintained during construction. Operation of the proposed project would occur passively and would not require additional fire protection. No substantial adverse physical impacts would occur relative to fire services and no mitigation is required.

ii) Police protection?

Less Than Significant Impact. As discussed in item i) above, construction of the proposed project could have the potential to reduce access for emergency vehicles at locations along the project alignment. However, all construction activities would be carried out in accordance with all applicable LADOT and LAPD emergency access standards, and access will be maintained during construction. Operation of the proposed project would occur passively and would not require additional police protection. No substantial adverse physical impacts would occur relative to police services and no mitigation is required.

iii) Schools?

Less Than Significant Impact. No population increase in the project area would result from the construction and operation of the proposed project, and construction of the proposed project would not have the potential to reduce access to schools in the vicinity of the proposed project, as access would be maintained per LADOT requirements. Therefore, no substantial adverse physical impacts to local schools would occur from construction activities. The proposed booster pump station would operate entirely within the LADWP VGS facility, at a substantial

distance from any schools (i.e., greater than 1 mile from any existing or proposed schools). Operation of the proposed pipeline and storage tank would occur passively as a closed system and would not adversely impact schools. Therefore, the proposed project would not result in the need for new or expanded schools, or otherwise adversely affect any schools in the project vicinity. Impacts to schools would be less than significant and no mitigation is required.

iv) Parks?

Less Than Significant Impact. The construction and operation of the proposed project would not generate any additional population that would increase demand for neighborhood or regional parks or other recreational facilities. The construction activities in the vicinity of the HDRA may have the potential to disrupt recreational activities in the immediate area where construction is occurring (i.e., street rights-of-way adjacent to the HDRA); however, such impacts would be limited to the local street rights-of-way, and would be temporary, thereby avoiding long-term impacts to parks or other recreational facilities in the project vicinity. No significant adverse physical impact to parks would result, and no mitigation is required.

v) Other public facilities?

Less Than Significant Impact. Construction and operation of the proposed project is not expected to result in physical impacts associated with any other public facilities in the project vicinity or in the City of Los Angeles as a whole. No substantial adverse physical impacts to public facilities (e.g., hospitals, flood control infrastructure) are anticipated and no mitigation is required.

XIV. RECREATION

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. Neither the construction nor operation of the proposed project would generate any additional population that would increase the use of existing neighborhood or regional parks or other recreational facilities. Furthermore, any impacts to recreational activities at any neighborhood parks along the alignment, or in the vicinity of the HDRA, resulting from construction of the proposed project would be temporary in nature and would be limited to the immediate area in which construction activities are occurring (i.e., street rights-of-way near parks along the alignment or adjacent to the HDRA). Operation of the proposed pipeline in the vicinity of the HDRA and other parks along the alignment would occur passively underground. Construction and operation of the proposed booster pump station would occur entirely within the LADWP VGS facility, and

therefore would not have the potential to affect parks or other recreational facilities. Construction and operation of the proposed project components at and near the Angeles National Golf Course (i.e., pipeline and storage tank) would be coordinated with the City of Los Angeles' Department of Recreation and Parks so as not to adversely affect golf course activities permanently or in the short-term (i.e., the Tujunga Wash unlined natural drainage lies between playable areas of the golf course and the pipeline/storage tank site). Therefore, impacts to existing neighborhood and regional parks or other recreational centers would be less than significant, and no mitigation is required.

b) Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed project is a booster pump station, storage tank, and pipeline with appurtenant structures necessary for the operation and maintenance of the pipeline. Construction and operation of the proposed project would not include recreational facilities or require construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. No impacts are expected and no mitigation is required.

XV. TRANSPORTATION/TRAFFIC

The proposed project is located within an urbanized area in the City of Los Angeles. Key streets along the project alignment can be described as follows (See Figure 2):

- Glenoaks Boulevard is classified as a Major Highway Class II. It has two lanes in each direction from Truesdale Street to Osborne Street. In this segment, Glenoaks Boulevard has a two-way left-turn lane. At the southern end of Glenoaks Boulevard before Truesdale Street, the median transitions to a raised median. Unrestricted curbside parking is allowed on this segment of Glenoaks Boulevard along both directions except for a small portion north of Truesdale Street. The posted speed limit is 45 mph.
- Osborne Street is classified as a Major Highway Class II. It has two lanes in each direction from Glenoaks Boulevard to Foothill Boulevard. In this segment, Osborne Street has a two-way left-turn lane. Curbside parking is prohibited along both directions on this segment of Osborne Street. The posted speed limit is 40 mph.
- Foothill Boulevard is classified as a Major Highway Class II. It has two lanes in each direction from Osborne Street to Conover Street. It also provides access to I-210 freeway interchange near Osborne Street, with the four diamond ramps each carrying a daily volume of 4,100 to 5,500 vehicles per day, according to the California Department of Transportation (Caltrans) ramp volume data for 2002. Opposing traffic flows are

separated by a two-way left-turn lane on this segment of Foothill Boulevard. East of Wheatland Avenue, the median transitions to solid double yellow line west of Wheatland Avenue. Parking is prohibited along the both directions of this segment at all times. The posted speed limit varies between 45 mph and 50 mph.

Several public transportation routes traverse the proposed alignment:

- MTA Route 90/91 travels along Foothill Boulevard between the Olive View Medical Center and Glendale.
- MTA Route 92 travels along Glenoaks Boulevard between the Sylmar/San Fernando Metrolink station and Burbank.
- MTA Route 166 travels along Nordhoff Street, Osborne Street, Glenoaks Boulevard, and Lankershim Boulevard between the Chatsworth Transportation Center and the North Hollywood Metrolink station.

Would the project:

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

Less Than Significant Impact. For a temporary period during construction, there would be minor alterations to the current traffic patterns. The pipeline would be installed in sections no longer than 500 feet (approximately the length of a short street block), within an approximately 1,200-foot work zone (up to a maximum of about 2,000 feet). After the installation of pipe within the work zone, the open trench in the street would be backfilled, paved, and returned to normal operation.

Prior to construction, LADWP would submit traffic control plans for approval to LADOT to ensure that traffic impacts, including impacts to public transportation routes, are kept to a minimum. LADWP would comply with any requirements specified by LADOT. In order to be consistent with requirements specified by LADOT, as well as ensure job site safety, LADWP would implement the following construction practices, as necessary:

- Construction areas would be separated by concrete barriers.
- During construction, temporary traffic control devices, signs, and flagmen would be utilized to minimize traffic congestion. At nighttime, all barricades would be provided with flashing/steady burn warnings, and all delineators would have white reflective bands. All barricading and traffic controls would conform to the latest editions of the Standard Specifications for Public Works Construction (Greenbook) and the Work Area Traffic Control Handbook (WATCH).

- Safe and adequate pedestrian and vehicular access would be provided to police and fire stations, schools, fire hydrants, hospitals, commercial buildings, industrial establishments, and residential uses. The access to these facilities would be continuous and unobstructed.
- The construction of the pipeline would be coordinated with the MTA to temporarily relocate bus stops if needed.
- Temporary traffic lanes would have a minimum width of 10 feet to provide safe access to cars, buses, trucks, and trailers.
- Generally, sections of the proposed pipeline would be installed using the open-trench method, along existing street rights-of-way or open space areas. The open trenches should be covered with plates to allow traffic flow during peak periods and times when construction work is not taking place, if open trench construction is blocking traffic lanes.
- The pipeline segment that extends along Foothill Boulevard near to the I-210/Osborne Street freeway ramps would be installed using the open-trench method. The approximate duration of the pipeline construction on this segment is estimated to be one week. Access to the ramps may be partially or completely restricted during the period of construction, potentially requiring temporary closure of one or more ramps at the Foothill Boulevard/Osborne Street interchange. During periods when access to the ramps is restricted, traffic served by these ramps would temporarily access the freeway via Foothill Boulevard at the Wheatland Avenue interchange to the east. To the extent possible, such closures should be avoided during peak traffic periods, potentially by use of plates to cover the open trenches near the freeway ramps during peak periods. Temporary detour plans would be developed for approval by LADOT and Caltrans.
- Pipe jacking would be utilized in the proposed project when open trenching is not feasible, in order to avoid large substructure utilities and to avoid the disruption of other facilities such as flood control channels and bike paths along the alignment. The proposed locations for pipe jacking are at the intersections of Glenoaks Boulevard/Branford Avenue, Glenoaks Boulevard/Osborne Street and Osborne Street/Foothill Boulevard.
- The pipeline segment along Glenoaks Boulevard across Tujunga Wash (concrete-lined flood control channel) would be installed by either the pipe jacking method, or it may be suspended from the existing bridge. This stretch of construction may require the closure of curb lane of Glenoaks Boulevard in the northbound direction for approximately one week.
- Construction would generally be carried out between 7 a.m. and 6 p.m., Mondays to Fridays and 8 a.m. and 5 p.m. on Saturdays.

- Staging equipment for both the open trench and jacking method would occur off-street. Possible staging areas include vacant parcels along the south side of I-210 (Foothill Freeway) at Wheatland Avenue north of Tujunga Wash (unlined natural drainage), and at the LADWP VGS site. With staging areas off-street, the equipment would not cause additional disruption to traffic flow during the construction period.
- The construction of the pipeline could create some minor temporary impacts to the existing street parking facilities; however, LADWP would coordinate the construction activities with the LADOT to minimize any potential impacts to the existing street parking facilities. The maximum length of open trench would be limited to 500 feet.
- Excavations would be fenced to provide protection against anyone falling into the excavation.
- LADWP would assign a full-time construction inspector to the project to monitor the construction activities and to ensure that all traffic requirements specified by LADOT are implemented.

No significant adverse environmental impacts associated with traffic load or congestion are anticipated to result from construction and operation of this pipeline project. No mitigation is required.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by MTA. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed if an Environmental Impact Report (EIR) is being prepared. Although an EIR is not being prepared for the proposed project, an analysis of regional impacts as outlined in the CMP was conducted.

A specific system of arterial roadways plus all freeways comprises the CMP system. A total of 164 intersections are identified for monitoring on the system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is to be conducted:

- At CMP arterial monitoring intersections, including freeway on- or off-ramps, where the proposed project would add 50 or more trips during either the morning or evening weekday peak hours.
- At CMP mainline freeway monitoring locations, where the project would add 150 or more trips in either direction during the either the morning or evening weekday peak hours.

The proposed project is not expected to add more than 24 a.m. or p.m. weekday peak hours trips, based on 24 workers in a typical 11-hour day

driving alone to the project site. Given this worst-case condition (i.e., every worker drives individually everyday and does not carpool or use transit), 24 peak-hour trips would be generated by the construction crew only for the temporary construction period.

During construction of the pipeline segment on Foothill Boulevard near the I-210/Osborne Street interchange, access to the freeway ramps could be restricted for an estimated period of one week. Traffic detour plans would be developed for approval by LADOT and Caltrans. The pipeline, once constructed, would operate passively underground; as such, no traffic impacts would occur as a result of project operation. Additionally, no CMP arterial monitoring intersections are located along the pipeline route.

Construction activities would not add enough peak-hour trips to the existing street system to trigger further analysis as set forth by the CMP. Impacts to levels of service on the CMP network from construction of the proposed pipeline would be less than significant and no mitigation is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project would not generate air traffic nor affect such activities. No impacts are anticipated and no mitigation is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. Construction and operation of the proposed pipeline would temporarily alter existing street/traffic patterns along the alignment. These temporary changes to traffic patterns and levels of service during the construction phase would be temporary and limited to the immediate area in which construction activities are occurring. All changes to traffic patterns (i.e., lane or ramp closures) would be coordinated with LADOT, Caltrans, and/or MTA, as appropriate, to minimize impacts to motorists, public transportation patrons, and pedestrians. No design features (e.g., sharp curves or dangerous intersections) or incompatible uses are proposed as part of this project. As such, no impacts are anticipated and no mitigation is required.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would not hinder emergency access in the area except for short-term periods during construction. As mentioned above, all construction activities would be carried out in accordance with LADOT, LAFD, and LAPD emergency access requirements and access would be maintained during construction. No significant emergency access impacts are expected and no mitigation is required.

f) Result in inadequate parking capacity?

Less Than Significant Impact. Lane closures resulting from construction activities in the existing street rights-of-way could result in short-term loss of parking capacity on affected sections of streets along the proposed alignment. Such parking deficits would be temporary and would not affect the long-term parking capacity along the pipeline alignment or the surrounding vicinity. The construction zone would be up to approximately 2,000 feet in length (approximately the length of three short street blocks), and any affected street parking would be restored after the installation of each segment of pipe. The operation of the proposed pipeline project would not generate any vehicle trips, nor require any parking as part of its operation. No significant impacts would occur and no mitigation is required.

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

No Impact. The proposed project would not conflict with adopted policies supporting alternative transportation. As discussed above, construction activities would be coordinated with MTA and LADOT in order to minimize impacts to alternative transportation facilities (e.g., bus stops, bike lanes). Access to public transportation and bike lanes would be maintained throughout construction, as required by LADOT and MTA. As a result, no impacts to alternative transportation would result from the proposed project and no mitigation is required.

XVI. UTILITIES AND SERVICE SYSTEMS

Would the project:

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

No Impact. The proposed project would not result in changes to facilities or operations at existing wastewater treatment facilities (including the Tillman Water Reclamation Plant [TWRP]). Consequently, no modification to a wastewater treatment facility's current wastewater discharges would occur; hence, no impact to wastewater treatment requirements of the Los Angeles RWQCB would occur and no mitigation is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. It is not anticipated that the construction and operation of the proposed project would generate wastewater, and would therefore not require the construction of new water or wastewater treatment facilities or expansion of existing facilities. No impacts are anticipated and no mitigation is required.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. Stormwater drainage facilities are provided along the proposed alignment and surrounding vicinity. Construction of the proposed project is not expected to increase stormwater runoff in the project area, since the project would be placed beneath previously developed surfaces (e.g., street rights-of-way and open space areas). Although limited dewatering may be required during construction, this activity would be temporary in nature and the amount of dewatering discharge would not exceed the capacity of the existing stormwater drainage facilities, nor require new or expanded facilities of this type. The proposed project, once operational, would be a closed system, and therefore would not impact stormwater drainage facilities. The construction and operation of the proposed project is not anticipated to require, or indirectly result in, the construction of new stormwater drainage facilities or the expansion of existing facilities. The only exception to this would be the construction of drainage benches above and below the proposed storage tank site, which would be very limited and would drain into the Tujunga Wash (unlined natural drainage) located directly below the tank site; nonetheless, such construction would be very limited in scale and would not result in significant environmental effects. Therefore, impacts to stormwater drainage facilities would be less than significant and no mitigation is required.

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

No Impact. The proposed project is a water supply project that would convey recycled water as part of the existing LADWP water supply infrastructure and serve the area from existing entitlements and resources. No new or expanded entitlements would be needed during construction or operation of the proposed project. No water supply impacts would result and no mitigation is required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Construction and operation of the proposed project would not generate or require wastewater capacity. No impacts to wastewater treatment capacity are anticipated and no mitigation is required.

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

Less Than Significant Impact. Excavation and construction debris would be recycled or transported to the nearest landfill site and disposed of

appropriately. The construction contractor will work with the City of Los Angeles' Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into project construction. The amount of debris generated during project construction is not expected to significantly impact landfill capacities. Operation of the proposed project would not generate any solid waste. No significant impacts to landfill capacity are anticipated and no mitigation is required.

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

Less Than Significant Impact. As mentioned in item f) above, construction debris would be recycled or disposed of in accordance with local and regional standards, and operation of the project would not generate any solid waste. As such, no significant impacts related to compliance with solid waste statutes and regulations are expected and no mitigation is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

No Impact. The analysis conducted in this Initial Study results in a determination that the proposed project, either individually or cumulatively, would not have a significant effect on the local environment. Since the proposed pipeline would be placed underground under existing street rights-of-way (e.g., Glenoaks Boulevard, Osborne Street, Foothill Boulevard, and Conover Street), within the LADWP VGS site, and within open space areas (almost all portions of which have been previously disturbed), and, the proposed alignment is devoid of fish, significant wildlife, and/or plant populations, the proposed project would not have the potential to degrade the environment in this regard. As described above, the potential for impacts to cultural resources from construction of the proposed project, with implementation of the identified project-specific mitigation measures, was found to be low; as such, significant adverse impacts to cultural resources are not anticipated. It is hereby found that the proposed project involves no potential for any impacts, either individually or cumulatively, on wildlife resources and cultural resources, and no mitigation is required.

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

No Impact. As discussed in the respective issue areas, the proposed project would have minor, or less than significant, impacts to some environmental resources. The implementation of the identified project-specific mitigation measures and compliance with applicable codes, ordinances, laws and other required regulations would reduce the magnitude of any impacts associated with construction activities to a level of less than significant. Thus, for the reasons set forth below, impacts would not be cumulatively considerable.

At this level of planning, it is not possible to identify all present and probable future projects in the vicinity of the proposed project alignment. Currently, however, two non-LADWP projects have been identified in close proximity to the proposed alignment, which are either in construction or planned for construction. The first of the these projects is an international church complex within an area zoned for commercial uses, located south of Foothill Boulevard and north of I-210 near the eastern end of the Foothill Boulevard segment of the proposed alignment. This project is currently under construction, and it is anticipated that construction will be completed prior to the start of proposed project construction activities. The second project is a new school project, undertaken by the Los Angeles Unified School District, called the Maclay New Primary Center, located near the intersection of Glenoaks Boulevard and Osborne Street. This project is scheduled to be in construction from December 2003 to December 2004. As such, both of these construction projects are anticipated to be completed and operational by the start of proposed project construction activities, and there would be no potential for cumulative construction impacts to result. Operation of the proposed project would not result in cumulative effects relative to these projects, as the proposed project would operate passively as a closed system.

Although all current and probable future projects located near the proposed project cannot be ascertained based on available data, as mentioned above, it is reasonable to assume that the projects with the potential to contribute to cumulative impacts would be those projects occurring concurrent with, and in proximity to, the proposed project. Such projects, as may be determined at this level of planning, would be other linear utility projects being undertaken by LADWP within, or near, the proposed project alignment at the time of the proposed project construction activities. Such projects would include other LADWP water and/or power system improvement projects. The impacts of these projects, as well as those of the proposed project (as discussed above), would be temporary in nature, and would generally be limited to the area in

which construction activities are occurring. Given that these infrastructure projects would be coordinated by LADWP, it can be anticipated that LADWP would initiate construction of each project in a manner such that construction activities associated with different projects would occur either at different times or at sufficient distance from one another as to avoid cumulative effects relative to air quality, noise, and traffic.

With regard to air quality, the SCAQMD has established incremental emissions thresholds to determine whether a project will contribute to significant impacts. Because the proposed project would contribute emissions at rates below SCAQMD significance thresholds, and given the aforementioned assumption that related LADWP projects would be coordinated as to avoid cumulative impacts in any one area (at any given time), it is anticipated that the air quality impacts of the proposed project and other related projects would not be cumulatively considerable.

Noise impacts, similar to those related to air quality, would be dependent on the timing and location of related project construction in conjunction with the construction of the proposed project. As such, assuming that LADWP would phase such projects to avoid, to the extent feasible, concurrent construction activities in any one location, it can be concluded that noise impacts of the proposed project and related projects (given that project-specific noise impacts are less than significant) would not result in noise impacts that are cumulatively considerable.

With regard to traffic, construction activities would generate truck traffic and vehicular traffic associated with construction worker travel, as well as result in lane closures and temporary loss of parking capacity along affected streets. Impacts resulting from the proposed project's construction traffic would be temporary and are not expected to be significant, as discussed above. Traffic impacts of the proposed project, in conjunction with those of the related LADWP projects, would be minimized by coordination with LADOT, which is required to maintain proper levels of service and the overall function of the City's transportation network. Given that all LADWP projects are subject to review by LADOT (when traffic system components or function are affected), it is assumed that LADOT would require that LADWP coordinate its projects such that the traffic system and levels of service in any one area are maintained. Review by, and coordination with, LADOT would preclude the possibility of cumulative traffic impacts resulting from proposed project and related project construction activities. Based on the above, the proposed project is not anticipated to result in traffic impacts that are cumulatively considerable.

Therefore, no impacts under this category are anticipated and no mitigation is required.

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

No Impact. The proposed project would have no adverse effects on human beings other than the beneficial effect of providing a more reliable water supply for existing LADWP water service customers. Therefore, the proposed project is not anticipated to have a direct or indirect substantial adverse effect on human beings and no mitigation is required.

SECTION 4.0

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APPENDIX A
Air Quality Factors, Assumptions, and Calculations

Hansen Area Water Recycling Project IS/MND
Air Quality Calculations Summary (Pipeline)

Stationary (Off-Road) Construction Equipment Emissions

Equipment Name	Equipment Type	Rated HP[a]	% Load/100[b]	Daily Hours of Operation[c]	Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Excavator (1)	medium diesel	150	0.580	8	0.70	7.66	16.70	1.39	1.04
Water truck (2)	heavy diesel	175	0.410	2	0.86	5.74	3.44	0.29	0.22
Dump truck (2)	heavy diesel	250	0.410	6	3.69	24.60	29.52	2.46	0.92
Loader (1)	medium diesel	130	0.465	8	1.45	7.25	21.28	1.93	0.97
Backhoe (1)	medium diesel	80	0.465	8	0.89	4.46	6.55	0.60	0.60
Crane (1)	heavy diesel	120	0.430	6	0.93	2.79	7.12	0.62	0.46
Compactor (1)	medium diesel	8	0.430	2	0.01	0.05	0.14	0.01	0.01
Paver (1)	medium diesel	90	0.590	2	0.11	0.74	2.44	0.21	0.11
Subtotal Stationary Equipment					**8.64**	**53.29**	**87.19**	**7.51**	**4.32**

Notes:

a) Horsepower ratings were derived from typical equipment ratings from SCAQMD (Table A9-8-C in the *Handbook*) and from the California Air Resources Board (ARB) website (*http://www.arb.ca.gov/msprog/mailouts/msc9925/msc9925e.pdf*, Appendix E, Revised January 10, 2002)

b) Load factors are based on SCAQMD *Handbook* Table A9-8-D for Off-Road Construction Equipment.

c) Scheduled hours are M-F 7 a.m. to 6 p.m. and Saturday 8 a.m. to 5 p.m. (Average of 10.67 hours per day, six days a week -- used 11 hours for the daily average). Hours of operation for each piece of equipment is based on the average proportion of 11-hour day during which that piece of equipment is typically used.

Source: South Coast Air Quality Management District CEQA Air Quality Handbook (April 1993), Table A9-8-B. Handbook emission factors used (all diesel): Excavator, Other Construction Equipment (for Water Truck and Dump Truck), Backhoe, Loader, Crane, Roller (for Compactor), and Asphalt Paver (for Paver).

Mobile (On-Road) Construction Equipment Emissions

Equipment Name	Equipment Type	Daily VMT[a]	Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Construction worker vehicles (24)	light gasoline	480	0.673	7.103	0.689	0.004	0.013
Welder's truck (1)	medium gasoline	5	0.010	0.103	0.016	0.000	0.000
Pick-up trucks (3)	medium gasoline	30	0.057	0.621	0.097	0.000	0.002
Delivery/haul trucks (6)	heavy diesel	120	0.197	0.916	5.508	0.049	0.098
Subtotal Mobile Equipment			**0.937**	**8.744**	**6.309**	**0.053**	**0.113**

Notes:

a) VMT's are estimated assuming all workers arrive at staging areas then proceed to construction activity sites along the proposed alignment and would only work on one section of the pipeline at any given time. Assumed 20 miles per worker commute per day for 24 workers, six days a week, for 52 weeks. Also assumed delivery/haul trips by large diesel trucks would occur 6 times a day at a distance of 20 miles round-trip (to and from LADWP equipment/supply facility and/or fill material disposal site). The number of delivery/haul truck trips are assumed to represent a total distance per day, using one or more trucks for trips of various lengths which total 120 miles per day on average.

Source: EMFAC2002 Draft Version 2.2 (Modeled for Year 2003 for Average Urban Los Angeles County)

PM_{10} Dust Emissions from Construction

Conditions	Area of Ground Disturbance (acres)	Dust Generation Factor	Dust Generation (lbs/day)[b]	Project Total (tons) Over 12-months
Average Conditions	0.184[a]	0.11 tons/acre-month	**1.56**	**0.607**
Worst-Case Conditions	0.184[a]	0.42 tons/acre-month	**5.94**	**2.318**

Notes:

a) Estimated using LADWP's approximated 2000-foot work area, multiplied by 4-foot-wide trench (maximum area of exposed soil at any given time, i.e., 8,000 square feet), divided by 43,560.17 sq. ft. (1 acre) = 0.184 acre.

b) Pounds per day conversion assumed 30 months (130 weeks), 6 days a week = 780 days.

Source: Midwest Research Institute, Improvement of Specific Emission Factors (BACM Project No. 1) Final Report, for SCAQMD (for PM_{10} dust emissions), March 29, 1996.

	Project Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Project Totals	**9.58**	**62.04**	**93.50**	**7.57**	**10.38**

Hansen Area Water Recycling Project IS/MND
Air Quality Calculations Summary (Tank/Pump Station)

Stationary (Off-Road) Construction Equipment Emissions

Equipment Name	Equipment Type	Rated HP[a]	% Load/100[b]	Daily Hours of Operation[c]	Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Bulldozer (1)	medium diesel	103	0.590	6	0.73	3.65	7.66	0.73	0.18
Water truck (2)	heavy diesel	175	0.410	2	0.86	5.74	3.44	0.29	0.22
Dump truck (2)	heavy diesel	250	0.410	6	3.69	24.60	29.52	2.46	0.92
Loader (1)	medium diesel	130	0.465	6	1.09	5.44	7.98	0.73	0.36
Backhoe (1)	medium diesel	80	0.465	6	0.67	3.35	4.91	0.45	0.22
Crane (1)	heavy diesel	120	0.430	8	1.24	3.72	9.49	0.83	0.62
Compactor (1)	medium diesel	8	0.430	2	0.01	0.05	0.14	0.01	0.01
Grader (1)	medium diesel	157	0.580	6	1.64	4.37	11.47	1.09	0.55
Concrete Mixer (1)	light diesel	11	0.560	6	0.07	0.37	0.89	0.07	0.06
Subtotal Stationary Equipment					**10.00**	**51.28**	**75.50**	**6.65**	**3.13**

Notes:

a) Horsepower ratings were derived from typical equipment ratings from SCAQMD (Table A9-8-C in the *Handbook*) and from the California Air Resources Board (ARB) website (*http://www.arb.ca.gov/msprog/mailouts/msc9925/msc9925e.pdf*, Appendix E, Revised January 10, 2002)

b) Load factors are based on SCAQMD *Handbook* Table A9-8-D for Off-Road Construction Equipment.

c) Scheduled hours are M-F 7 a.m. to 6 p.m. and Saturday 8 a.m. to 5 p.m. (Average of 10.67 hours per day, six days a week -- used 11 hours for the daily average). Hours of operation for each piece of equipment is based on proportion of 11-hour day during which that piece of equipment is typically used.

Source: South Coast Air Quality Management District CEQA Air Quality Handbook (April 1993), Table A9-8-B. Handbook emission factors used (all diesel): Excavator, Other Construction Equipment (for Water Truck and Dump Truck), Backhoe, Loader, Crane, Roller (for Compactor), and Asphalt Paver (for Paver).

Mobile (On-Road) Construction Equipment Emissions

Equipment Name	Equipment Type	Daily VMT[a]	Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Construction worker vehicles (24)	light gasoline	480	0.673	7.103	0.689	0.004	0.013
Welder's truck (1)	medium gasoline	5	0.010	0.103	0.016	0.000	0.000
Pick-up trucks (3)	medium gasoline	30	0.057	0.621	0.097	0.000	0.002
Delivery/haul trucks (6)	heavy diesel	120	0.197	0.916	5.508	0.049	0.098
Subtotal Mobile Equipment			**0.937**	**8.744**	**6.309**	**0.053**	**0.113**

Notes:

a) VMT's are estimated assuming all workers arrive at staging areas then proceed to construction activity sites along the proposed alignment and would only work on one section of the pipeline at any given time. Assumed 20 miles per worker commute per day for 24 workers, six days a week, for 52 weeks. Also assumed delivery/haul trips by large diesel trucks would occur 6 times a day at a distance of 20 miles round-trip (to and from LADWP equipment/supply facility and/or fill material disposal site). The number of delivery/haul truck trips are assumed to represent a total distance per day, using one or more trucks for trips of various lengths which total 120 miles per day on average.

Source: EMFAC2002 Draft Version 2.2 (Modeled for Year 2003 for Average Urban Los Angeles County)

PM_{10} Dust Emissions from Construction

Conditions	Area of Ground Disturbance (acres)	Dust Generation Factor	Dust Generation (lbs/day)[b]	Project Total (tons) Over 30-months
Average Conditions	1.056[a]	0.11 tons/acre-month	**8.94**	**3.485**
Worst-Case Conditions	1.056[a]	0.42 tons/acre-month	**34.12**	**13.306**

Notes:

a) Estimated based on LADWP's approximated 46,000-square-foot storage tank construction site (maximum area of exposed soil during construction), divided by 43,560.17 sq. ft. (1 acre) = 1.056 acre.

b) Pounds per day conversion assumed 30 months (130 weeks), 6 days a week = 780 days.

Source: Midwest Research Institute, Improvement of Specific Emission Factors (BACM Project No. 1) Final Report, for SCAQMD (for PM_{10} dust emissions), March 29, 1996.

	Project Emissions (pounds per day) ROC	CO	NO_X	SO_X	PM_{10}
Project Totals	**10.94**	**60.02**	**81.81**	**6.71**	**37.37**

APPENDIX B

Biological Resources Technical Letter Report

BonTerra
CONSULTING
An Environmental Planning/Resource Management Corporation

January 9, 2004

Ms. Dorothy Meyer
Camp, Dresser, & McKee
18581 Teller Avenue, Suite 200
Irvine, CA 92612

VIA FACSIMILE, EMAIL, AND MAIL
(949) 752-1307
CrookDA@CDM.com

Subject: Biological Letter Report for the Los Angeles Department of Water and Power Hansen Area Water Reclamation Project (Tujunga Wash Alignment), City of Los Angeles, California

Dear Ms. Meyer:

On September 18 and September 30, 2003, BonTerra Consulting biologist Jeff Galizio conducted biological reconnaissance surveys within the proposed alignment of the Hansen Area Water Reclamation Project (HAWRP). The western terminus and majority of the proposed HAWRP alignment is located within a nearly completely urbanized portion of the City of Los Angeles (Exhibit 1). The eastern terminus of the HAWRP is a proposed one million gallon reservoir located at the Canyon Trails Golf Course. The alignment is located predominantly within the right-of-way of existing streets (Exhibit 2). Land uses within and proximal to the proposed alignment include open space within Tujunga Wash (designated Significant Ecological Area No. 24 by Los Angeles County), single- and multi-family residential, commercial/retail, office, industrial, schools, roadway, rail crossing, flood channel, electric conductor, golf course, and park. The project site is on the U.S. Geological Survey's San Fernando and Sun Valley 7.5-minute quadrangles.

SURVEY METHODS

Prior to the initiation of field surveys, BonTerra Consulting conducted a search of available literature to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project site. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2003) and a compendia of special status species published by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) were reviewed. In addition, CDFG's California Natural Diversity Database (CNDDB) was reviewed prior to the site visit (CDFG 2003).

The biological reconnaissance surveys were conducted to describe the vegetation present within the proposed alignment and to evaluate the actual or potential for the habitats observed to support special status plant and wildlife species. The qualitative potential for the habitat or substrates identified to support special status plant and wildlife species was estimated based upon observations made on the site. All plant and wildlife species observed were noted. Plant species were identified in the field or collected for future identification. Plants were identified using keys in Hickman (1993), Munz (1974), and Abrams (1923, 1960). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific

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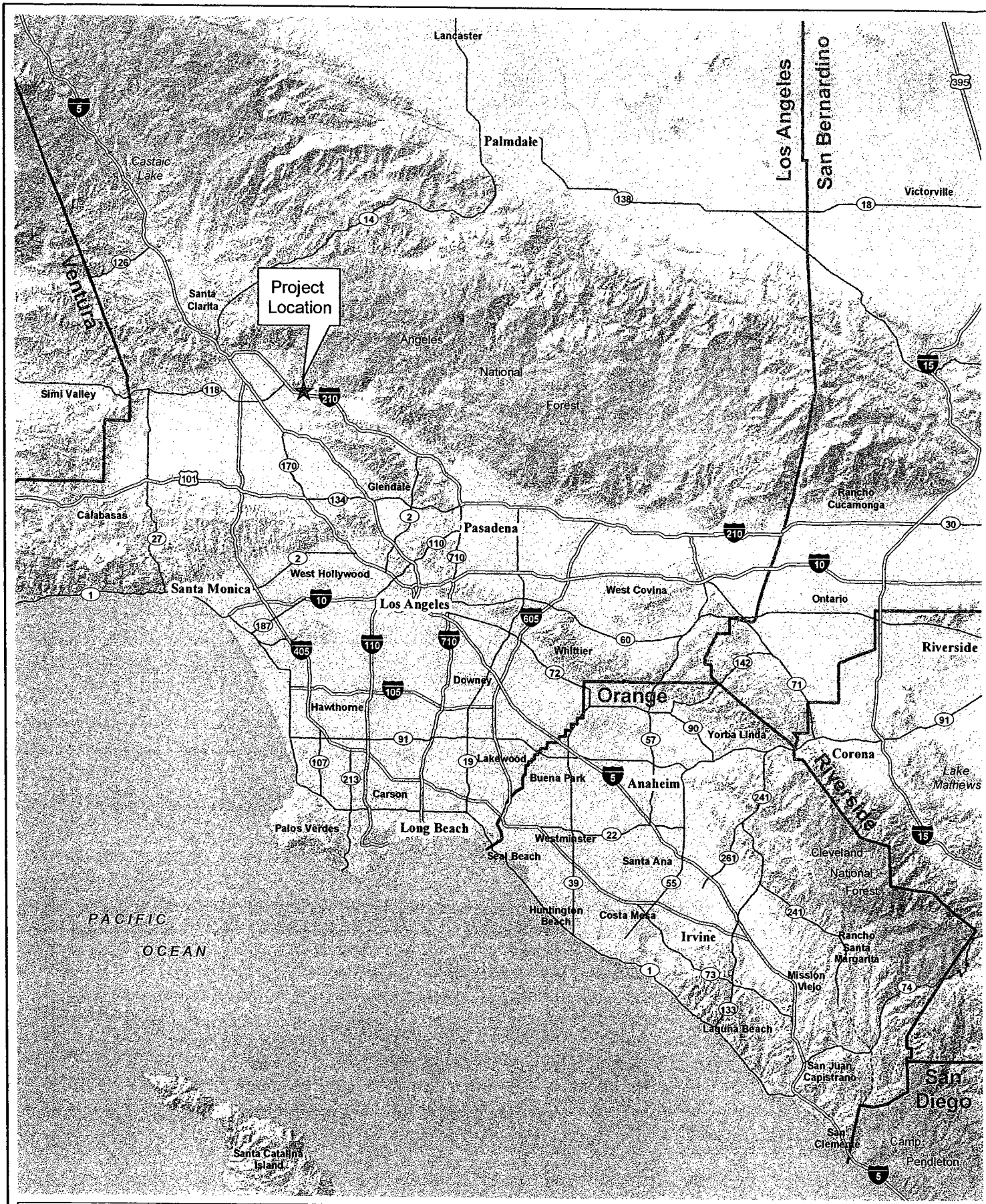


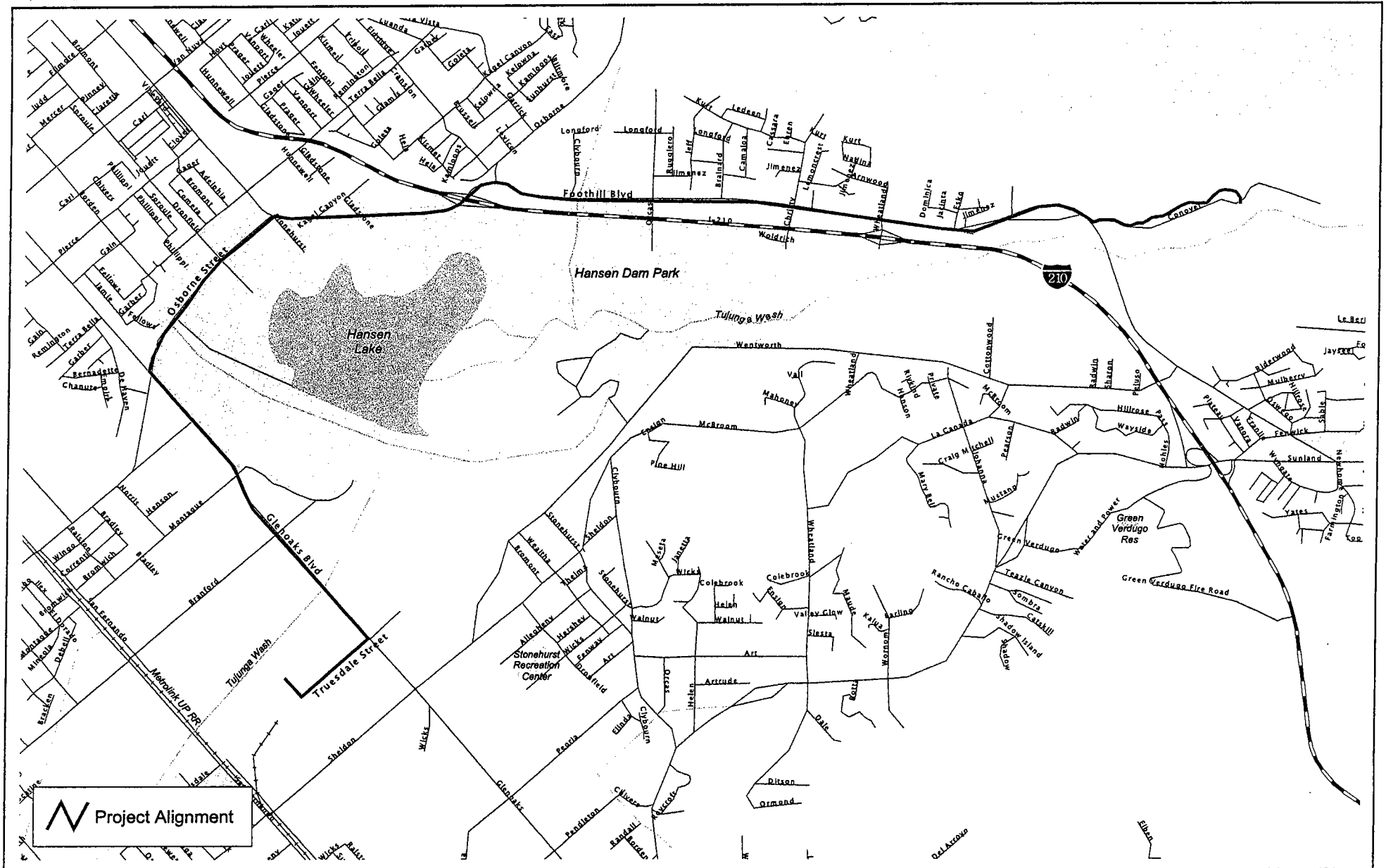
Regional Location

Exhibit 1

Hansen Area Water Reclamation Project

Bonterra CONSULTING

S:/GIS_Exhibits/CampDressJ002_RL_010804.pdf



Local Vicinity

Exhibit 2

Hansen Area Water Reclamation Project

0.5 0 0.5 Miles

BonTerra CONSULTING

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journals) for scientific and common names. Roberts (1998) was used for common names when none were listed in Hickman (1993). The Sunset Western Garden Book (Brenzel, 1995) was used for ornamental species that were not included in the references listed above. The List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base (CDFG 2003) was generally used to classify vegetation types.

Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris, where appropriate. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Fisher and Case (1997) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Jones *et. al* (1992) for mammals.

SURVEY RESULTS

Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special status plant and wildlife species either known or potentially occurring within the proposed HAWRP alignment are discussed below.

Vegetation Types and Disturbed Areas

Urbanization in the project area has impacted native vegetation types such that the majority of the vegetated area, with the exception of Tujunga Wash upstream from Hansen Dam and some areas adjacent to Wentworth Street and the hillside near the eastern terminus, may be described as ruderal or developed land. Tujunga Wash above Hansen Dam, in particular, has the potential to support or does support, native vegetation that includes Riversidean alluvial fan sage scrub, coastal sage scrub, non-native grassland, willow scrub, and mule fat scrub. The following section describes each of the vegetation types and disturbed areas observed during field reconnaissance.

Riversidean Alluvial Fan Sage Scrub

Riversidean alluvial sage scrub is a vegetation type primarily restricted to floodplain areas. This vegetation type is typically dominated by scalebroom (*Lepidospartum squamatum*), though common subdominant shrub species include California sagebrush (*Artemisia californica*), Mexican elderberry (*Sambucus mexicana*), and various coastal sage scrub and chaparral species. The open understory areas are typically dominated by herbaceous species (native and non-native) usually associated with grassland communities. Scattered riparian trees and shrubs often found in association with this vegetation type include sycamore (*Platanus racemosa*) and mule fat (*Baccharis salicifolia*). This high value vegetation type was observed within Tujunga Wash.

Coastal Sage Scrub

Coastal sage scrub is a low to moderate shrub vegetation type that occurs at low elevations on the western slopes and plains of the coast ranges. The coastal sage scrub vegetation type observed consists of a mix of buckwheat (*Eriogunum fasciculatum*), California sagebrush, and Our Lord's candle (*Yucca whipplei*). Coastal sage scrub, which provide moderate to high habitat value, was observed in patches adjacent to Wentworth, in Tujunga Wash, and on the hillside in the area of the eastern terminus.

Non-Native Grassland

Non-native grassland consists primarily of annual grasses that are predominately Mediterranean in origin. Common grasses within this vegetation type include bromes (*Bromus* ssp.), oats (*Avena* ssp.), fescues (*Festuca* ssp.), and barleys (*Hordeum* ssp.). Many species of native forbs and bulbs, as well as naturalized annual forbs, may be found in annual grasslands but floristic richness is affected to a high degree by land use activity, such as intensity and duration of development and other disturbances. Common forbs encountered within non-native grasslands include filaree (*Erodium* spp.), mustard (*Brassica* spp.), peppergrasses (*Lepidium* spp.), and doveweed (*Eremocarpus setigerus*). Scattered elements of non-native grassland, which provide low to moderate habitat value, were observed in patches adjacent to Wentworth, in Tujunga Wash, and on the hillside in the area of the eastern terminus.

Southern Willow Scrub

Southern willow scrub is characterized by willows (*Salix* sp.) with lower concentrations of mule fat. This high-value habitat was observed in the project area within Tujunga Wash.

Mule Fat Scrub

Mule fat scrub consists of dense stands of mule fat with lower concentrations of willow. This high-value vegetation type occurs within Tujunga Wash.

Ruderal and Developed Areas

Ruderal areas consist of early successional grassland with pioneering herbaceous plants that readily colonize disturbed ground and openings in hardscape development. Species frequently occurring within this vegetation type include Russian thistle (*Salsola tragus*), doveweed, tumbleweed (*Amaranthus albus*), and many of the forbs that also occur in non-native grassland. Ruderal vegetation occurs throughout the project area at any site that has been disturbed by either natural or human causes. These areas are considered to have a low biological value.

The developed areas consist of structures, paved areas, and utility, public works, and roadway right-of-way. Developed areas are typically devoid of native plants. Ornamental vegetation that may be present in the developed areas typically consist of introduced trees, shrubs, flowers, and turf grass. Developed areas, which provide low habitat value, were observed throughout the area along the proposed HAWRP alignment.

Common Wildlife

The following discussion identifies wildlife species expected to occur within the project area. Potential for presence is based on known occurrences of these species in the project area or the presence of suitable habitat to support them within or proximal to the proposed HAWRP alignment.

Fish

Freshwater fish were not observed during field reconnaissance, habitat observed within Tujunga Wash proximal to the eastern terminus has the potential to support these species. Camm Swift collected representatives of 3 special status fish species: Santa Ana speckled dace (*Rhinichtys* osculus), Santa Ana sucker (*Catostomus santaanae*), and arroyo chub (*Gila orcutti*) proximal to the eastern terminus south of the Canyon Trails Golf Course within Tujunga Wash at its

confluence with Haines Canyon Creek in May 2002 (Natural History Museum of Los Angeles County, 2004).

Amphibians

Though no amphibians were observed during the field reconnaissance, habitat observed within Tujunga Wash has the potential to support these species. Common native amphibian species expected to occur in the project area include the western toad (*Bufo boreas*) and Pacific treefrog (*Hyla regilla*). Non-native amphibian species expected to occur in the project area include the bullfrog (*Rana catesbeiana*).

Reptiles

Several of the common reptile species observed or expected to occur within the project area include the side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinatus*), western whiptail (*Cnemidophorus tigris*), coachwhip (*Masticophis flagellum*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus viridis*). Habitats within the project area that have potential to support these species occur within Tujunga Wash and the hillside near the eastern terminus.

Birds

Several of the resident bird species observed or expected to occur in the project area include the turkey vulture (*Cathartes aura*), mallard (*Anas platyrhynchos*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferous*), barn owl (*Tyto alba*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), house wren (*Troglodyes aedon*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), brown-headed cowbird (*Molothrus ater*), and house finch (*Carpodacus mexicanus*). Habitats within the project area that have potential to provide nesting, foraging, or roosting habitat for these species occur within Tujunga Wash and the hillside near the eastern terminus.

Mammals

Several of the common small mammal species observed or expected to occur in the project area include the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), house mouse (*Mus musculus*), California mouse (*Peromyscus californicus*), deer mouse (*Peromyscus maniculatus*), and black rat (*Rattus rattus*). Larger mammal species expected to occur in the watershed include the Virginia opossum (*Didalphis virginiana*), coyote (*Canis latrans*), common raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). Habitats within the project area that have potential to support these species occur within Tujunga Wash and the hillside near the eastern terminus.

Common bat species expected to occur in the project area include the big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*). The surface water behind Hansen Dam and within Tujunga Wash has potential to support insects that would provide forage for these various bat species.

Wildlife Movement

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990).

Corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining vegetation types, thereby permitting depleted populations to be replenished and promotes genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other needs (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

Travel Route–a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas and provides a relatively direct link between target habitat areas.

Wildlife Corridor–a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing–a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor.

It is important to note that, in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors as defined above may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and provide a variety of travel routes (canyons, ridgelines, trails,

riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates, and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles such as roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can "become" corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

In general, the project area has been nearly completely urbanized and/or developed for decades; therefore, virtually all of the viable wildlife movement that historically occurred through the area has been constrained by existing land uses and development. While land uses such as residential and commercial/retail have virtually eliminated the potential for wildlife movement to occur, land uses such as commercial/recreational (e.g., golf courses and parks) and industrial (e.g., gravel pits and utility/public works easements) may contain conditions or vegetation types with the potential support wildlife movement in the project area. Any such conditions could become more viable with enhancement or restoration of the habitat. Portions of Tujunga Wash and the City of Los Angeles Department of Water and Power (LADWP) powerline easements have the potential to provide wildlife travel routes or corridors into or through the project area.

Regulatory Framework — Sensitive Species and Habitats

Biological resources within the project area are governed by several regulatory agencies and applicable statutes and guidelines for which they are responsible, including but not limited to: the USFWS and the Federal Endangered Species Act (FESA); the CDFG and the California Endangered Species Act (CESA) and Fish and Game Code Section 1601; Regional Water Quality Control Board (RWQCB); and the U.S. Army Corps of Engineers (ACOE) and Section 401 and 404 of the Federal Clean Water Act. These agencies can provide input into the CEQA process regarding compliance with the FESA and CESA. The CNPS is a private organization that has developed and maintains an inventory of California's special status plant species that provides a summary of the distribution, rarity, and endangerment of California's vascular plants. Information from this inventory also provides input into the CEQA process. Local jurisdictions may designate areas with potentially sensitive natural resources, typically through zoning or ordinance, in order to preserve biological diversity, Significant Ecological Areas (SEAs) were established in 1976 by Los Angeles County for this purpose. The applicable agencies, regulations, and terminology associated with biological resource protection and management are described below.

Federal Status

A federally-listed Endangered species is a species facing extinction throughout all or a significant portion of its geographic range. A federally-listed Threatened species is a species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species on an area proposed for development may lead to a CEQA finding of "significance" and requires coordination with the USFWS, particularly if development would result in "take" of the species.

Proposed Threatened and proposed Endangered species are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed

species may become listed as Threatened or Endangered prior to or during implementation of a proposed project, they are treated here as though they are listed species.

Federal Species of Concern is an informal designation by the USFWS for those species that the USFWS has determined might be declining or are in need of concentrated conservation actions to prevent decline.

Federal Endangered Species Act

The FESA of 1973 protects plants and animals that are listed by the federal government as Endangered or Threatened. The FESA is implemented by enforcement of Sections 7 and 9 of the FESA. A federally-listed species is protected from unauthorized "take" pursuant to Section 9 of the FESA. "Take," as defined by the FESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or to attempt to engage in any such conduct. All "persons" are presently prohibited from taking a federally-listed species unless and until: 1) the appropriate Section 10a permit has been issued by the USFWS; or 2) an incidental take statement is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and implementing regulations pertaining thereto (50 CFR 402). "Person" is defined in the FESA as an individual, corporation, partnership, trust, association, or any private entity; or any officer, employee, agent, department or instrumental of the federal government, or any state, municipality or political subdivision of the state, or any other entity subject to the jurisdiction of the United States.

Section 7 of the FESA applies to federal agency actions (permits/funding, etc.) for private activities, such as Section 404 permits issued by the ACOE for construction work in waters or wetlands. Specifically, Section 7 imposes an affirmative duty on federal agencies to ensure that their actions (including permitting) are not likely to jeopardize the continued existence of a listed species (plant or animal) or result in the destruction or modification of critical habitat (50 C.F.R. § 402.01[a]). Both Sections 7 and 9 of the FESA allow or authorize "incidental" takes in accordance with the provisions of the FESA as described below, but only with a permit which may be obtained through consultation with the USFWS.

"Take" may be permitted pursuant to Section 10(a) of the FESA if a Habitat Conservation Plan (HCP), which is prepared pursuant to regulations at 50 CFR 17.22(b)(2) and 50 CFR 17.32(b)(2), is approved by the USFWS. These regulations require, in part, that the "take" can be permitted only when the taking is incidental to, but not the purpose of, an otherwise lawful activity and that the permit applicant shall, to the maximum extent practicable, minimize and mitigate the impacts of such taking.

Clean Water Act – Section 404

Section 404 of the Clean Water Act (CWA) regulates the placement of dredged and fill material into waters of the United States, including wetlands. Discharges of dredged and fill material are commonly associated with activities such as channel construction and maintenance, fills to create development sites, transportation improvements, and water resource projects (such as dams, jetties, and levees). Excavation activities (e.g., mechanized land clearing, ditching, channelization, runoff from disposal areas, and others) also result in at least some discharge of dredged materials, and are thus regulated. The CWA authorizes the issuance of permits for such discharges as long as the proposed activity complies with environmental requirements specified in Section 404(b)(1) of the CWA. Section 404 is the primary federal program regulating activities in wetlands. The Section 404 program is administered by both the ACOE and the U.S. Environmental Protection Agency (USEPA), while the USFWS, National Marine Fisheries Service (NMFS), and several state agencies play important advisory roles.

The ACOE has primary responsibility for the permit program and is authorized, after notice and opportunity for a public hearing, to issue Section 404 permits. In evaluating individual Section 404 permit applications, the ACOE determines compliance with Section 404(b)(1) guidelines and carries out a public-interest review. This review involves balancing such public-interest factors as conservation, economics, aesthetics, wetlands protection, cultural values, navigation, fish and wildlife values, water supply, and water quality. The ACOE also considers comments received from the USEPA, USFWS, NMFS, and state resource agencies. The ACOE is obligated to permit the "least environmentally damaging practicable alternative," provided one exists. Also, the ACOE may not issue a permit before the local RWCQB has issued a water quality "certification" or "waiver" of compliance with Section 401 of the federal CWA.

State Status

The State of California defines an Endangered species as a species whose prospects of survival and reproduction are in immediate jeopardy. A Threatened species is a species in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management. A Rare species is one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. Rare status applies to California native plants listed prior to the CESA. State Threatened and Endangered species are protected against take unless an incidental take permit is obtained from the CDFG.

California Species of Special Concern is an informal designation used by the CDFG for some declining wildlife species that are not state candidates. This designation does not provide legal protection, but signifies that these species are recognized as special status by the CDFG.

Species that are California Fully Protected may not be taken or possessed at any time.

The California Natural Diversity Data Base (CNDDB) provides an inventory of special status plant and animal species that occur in the state. The CNDDB also provides an inventory of vegetation types that are considered special status by the state and federal resource agencies, academic institutions, and various conservation groups.

A species that is considered a Special Animal is a species that is tracked by the CNDDB. Species of Local Concern are those that have no official status with the resource agencies, but are being watched by local conservation organizations because either there is a unique population in the region or the species is declining in the region.

California Endangered Species Act

The CESA (Fish and Game Code Sections 2050 to 2097) is administered by the CDFG and prohibits the take of plant and animal species designated by the Fish and Game Commission as either Threatened or Endangered in the state of California. "Take" in the context of the CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when attempting to take individuals of a listed species.

CESA allows for take that is incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts on rare, Endangered, and Threatened species and to develop appropriate mitigation planning to offset project induced losses of listed species populations and their essential habitats.

Through permits or memorandums of understanding, the CDFG may authorize individuals, public agencies, or educational institutions, to import, export, take, or possess any Endangered species, Threatened species, or candidate species of plants and animals. Take is authorized only after it has been demonstrated by the applicant that the impacts of a project shall be minimized and fully mitigated. The measures required to meet this obligation are roughly proportional in extent to the impact of the authorized taking on the species and must be capable of successful implementation.

California Fish and Game Code Section 1601

The CDFG has jurisdictional authority over riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600-1607. Activities of state and local agencies and public utilities that are project proponents are regulated by the CDFG under Section 1601 of the code and regulates work that will: substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. CDFG enters into a Streambed Alteration Permit with a project proponent and can impose conditions on the agreement to ensure no net loss of riparian values or acreage.

Due to the fact that the CDFG includes under its jurisdiction streamside habitats that under the federal definition may not qualify as jurisdictional waters and/or wetlands of the U.S. on a particular project site, CDFG jurisdiction may be broader than that of the ACOE. As an example, riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under Section 1601.

CNPS

The CNPS is a private organization that has developed an inventory of California's special status plant species (CNPS 2003). This inventory summarizes the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory is comprised of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as Rare, Threatened, or Endangered throughout their range. List 2 plant species are considered Rare, Threatened, or Endangered in California but more common elsewhere. Plant species for which CNPS needs additional information are included on List 3. List 4 plant species are those of limited distribution in California, but whose susceptibility to threat appears low at this time.

Significant Ecological Areas

Significant Ecological Areas (SEAs) were established in 1976 by Los Angeles County to designate areas with sensitive environmental conditions and/or resources to preserve biological diversity. The County recently re-evaluated the biological conditions of these SEAs in 2000; however, revisions were never adopted and the SEAs established in 1976 are the only ones currently recognized. SEA boundaries are general in nature, and broadly outline the biological resources of concern. The Los Angeles County General Plan allows development in SEAs as long as development is "highly compatible" with the identified resources. Los Angeles County established Tujunga Wash upstream from Hansen Dam as SEA No. 24 in 1976.

Sensitive Species in the Project Area

Special Status Plant Species

Fourteen (14) special status plant species have been previously identified in the project region, or have some potential to occur within the project area. Brief descriptions of these species are discussed below and summarized in Table 1, alphabetically, according to their scientific name.

Greata's Aster (*Aster greatae*)

Greata's aster, a CNPS 1B plant, is a perennial species known from the southern slopes of the San Gabriel Mountains. One of the two known occurrences is located in Gold Canyon within the Angeles National Forest. The species is found in damp places within foothill and lower montane conifer habitats. This species is not expected to occur due to lack of appropriate supporting habitat.

Braunton's Milk-vetch (*Astragalus brauntonii*)

Braunton's milk-vetch is a federal and state-listed Endangered, and a CNPS 1B, plant species endemic to foothill habitats in the Santa Ana, San Gabriel, and Santa Monica mountains. The species is found on small limestone outcrops in gaps or disturbed places within chaparral, coastal sage scrub, and closed-cone conifer forest. This species is known from the Simi and Chino hills, Santa Ynez Canyon (Santa Monica Mountains), and Coal and Gypsum canyons (Santa Ana Mountains), with other occurrences documented in the San Gabriel Mountains on private lands adjacent to the Angeles National Forest. This species is short-lived (two to three years) and appears to require significant surface disturbance for reproduction; consequently, this species may appear only once in 20 to 50 or more years, depending on the interval between significant disturbances. This species is not expected to occur due to lack of appropriate substrate.

Parish's Brittlescale (*Atriplex parishii*)

Parish's brittlescale is a CNPS 1B species that is typically found on drying soils in alkali meadows, vernal pools, playas, and in chenopod scrub at low elevations within desert habitats (though some locations are reported up to 4,700 feet). The CNDDB contains records for 11 occurrences. Most of the recent collections are from the San Jacinto Valley in Riverside County, though historic occurrences exist for Los Angeles, San Bernardino, and Orange counties. This species is not expected to occur due to lack of appropriate habitat and substrate.

Nevin's Barberry (*Berberis nevinii*)

Nevin's barberry is a federal- and state-listed Endangered and CNPS 1B species known from Riverside, San Bernardino, and Los Angeles counties. Its current range extends from the foothills of the San Gabriel Mountains to near the foothills of the Santa Ana Mountains. Plants have been observed in discrete, localized occurrences in two types of habitat: sandy and gravelly places along the margins of dry washes, and on coarse soils in chaparral. This species is known historically from fewer than 30 scattered occurrences, with several known to have been extirpated as a result of urban development. This species appears to be restricted to chaparral or coastal sage scrub communities in areas with alluvial or sedimentary-based substrates. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the alignment due to lack of habitat and/or substrate.

TABLE 1
SPECIAL STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR WITHIN HAWRP AREA

Species	Status		Sites with Potential Occurrence
	Federal/ State	CNPS	
Greata's aster *Aster greatea*	–/–	1B	Species is not expected to occur due to lack of habitat and/or substrate.
Braunton's milk vetch *Astragalus brauntonii*	FE/CE	1B	Species is not expected to occur due to lack of habitat and/or substrate.
Parish's brittlescale *Atriplex parishii*	–/–	1B	Species is not expected to occur due to lack of habitat and/or substrate.
Nevin's barberry *Berberis nevinii*	FE/CE	1B	Species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.
Plummer's mariposa lily *Calochortus plummerae*	–/–	1B	Species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.
Southern tarplant *Centromadia parryi* ssp. *australis*	–/–	1B	Species is not expected to occur due to lack of habitat and/or substrate.
San Fernando Valley spineflower *Chorizanthe parryi* var. *Fernandina*	FC/CE	1B	Species is not expected to occur due to lack of habitat and/or substrate.
slender-horned spineflower *Dodecahema leptocerus*	FE/CE	1B	Species is not expected to occur due to lack of habitat and/or substrate.
many-stemmed dudleya *Dudleya multicaulis*	–/–	1B	Species is not expected to occur due to lack of habitat and/or substrate.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	–/SC	1B	Species is not expected to occur due to lack of habitat and/or substrate.
mesa horkelia *Horkelia cuneata* ssp. *puberula*	–/–	1B	Species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.
San Gabriel linanthus *Linanthus concinnus*	–/–	1B	Species is not expected to occur due to lack of habitat and/or substrate.

TABLE 1 (Continued)
SPECIAL STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR WITHIN HAWRP AREA

Species	Status		Sites with Potential Occurrence
	Federal/ State	CNPS	
Davidson's bush mallow *Malacothamnus davidsonii*	–/–	1B	Species has a low potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.
California orcutt grass *Ocuttia californica*	FE/CE	1B	Species is not expected to occur due to lack of habitat and/or substrate.

LEGEND

Federal (USFWS)

FE	Endangered
FT	Threatened
PE	Proposed Endangered
PT	Proposed Threatened
SOC	Species of Concern[1]
FC	Federal Candidate

State (CDFG)

CE	Endangered
CT	Threatened
PE	Proposed Endangered
PT	Proposed Threatened
SSC	Species of Special Concern[1]
SC	State Candidate

California Native Plant Society (CNPS)

1A Plants Presume Extinct in California
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2 Plants Rare, Threatened, or Endangered in California but More Common Elsewhere
3 Plants About Which We Need More Information – A Review List
4 Plants of Limited Distribution – A Watch List

[1]Note – This designation, although not an active term, has been reinstated for informational purposes only.

Plummer's Mariposa Lily (*Calochortus plummerae*)

Plummer's mariposa lily is a CNPS 1B plant found in the San Gabriel, San Bernardino, San Jacinto, Santa Ana, and Santa Monica mountains. The CNDDB lists 58 occurrences, many of which are located on private lands planned for development. This species is found in chaparral habitat as well as alluvial fan sage scrub, grasslands, and lower montane conifer forests below 5,500 feet. The species is vulnerable to development projects, trail construction and maintenance, fire suppression, habitat conversion, grazing, trampling, and sand and gravel mining. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the alignment due to lack of habitat and/or substrate.

Southern Tarplant (*Centromadia parryi* ssp. *australis*)

Southern tarplant is a CNPS 1B plant that occurs within San Diego, Orange, Ventura, Los Angeles, and Santa Barbara counties. This species prefers the margins of marshes, swamps, seasonal wetlands (such as vernal pools), and valley and foothill grasslands. This species is not expected to occur due to lack of habitat and/or substrate.

San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*)

The San Fernando Valley spineflower is a federal candidate, state-listed Endangered, and CNPS List 1B plant species. This species is a small, decumbent plant with white flowers. It is

distinguished from the Parry's spineflower in having straight, rather than hooked, involucural teeth. Historically it was thought that the habitat for this species was in sandy washes. However, a locality discovered in 1999 found the species in non-native grassland and grassland-coastal sage scrub ecotonal habitats. These plants were found on mineral soils with reduced annual cover and well developed crytogamic crusts. This species was historically known from valleys of Los Angeles and Orange counties, including the following locations: a sandy wash in Castaic, Elizabeth Lake, the mouth of Little Tujunga Wash, the Chatsworth area, Santa Ana, Ballona Creek, and the area near the lower San Fernando Dam. This species was thought to be extinct, until the discovery in 1999 of a population on Laskey Mesa in the Simi Hills. This species was also verified in the Newhall area in 1999. This species is not expected to occur due to lack of habitat and/or substrate.

Slender-horned Spineflower (*Dodecahema leptoceras*)

Slender-horned spineflower is a federally- and state-listed Endangered and CNPS 1B species found along sandy stream terraces. This species prefers alluvial fan scrub habitat, which has been declining in Los Angeles, San Bernardino, and Riverside counties as a result of urban and agricultural development, sand and gravel mining, and flood control measures. Plants are typically found in areas with no exotic species or obvious ground disturbance. This species is not expected to occur due to lack of habitat and/or substrate.

Many-stemmed Dudleya (*Dudleya multicaulis*)

Many-stemmed dudleya is a CNPS 1B species distributed in coastal and foothill areas of Los Angeles, Orange, western Riverside, and San Diego counties. This species typically prefers clay soils in chaparral, coastal sage scrub, and grassland habitats. The species forms vegetative parts and inflorescences above ground each year and then dies back in late spring leaving just the underground corm. This species is not expected to occur due to lack of habitat and/or substrate.

Los Angeles Sunflower (*Helianthus nuttallii* ssp. *parishii*)

The Los Angeles sunflower is a state candidate and a CNPS 1B plant. Until the summer of 2002 when it was rediscovered in the Newhall area of Los Angeles County, this species had been considered extinct because it had not been observed since 1937. Los Angeles sunflower is a wetland indicator species that typically prefers marshes and swamps (coastal salt and freshwater), though potential habitat may include the margins of linear drainages that mimic marsh habitat as well. This sunflower is a perennial plant that is expected to bloom between August and October. This species is not expected to occur due to lack of habitat and/or substrate.

Mesa Horkelia (*Horkelia cuneata* ssp. *puberula*)

Mesa horkelia is a CNPS List 1B plant endemic to southern California, though many historical occurrences have been extirpated. This species is a perennial herb that prefers sandy or gravelly substrates in chaparral, cismontane woodland, and coastal sage scrub habitat. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.

San Gabriel Linanthus (*Linanthus concinnus*)

San Gabriel linanthus is a CNPS 1B plant species. This is an annual species typically observed on dry, rocky soils in montane coniferous forests. This species is not expected to occur due to lack of appropriate habitat and substrate.

Davidson's Bushmallow (*Malacothamnus davidsonii*)

Davidson's bushmallow is a CNPS 1B shrub species known to occur at low elevations in Los Angeles County. Occurrences of this species are known from the San Fernando Valley and the western end of the San Gabriel Mountains. In the mountains, this species has been recorded in Little Tujunga Canyon, Lopez Canyon, upper Haines Canyon, Loop Canyon, Big Tujunga Wash, and Pacoima Canyon. The species is typically found in sandy washes and in openings of coastal sage scrub or chaparral. This species has a low potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of habitat and/or substrate.

California Orcutt Grass (*Orcuttia californica*)

California Orcutt grass is a federal and state Endangered and a CNPS List 1B species. California Orcutt grass tends to grow in wetter portions of the vernal pool basins, but this annual does not show much growth until the basins become somewhat desiccated. This species is not expected to occur due to lack of appropriate habitat and substrate.

Special Status Wildlife Species

Fourteen (14) special status wildlife species have been recorded as having occurred within the HAWRP area. A brief description of these special status wildlife species and their potential to occur is provided below and summarized in Table 2.

Santa Ana Speckled Dace (*Rhinichthys osculus*)

The Santa Ana speckled dace is a California Species of Special Concern. Its historic range includes low elevation streams in the Los Angeles, San Gabriel, and Santa Ana river systems. The largest known remaining population is within the Angeles National Forest on the lower reaches of the east, north, and west forks of the San Gabriel River. Other reported occurrences include Pacoima Creek, Little Tujunga Creek, and Big Tujunga Creek (confirmed in May 2002 in Tujunga Wash proximal to the eastern terminus south of the Canyon Trails Golf Course at the confluence with Haines Canyon Creek (Natural History Museum of Los Angeles County 2004)). The Santa Ana speckled dace requires permanent flowing streams with shallow cobble and gravel riffles. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

TABLE 2
SPECIAL STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR WITHIN THE HAWRP AREA

Species	Status		Sites with Potential Occurrence
	Federal	State	
Fish			
Santa Ana speckled dace *Rhinichithys osulus ssp 3*	None	SSC	Species is known to occur in Tujunga Wash near the eastern terminus south of the Canyon Trails Golf Course, but is not expected to occur in the proposed alignment due to lack of potentially supporting habitat.
Santa Ana sucker *Catostomuis santaanae*	FT	SSC	Species is known to occur in Tujunga Wash near the eastern terminus south of the Canyon Trails Golf Course, but is not expected to occur in the proposed alignment due to lack of potentially supporting habitat.
arroyo chub *Gila orcutti*	None	SSC	Species is known to occur in Tujunga Wash near the eastern terminus south of the Canyon Trails Golf Course, but is not expected to occur in the proposed alignment due to lack of potentially supporting habitat.
Amphibians			
arroyo toad *Bufo californicaus*	FE	SSC	Species is not expected to occur due to lack of potentially supporting habitat.
Western spadefoot toad *Scaphiopus hammondi*	SOC	SSC	Species is not expected to occur due to lack of potentially supporting habitat.
mountain yellow-legged frog *Rana muscosa*	FE (Southern California populations only)	SSC	Species is not expected to occur due to lack of potentially supporting habitat.
Reptiles			
silvery legless lizard *Anniella pulchra pulchra*	SOC	SSC	Species is not expected to occur due to lack of potentially supporting habitat.
orange-throated whiptail *Cnemidophorus hyperythrus beldingi*	None	SSC	Species has a limited potential to occur at eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.
San Diego coast horned lizard *Phrynosoma coronatum blainvillei*	SOC	SSC	Species has a limited potential to occur at eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.
Western pond turtle *Clemmys marmorata*	SOC	SSC	Species is not expected to occur due to lack of potentially supporting habitat.
Birds			
yellow-billed cuckoo *Coccyzus americanus occidentalis*	None	SE	Species is not expected to occur due to lack of potentially supporting habitat.

TABLE 2 (Continued)
SPECIAL STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR WITHIN THE HAWRP AREA

Species	Status		Sites with Potential Occurrence
	Federal	State	
coastal California gnatcatcher *Polioptila californica californica*	FT	SSC	Species has a limited potential to occur at eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.
least Bell's vireo *Vireo bellii pusillus*	FE	SE	Species is not expected to occur due to lack of potentially supporting habitat.
Mammals			
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	None	SSC	Species has a limited potential to occur at eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.

LEGEND

Federal (USFWS)		State (CDFG)	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened
PE	Proposed Endangered	PE	Proposed Endangered
PT	Proposed Threatened	PT	Proposed Threatened
C	Candidate Species	SSC	Species of Special Concern
SOC	Species of Concern[1]	FP	Fully Protected

[1]Note – This designation, although not an active term, has been reinstated for informational purposes only.

Santa Ana Sucker (*Catostomus santaanae*)

The Santa Ana sucker is a federally-listed Threatened species and a California Species of Special Concern. The historic range of this species includes low-elevation streams in the Los Angeles, San Gabriel, and Santa Ana river systems. Extant native populations appear to be concentrated within the east, north, and west forks of the San Gabriel River (including Cattle Canyon and Bear Creek), and Big Tujunga Creek (confirmed in May 2002 in Tujunga Wash proximal to the eastern terminus south of the Canyon Trails Golf Course at the confluence with Haines Canyon Creek (Natural History Museum of Los Angeles County 2004)). Introduced populations of the Santa Ana sucker are present in the Santa Clara River, Sespe Creek, Piru Creek, and San Francisquito Creek. Santa Ana suckers are native to many of the same streams as the speckled dace and have similar habitat requirements. Preferred substrates for this species are coarse gravels and boulders. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Arroyo Chub (*Gila orcutti*)

This species is a federal Species of Concern. The arroyo chub feeds on algae and prefers warm water temperatures and pool habitats with sand and mud bottoms. The chub is adapted to survive in widely fluctuating water temperatures and dissolved oxygen levels. The Natural History Museum of Los Angeles County (2004) contains a specimen collected in May 2002 from the Tujunga Wash proximal to the eastern terminus south of the Canyon Trails Golf Course at

the confluence with Haines Canyon Creek. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Arroyo Toad (*Bufo californicus*)

The arroyo toad species is a federally-listed Endangered species and California Species of Special Concern. The arroyo toad, a subspecies of the southwestern toad, is restricted to rivers with shallow, gravelly pools adjacent to sandy terraces. This species forages on sandy terraces, where adults may also excavate shallow burrows where they shelter during the day and during the dry season. This species historically occurred from San Luis Obispo to San Diego counties along most major rivers and drainages. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Western Spadefoot Toad (*Scaphiopus hammondii*)

The western spadefoot is a federal Species of Concern and a California Species of Special Concern. The California range of this toad is the Central Valley and adjacent foothills, and the Coast Ranges from Point Conception, Santa Barbara County south to San Diego County. This is typically a lowland species that is found in washes, river flood plains, alluvial fans, playas, and alkali flats and is not a vernal pool obligate as previously reported. This species may occur at higher elevations in southern California, and has been documented at elevations above 4,000 feet in the Chihuahua Valley and Boulevard areas of San Diego County (Jeff Galizio, personal observation). It primarily inhabits grasslands, but does occur in other sparsely vegetated habitats. This species breeds in vernal pools and other seemingly ephemeral water bodies or floodplains. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Mountain Yellow-legged Frog (*Rana muscosa*)

The mountain yellow-legged frog is a California Species of Special Concern and Southern California populations are federally-listed as Endangered. In southern California, these frogs are found in the San Gabriel, San Bernardino, and San Jacinto mountains and at least historically on Palomar Mountain. Mountain yellow-legged frogs inhabit high-elevation streams usually above 4,000 feet. However, in the San Gabriel Mountains, and perhaps other areas where the characteristics of mountain streams (i.e., steep, rocky canyons) extend to lower elevations, these frogs were believed to have occurred historically at elevations down to 2,000 feet. This species is not expected to occur due to lack of potentially supporting habitat.

Silvery Legless Lizard (*Anniella pulchra pulchra*)

The silvery legless lizard is a federal Species of Concern and a California Species of Special Concern. It is a small, secretive lizard that spends most of its life beneath the soil, under stones, logs, debris, or in leaf litter associated with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, pine-oak woodland, or under sycamores, cottonwoods, or oaks growing on stream terraces. Soil moisture is essential for them and legless lizards die if they are unable to reach a moist substrate. Its reported elevation range extends from sea level to approximately 5,700 feet in the Sierra Nevada foothills, but most historic localities along the central and southern California coast are below 3,500 feet. The silvery legless lizard is a burrowing species. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Orange-throated Whiptail (*Cnemidophorus hyperythrus beldingi*)

The orange-throated whiptail is a California Species of Special Concern that occurs in coastal sage scrub and, to a lesser extent, chaparral, floodplains, and streamside terraces. Its geographic range extends from the southern edge of San Bernardino County south to around Loreto in Baja California, Mexico. This species is usually observed on the western slopes of the coast ranges at an elevation range from near sea level to about 3,400 feet. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.

San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*)

The San Diego horned lizard is a federal Species of Concern and a California Species of Special Concern. This species may be found in a variety of habitats but are most common in communities with loose, fine soils with a high sand component; an abundance of native ants; open areas with limited overstory for basking; and areas with low, dense shrubs for refuge. Three factors have contributed to its decline: loss of habitat, over collecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, the introduced ants have displaced the native species upon which the lizard feeds. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.

Western Pond Turtle (*Clemmys marmorata*)

The Western pond turtle is a federal Species of Concern and a California Species of Special Concern. This species occurs primarily in freshwater rivers, streams, lakes and ponds that also support basking sites such as logs, banks, or other suitable areas above water level. There is one large pond turtle population on the West Fork of the San Gabriel River below Cogswell Reservoir with smaller populations on upper Castaic Creek, Aliso Canyon, Pacoima Creek, Little Tujunga Creek, Big Tujunga Creek (east of the project alignment), the East Fork of the San Gabriel River, and possibly Big Dalton Creek. The primary reason for pond turtle declines has been loss of suitable habitat from the construction of dams, diversions, and stream channelization that have greatly reduced the availability of persistent, pooled water along low-elevation streams. Other threats to this species include introduced predatory fish, bullfrogs, and illegal collecting. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

The yellow-billed cuckoo is listed as Endangered by the state of California. Formerly a rare summer resident, this species is now extirpated from much of southern California. Breeding yellow-billed cuckoos are restricted to extensive deciduous riparian thickets or forest with dense, low-level or understory foliage that occurs along slow-moving watercourses, backwaters, or seeps. Willows are almost always a dominant component of western yellow-billed cuckoo nesting habitat. This species is not expected to occur due to lack of potentially supporting habitat.

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is a federally-listed Threatened species and California Species of Special Concern. This species is a non-migratory resident of coastal sage scrub habitats of southern California. This species may occur at elevations up to 3,000 feet on the western side of the coastal mountain ranges, though population densities decline substantially

at elevations above approximately 900 feet and at increasing distances from the coast. This species tends to be most abundant in mature stands of coastal sage scrub, where shrub canopy cover is typically greater than 50 percent. This species is known to occur in the project area on the hillside south of Wentworth Avenue, which is located south of the eastern terminus on the far side of Tujunga Wash. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.

Least Bell's Vireo (*Vireo bellii pusillus*)

The least Bell's vireo is a federally- and state-listed Endangered species. This species is a neotropical migrant that breeds in low-elevation riparian habitats, particularly broad cottonwood-willow woodlands and mule fat scrub and is a rare and local summer resident in southern California. While destruction of lowland riparian habitats has played a large role in reducing the population of this species, brood parasitism by brown-headed cowbirds is likely the most important factor in its decline. There have been sporadic sightings of this species during the breeding season in Big Tujunga Creek, behind Hansen Dam as well a record of an observation in riparian scrub vegetation that had developed within the inundated bottom of a gravel pit in the San Gabriel Valley. This species is not expected to occur along the proposed alignment due to lack of potentially supporting habitat.

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)

The San Diego black-tailed jackrabbit is a California Species of Special Concern. The San Diego subspecies of the widespread black-tailed jackrabbit is restricted to the western slope of the coastal mountain ranges from Santa Barbara County to northwestern Baja California. This nocturnal species prefers relatively open areas with sparse shrub cover. This species has a limited potential to occur at the eastern terminus and is not expected to occur in other areas along the proposed alignment due to lack of potentially supporting habitat.

Special Status Vegetation Types

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by the state and federal resource agencies, academic institutions, and various conservation groups (such as CNPS). Determination of the level of sensitivity is based on the Nature Conservancy Heritage Program Status Ranks that rank both species and vegetation types on a global and statewide basis according to the number and size of remaining occurrences as well as recognized threats (e.g., proposed developments, habitat degradation, and invasion by non-native species). Special status vegetation types that are present in the project area are discussed below.

Riversidean alluvial fan sage scrub is an open to moderately dense scrub vegetation type and is primarily restricted to floodplain habitats that only occasionally flood (e.g., every five to ten years). As a result of the occasional flooding, many upland species may become established in this vegetation type. The occasional flooding and sediment reworking, however, is the driving force that maintains this vegetation type. It is typically dominated by scalebroom, though common subdominant shrub species include California sagebrush, Mexican elderberry, and various coastal sage scrub and chaparral species. Open understory areas are typically dominated by native and non-native herbaceous species usually associated with grassland communities, though some ruderal species may also occur. Scattered riparian trees and shrubs may also occur in association with this vegetation type, and include sycamore, mule fat, and sometimes Fremont cottonwood. This vegetation type was observed within Tujunga Wash, proximal to the eastern terminus south of the Canyon Trails Golf Course.

PROJECT IMPACTS

The following section analyzes impacts associated with construction, operation, and maintenance of the project. The direct (both permanent and temporary) impacts to biological resources related to the construction of the project is described in this section.

Significance Criteria

The potential significance of environmental impacts on biological resources has been assessed using impact significance criteria that mirror the policy contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the state to:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7–Thresholds of Significance, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A significance threshold is a quantitative, qualitative, or performance level of a particular environmental effect, that would normally be determined to be significant by the agency if the threshold is exceeded.

In the development of thresholds of significance for impacts on biological resources, CEQA provides guidance primarily in Section 15065–Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an Endangered, rare, or Threatened species..."*

Appendix G of the CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including: candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and adopted habitat conservation plans. These factors are considered through the checklist of questions answered during the Initial Study process that is used to determine the appropriate type of environmental documentation for a project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]). Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, these standards have been used as the basis for defining significance thresholds in this MND. For each of the thresholds identified below, the section of CEQA upon which the threshold was derived has been provided. For the purpose of this analysis, impacts on biological resources are considered significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project:

- *If the project has the potential to substantially degrade the quality of the environment (15065[a]),*

- *If the project has the potential to substantially reduce the habitat of a fish or wildlife species (15065[a]),*

- *If the project will cause a fish or wildlife populations to drop below self-sustaining levels (15065[a]),*

- *If the project will threaten to eliminate a plant or animal community (15065[a]),*

- *If the project will reduce the number or restrict the range of an Endangered, Rare, or Threatened species[1] (15065[a]),*

- *If the project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS (CEQA Guidelines, Appendix G, IV [a]),*

- *If the project has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS (CEQA Guidelines, Appendix G, IV [b]),*

- *If the project has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (CEQA Guidelines, Appendix G, IV [c]),*

- *If the project interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites (CEQA Guidelines, Appendix G, IV [d]),*

- *If the project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (CEQA Guidelines, Appendix G, IV [e]),*

- *If the project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (CEQA Guidelines, Appendix G, IV. [f]).*

An evaluation of whether an impact on biological resources would result in a "substantial adverse effect" must consider both the resource itself and how that resource fits into a regional context. For the proposed project, the regional setting of the project includes the following USGS quads that were queried in the records search: Burbank, San Fernando, Sunland, and Van Nuys.

---

[1] Endangered and threatened species referenced in this threshold are those listed by the USFWS and/or CDFG as Threatened or Endangered. Section 15380 of CEQA indicates that a lead agency can consider a non-listed species (e.g., CNPS List 1B plants) to be Endangered, Rare, or Threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species met the definitions for Rare and Endangered according to Section 15380 of CEQA.

For the purposes of this impact analysis, "substantial adverse effect" is defined as the loss or harm of a magnitude which, based on current scientific data and knowledge, would: 1) substantially diminish population numbers of a species or distribution of a habitat type within the region; or 2) eliminate the functions and values of a biological resource in the region.

Construction Impacts

General Habitat and Wildlife Loss

It is anticipated that construction activities would be limited to low-value and/or disturbed habitats (e.g., ruderal and developed) that support wildlife that have adapted to an environment modified by human activity and development. The removal or alteration of these habitats would result in a less than significant impact.

Wildlife Movement and Habitat Fragmentation

Tujunga Wash currently provides a functional connection between two or more habitat patches that would otherwise be fragmented or isolated from one another. Tujunga Wash occurs outside of the proposed project footprint; therefore, construction impacts to wildlife movement would not occur.

Special Status Plant Impacts

Special status plant species are not expected to occur, within the portions of the alignment where historic modification and development has eliminated habitat or substrate with the potential to support these species. Coastal sage scrub habitat occurs proximal to the eastern terminus and maintains some potential to support the Nevin's barberry, Plummer's mariposa lily, mesa horkelia, and Davidson's bush mallow. The proposed project footprint would avoid the areas with potential to support these species, therefore, no impact would occur.

Special Status Wildlife Impacts

Special status wildlife species are not expected to occur, because historic habitat modification and development has eliminated habitat with the potential to support these species. Coastal sage habitat, however, occurs proximal to the eastern terminus and maintains some potential to support orange-throated whiptail, San Diego horned lizard, coastal California gnatcatcher, and San Diego black-tailed jackrabbit. The proposed project footprint would avoid habitat with the potential to support these species, therefore, no impact would occur.

Special Status Vegetation Types Impacts

Historic habitat modification and development has eliminated nearly all native vegetation types from the proposed alignment. Coastal sage scrub, however, was observed proximal to the eastern terminus. The proposed project footprint would avoid areas covered by coastal sage scrub, therefore, no adverse impact is expected to occur.

Operational Impacts

Though construction-related activities would be the initial project-related impacts, operation and maintenance activities may be required on an ongoing basis in the project area to ensure the function of project components. Anticipated operation and maintenance activities components include landscaping maintenance, operation of the pumps, maintenance of the pumps, cleaning,

and total system inspection. Operation and maintenance activities implemented consistent with the requirements of project approvals or permits would result in a less than significant impact.

MITIGATION MEASURES

No substantial adverse direct or indirect effects from construction, operation and/or maintenance of the proposed project are expected and no mitigation is required; however, it is recommended that a qualified biologist determine the extent of habitat and flag the boundaries of areas to be avoided during construction. Operation and maintenance requirements and implementation protocols shall be developed for inclusion within the project description of permits, or other entitlement applications. To this end, operation and maintenance activities shall be implemented in a manner consistent with the terms and conditions of necessary project approvals and/or permits.

Please contact me at (714) 444-9199 if you have any questions or comments.

Sincerely,

BONTERRA CONSULTING

Jeffrey C. Galizio

Jeffrey C. Galizio
Senior Project Manager, Biological Services

Attachments: Exhibits 1 and 2

R:\Projects\CampDress\J002\TaskVII-Revised Bio Letter-010904.doc

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APPENDIX C
Cultural Resources Report

CULTURAL RESOURCES SURVEY OF THE PROPOSED HANSEN AREA WATER RECYCLING PROJECT LOS ANGELES COUNTY, LOS ANGELES, CALIFORNIA

By:

Roger D. Mason, Ph.D., RPA
Jay K. Sander, M.A.

Prepared by:

CHAMBERS GROUP, INC.
17671 Cowan Avenue, Suite 100
Irvine, California 92614

Prepared for:

CDM
18581 Teller Avenue, Suite 200
Irvine, California 92612

And

City of Los Angeles Department of Water and Power

OCTOBER 2003

USGS 7.5' Van Nuys, Sunland, Burbank, San Fernando
Linear Survey, Approximately 6.5 miles

Chambers Group®

MANAGEMENT SUMMARY

A records search and cultural resources survey were completed for the Los Angeles Department of Water and Power proposed Hansen Area Water Recycling Project in the Lake View Terrace community of the City of Los Angeles. As a result of the records search and survey, one previously recorded cultural resource was identified in the project's potential impact area. The impact area consists of the pipeline alignment plus the current road rights-of-way. The previously recorded cultural resource consists of a prehistoric village site (CA-LAN-167). This site is located along Foothill Boulevard. No previously unidentified cultural resources were identified as a result of the field survey.

The potential for intact cultural remains exists along Foothill Boulevard in the vicinity of Orcas Avenue. Therefore, archaeological monitoring of all project related ground-disturbing activities along this part of Foothill Boulevard is recommended.

1.0 INTRODUCTION

This report provides the results of the cultural resources survey for the proposed Hansen Area Water Recycling Project. This project involves the construction of a new recycled water pipeline to be constructed by the City of Los Angeles Department of Water and Power (LADWP) in the vicinity of Hansen Lake in the Sun Valley, Pacoima, and Lake View Terrace communities of the City of Los Angeles (Figure 1). This project is expected to improve the reliability of the City's potable water supply through recycling and conservation programs and supply reclaimed water to the Canyon Trails Golf Course and the Hansen Dam Recreation Area.

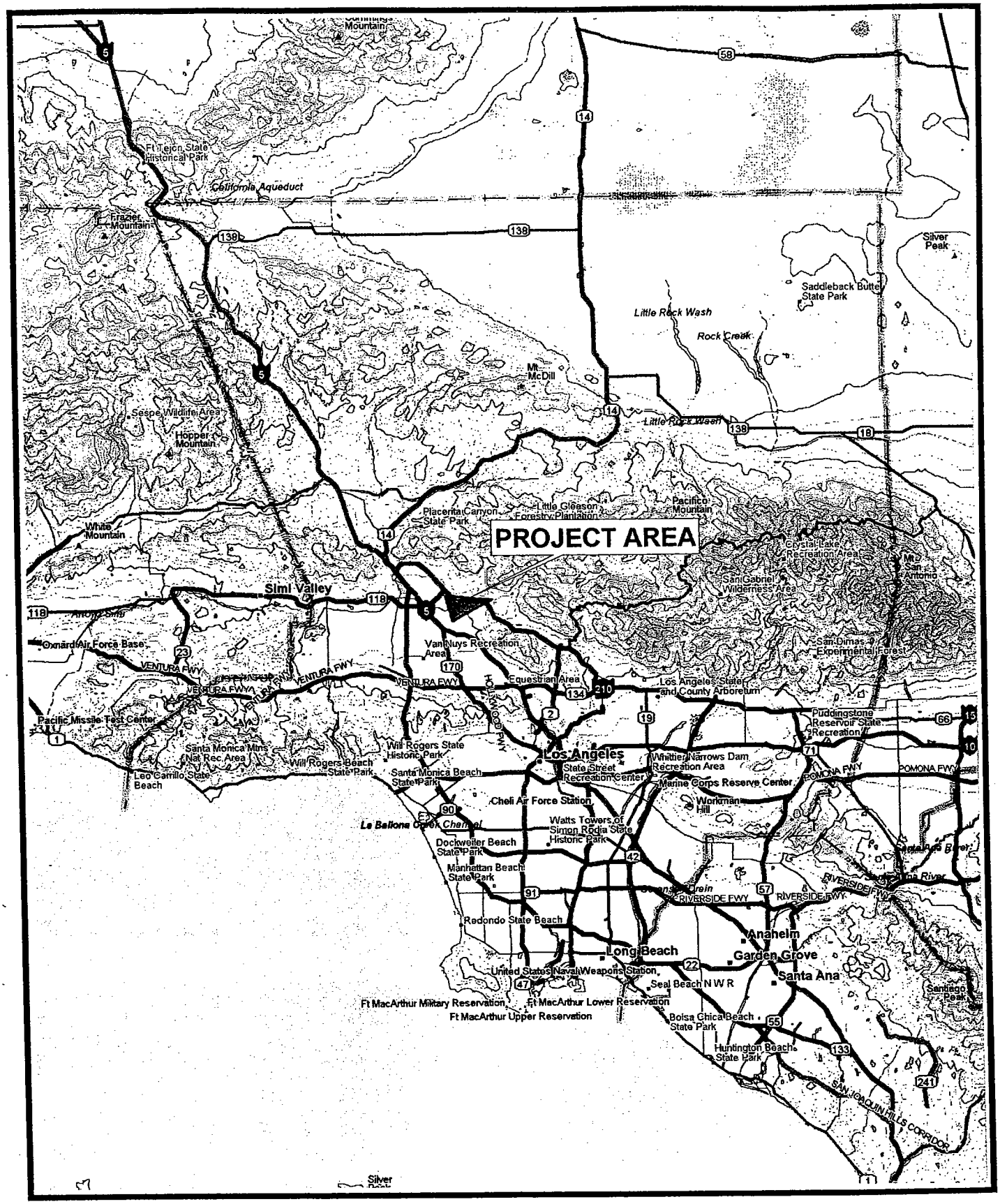
Chambers Group, Inc. (Chambers Group) was retained to perform a records/literature review to identify cultural resources known to exist in the project area as well as an intensive survey to identify any previously unrecorded cultural resources that could be impacted by the project. The cultural resources inventory presented here consists of the results of both the records/literature review and archaeological field survey of the proposed pipeline routes.

2.0 PROJECT DESCRIPTION

The proposed project would involve the construction of approximately 6.5 miles of ductile iron pipeline, a booster pump station, and a 1 MG water tank. Construction of the pump station will be within an existing LADWP facility. The 1 MG water tank would be constructed at the Canyon Trails Golf Course. Construction of the proposed project would occur along existing street rights-of-way using the open-trench method, except at busy intersections, such as Glenoaks Boulevard at Osborne Street, and Osborne Street at Foothill Boulevard, where the pipeline may be jacked. The proposed project also includes construction of maintenance/access holes, flow meters, valves, and/or vaults.

The pipeline route is as follows, from southwest to northeast:

- LADWP Valley Generating Station (VGS) site from the connection to an existing 7 million gallon (MG) storage tank and new booster pump station, southeast to Truesdale Street (which is an LADWP service road through the VGS site);
- Northeast along Truesdale Street to its intersection with Glenoaks Boulevard (through LADWP property);
- Glenoaks Boulevard from the LADWP VGS service road intersection northwest to Osborne Street;
- Osborne Street from Glenoaks Boulevard to Foothill Boulevard;
- Foothill Boulevard from Osborne Street to Conover Street; and
- Conover Street (via Conover fire road) to the connection to a new 1 MG storage tank at the Canyon Trails Golf Course.



NORTH
SCALE: 1:800,000

FIGURE 1. HANSEN AREA WATER RECYCLING PROJECT AREA

3.0 LOCATION AND ENVIRONMENTAL SETTING

The pipeline alignment crosses Tujunga Wash below Hansen Dam and then runs along the north side of the Tujunga Valley which contains Tujunga Wash, a creek that originates in Big Tujunga Canyon in the San Gabriel Mountains. Hansen Dam blocks the outlet of Tujunga Valley, forming Hansen Lake. Hansen Lake is surrounded by Hansen Dam Park. The route along Glenoaks is industrial and commercial. The route along Osborne and Foothill west of the 210 Freeway is undeveloped. Foothill Boulevard east of the 210 Freeway is commercial and residential. The final segment of the pipeline route is in open space along Conover Street.

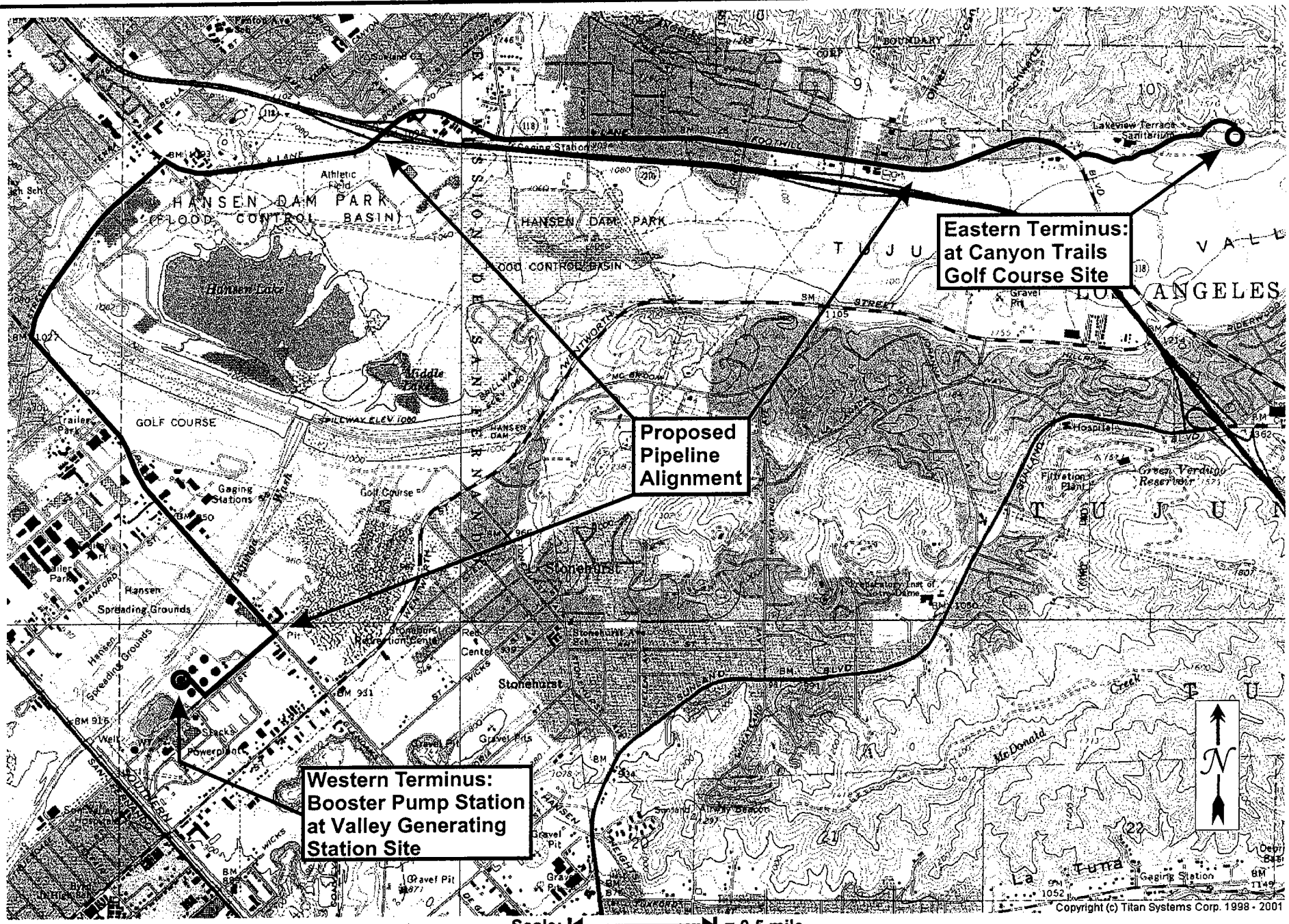
The proposed project is located within unsectioned portions of the Ex-Mission De San Fernando and the Tujunga land grants in Township 2 North, Range 14 West, as depicted on the U.S. Geological Survey (USGS) 7.5-minute Van Nuys, Sunland, Burbank, and San Fernando topographic quadrangles. The area ranges in elevation from approximately 900 to 1,300 feet above mean sea level (see Figure 2).

4.0 CULTURAL OVERVIEW

4.1 PREHISTORIC AND ETHNOHISTORIC BACKGROUND

It is generally believed that human occupation of coastal southern California dates back to at least 10,000 years before present (BP). Four cultural periods of precontact occupation of California during the Holocene Epoch (10,000 years BP to present) are discussed below: the Early Holocene Period, the Early Horizon Period, the Middle Horizon Period, and the Late Horizon Period. During the Early Holocene Period (10,000 to 8,000 years BP), hunters/gatherers utilized lacustrine and marshland settings for the varied and abundant resources found there. Milling-related artifacts are lacking during this period, but the *atlatl* (spear-thrower) and dart are common. Hunting of large and small game occurred, as well as fishing. A few, scattered permanent settlements were established near large water sources, but a nomadic lifestyle was more common (Moratto 1984).

Milling-related artifacts first appear in sites dating to the Early Horizon Period (8,000 to 4,000 years BP). Hunting and gathering continue during this period, but with greater reliance on vegetal foods. Mussels and oysters were a staple. This gave way to greater consumption of shellfish in the Middle Horizon Period (4,000 to 2,000 years BP). Use of bone artifacts appears to have increased during this period, and baked-earth steaming ovens were developed. Occupation of permanent or semi-permanent villages occurred in this period, as did reoccupation of seasonal sites. During the Late Horizon Period (2,000 years BP to the time of European Contact [i.e., AD 1769]), population densities were high and settlement in permanent villages increased (Erlandson 1994; Moratto 1984). Regional subcultures also developed, each with their own geographical territory and language or dialect. These groups, bound by shared cultural traits, maintained a high degree of interaction, including trading extensively with one another.



LOS ANGELES DEPARTMENT OF WATER AND POWER
HANSEN AREA WATER RECYCLING PROJECT

CDM

Proposed Alignment

Figure 2

Ethnographic accounts of Native Americans indicate that the Tongva (or Gabrielino) once occupied the region that encompasses the project area. At the time of contact with Europeans, the Tongva were the main occupants of the southern Channel Islands, the Los Angeles basin, much of Orange County, and extended as far east as the western San Bernardino valley. The term "Gabrielino" came from the group's association with Mission San Gabriel Arcangel, established in 1771, however, today the group prefers to be known by their ancestral name, Tongva. The Tongva are believed to have been one of the most populous and wealthy Native American tribes in southern California prior to European contact, second only to the Chumash (Bean and Smith 1978; McCawley 1996; Moratto 1984).

The Tongva occupied numerous villages with populations ranging from 50 to 200 inhabitants. Residential structures within the villages were domed, circular, and made from thatched tule or other available wood. Tongva society was organized by kinship groups, with each group composed of several related families who together owned hunting and gathering territories. Settlement patterns varied according to the availability of floral and faunal resources (Bean and Smith 1978; McCawley 1996; Miller 1991)

Vegetal staples consisted of acorns, chia, seeds, piñon nuts, sage, cacti, roots, and bulbs. Animals hunted included deer, antelope, coyote, rabbits, squirrels, rodents, birds, and snakes. The Tongva also fished (Bean and Smith 1978; McCawley 1996; Miller 1991).

By the late 18th century, Tongva population had significantly dwindled due to introduced diseases and dietary deficiencies. Tongva communities near the missions disintegrated as individuals succumbed to Spanish control, fled the region, or died. Later, many of the Tongva fell into indentured servitude to Anglo-Americans. By the early 1900s, few Tongva people had survived and much of their culture had been lost (Bean and Smith 1978; McCawley 1996; Miller 1991). However, in the 1970s, a revival of the Tongva culture began which continues today with growing interest and support.

4.2 HISTORY

The first significant European settlement of California began during the Spanish Period (1769 to 1821) when 21 missions and 4 presidios were established between San Diego and Sonoma. Although located primarily along the coast, the missions dominated economic and political life over the majority of the California region. The purpose of the missions was primarily Indian control, along with economic support to the presidios, forced assimilation of the Indians to Hispanic society, and conversion of the native population to Spanish Catholicism (Castillo 1978).

The Mexican Period (1821-1848) began with the success of the Mexican Revolution in 1821, but changes to the mission system were slow to follow. When secularization of the missions occurred in the 1830s, the vast land holdings of the missions in California were divided into large land grants called "ranchos." The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). The project area is in the Rancho Tujunga, granted to Pedro Lopez in 1840 (Aviña 1976:85) and in the Ex-Mission de San Fernando lands, granted to Eulogio de Celis in 1846. The mission lands were confirmed to de Celis in 1862 with the issuance of a patent (Los Angeles County Deed Book 2, page 193).

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican-American War and marked the beginning of the American Period (1848 to present). The discovery of gold that same year sparked the 1849 California Gold Rush, bringing thousands of miners and settlers to California from various parts of the United States, most of whom settled in the north. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching rather than by gold. This prosperity, however, came to a halt in the 1860s as a result of severe floods and droughts, which put many ranchos into bankruptcy (Castillo 1978).

The San Fernando Valley remained rural until the 1930s and 1940s when residential development began. Hansen Dam was built by the U.S. Army Corps of Engineers in the 1940s to provide flood control for this area.

5.0 METHODS

5.1 RECORD SEARCH/LITERATURE REVIEW METHODS

A records/literature review was conducted at the South Central Coastal Information Center at California State University, Fullerton. The purpose of the review was to examine any existing previous cultural resources survey reports, archaeological site records, and historic maps to determine whether previously documented prehistoric or historic archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within or near the project area. The records/literature review was also conducted to determine whether any historic properties listed on or determined eligible for listing on the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP) exist within the project area. In addition, the Native American Heritage Commission (NAHC) was requested to conduct a search of their Sacred Lands File for the project area.

5.2 FIELD SURVEY METHODS

On September 19, 2003, archaeological field survey of the proposed Hansen Area Water Recycling Project area was performed by Chambers Group archaeologist Jay Sander, M.A. A map of the proposed pipeline, in its relation to the entire project area, was provided by the Los Angeles Department of Water and Power. Since most of the pipeline route is in paved roadways, the paved portions of the route was driven. Any undeveloped areas along the route were surveyed on foot. The north side of Foothill Boulevard between Osborne Street and the 210 Freeway and the portion of the route along Conover Street were surveyed on foot.

6.0 RESULTS

6.1 RECORD SEARCH/LITERATURE REVIEW RESULTS

Results of the review of the survey reports and site records provided by the South Central Coastal Information Center (SCCIC) revealed that 68 prior cultural resources investigations have been performed within one half mile of the project area (Appendix A). Nine cultural resources have been recorded within one half mile of the project area. One of these is within the survey area. Summaries of the known sites, both in the project area and within a one half-mile

radius, are provided below in Tables 1 and 2. The NAHC search of their Sacred Lands File was negative for the project area.

Table 1
Known Cultural Resources in the Survey Area

Resource type	Designation(s)	Description
Prehistoric	CA-LAN-167	Village of Tujunga

Table 2
Known Cultural Resources within a One-Half Mile Radius, Outside of the Survey Area

Resource type	Designation	Description
Prehistoric	CA-LAN-300	Residential Base or Village with Cemetery
Prehistoric	CA-LAN-1525	Lithic Scatter with Fire-Affected Rock
Historic	CA-LAN-2073H	Abandoned Subdivision, Residential Debris
Historic	CA-LAN-2089H	Grove House Site, Residential Refuse/Building Debris
Historic	CA-LAN-2090H	Abandoned Roads, Farm Building Sites/Debris
Historic	CA-LAN-2313H	Building Foundation and Associated Debris
Historic	CA-LAN-2324H	Refuse Scatter, Building Debris, Glass, Cans
Historic	CA-LAN-2377H	Road

CA-LAN-167 is the Gabrielino village site of Tujunga, documented in the mission records. The site probably meets the eligibility criteria for the California Register of Historical Resources. The recorded site area includes Foothill Boulevard on both sides of Orcas Avenue and extends south into Hansen Dam Park.

Although CA-LAN-2313H is directly adjacent to the pipeline route on the south side of Conover Street, it is at the base of a slope below the level of the road. Trenching in the road will not impact the site.

In addition to the archaeological sites, the Historic Property Data File (on file at the SCCIC) lists two structures of historic age on Foothill Boulevard between Wheatland Avenue and Esko Avenue:

10189 Foothill Blvd. Built 1925
10217 Foothill Blvd. Built 1921

Both of these structures have a code of 6Y2, indicating that they have been evaluated as not eligible for the National Register of Historical Places and therefore also not eligible for the California Register of Historical Resources.

The 1900 edition of the USGS Fernando Quad shows two structures (probably houses) on the south side of what is now Foothill Boulevard near its intersection with Orcas Avenue. These

houses are no longer present, but refuse deposits from the historical period associated with these houses could be present subsurface in this area.

6.2 FIELD SURVEY RESULTS

Ground visibility was excellent in both survey segments. The area where CA-LAN-167 is located is developed on both sides of Foothill Boulevard and could not be surveyed. No cultural resources were identified as a result of the field survey.

7.0 RECOMMENDATIONS

The only known cultural resource that could potentially be impacted by pipeline construction is CA-LAN-167, a large village site which intersects Foothill Boulevard in the vicinity of Orcas Avenue. Although the site was likely disturbed when Foothill Boulevard was constructed, it is possible that significant archaeological resources associated with CA-LAN-167 could be encountered during trenching for pipeline installation. In addition, the house locations shown on the 1900 USGS quad are in this same area. Significant archaeological resources from the historical period could be encountered during trenching for pipeline installation in this area. Therefore, it is recommended that all trenching along Foothill Boulevard between the eastern boundary of the Lakeview Terrace Recreation Center (where it intersects the north side of Foothill Boulevard) and Brainard Avenue should be monitored by a qualified archaeologist. In the event archaeological resources are discovered during excavation or construction, activity in the vicinity of the find should cease until the qualified archaeologist can assess whether the find is eligible for the California Register of Historical Resources. If evaluated as eligible, construction should not begin again until mitigation, consisting of avoidance or data recovery, has been implemented.

8.0 REFERENCES

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9.0 REPORT AND FIELD PERSONNEL

9.1 REPORT PREPARERS

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1980 Ph.D., Anthropology, University of Texas, Austin
1971 B.A., Anthropology, University of Washington
RPA certified
Years of experience: 20

Jay K. Sander, Senior Archaeologist/Field Director
1998 M.A., Anthropology, University of California, Riverside
1993 B.A., Anthropology, University of Arizona, Tucson
Years of experience: 10

9.2 FIELD PERSONNEL

Jay K. Sander, Senior Archaeologist/Field Director
1998 M.A., Anthropology, University of California, Riverside
1993 B.A., Anthropology, University of Arizona, Tucson
Years of experience: 10

APPENDIX A

RECORDS SEARCH BIBLIOGRAPHY

USGS 7.5' Van Nuys, Sunland, Burbank, San Fernando
Linear Survey, Approximately 6.5 miles

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA1086 **DATE:** 1977 **PAGES:** 19
AUTHOR: McIntyre, Michael J.
FIRM: NARC
TITLE: Assessment of the Impact on Cultural Resources by the Proposed Development of the Proposed Development of the Tentative Tract No. 33993, Sunland
AREA: 13 ac
SITES: None

QUADNAME: Sunland
MEMO:

IC ID#: LA1217 **DATE:** 1983 **PAGES:** 2
AUTHOR: Singer, Clay A.
FIRM: NARC
TITLE: Letter RE: Archaeological Survey of Property
located at 10070 McBroom St. Sunland-Tujunga-Shadow Hills, Los Angeles County
AREA: 3 ac
SITES: None

QUADNAME: Sunland
MEMO:

IC ID#: LA1277 **DATE:** 1976 **PAGES:** 10
AUTHOR: Bridgwater, John W.
FIRM: USFS
TITLE: archaeological Reconnaissance Report: SCHWARTZ
CANYON DEBRIS BASin
AREA:
SITES: None

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA13 **DATE:** 1973 **PAGES:** 56

AUTHOR: Farrell, Nancy
FIRM: CALTRANS
TITLE: Archaeological Survey of the PROPOSED FOOTHILL FREEWAY (inTERSTATE ROUTE 210)
AREA: 6 li mi
SITES: CA-LAN-167, LAN-300

QUADNAME: San Fernando
Sunland
MEMO:

IC ID#: LA1356 **DATE:** 1976 **PAGES:** 13

AUTHOR: Bridgwater, John W.
FIRM: USFS
TITLE: Oliver Canyon Debria Basin
AREA: 100 ac
SITES: None

QUADNAME: Sunland
MEMO:

IC ID#: LA149 **DATE:** 1988 **PAGES:** 17

AUTHOR: Padon, Beth
FIRM: BETH PADON, CONSULTING ARCHAEOLOGIST
TITLE: Archaeological Assessment for the TUJUNGA VALLEY BUSINESS PARK /TUJUNGA VALLEY HOMES PROJECT Los Angeles County, CA
AREA: 560 ac
SITES: None

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA1559 **DATE:** 1985 **PAGES:** 10
AUTHOR: Meighan, Clement W.
FIRM: USFS
TITLE: Cultural Resources Survey, OLIVER CANYon DEBRIS BASIN (TUJUNGA, Los Angeles County)
AREA:
SITES: None

QUADNAME: Sunland
MEMO:

IC ID#: LA1742 **DATE:** 1988 **PAGES:** 20
AUTHOR: Blodgett, Leslie M.
FIRM:
TITLE: Report of A FIELD Survey for Archaeological Resources on PROPERTY located in the TUJUNGA VALLEY, Los Angeles County, CALIforNIA
AREA: 100 ac
SITES: CA-LAN-657

QUADNAME: Sunland
MEMO:

IC ID#: LA1893 **DATE:** 1980 **PAGES:** 3
AUTHOR: McIntyre, Michael J.
FIRM: NARC
TITLE: Archaeological SITE Survey RECORD: CA-LAN-1700H
AREA: 15 ac
SITES: CA-LAN-1700H

QUADNAME: SUNLAND
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA2049 **DATE:** 1976 **PAGES:** 11

AUTHOR: Gates, Gerald R.

FIRM: Northridge Archaeological Research Center

TITLE: Assessment of the Archaeological Impact by the Construction of Levees on Big Tujunga Wash and the Extension of Big Tujunga Canyon Boulevard from Oro Vista Avenue to Foothill Boulevard and the Proposed Extension of Haines Canyon Channel, City of Los Angeles, California

AREA: 3 li mi

SITES: P-19-000657

QUADNAME: Sunland

MEMO:

IC ID#: LA2320 **DATE:** 1991 **PAGES:** 67

AUTHOR: Wlodarski, Robert J.

FIRM: H.E.A.R.T.

TITLE: RESULTS of A DATA RECOVERY PROGRAM for PORTIonS of CA-LAN-167 (HANSEN DAM EQUESTRIAN CENTER PROJECT) LAKEVIEW TERRACE, Los Angeles County, CALIforNIA

AREA:

SITES: CA-LAN-167

QUADNAME: SUNLAND

MEMO:

IC ID#: LA2351 **DATE:** 1966 **PAGES:** 29

AUTHOR: Ruby, Jay

FIRM: UCLA Archaeological Survey

TITLE: Archaeological Investigations of the BIG TUJUNGA SITE (LAN-167)

AREA:

SITES: CA-LAN-167

QUADNAME: SUNLAND

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA2361 **DATE:** 1966 **PAGES:** 12

AUTHOR: Forbes, Jack D.

FIRM: UCLA Archaeological Survey

TITLE: the TonGVA of TUJUNGA TO 1801
APPENDIX II in:Archaeological inVESTIGATIONS AT the BIG TUJUNGA SITE (LAN-167) BY JAY RUBY

AREA:

SITES: CA-LAN-167

QUADNAME: SUNLAND

MEMO:

IC ID#: LA2508 **DATE:** 1966 **PAGES:** 16

AUTHOR: CHARTKOFF, JOSEPH L.

FIRM: UCLA Archaeological Survey

TITLE: APPENDIX 1: EVALUATING A MIDDEN SAMPLING TECHNIQUE AT the BIG TUJUNGA SITE (LAN-167)

AREA:

SITES: CA-LAN-167

QUADNAME: SUNLAND

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA2649 **DATE:** 1989 **PAGES:** 35

AUTHOR: Anonymous

FIRM: MITECH

TITLE: HISTORIC PROPERTIES OVERVIEW for ROUTINE OPERATIonS and MAinTENANCE, Los Angeles County DRAinAGE area (LACDA)

AREA: 43 li mi

SITES: CA-LAN-53, LAN-57, LAN-68, LAN-111, LAN-345, LAN 167, LAN-300, LAN-858, LAN-1009, LAN-1311\H, LAN 1368\H

QUADNAME: AZUSA
BEVERLY HILLS

MEMO:

IC ID#: LA2665 **DATE:** 1985 **PAGES:** 122

AUTHOR: Cottrell, Marie G., James N. Hill, Stephen Van Wormer, John Cooper

FIRM: ARMC

TITLE: Cultural Resource OVERVIEW and Survey for the LOS ANGELES COUNTY DRAinAGE area REVIEW STUDY

AREA:

SITES: CA-LAN-167, LAN-300, LAN-657, LAN-208, LAN-1046, LAN 164, LAN-1009

QUADNAME: BALDWIN PARK
EL MONTE

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA2693 **DATE:** 1986 **PAGES:** 34
AUTHOR: PADON, BETH
FIRM:
TITLE: DRAFT ENVIRonMENTAL Impact Report EIR NO. 68-84 SUB(ZC)(PA)(VAC) STATE CLEARinGHOUSE NO. 84032803
AREA:
SITES: CA-LAN-657

QUADNAME: SUNLAND
MEMO:

IC ID#: LA2761 **DATE:** 1964 **PAGES:** 68
AUTHOR: RUBY, JAY
FIRM: UNIVERSITY OF CALIFORNIA, DEPARTMENT OF ANTHROPOLOGY
TITLE: Archaeological Investigations of the BIG TUJUNGA SITE (LAN-167)
AREA: 5 ac
SITES: CA-LAN-167

QUADNAME: SUNLAND
MEMO:

IC ID#: LA2803 **DATE:** 1992 **PAGES:** 36
AUTHOR: PADON, BETH
FIRM: LSA Associates, INC.
TITLE: Archaeological Assessment CA-LAN-657
AREA:
SITES: CA-LAN-657

QUADNAME: SUNLAND
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA294 DATE: n.d. PAGES: 8

AUTHOR: Adams, Andrea

FIRM: UCLA Archaeological Survey

TITLE: A PRELIMINARY Archaeological LITERATURE SEARCH for the COMMUNITY DEVELOPMENT PLAN

AREA: Unknown

SITES: 19-000342,19-000136,19-000158,19-000167,19-000300,19-000036,19-000182,19-000385

QUADNAME: Pasadena,Southgate,Venice,Inglewood,Lancaster East,Lancaster West,Van Nuys,San Fernendo,

MEMO: The communites of Lopez, Maravilla Sunshine Acres and Westmont could not be located and ma

IC ID#: LA3095 DATE: 1993 PAGES: 36

AUTHOR: BROCK, JAMES, JOHN F. ELLIOT, AND NINA M. HARRIS

FIRM: Archaeological Advisory Group

TITLE: A Cultural Resources Assessment of the HANSEN DAM FLOOD CONTROL BASin, CITY of LOS ANGELES, CALIforNIA

AREA: 146 ac

SITES: CA-LAN-167, LAN-300, LAN-1525, LAN-2073H, LAN-2087H, CAN-88H, LAN-2089H, LAN-2090H,

QUADNAME: SUNLAND
SAN FERNANDO

MEMO:

IC ID#: LA3106 DATE: 1994 PAGES: 35

AUTHOR: Wlodarski, Robert J.

FIRM: H.E.A.R.T.

TITLE: RESULTS of A Phase I Archaeological STUDY for the PROPOSED RECREATIonAL INPROVEMENTS AT ORCAS PARK IN the HANSEN DAM RECREATION area, LAKEVIEW TERRACE, Los Angeles County, CALIforNIA

AREA: 40 ac

SITES: CA-LAN-1525, LAN-167

QUADNAME: SUNLAND

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA3291 **DATE:** 1984 **PAGES:**
AUTHOR: Dillion, Brian D.
FIRM:
TITLE: Archaeological Review of Tentative Tract 42687 in Malibu, California.
AREA: 7 ac
SITES: 19-001429

QUADNAME: Point Dume
MEMO:

IC ID#: LA3389 **DATE:** 1996 **PAGES:** 138
AUTHOR: NORWOOD, RICHARD
FIRM: RT FACTFINDERS
TITLE: Cultural Resources Investigation for WASTE NOT ENTERPRISES A 10 ACRE Parcel IN LANCASTER, LOS ANGELES COUNTY, CALIforNIA
AREA: 10 ac
SITES: CA-LAN-2396-H

QUADNAME: LANCASTER
MEMO:

IC ID#: LA3597 **DATE:** 1995 **PAGES:** 450
AUTHOR: Becker, Kenneth M. and Knell, Edward J. and Maxon, Patrick O.
FIRM: RMW Paleo Associates, Inc.
TITLE: Cultural Resources Reconnaissance and Archaeological Site Evaluation of the Proposed Los Angeles Golf Course, Los Angeles County, California
AREA: 352 ac
SITES: 19-000657,19-002313,19-002314,19-002315,19-002316,19-002317,19-002318,19-002319,19-002320,19-002321,19-002322,19-002323,19-002324,19-002376,19-002377

QUADNAME: Sunland
MEMO: Missing Report Updated: 11/6/02

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA370 **DATE:** 1978 **PAGES:** 12

AUTHOR: Anonymous
FIRM: WESTEC SERVICES, INC.
TITLE: Sunland-KAY PROPERTY
AREA: 66 ac
SITES: None

QUADNAME: Sunland
MEMO:

IC ID#: LA384 **DATE:** 1977 **PAGES:** 65

AUTHOR: Martz, Patricia
FIRM:
TITLE: DESCRIPTIon and Evaluation of the Cultural Resources WITHIN HAinES DEBRIS BASin, HANSEN DAM, LOPEZ DAM, AND SEPULVEDA DAM, Los Angeles County, CALIforNIA
AREA: 3663 ac
SITES: 19-000300,19-000111,19-000345,19-000167

QUADNAME: Burbank,Canoga Park / San Fernando
MEMO:

IC ID#: LA3845 **DATE:** 1990 **PAGES:** 11

AUTHOR: Wlodarski, Robert J.
FIRM: HEART
TITLE: A Proposal for Archaeological Mitigation of Portions of CA-LAN-167(the Tujunga Site), Lake View Terrace, Los Angeles County, Ca.
AREA:
SITES: 19-000167

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA4363 **DATE:** n.d. **PAGES:** 4
AUTHOR: Anonymous
FIRM: University of California, Los Angeles
TITLE: Proposal to Conduct Salvage Excavation on the Portion of the Big Tujunga Site (LAn-167) to be Destroyed by the Foothill Freeway
AREA:
SITES: 19-000167

QUADNAME: Sunland
MEMO:

IC ID#: LA4544 **DATE:** 1966 **PAGES:** 136
AUTHOR: Ruby, Jay
FIRM: UCLA
TITLE: Archaeological Investigations of the Big Tujunga Site (Lan-167)
AREA: None
SITES: 19-000167

QUADNAME: Sunland
MEMO:

IC ID#: LA4671 **DATE:** 1992 **PAGES:** 8
AUTHOR: UNKNOWN
FIRM: ARCHAEOLOGICAL ADVISORY GROUP
TITLE: INTERIM CULTURAL RESOURCES Report on PROOSED SWIMMING AREA AT HANSEN DAM (P.O. NO. DACW09-92-M-0505)
AREA:
SITES:

QUADNAME: SUNLAND, SAN FERNANDO
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA4680 DATE: 1999 PAGES: 43

AUTHOR: Knight, Albert
FIRM: ALBERT KNIGHT

TITLE: STonEHURST - A 1920'S STonE HOUSE NEIGHBORHOOD

AREA: .5 mi

SITES: 19-175262

QUADNAME: SUNLAND, SAN FERNANDO, BURBANK, VAN NUYS

MEMO:

IC ID#: LA5589 DATE: 2000 PAGES: 14

AUTHOR: CURT DUKE
FIRM: LSA ASSOCIATES, INC.

TITLE: CULTURAL RESOURCE ASSESSMENT for PACIFIC BELL MOBILE SERVICE FACILITY LA 716-01
COUNTY of LOS ANGELES, CALIforNIA

AREA: < 1 AC

SITES:

QUADNAME: SUNLAND

MEMO:

IC ID#: LA5678 DATE: 2002 PAGES: 140

AUTHOR: McKenna, Jeanette
FIRM: McKenna et al.

TITLE: RESULTS OF AN ARCHAEOLOGCIAL TESTING PROGRAM AT the PROPOSED CITY OF LOS ANGELES DEPARTMENT OF RECREATIon AND PARKS SOCCER COMPLEX AT the HANSEN DAM RECREATIon AREA, LOS ANGELES COUNTY, CALIforNIA

AREA: 20 ac

SITES: none

QUADNAME: San Fernando
Sunland

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA5680 **DATE:** 2001 **PAGES:** 21

AUTHOR: Duke, Curt
FIRM: LSA
TITLE: Cultural Resource Assessment for Modifications to Cingular Wireless Facility LA 164-11, County of Los Angeles, California
AREA: <1 ac
SITES: none

QUADNAME: Sunland
MEMO:

IC ID#: LA5682 **DATE:** 2001 **PAGES:** 25

AUTHOR: McCormick, Steve
FIRM: RMW Paleo Assoicates, Inc.
TITLE: Test and Data Recovery Excavations at CA-LAN-2317h, CA-LAN-2376H CA-LAN-2321H for the Proposed Los Angeles Canyon Trials Golf Club, Los Angeles County, California
AREA: 320 ac
SITES: 19-002317H, 19-002321H
19-002376H
QUADNAME: Sunland
MEMO:

IC ID#: LA5966 **DATE:** 1984 **PAGES:** 18

AUTHOR: Unknown
FIRM: Army Corps of Engineers, Los Angeles District
TITLE: Cultural Resources Survey for Tujunga Wash
AREA: 1 ac
SITES: none

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA5967 **DATE:** 2001 **PAGES:** 24

AUTHOR: Duke, Curt
FIRM: LSA Associates, Inc.
TITLE: Cultural Resource Assessment for Modifications to Cingular Wireless Facility LA 164-11, County of Los Angeles, California
AREA: .25 ac
SITES: none

QUADNAME: Sunland
MEMO:

IC ID#: LA5968 **DATE:** 2002 **PAGES:** 8

AUTHOR: Duke, Curt
FIRM: LSA Associates, Inc.
TITLE: Cultural Resource Assessment AT&T Wireless Services Facility No. 14106 Los Angeles County, California
AREA: .25 ac
SITES: none

QUADNAME: Sunland
MEMO:

IC ID#: LA625 **DATE:** 1979 **PAGES:** 8

AUTHOR: Ancient Enterprises, Inc.
FIRM: Ancient Enterprises, Inc.
TITLE: A Cultural Resources Assessment of SIX ACRES SURROUNDinG 9655 WENTWORTH STREET, LOS ANGELES, LOS ANGELES, CALIforNIA
AREA: 6 ac
SITES: none

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA629 **DATE:** 1979 **PAGES:** 8

AUTHOR: Kirkish, Alex N. and Clay A. Singer

FIRM: CLAY SINGER AND ALEX KIRKISH, CONSULTING ARCHAEOLOGISTS

TITLE: An Archaeological Assessment of A 5.58 ACRE Parcel located in the SITY of SUNLAND, Los Angeles County, CALIforNIA

AREA: 6 ac

SITES: none

QUADNAME: Sunland

MEMO:

IC ID#: LA734 **DATE:** 1964 **PAGES:** 42

AUTHOR: Ruby, Jay

FIRM: UCLA Archaeological Survey

TITLE: Archaeological Investigations of the BIG TUJUNGA SITE (LAN-167)

AREA:

SITES: CA-LAN-167

QUADNAME: Sunland

MEMO:

IC ID#: LA791 **DATE:** 1980 **PAGES:** 7

AUTHOR: Singer, Clay A.

FIRM: CLAY SINGER, CONSULTING ARCHAEOLOGIST

TITLE: Cultural Resource Survey and Impact Assessment for TENTATIVE TRACT NO. 39938 in the COMMUNITY of SUNLAND, CITY AND COUNTY of LOS ANGELES, CALIforNIA

AREA: 16 ac

SITES: none

QUADNAME: Sunland

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Sunland 7.5' USGS Quadrangle

IC ID#: LA999 **DATE:** 1981 **PAGES:** 22

AUTHOR: Tartaglia, Louis James

FIRM: LOUIS JAMES TARTAGLIA,

TITLE: Cultural Resource Survey Tract NUMBER 41695

AREA: 4 ac

SITES: none

QUADNAME: Sunland

MEMO:

Bibliography: Chambers # 2877
Sunland Quad

IC ID#: LA1973 **DATE:** 1990 **PAGES:** 300
AUTHOR: COOLEY, THEODORE
FIRM: ERCE
TITLE: DRAFT ENVIRonMENTAL Impact STATEMENT for U.S. ARMY CORPS of ENGinEERS REGULATORY PERMIT UNDER SECTION 404 of the CLEAN WATER ACT
AREA: 1128 ac
SITES: CA-LAN-157, LAN-167, LAN-253, LAN-300, LAN-647H, CA-LAN-651H, LAN-657, LAN-1606, LAN-1607, LAN-1608H, + ISOLATES
QUADNAME: CALABASAS
SUNLAND
MEMO:

IC ID#: LA2761 **DATE:** 1964 **PAGES:** 68
AUTHOR: RUBY, JAY
FIRM: UNIVERSITY OF CALIFORNIA, DEPARTMENT OF ANTHROPOLOGY
TITLE: Archaeological Investigations of the BIG TUJUNGA SITE (LAN-167)
AREA: 5 ac
SITES: CA-LAN-167

QUADNAME: SUNLAND
MEMO:

IC ID#: LA3921 **DATE:** 1998 **PAGES:** 25
AUTHOR: Wlodarski, Robert J.
FIRM: HEART
TITLE: A Phase I Archaeological Study for a Proposed Community Equestrian Exercising Arena, Hansen Dam Recreation Area, Lakeview Terrace, Los Angeles County, California
AREA: 2.5 ac
SITES: 19-000167

QUADNAME: Sunland
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

San Fernando 7.5' USGS Quadrangle

IC ID#: LA158 **DATE:** 1974 **PAGES:** 6

AUTHOR: Singer, Clay A.
FIRM: UCLA Archaeological Survey
TITLE: Evaluation of the Archaeological Resources and POTENTIAL Impact of PROPOSED GRAVEL EXCAVATIon and REMOVAL AT the HANSEN FLOOD ConTROL BASIN, UNITED STATES ARMY, CORPS of Engineers
AREA: 40 ac
SITES: 19-000300

QUADNAME: San Fernando
MEMO: Same as LA1994. Note in folder states: Report L-158 deleted 6-23-91.

IC ID#: LA1994 **DATE:** 1974 **PAGES:** 6

AUTHOR: Singer, Clay A.
FIRM: UCLA Archaeological Survey
TITLE: Evaluation of the Archaeological Resources and POTENTIAL IMPACT of PROPOSED GRAVEL EXCAVATION AND REMOVAL AT the HANSEN FLOOD CONTROL BASin, UNITED STATES ARMY, CORPS of ENGinEERS.
AREA: 40 ac
SITES: 19-000300

QUADNAME: SAN FERNANDO
MEMO: Same as LA158.

IC ID#: LA2635 **DATE:** 1992 **PAGES:** 25

AUTHOR: Singer, Clay A., John E. Atwood and Barbie S. Laney
FIRM: SINGER AND Associates, INC.
TITLE: Cultural Resources Survey and Impact Assessment for the LANCASTER WATER RECLAMATION PLANT STAGE IV EXPANSION, Los Angeles County, CALIforNIA.
AREA:
SITES: None

QUADNAME: ROSAMOND
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

San Fernando 7.5' USGS Quadrangle

IC ID#: LA2641 **DATE:** 1992 **PAGES:** 21
AUTHOR: Wlodarski, Robert J.
FIRM: H.E.A.R.T.
TITLE: A Phase I Archaeological STUDY for the PEBBLY BEACH VILLAGE PROJECT area SANTA CATALinA ISLAND, Los Angeles County, CALIforNIA
AREA:
SITES: None

QUADNAME:
MEMO:

IC ID#: LA294 **DATE:** n.d. **PAGES:** 8
AUTHOR: Adams, Andrea
FIRM: UCLA Archaeological Survey
TITLE: A PRELIMINARY Archaeological LITERATURE SEARCH for the COMMUNITY DEVELOPMENT PLAN
AREA: Unknown
SITES: 19-000342,19-000136,19-000158,19-000167,19-000300,19-000036,19-000182,19-000385

QUADNAME: Pasadena,Southgate,Venice,Inglewood,Lancaster East,Lancaster West,Van Nuys,San Fernendo,
MEMO: The communites of Lopez, Maravilla Sunshine Acres and Westmont could not be located and ma

IC ID#: LA2969 **DATE:** 1994 **PAGES:** 114
AUTHOR: ROMANI, GWENDOLYN R., JOHN F. ROMANI, AND BRADLEY L. STURM
FIRM: Greenwood and Associates
TITLE: HISTORIC PROPERTIES MANAGEMENT PLAN for the U.S. ARMY CORPS of ENGinEERS HANSEN DAM FLOOD CONTROL BASin Los Angeles County, CALIforNIA
AREA: 146 ac
SITES: CA-LAN-167, LAN-300, LAN-2073H, LAN-2087H, LAN-2088H LAN-2089H, LAN-2090H
QUADNAME: SAN FERNANDO SUNLAND
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

San Fernando 7.5' USGS Quadrangle

IC ID#: LA3095 **DATE:** 1993 **PAGES:** 36

AUTHOR: BROCK, JAMES, JOHN F. ELLIOT, AND NINA M. HARRIS

FIRM: Archaeological Advisory Group

TITLE: A Cultural Resources Assessment of the HANSEN DAM FLOOD CONTROL BASin, CITY of LOS ANGELES, CALIforNIA

AREA: 146 ac

SITES: CA-LAN-167, LAN-300, LAN-1525, LAN-2073H, LAN-2087H, CAN-88H, LAN-2089H, LAN-2090H,

QUADNAME: SUNLAND
SAN FERNANDO

MEMO:

IC ID#: LA3486 **DATE:** 1994 **PAGES:** 24

AUTHOR: Stickel, E. Gary

FIRM: Environmental Research Archaeologists: A Scientific Consortium

TITLE: A Cultural Resources Inventory for the East Valley Water Reclamation Project

AREA: Unknown

SITES: 19-000021,19-002003,19-000169,19-002006,19-002073,19-002090

QUADNAME: Van Nuys
San Fernando

MEMO: Indexed. No specific location map provided. Sites mapped.

Bibliography: Proposed Hansen Area Water Recycling Project

San Fernando 7.5' USGS Quadrangle

IC ID#: LA3509 **DATE:** 1985 **PAGES:** 124

AUTHOR: Cottrell, Marie G., James N. Hill, Stephen Van Wormer and John Cooper

FIRM: Archaeological Resource Management Corporation

TITLE: Cultural Resource Overview and Survey for the Los Angeles County Drainage Area Review Study

AREA: Uknown

SITES: 19-000208,19-000522,19-001044,19-001045,19-001046,19-000693,19-000694,19-000695,19-000797,19-000043,19-000967,19-000397,19-000075,10-000697,19-000345,19-000348,19-000230,19-001014,19-000343,19-000230,19-000518,
19-000166,19-000524,19-000173,19-000871,19-000339,
19-001109,19-000163,19-000164,19-000221,19-000240,
19-000241,19-000272,19-000182,19-000858,19-001009,
19-000026,19-000657,19-000167,19-000300,19-000111

QUADNAME: Mt. Baldy,San Dimas,La Habra,Baldwin park,El monte, Glendora, Whittier, Seal Beach, Los Ala

MEMO:

IC ID#: LA384 **DATE:** 1977 **PAGES:** 65

AUTHOR: Martz, Patricia

FIRM:

TITLE: DESCRIPTIon and Evaluation of the Cultural Resources WITHIN HAinES DEBRIS BASin, HANSEN DAM, LOPEZ DAM, AND SEPULVEDA DAM, Los Angeles County, CALIforNIA

AREA: 3663 ac

SITES: 19-000300,19-000111,19-000345,19-000167

QUADNAME: Burbank,Canoga Park
San Fernando

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

San Fernando 7.5' USGS Quadrangle

IC ID#: LA4671 **DATE:** 1992 **PAGES:** 8
AUTHOR: UNKNOWN
FIRM: ARCHAEOLOGICAL ADVISORY GROUP
TITLE: INTERIM CULTURAL RESOURCES Report on PROOSED SWIMMING AREA AT HANSEN DAM (P.O. NO. DACW09-92-M-0505)
AREA:
SITES:

QUADNAME: SUNLAND, SAN FERNANDO
MEMO:

IC ID#: LA4680 **DATE:** 1999 **PAGES:** 43
AUTHOR: Knight, Albert
FIRM: ALBERT KNIGHT
TITLE: STonEHURST - A 1920'S STonE HOUSE NEIGHBORHOOD
AREA: .5 mi
SITES: 19-175262

QUADNAME: SUNLAND, SAN FERNANDO, BURBANK, VAN NUYS
MEMO:

IC ID#: LA5935 **DATE:** 2002 **PAGES:** 4
AUTHOR: Sylvia, Barbara
FIRM: CalTrans 7
TITLE: Negative Archaeological Survey Report: Class I bike path within MTA, San Fernando Road from Wolfskill Street to
Brandford Street in San Fernando Valley
AREA: 3.75 li mi
SITES: none

QUADNAME: San Fernando, Van Nuys
MEMO:

Bibliography: Chambers # 2877
San Fernando Quad

IC ID#: LA5929 **DATE:** 2002 **PAGES:** 70

AUTHOR: McKenna, Jeanette

FIRM: McKenna et al.

TITLE: Results of a Phase I Cultural Resources Investigation of the Proposed Hansen Dam Skate Park at the City of Los Angeles Department of Recreation and Parks
Hansen Dam Recreation Area, Los Angeles County, California

AREA: 4.5 ac

SITES: none

QUADNAME: San Fernando

MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Burbank 7.5' USGS Quadrangle

IC ID#: LA4680 **DATE:** 1999 **PAGES:** 43

AUTHOR: Knight, Albert
FIRM: ALBERT KNIGHT
TITLE: STonEHURST - A 1920'S STonE HOUSE NEIGHBORHOOD
AREA: .5 mi
SITES: 19-175262

QUADNAME: SUNLAND, SAN FERNANDO, BURBANK, VAN NUYS
MEMO:

IC ID#: LA5023 **DATE:** 2000 **PAGES:** 14

AUTHOR: Duke, Curt
FIRM: LSA
TITLE: Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 748-04, County of Los Angeles, CA
AREA: <1 ac
SITES: none

QUADNAME: Burbank
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Van Nuys 7.5' USGS Quadrangle

IC ID#: LA3486 DATE: 1994 PAGES: 24

AUTHOR: Stickel, E. Gary
FIRM: Environmental Research Archaeologists: A Scientific Consortium
TITLE: A Cultural Resources Inventory for the East Valley Water Reclamation Project
AREA: Unknown
SITES: 19-000021,19-002003,19-000169,19-002006,19-002073,19-002090

QUADNAME: Van Nuys
San Fernando
MEMO: Indexed. No specific location map provided. Sites mapped.

IC ID#: LA4680 DATE: 1999 PAGES: 43

AUTHOR: Knight, Albert
FIRM: ALBERT KNIGHT
TITLE: STonEHURST - A 1920'S STonE HOUSE NEIGHBORHOOD
AREA: .5 mi
SITES: 19-175262

QUADNAME: SUNLAND, SAN FERNANDO, BURBANK, VAN NUYS
MEMO:

IC ID#: LA4907 DATE: 2000 PAGES: 18

AUTHOR: Maki, Mary
FIRM: Conejo Archaeological Consultants
TITLE: Phase I Archaeological Investigation of Limited Areas Within the Los Angeles Department of Water & Power's Harbor, Scattergood & Valley Generating Stations Los Angeles County, California
AREA: 12 ac
SITES: none

QUADNAME: Torrance, Van Nuys, Venice
MEMO:

Bibliography: Proposed Hansen Area Water Recycling Project

Van Nuys 7.5' USGS Quadrangle

IC ID#: LA5597 **DATE:** 2000 **PAGES:** 10

AUTHOR: PHILIPPE LAPIN
FIRM: LSA ASSOCIATES, INC.

TITLE: CULTURAL RESOURCE ASSESSMENT for PACIFIC BELL WIRELESS FACILITY LA 958-11
COUNTY of LOS ANGELES, CALIforNIA

AREA: < 1 AC
SITES:

QUADNAME: VAN NUYS
MEMO:

IC ID#: LA5935 **DATE:** 2002 **PAGES:** 4

AUTHOR: Sylvia, Barbara
FIRM: CalTrans 7

TITLE: Negative Archaeological Survey Report: Class I bike path within MTA, San Fernando Road from Wolfskill Street to
Brandford Street in San Fernando Valley

AREA: 3.75 li mi
SITES: none

QUADNAME: San Fernando, Van Nuys
MEMO:

SAN BERNARDINO COUNTY MUSEUM

2024 Orange Tree Lane • Redlands, California USA 92374-4560
(909) 307-2669 • Fax (909) 307-0539 • www.sbcountymuseum.org

COUNTY OF SAN BERNARDINO
ECONOMIC DEVELOPMENT
AND PUBLIC SERVICES GROUP

ROBERT L. McKERNAN
Director

26 September 2003

Chambers Group, Incorporated
attn: Brant Brechbiel
17671 Cowan Avenue, Suite #100
Irvine, CA 92614

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, HANSEN AREA WATER RECYCLING PROJECT, SAN FERNANDO VALLEY AREA, LOS ANGELES COUNTY, CALIFORNIA**

Dear Mr. Brechbiel,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-referenced development near Hansen Dam and the Tujunga Valley in Los Angeles County, California. The proposed project alignment traverses portions of sections 8, 9 and 10 as well as projected sections 17, 18, and 19, Township 2 North, Range 14 West, San Bernardino Base and Meridian, as seen on the Burbank, California (1966 edition, photorevised 1972), San Fernando, California (1966 edition, photorevised 1988), Sunland, California (1966 edition, photorevised 1988), and Van Nuys, California (1966 edition, photorevised 1972) 7.5' United States Geological Survey topographic quadrangle maps.

Geologic mapping by Jennings and Strand (1969) indicates that the proposed project alignment will cross surface exposures of two sedimentary rock units: the Monterey Formation, which dates to the later part of the Miocene Epoch [> 5 million years before present (ybp)] and Quaternary alluvium. Additionally, Pleistocene older alluvial sediments may be present at depth. Of these units, the Monterey Formation – sometimes referred to as the Modelo Formation in this area – and the Pleistocene older alluvium have high potential to contain significant nonrenewable paleontologic resources, and are therefore assigned high paleontologic sensitivity. Overlying Recent alluvium is too young to contain fossils and is therefore assigned low paleontologic sensitivity.

The Monterey Formation, as exposed along the Wentworth Street segment of the alignment and elsewhere in the immediate vicinity, consists primarily of arkosic sandstones and some interbedded silty shales. This rock unit is also equivalent to the La Vida and Soquel members of the highly-fossiliferous Puente Formation (Dibblee, 1989). The Monterey Formation has produced a rich suite of later Miocene marine invertebrates and vertebrates. Subsurface Pleistocene alluvium in the vicinity of the project alignment has demonstrated paleontologic sensitivity (Miller, 1971; Jefferson, 1991), and has yielded fossils of mastodons (*Mammut americanum*), mammoths (*Mammuthus* sp.), horses (*Equus "occidentalis"*), camels (Camelidae), and bison (*Bison*).

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this records search indicated that no paleontologic resource localities are located along the proposed project alignments, or within one mile of the project in any direction.

Recommendations

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in undisturbed sediments of the Monterey Formation and/or subsurface Pleistocene alluvium has high potential to adversely impact significant nonrenewable paleontologic resources. Sediments from these units have high paleontologic sensitivity. A qualified professional vertebrate paleontologist must therefore develop a plan to mitigate adverse impacts to paleontologic resources for this project. This mitigation program must be consistent with the provisions of the California Environmental Quality Act, as well as with regulations implemented by the County of Los Angeles and with the proposed guidelines of the Society of Vertebrate Paleontology. This plan should include, but not be limited to:

1. Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Based upon the results of this review, areas of concern include any undisturbed surface or subsurface sediments of the Monterey Formation and/or subsurface Pleistocene older alluvium. Paleontologic monitors should be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if the potentially-fossiliferous units described herein are not present in the subsurface, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.

3. Identification and curation of specimens into a professional, accredited museum repository with permanent retrievable storage. The paleontologist should have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established museum repository has been fully completed and documented.

4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontologic resources.

References

Dibblee, T.W., Jr., 1989. Geologic map of the Los Angeles quadrangle, Los Angeles County, California. Division of Mines and Geology Dibblee Foundation Map #DF-22.DF-22.

Jefferson, G.T., 1991. A catalogue of late Quaternary vertebrates from California: Part Two, mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7.

Jennings, C.W. and R.G. Strand, 1969. Geologic map of California, Los Angeles sheet, scale 1:250,000. California Division of Mines and Geology.

Miller, W.E. 1971. Pleistocene vertebrates of the Los Angeles Basin and vicinity (exclusive of Rancho La Brea). Bulletin of the Los Angeles County Museum of Natural History Science 10:1-124.

Please do not hesitate to contact us with any further questions you may have.

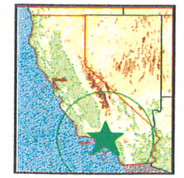
Sincerely,

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

APPENDIX D
EDR Map and Summary Sheets

Hansen Area Water Recycling Project

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- 100-Yr Flood Zones
- Wetlands



Los Angeles, CA

0 1/2 1

Scale in Miles

Environmental Data Resources, Inc.
1-800 352 0050

1082385.1r - 15 Oct 03

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR).

TARGET PROPERTY INFORMATION

ADDRESS

HANSEN AREA WATER RECYCLING PROJECT
LOS ANGELES, CA 91352

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL ASTM STANDARD

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
CORRACTS ---------- Corrective Action Report
ERNS ---------- Emergency Response Notification System

STATE ASTM STANDARD

Notify 65 ---------- Proposition 65 Records
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
CA BOND EXP. PLAN ---------- Bond Expenditure Plan
INDIAN UST ---------- Underground Storage Tanks on Indian Land

FEDERAL ASTM SUPPLEMENTAL

CONSENT ---------- Superfund (CERCLA) Consent Decrees
ROD ---------- Records Of Decision
Delisted NPL ---------- National Priority List Deletions
HMIRS ---------- Hazardous Materials Information Reporting System
MLTS ---------- Material Licensing Tracking System
MINES ---------- Mines Master Index File
NPL Liens ---------- Federal Superfund Liens
PADS ---------- PCB Activity Database System
DOD ---------- Department of Defense Sites
US BROWNFIELDS ---------- A Listing of Brownfields Sites
RAATS ---------- RCRA Administrative Action Tracking System
TSCA ---------- Toxic Substances Control Act
SSTS ---------- Section 7 Tracking Systems
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

CLEANERS ---------- Cleaner Facilities

CA WDS..... Waste Discharge System
DEED..... List of Deed Restrictions
SCH..... School Property Evaluation Program
NFA..... No Further Action Determination
REF..... Unconfirmed Properties Referred to Another Agency

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

US BROWNFIELDS..... A Listing of Brownfields Sites

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL ASTM STANDARD

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 06/16/2003 has revealed that there are 2 CERCLIS sites within the searched area.

Site	Address	Map ID	Page
LEDGER LANDFILL	***COR OF MONTAGUE ST & GL***	***16***	***67***
VALLEY GENERATING STATION	***9430 S. SAN FERNANDO RO***	***29***	***121***

CERCLIS-NFRAP: As of February 1995. CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund Action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to

promote economic redevelopment of unproductive urban sites.

A review of the CERC-NFRAP list, as provided by EDR, and dated 06/11/2003 has revealed that there is 1 CERC-NFRAP site within the searched area.

Site	Address	Map ID	Page
TEXTRON INC HYDRAULIC RESEARCH	*10445 GLENOAKS BLVD*	*16*	*71*

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-TSD list, as provided by EDR, and dated 09/10/2003 has revealed that there is 1 RCRIS-TSD site within the searched area.

Site	Address	Map ID	Page
ESM EAST VALLEY HEADQUATERS	*11781 TRUESDALE ST*	*20*	*87*

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-LQG list, as provided by EDR, and dated 09/10/2003 has revealed that there are 4 RCRIS-LQG sites within the searched area.

Site	Address	Map ID	Page
A AND J PLATING	*10253 GLENOAKS BLVD*	*16*	*34*
STARTEX	*12224 MONTAGUE ST*	*16*	*45*
TEXTRON INC HYDRAULIC RESEARCH	*10445 GLENOAKS BLVD*	*16*	*71*
SUPERIOR PLATING INC	*9983 GLENOAKS BLVD*	*20*	*98*

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there are 4 SWF/LF sites within the searched area.

Site	Address	Map ID	Page
GLENOAKS DUMP	10403 GLENOAKS BLVD.	16	62
BRANFORD LANDFILL	***9701 SAN FERNANDO ROAD***	***23***	***106***
WICKS PLACE DUMP		24	109
Not reported	***9081 TUJUNGA AVE.***	***33***	***133***

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, has revealed that there are 4 WMUDS/SWAT sites within the searched area.

Site	Address	Map ID	Page
LEDGER NO. 2	GLENOAKS / MONTAGUE	16	59
LOS ANGELES DWP-BRANFORD STREE	9701 SAN FERNANDO	23	104
BRANFORD EXPERIMENT SITE	9701 SAN FERNANDO	23	108
VALLEY GENERATING STATION DISP	9430 SAN FERNANDO ROAD	29	121

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 04/02/2003 has revealed that there are 13 LUST sites within the searched area.

Site	Address	Map ID	Page
EXXON #7-3332	***12786 VAN NUYS BLVD***	***5***	***7***
THE REEVES TRUST	11840 FOOTHILL BLVD	10	14
SUNLAND MAINTENANCE YARD	***9401 WENTWORTH ST***	***14***	***18***
FIRE STATION #24	***9411 WENTWORTH ST***	***14***	***20***
SOUTHERN CA RTD DIV 15	***11900 BRANFORD ST***	***16***	***37***
HR TEXTRON INC	10445 GLENOAKS BLVD	16	69
MOC PRODS. CO. INC.	***12306 MONTAGUE ST.***	***17***	***74***
ROADWAY EXPRESS, INC.	12355 MONTAGUE ST	18	77
SPARTAN TRUCK EQUIPMENT	***12266 BRANFORD ST***	***21***	***100***
FORTIN INDUSTRIES #610	***9880 SAN FERNANDO RD***	***22***	***102***
MARFRED INDUSTRIES	***12708 BRANFORD ST***	***26***	***111***
MONARCH RECORD MFG CORP INC	9545 SAN FERNANDO RD	27	116
LIVINGSTON GRAHAM BLUE DIAMOND	***11720 WICKS ST***	***32***	***131***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 04/02/2003 has revealed that there are 10 UST sites within the searched area.

Site	Address	Map ID	Page
RESOURCE PROP MANAGEMENT	11910 FOOTHILL BLVD	7	10
HANSEN DAM MAINTENANCE YARD	***11770 FOOTHILL BLVD***	***9***	***12***
HANSEN YARD	10179 GLENOAKS BLVD	16	26
VIKING FREIGHT INC	11911 BRANFORD ST	16	33
MTA - DIVISION 15 - SUN VALLEY	11900 BRANFORD ST	16	36
TRUESDALE CENTER	11760 TRUESDALE ST	20	88
ALCORN FENCE COMPANY	***9901 GLENOAKS BLVD***	***20***	***93***
KITCOR CORPORATION	9959 GLENOAKS BLVD	20	96
HANSEN SPREADING GROUNDS	10010 GLENOAKS BL	20	99
MARFRED INDUSTRIES	***12708 BRANFORD ST***	***26***	***111***

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 08/31/2003 has revealed that there are 2 VCP sites within the searched area.

Site	Address	Map ID	Page
TRUESDALE CENTER - LA DWP	11791 TRUESDALE ST	20	88
VALLEY GENERATING STATION	***11801 SHELDON ST***	***28***	***117***

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, has revealed that there are 24 CA FID UST sites within the searched area.

Site	Address	Map ID	Page
NODA BROS FARM	11742 KAGEL CANYON ST	3	6
A A SCHNIEROW NURSERIES INC	10456 FOOTHILL BLVD	4	6
FLAMEPROOFING ENGINEERS INC	10373 FOOTHILL BLVD	6	8
EXXON SERVICE STATION	11910 FOOTHILL BLVD	7	10
CITY OF L A DEPT REC/PARKS	11770 FOOTHILL BLVD	9	12
L.A. COUNTY-HANSEN SPREADIN YD	10179 GLENOAKS BLVD	16	23
VIKING FREIGHT INC	11911 BRANFORD ST	16	33
BADGER BLOCKS	10261 GLENOAKS BLVD	16	35
RTD-DIVISION 15 - SUN VALLEY	11900 BRANFORD ST	16	39
FRITO LAY INC	11861 BRANFORD ST	16	47
RYDER/PIE NATIONWIDE INC	12200 MONTAGUE ST	16	47
UNITECH	12154 MONTAGUE ST	16	55
CONSOLIDATED FREIGHTWAYS	12100 MONTAGUE AVE	16	59
NATIONAL RENT A FENCE	10403 GLENOAKS BLVD	16	63

Site	Address	Map ID	Page
H R TEXTRON INC	10445 GLENOAKS BLVD	16	70
MOC PRODS. CO. INC.	***12306 MONTAGUE ST.***	***17***	***74***
VALLEY HOUSE MOVERS	12071 BRANFORD ST	19	80
BEN MAHER	12039 BRANFORD ST	19	81
LA DEPARTMENT OF WATER/POWER	11791 TRUESDALE	20	86
ALCORN FENCE COMPANY	9901 GLENOAKS BLVD	20	92
KITCOR CORPORATION	9959 GLENOAKS BLVD	20	96
L A COUNTY DEPT OF PUBLIC WORK	10010 GLENOAKS BLVD	20	99
SPARTAN TRUCK EQUIPMENT	***12266 BRANFORD ST***	***21***	***100***
MARFRED INDUSTRIES	***12708 BRANFORD ST***	***26***	***111***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 21 HIST UST sites within the searched area.

Site	Address	Map ID	Page
MAS NODA	11742 KAGEL CANYON ST	3	5
A + A GREEN HOUSES	10456 FOOTHILL BLVD	4	6
A & A GREEN HOUSES	10456 FOOTHILL BLVD	4	7
EXXON SERVICE STATION	11910 FOOTHILL BLVD	7	9
HANSEN DAM MAINTENANCE YARD	***11770 FOOTHILL BLVD***	***9***	***12***
B&C TRANSMISSION	11840 FOOTHILL BLVD	10	16
TUJUNGA WASH - HANSEN SPREADIN	***10179 GLENOAKS BLVD***	***16***	***24***
HANSEN YARD	10179 GLENOAKS BLVD	16	25
ANWRIGHT CORPORATION LLOYD G.	***10225 GLENOAKS BLVD., P***	***16***	***26***
VIKING FREIGHT SYSTEM, INC.	11911 BRANFORD	16	28
BADGER BLOCKS, INC.	10261 GLENOAKS BLVD	16	36
DIVISION 15 - SUN VALLEY	11900 BRANFORD ST	16	40
RYDER/PIE NATIONWIDE, INC.	12200 MONTAGUE ST	16	47
NATIONAL RENT A FENCE	10403 GLENOAKS BLVD	16	65
HR TEXTRON INC.	10445 GLENOAKS BLVD	16	68
TEXTRON INC HYDRAULIC RESEARCH	***10445 GLENOAKS BLVD***	***16***	***71***
MOC PRODS. CO. INC.	***12306 MONTAGUE ST.***	***17***	***74***
ALCORN FENCE COMPANY	***9901 GLENOAKS BLVD***	***20***	***93***
KITCOR CORPORATION	9959 GLENOAKS BLVD.,SUN	20	96
MARFRED INDUSTRIES	***12708 BRANFORD ST***	***26***	***111***
VALLEY RECLAMATION	***9227 TUJUNGA AVE***	***31***	***124***

FEDERAL ASTM SUPPLEMENTAL

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement

cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 07/25/2003 has revealed that there are 34 FINDS sites within the searched area.

Site	Address	Map ID	Page
DEL ANDERSON	*9767 FOOTHILL PL*	*8*	*11*
HANSEN DAM MAINT YD	*11770 FOOTHILL BLVD*	*9*	*11*
REEVES TRUST	*11840 FOOTHILL BLVD*	*10*	*17*
LA CO., DEPT. OF PUBLIC WORKS	10179 GLENOAKS BOULEVAR	16	23
LOS ANGELES COUNTY FLOOD CONTR	*10179 GLENOAKS BOULEVAR*	*16*	*24*
VIKING FREIGHT SYSTEM	*11911 BRANFORD*	*16*	*30*
VALLEY SCREW PRODUCTS	*10243-1/2 GLENOAKS BLVD*	*16*	*30*
A AND J PLATING	*10253 GLENOAKS BLVD*	*16*	*34*
STARTEX	*12224 MONTAGUE ST*	*16*	*45*
WHALING GEAR CO	*10285 GLENOAKS BLVD UNI*	*16*	*46*
ALPINE PAPER	*12181 MONTAGUE*	*16*	*48*
ULTRAMET	*12173 MONTAGUE ST*	*16*	*50*
RPS ARCHITECTURAL SYSTEMS INC	*12169 MONTAGUE ST*	*16*	*52*
WEST COAST EXTRUSION	*12169 MONTAGUE ST*	*16*	*53*
MAYONI ENTERPRISES	*10340 GLENOAKS BLVD*	*16*	*53*
CF MOTORFREIGHT	*12100 MONTAGUE ST*	*16*	*57*
HANSEN DAM GOLF SERVICE YARD	*10400 GLENOAKS BLVD*	*16*	*60*
GLENOAKS DUMP	10403 GLENOAKS BLVD	16	63
NATIONAL CONSTRUCTION RENTALS	*10403 GLENOAKS BLVD*	*16*	*63*
LEDGER LANDFILL	*COR OF MONTAGUE ST & GL*	*16*	*67*
TEXTRON INC HYDRAULIC RESEARCH	*10445 GLENOAKS BLVD*	*16*	*71*
QUALITY PROCESSING INC	*12111-1/2 BRANFORD ST U*	*19*	*78*
BECK METALS CO	*12051 BRANFORD ST*	*19*	*81*
STATEWIDE AUTO SALES	*12039 BRANFORD*	*19*	*82*
SHEFFIELD MFG INC	*9819 GLENOAKS BLVD*	*20*	*83*
NETWORK CITY INDUSTRIAL CORP	*9826 GLENOAKS BLVD*	*20*	*84*
ESM EAST VALLEY HEADQUATERS	*11781 TRUESDALE ST*	*20*	*87*
M J F EQUIPMENT TRANSPORT	*9867 GLENOAKS BLVD*	*20*	*92*
ALERT PLATING CO	*9939 GLENOAKS BLVD*	*20*	*94*
3M DELTA G	*9960-A GLENOAKS BLVD*	*20*	*97*
SUPERIOR PLATING INC	*9983 GLENOAKS BLVD*	*20*	*98*
CUSHION CUT INC	*9983 GLENOAKS BLVD*	*20*	*98*
MARFRED INDUSTRIES	*12708 BRANFORD ST*	*26*	*111*
VALLEY GENERATING STATION	*9430 S. SAN FERNANDO RO*	*29*	*121*

TRIS: The Toxic Chemical Release Inventory System identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA Title III, Section 313. The source of this database is the U.S. EPA.

A review of the TRIS list, as provided by EDR, and dated 12/31/2001 has revealed that there are 2 TRIS sites within the searched area.

Site	Address	Map ID	Page
MOC PRODS. CO. INC.	*12306 MONTAGUE ST.*	*17*	*74*
ALERT PLATING CO.	9939 GLENOAKS BLVD.	20	96

STATE OR LOCAL ASTM SUPPLEMENTAL

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 07/01/2003 has revealed that there is 1 AST site within the searched area.

Site	Address	Map ID	Page
VALLEY RECLAMATION	*9227 TUJUNGA AVE*	*31*	*124*

Emissions Inventory Data: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the EMI list, as provided by EDR, and dated 12/31/2001 has revealed that there are 8 EMI sites within the searched area.

Site	Address	Map ID	Page
TUJUNGA WASH - HANSEN SPREADIN	*10179 GLENOAKS BLVD*	*16*	*24*
ZERO COR	*12224 MONTAGUE ST*	*16*	*43*
MAYONI ENTERPRISES	*10340 GLENOAKS BLVD*	*16*	*53*
TANK LEAK-PACOIMA FACILIT	*10445 GLENOAKS BLVD.*	*16*	*68*
CUSHION CUT INC	*9983 GLENOAKS BLVD*	*20*	*98*
SPARTAN TRUCK EQUIPMENT	*12266 BRANFORD ST*	*21*	*100*
VALLEY GENERATING STATION	*11801 SHELDON ST*	*28*	*117*
VALLEY RECLAMATION	*9227 TUJUNGA AVE*	*31*	*124*

NFE: This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to beassessed using the PEA process. PEA in Progress indicates properties where DTSC has determined a PEA is required, but not currently underway.

A review of the NFE list, as provided by EDR, and dated 08/31/2003 has revealed that there are 2 NFE sites within the searched area.

Site	Address	Map ID	Page
HR TEXTRON	12137 MONTAGUE	16	56
LEDGER LANDFILL	10403 GLENOAKS BLVD	16	66

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the CA SLIC list, as provided by EDR, has revealed that there are 2 CA SLIC sites within the searched area.

Site	Address	Map ID	Page
TEXTRON INC HYDRAULIC RESEARCH	*10445 GLENOAKS BLVD*	*16*	*71*
FORTIN INDUSTRIES #610	*9880 SAN FERNANDO RD*	*22*	*102*

EXECUTIVE SUMMARY

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, has revealed that there are 63 HAZNET sites within the searched area.

Site	Address	Map ID	Page
LAUSD/ BRAINARD AVE ELEM	11407 BRAINARD AVE	1	3
HOUSING AUTHORITY CITY OF LA/D	12054 FOOTHILL BLVD	2	3
ATTACK OFF ROAD	12061 FOOTHILL BLVD	2	4
PILLAR PRECISION GRINDING	12067 FOOTHILL BLVD. #B	2	4
J B MANUFACTURING	12067 FOOTHILL BLVD,_#F	2	5
RESOURCE PROPERTIES MANAGEMENT	11910 FOOTHILL BLVD	7	9
AUTO ZONE INC	11930 FOOTHILL BLVD	7	10
HANSEN DAM MAINT YD	***11770 FOOTHILL BLVD***	***9***	***11***
HANSEN DAM MAINTENANCE YARD	***11770 FOOTHILL BLVD***	***9***	***12***
REEVES TRUST	11840 FOOTHILL BLVD	10	13
KOMEX-H2O SCIENCE	11840 FOOTHILL BLVD	10	13
REEVES TRUST	11840 FOOTHILL BLVD	10	15
THRIFTY #230	***12957 VAN NUYS***	***11***	***17***
GLENOAK ARMS APT. ASSOCIATION	12251 OSBORNE ST.	12	18
SUNSHINE INVESTMENTS	10770 GLEN OAKS BLVD.	13	18
FIRE STATION #24	***9411 WENTWORTH ST***	***14***	***20***
1X HOME SAVINGS OF AMERICA	12301 OSBORNE PLACE	15	21
HOME SAVINGS OF AMERICA	12300 OSBORNE PLACE	15	22
CTY LOS ANGELES DPW HANSEN YAR	10179 GLENOAKS BLVD	16	22
TUJUNGA WASH - HANSEN SPREADIN	***10179 GLENOAKS BLVD***	***16***	***24***
ANWRIGHT CORPORATION LLOYD G.	***10225 GLENOAKS BLVD., P***	***16***	***26***
LANCE CAMPER MANUFACTURING	10234 GLEN OAKS BLVD	16	29
CUSTOM PAINTING & DECORATING	10245 GLEN OAKS BLVD	16	30
MACHINE MOTORS	10249 1/2 GLEN OAKS BLV	16	31
VIKING FREIGHT INC	11911 BRANFORD	16	32
A AND J PLATING	***10253 GLENOAKS BLVD***	***16***	***34***
BADGER BLOCK INC	10261 GLENOAKS BLVD	16	35
ASAP EQUIPMENT RENTAL	12233 MONTAGUE	16	36
SOUTHERN CA RTD DIV 15	***11900 BRANFORD ST***	***16***	***37***
ZERO COR	***12224 MONTAGUE ST***	***16***	***43***
ARC MACHINES INC	10280 GLENOAKS BLVD	16	45
REGEN PROJECTS	10318 GLENNOAKS BLVD	16	48
ALPINE PAPER	***12181 MONTAGUE***	***16***	***48***
ULTRAMET	***12173 MONTAGUE ST***	***16***	***50***
MAYONI ENTERPRISES	***10340 GLENOAKS BLVD***	***16***	***53***
CF MOTORFREIGHT	***12100 MONTAGUE ST***	***16***	***57***
HANSEN DAM GOLF SERVICE YARD	***10400 GLENOAKS BLVD***	***16***	***60***
NATIONAL CONSTRUCTION RENTALS	***10403 GLENOAKS BLVD***	***16***	***63***
ROBISON-PREZIOSO	***10445 GLENOAKS BLVD***	***16***	***70***
TEXTRON INC HYDRAULIC RESEARCH	***10445 GLENOAKS BLVD***	***16***	***71***
NALCO CHEMICAL CO	***12355 MONTAGUE AVE***	***18***	***78***
QUALITY PROCESSING INC	***12111-1/2 BRANFORD ST U***	***19***	***78***
NUMBER ONE RECYCLING INC	12051 BRANFORD ST	19	81
STATEWIDE AUTO SALES	***12039 BRANFORD***	***19***	***82***
MAGIC AUTO	9760 GLENOAKS BLVD	20	82
ELITE FOREIGN AUTO PARTS	9787 GLENOAKS BLVD	20	83
AMERICAN PRECISION	9790 GLENOAKS BLVD	20	83

Site	Address	Map ID	Page
VAN FLEET PRECISION	9826 GLENOAKS BLVD	20	84
TIERNAY AEROSPACE	9848 GLENOAKS BLVD	20	85
LOS ANGELES CITY/DEPT WATER &	11791 TRUESDALE ST	20	85
LA DEPARTMENT WATER & POWER	***11791 TRUSDALE ST***	***20***	***86***
M J F EQUIPMENT TRANSPORT	***9867 GLENOAKS BLVD***	***20***	***92***
ALCORN FENCE COMPANY	***9901 GLENOAKS BLVD***	***20***	***93***
ALERT PLATING CO	***9939 GLENOAKS BLVD***	***20***	***94***
POWDERMET INC	9960 GLENOAKS BLVD #A	20	97
DAVID PADILLA	9970 GLENOAKS BLVD	20	97
HERMAN OSTROW	9983 GLENOAKS BLVD	20	98
FORTIN INDUSTRIES #610	***9880 SAN FERNANDO RD***	***22***	***102***
LA EAST VLY REFUSE COLL YD	***9701 SAN FERNANDO RD***	***23***	***105***
ANGELUS BLOCK CO INC	***11740 SHELDON ST***	***25***	***110***
MARFRED INDUSTRIES	***12708 BRANFORD ST***	***26***	***111***
MONARCH RECORD MANUFACTURING	***9545 SAN FERNANDO RD***	***27***	***117***
VALLEY GENERATING STATION	***11801 SHELDON ST***	***28***	***117***

HMS: Los Angeles County Industrial Waste and Underground Storage Tank Sites.

A review of the LOS ANGELES CO. HMS list, as provided by EDR, has revealed that there are 2 LOS ANGELES CO. HMS sites within the searched area.

Site	Address	Map ID	Page
LA CO DPW FLOOD HANSEN YARD	10010 GLENOAKS BLVD	20	99
LA CO DPW FLOOD HANSEN SPR GRD	10010 GLENOAKS BLVD	20	99

BROWNFIELDS DATABASES

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 08/31/2003 has revealed that there are 2 VCP sites within the searched area.

Site	Address	Map ID	Page
TRUESDALE CENTER - LA DWP	11791 TRUESDALE ST	20	88
VALLEY GENERATING STATION	***11801 SHELDON ST***	***28***	***117***

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

Los Angeles Department of Water and Power Natural Gas and Coal Generation Capacity as of 12/31/05

Gross Capacity (Max Load)		
NATURAL GAS	**MW**	
HARBOR		
Units 1, 2, 5 (Combined Cycle CTs + HRSG)	235	2 CTs at 84 MW each + 67 MW steam turbine
Units 10 - 14 (Simple Cycle CTs)	246.5	5 CTs at 49.3 MW each
HAYNES		
Unit 1 (Boiler)	230	
Unit 2 (Boiler)	230	
Unit 5 (Boiler)	330	
Unit 6 (Boiler)	249	Required to derate 82 MW as part of 1304 exemption for Units 3 & 4 repowering. Unit 6 transformer blew up Feb 2004, replaced with Unit 4 transformer April 2004, new max capacity = 249 MW (230 MW nominal). Total reduction = 94 MW.
Units 8, 9, 10 (Combined Cycle CTs + HRSG) (Repower Units 3 & 4)	590	2 CTs at 170 MW each + 250 MW steam turbine. Commissioning ended Dec. 12, 2004.
Units 11, 12, 13 (Combined Cycle CTs + HRSG) (Repower Units 5 & 6)	-	615 MW (delayed...originally scheduled to be in service Sept. 2006)
SCATTERGOOD		
Unit 1 (Boiler)	190	
Unit 2 (Boiler)	191	
Unit 3 (Boiler)	465	
VALLEY		
Unit 5 (Simple Cycle CT)	47.4	1 CT at 47.4 MW
Units 6, 7, 8 (Combined Cycle CTs + HRSG) (Repower Units 1 - 4)	527	2 CTs at 163 MW each + 201 MW steam turbine. Commissioning ended Nov. 1, 2003.
TOTAL GAS	**3530.9**	
COAL	**MW**	
Intermountain	1228	Unit 1 (970 MW Max) + Unit 2 (950 MW Max) x DWP's share of generation as of 12/31/05 (63.96516%)
Mohave	0	Plant shut down 12/31/05
Navajo	477	3 units at 750 MW each x DWP's share of generation (21.2%)
TOTAL COAL	**1705.1311**	
TOTAL CAPACITY (NATURAL GAS + COAL) =	**5236.0311**	

Notes:

Intermountain: LADWP's share of generation received from IPP = (entitlement + excess power + UP&L)

Mohave: Reduced 20% ownership share to 10% effective Oct. 2001 (divestiture approved by City Council 11.27.01, retroactive to Oct. 2001)

Mohave: Plant shut down, last day of operation = 12/31/05, will be out of service for at least 4 years, may be rebuilt

Updated 10.17.05

Los Angeles Department of Water and Power Natural Gas and Coal Generation Capacity as of 12/31/05

Gross Capacity (Max Load)		
NATURAL GAS	**MW**	**NOTES**
HARBOR		
Units 1, 2, 5 (Combined Cycle CTs + HRSG)	235	
Units 10 - 14 (Simple Cycle CTs)	246.5	
HAYNES		
Unit 1 (Boiler)	230	
Unit 2 (Boiler)	230	
Unit 5 (Boiler)	330	
Unit 6 (Boiler)	249	Derated
Units 8, 9, 10 (Combined Cycle CTs + HRSG)	-	Start of operation Dec. 2004
SCATTERGOOD		
Unit 1 (Boiler)	191	
Unit 2 (Boiler)	465	
Unit 3 (Boiler)	0	
VALLEY		
Unit 5 (Simple Cycle CT)	527	
Units 6, 7, 8 (Combined Cycle CTs + HRSG)	0	Start of operation Nov. 2003
TOTAL GAS	**2703.5**	
COAL	**MW**	**NOTES**
Intermountain	0	LADWP share of generation as of 12/31/05 = 63.96516%
Mohave	477	Plant shut down 12/31/05
Navajo	0	LADWP share of generation = 21.2%
TOTAL COAL	**477.00**	
TOTAL FOSSIL FUEL GENERATING CAPACITY		
TOTAL NATURAL GAS + COAL CAPACITY =	**3180.50**	**MW**

Note: LADWP's share of generation from Intermountain Generating Station = (entitlement + excess power + UP&L)

Updated 10.17.05