

EASTLAKE/OTAY WATER DISTRICT IMPROVEMENTS
FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

City of Chula Vista Number: EIR 85-3
State Clearinghouse Number: 85061916

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DRAFT
August 1985

FINAL
September 1985

PREFACE

This document comprises the Final EIR for the proposed EastLake/Otay Water District Improvements project. A Notice of Preparation for the proposed project was circulated by the City of Chula Vista in June 1985. Subsequently, a Draft EIR was completed and circulated for public review. One letter of comment was received regarding Draft EIR from Longley-Cook Engineering Inc. and several EIR issues were discussed at a Chula Vista City Council hearing conducted on September 11, 1985. The Draft EIR has been revised in several areas to address concerns raised during the public review period. The revised EIR text, comments on the Draft EIR and responses to those public comments, comprise the Final EIR. Additional information regarding the project, including pressure zone information is available for review at the Otay Water District Office. A Cultural Resource Survey for the project area is available for Review at the City of Chula Vista Planning Department.

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SECTION I
INTRODUCTION AND SUMMARY

1.1 PURPOSE

This Supplemental Environmental Impact Report (EIR) addresses the proposed Otay Water District (OWD) improvements associated with development of the EastLake Planned Community and future surrounding land uses in the City of Chula Vista and San Diego County. Improvements would be located within or adjacent to the EastLake project boundary, within the Otay-Jamacha Reuse Area (OJRA) and between the EastLake and OJRA boundaries. The project area is located approximately 7.5 miles east of downtown Chula Vista, approximately 8 miles north of the U.S. Mexico border.

This EIR is intended to serve as a supplement to the EastLake Master EIR (EIR-81-03). Improvements for the Water District's 980 and 710 pressure zones would be sized to allow ultimate service to approximately 8670 acres, including 3073 acres located in EastLake and 1000 acres currently served by the 710 zone. The portion of the project area located in EastLake I has been annexed into OWD Improvement District 22; however, an additional 1805 acres located in the portion of EastLake reserved for future development and 4600 acres located outside of EastLake could be served by ID-22 and would need to be annexed into the Improvement District before service could be obtained. EIR review and certification by the OWD Board of Directors is required before the proposed water distribution system improvements can be implemented.

On August 24, 1982, the City of Chula Vista adopted the EastLake Policy Plan for the entire 3073-acre community and the Planned Community Zoning for EastLake I. EastLake I is the designation adopted for the current development area of EastLake. Combined, these constitute the General Plan designation for the property. A provision of the Planned Community Zoning was that, prior to development, a Section Planning Area (SPA) Plan would have to be approved for the EastLake I planning area. Both the EastLake Policy Plan addressing the entire 3073 acres and the EastLake I SPA plan were approved on March 19, 1985. EIRs which addressed environmental issues, including water distribution system improvements, were prepared for EastLake (EIR-81-03, SCH 80121007, FEIR-February 1982) and EastLake I (EIR-84-1, SCH 84022206, FEIR-January 1985) and are hereby incorporated by reference into this EIR.

This EIR is an informational document which is intended to inform responsible and interested agencies, and the general public of the environmental effects of a proposed project. The environmental review process has been established to enable public

agencies to evaluate a project in terms of its environmental consequences, to examine and implement methods of eliminating or reducing any adverse impacts, and to consider alternatives to the project as proposed. While the California Environmental Quality Act (CEQA) requires that major consideration be given to avoiding environmental damage, the responsible public agencies remain obligated to balance possible adverse effects against other public objectives, including economic and social goals, in determining whether and in what manner a project should be approved. Accordingly, this EIR has been prepared in compliance with CEQA and State EIR guidelines.

1.2 SUMMARY OF FINDINGS

Project Description

Development of EastLake and surrounding properties will require the construction of several water distribution system improvements. These water distribution system improvements will occur in two pressure zones, the existing 710 zone and the proposed 980 zone in the 11 separate projects described below.

1. Installation of 16-inch, 18-inch and 20-inch transmission mains from the proposed 980 Zone Pump Station (project number 3) located within EastLake I to the offsite 980 zone reservoir located in the Otay Water District Use Area.
2. Relocation of an existing 20-inch water main in Otay Lakes Road to coincide with the realignment of Otay Lakes Road as part of EastLake I development.
3. Construction of a pump station at the southeast corner of EastLake I which would be sized to accommodate only EastLake I.
4. Construction of two 5-million gallon reservoirs in the Otay Water District Reuse Area located approximately 800 feet north of EastLake I. One 5 million gallon reservoir would be constructed to serve EastLake and the other would be constructed for development outside of EastLake.
5. Construction of a 16-inch transmission main from the Central Area Pump Station to Otay Lakes Road.
6. Expansion of the previously proposed Reservoir 22-3 located immediately south of EastLake I from 3.0 mg to 8.0 mg capacity to serve EastLake and surrounding areas.
7. Construction of a 20-inch reclaimed water main from the Otay Water District Use Area to the future golf course south of Otay Lakes Road.

The offsite portion of the water main would be constructed parallel to subproject number 1 but separated by 10 feet in order to comply with State Health Department requirements.

8. Construction of a 24-inch transmission main to connect the transmission system of EastLake I to the proposed Pump Station 2 (subproject number 9).
9. Construction of a pump station to augment the water supply for the 980 zone located at Reservoir 22-3.
10. Expansion of the existing Reservoir 22-1 located in EastLake I to include a 2 million gallon reservoir immediately east of the existing reservoir.
11. Expansion of the existing Central Area Pump Station located immediately south of EastLake I to accommodate EastLake development.

Environmental Analysis

The environmental impacts of the proposed project are summarized below. Mitigation measures as listed are required to reduce potential significant impacts to a level of insignificance. More detailed discussions of impacts and mitigation measures for each issue are contained in Section III of this report.

Visual Quality: The majority of the proposed water improvement projects do not have the potential to create adverse visual impacts since they will either be pipelines placed underground or hidden from public view in the Otay Water District Reuse Area (Project No. 4, reservoirs). However, Project Nos. 3, 6, 9, 10 and 11 could potentially result in visual impacts to future and existing development if specific design measures are not incorporated into final project plans. Reservoirs (Project Nos. 6 and 10) would be painted a natural color and extensively landscaped in order to blend them into the environment and screen them from views. Pump stations (Project Nos. 3, 9 and 11) would be enclosed in structures which blend with the surrounding architectural theme. The above mentioned measures, would mitigate potential visual impacts of the proposed projects.

Noise: The proposed pump stations (Project Nos. 3, 9 and 11) could potentially result in noise impacts on the surrounding community if measures are not implemented to attenuate noise generated by the pumps. Project Nos. 3 and 9 involve the construction of pump stations which will be surrounded by urbanized property. These pump stations will be designed to attenuate noise to no higher than 45 dB(A) CNEL, by utilizing mufflers integrated into the pump design and block pumphouses. Thus City of Chula

Vista noise standards would be met. Expansion of the Central Area Pump Station (Project No. 11) will involve modification of piping and expansion of the pumping capacity. Currently, no plans have been developed for these modifications; therefore, potential noise impacts cannot be determined. However, mitigation measures would be incorporated into future design plans to ensure compliance with City of Chula Vista noise standards.

Construction: Construction impacts as a result of project implementation will be minimal and will not result in significant impacts to the existing land uses and natural environment. Dust levels, which would be relatively low, would be controlled by watering as required by development standards.

Noise levels from construction equipment could affect existing residents adjacent to Projects Nos. 6 and 9 in the Southwest College Estates community. However, the construction noise would be short term in nature and would not constitute a significant impact. Required measures, such as limited work hours (7 a.m. to 6 p.m.) and equipment muffling, would reduce levels of nuisance noise.

Traffic disruptions and detours would occur where water mains are constructed below existing roadway surfaces. These disruptions and detours would affect Rancho Janal Road, between Proctor Valley Road and Otay Lakes Road, and Proctor Valley Road east of Rancho Janal Road. However, these detours would have a very low potential for causing traffic congestion or hazards due to the few cars that utilize the dirt roads. The majority of the pipeline construction would be completed before traffic would increase in EastLake due to buildout. No significant impacts are anticipated from the temporary road realignments which would last for 2 to 3 months.

Archaeology: The proposed projects would not result in the disturbance of any significant archaeological resources; therefore, no mitigation is required.

Biology: Water system improvements would be limited to previously disturbed areas which do not support significant vegetative or wildlife species; therefore, no significant biological impacts would result from project implementation.

Geology: Preliminary geotechnical investigations and available literature indicate that there are no significant geologic features which would preclude or pose a major constraint to development of the proposed water district improvements.

Paleontology: There is a potential for encountering paleontological resources in certain areas of the site underlain by the Otay Formation. Where trenching for pipelines would occur in areas cut by previous grading activities and where reservoir

and pump construction would require cutting into the Otay Formation (Project Nos. 6 and 9), a qualified paleontologist will monitor initial grading and trenching activities in order to avoid potential adverse impacts to subsurface resources.

Growth Inducement: A large portion of the proposed water system improvements would serve property which is zoned, planned and approved for development. However, the provision and planning of water facilities to accommodate surrounding areas will make future development of these areas more feasible. The significance of this impact can only be defined in the context of growth inducing impacts of the approved developments. The water improvements are being provided as a result of project approvals. Prudent planning requires that these system improvements be sized to accommodate future development in order to avoid costly resizing of the proposed system. The proposed water improvements will contribute cumulatively, along with the extension of other public services associated with approved projects, to induce growth in the area; however, the proposed project alone does not constitute a significant growth inducing impact.

SECTION II
PROJECT DESCRIPTION

2.1 GEOGRAPHIC LOCATION

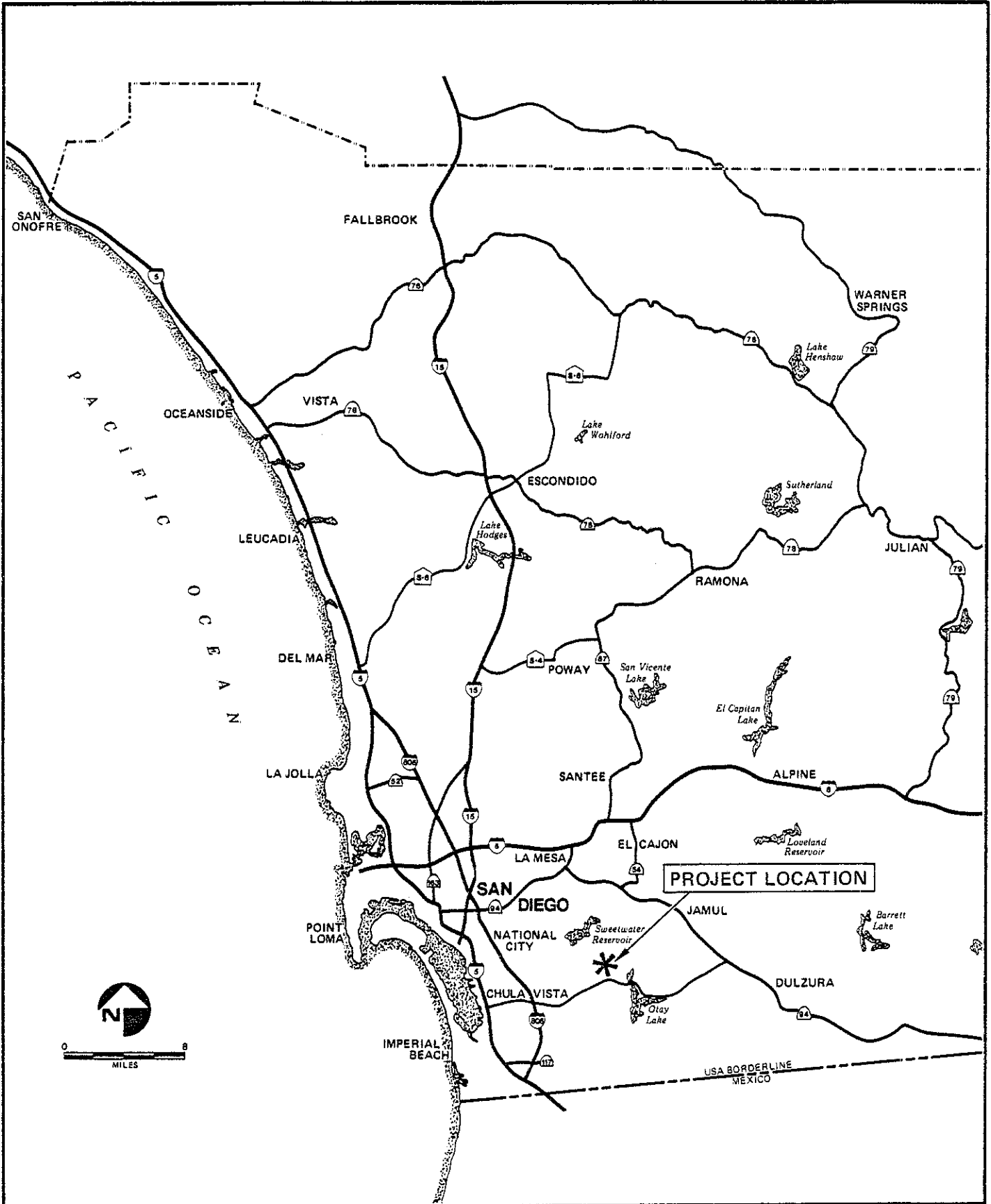
The improvements proposed by OWD in conjunction with development of EastLake and future surrounding land uses would primarily be located within the EastLake plan area or immediately adjacent to its boundary. Several of the improvements would also be located on OWD property and on property owned by United Enterprises between EastLake and the OWD land. The project area is located approximately 7.5 miles east of downtown Chula Vista and approximately 8 miles north of the United States/Mexico border, within the City of Chula Vista. The regional location and topography of the project area are shown on Figures 2-1 and 2-2.

2.2 ENVIRONMENTAL SETTING

The area where a majority of the Otay Water District improvements will be located is currently undergoing a transformation from undeveloped to the urbanized community of EastLake I. Grading is taking place over 60 to 70 percent of the EastLake Hills and EastLake Shores property in the northwestern portion of the EastLake planning area. The remaining portions of EastLake have been extensively disturbed by cultivation, with the exception of several small areas in the northwest.

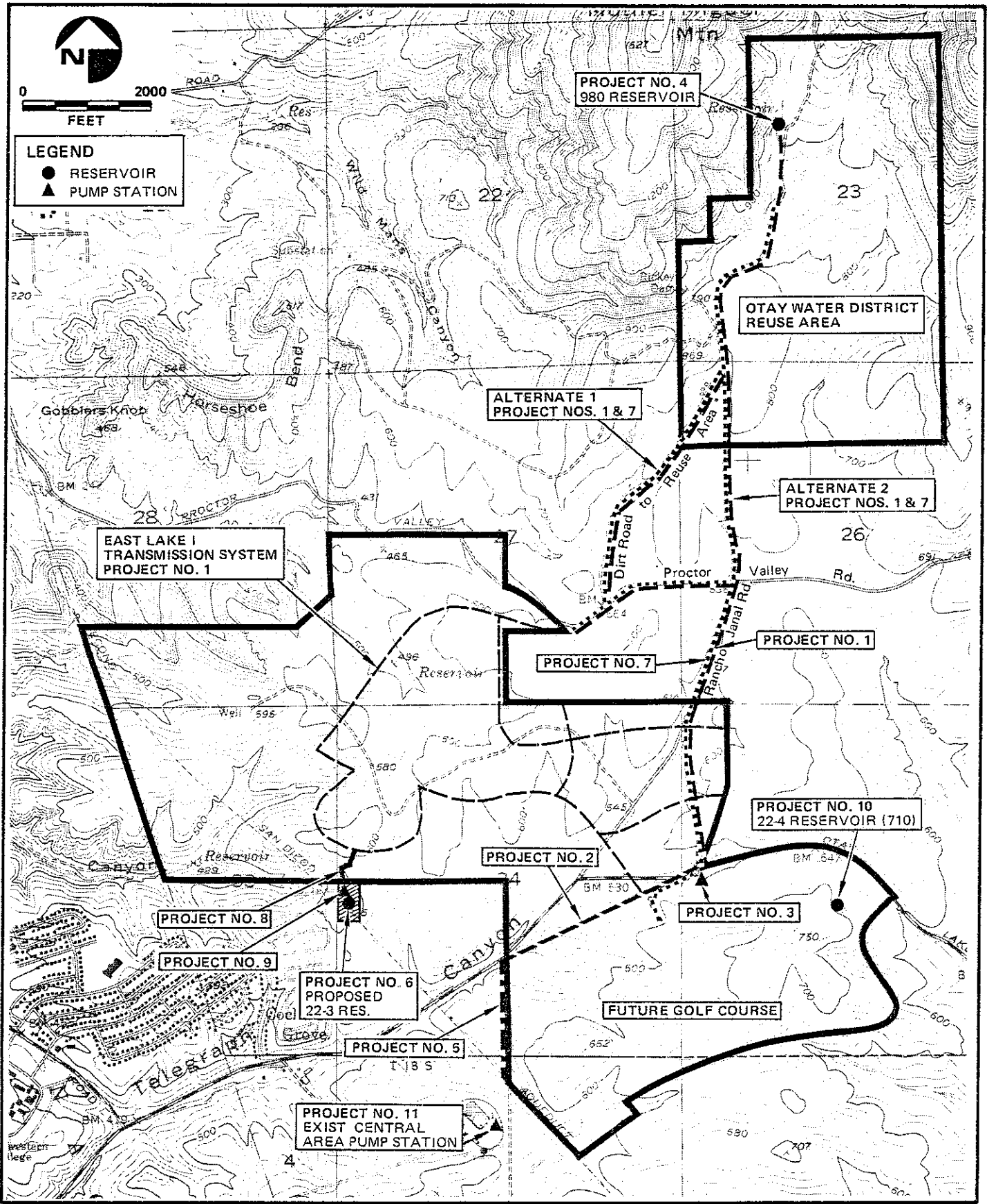
The project site's topography is typical of the western foothills of the Peninsular Range, consisting of rolling hills cut by drainage courses. Elevations range from approximately 750 feet above mean sea level (MSL) at the southeast portion of the project area, to 370 feet above MSL in the northwest corner of the project area where the property slopes down to Proctor Valley. The highest elevations, 700 to 750 feet above MSL, are located along the crest of the north/south trending ridge that divides the Salt Creek and Otay Lakes watersheds in the southeast portion of the project area. Various drainages extend into the project area, including Poggi Canyon in the south, Telegraph Canyon in the center, Long Canyon in the west and Proctor Valley in the north (Figure 2-2).

Land uses in the project area include the Second San Diego Aqueduct, an 80-foot wide San Diego County Water Authority easement which crosses the northwestern portion and borders the southern edge of the project area. A water tank surrounded by eucalyptus trees is located in the southeast portion of the project area. The 60-foot wide easement for paved Otay Lakes Road bisects the project area and several graded and unimproved dirt roads cross the site, including Proctor Valley Road



Regional Location of Project Site

**FIGURE
2-1**



Topography of Project Site

FIGURE 2-2

in the north and Janal Road, located between Otay Lakes Road and Proctor Valley Road (Figure 2-2). San Diego Gas & Electric Company has a 120-foot wide easement for its 230 kV transmission line which crosses the central and southwestern portions of the project area in a northwest to southeast direction. In the future, two 69 kV lines will be located adjacent to the 230 kV line, but it is uncertain whether the right-of-way will need to be widened (McGuire, 1984). A 250-foot wide SDG&E easement also crosses the extreme northwest portion of the project area.

The land surrounding EastLake I is largely undeveloped. The property is bound on the northeast, east and south by agricultural land used for the cultivation of barley. To the north, on United Enterprises Property, the slopes adjacent to Proctor Valley Road are grazed or otherwise undisturbed. Steep slopes north of the project area and south of Proctor Valley Road are also undisturbed with the exception of several off-road vehicle (ORV) trails. Single-family homes are located on a mesa top near the southwest corner of EastLake and immediately adjacent to Otay Improvement Project Nos. 6, 8 and 9. To the west is undisturbed land with ORV trails north of Long Canyon.

Property in the Otay-Jamacha Reuse Area, where improvement Project Nos. 1, 4 and 7 will be located, consists of broad, rounded hills separated by shallow canyons. The Reuse Area provides a land disposal system for treated effluent. Cultivation has occurred along the proposed pipeline routes and the reservoir site, located at the base of Mother Miguel Mountain, has been graded.

Existing Water Facilities

The EastLake planned community and the surrounding area are within the boundaries of the OWD, which is the agency responsible for local water service. The OWD is a member agency of the San Diego County Water Authority (CWA) and the Metropolitan Water District of Southern California, agencies that provide regional water supplies. The County Water Authority's existing and proposed supply facilities are designed to meet the projections of these member agencies.

The CWA's 69-inch aqueduct traverses the western edge of the project area before it discharges into Lower Otay Reservoir. There is a connection to the aqueduct and 16- to 20-inch distribution lines which provide service to existing development west of EastLake. Water from the aqueduct is stored in the Patzig Reservoir and flows by gravity into a distribution line to the 621 zone and is pumped by the existing central area pump station to the existing 710-zone facility, a 3-million gallon reservoir (22-1) located in the southeast portion of EastLake.

Two existing pressure zones, the 621-zone and the 710-zone, currently serve development in the EastLake vicinity. The maximum service elevations of the two pressure zones are 480 and 570 feet above MSL, respectively.

2.3 PROJECT CHARACTERISTICS

Elevations over a majority of the EastLake Planned Community are too high to be supplied by the existing gravity water distribution system with the exception of the lowland portion of the community which can be serviced by the existing 710-zone. Therefore a new zone (980) is proposed to serve development located between 570 and 840 feet above MSL. Figure 2-3 depicts the location of the two zones.

The EastLake Water System will be designed based upon maintaining static pressures between 60 and 160 pounds per square inch (psi). Minimum pressures of 40 psi during peak hour use and 20 psi during fire flow conditions will be maintained.

In addition to the proposed domestic water system, an irrigation system is proposed to provide water for the future golf course and additional open space areas in EastLake. Reclaimed water will be supplied from the Otay-Jamacha Reuse Area.

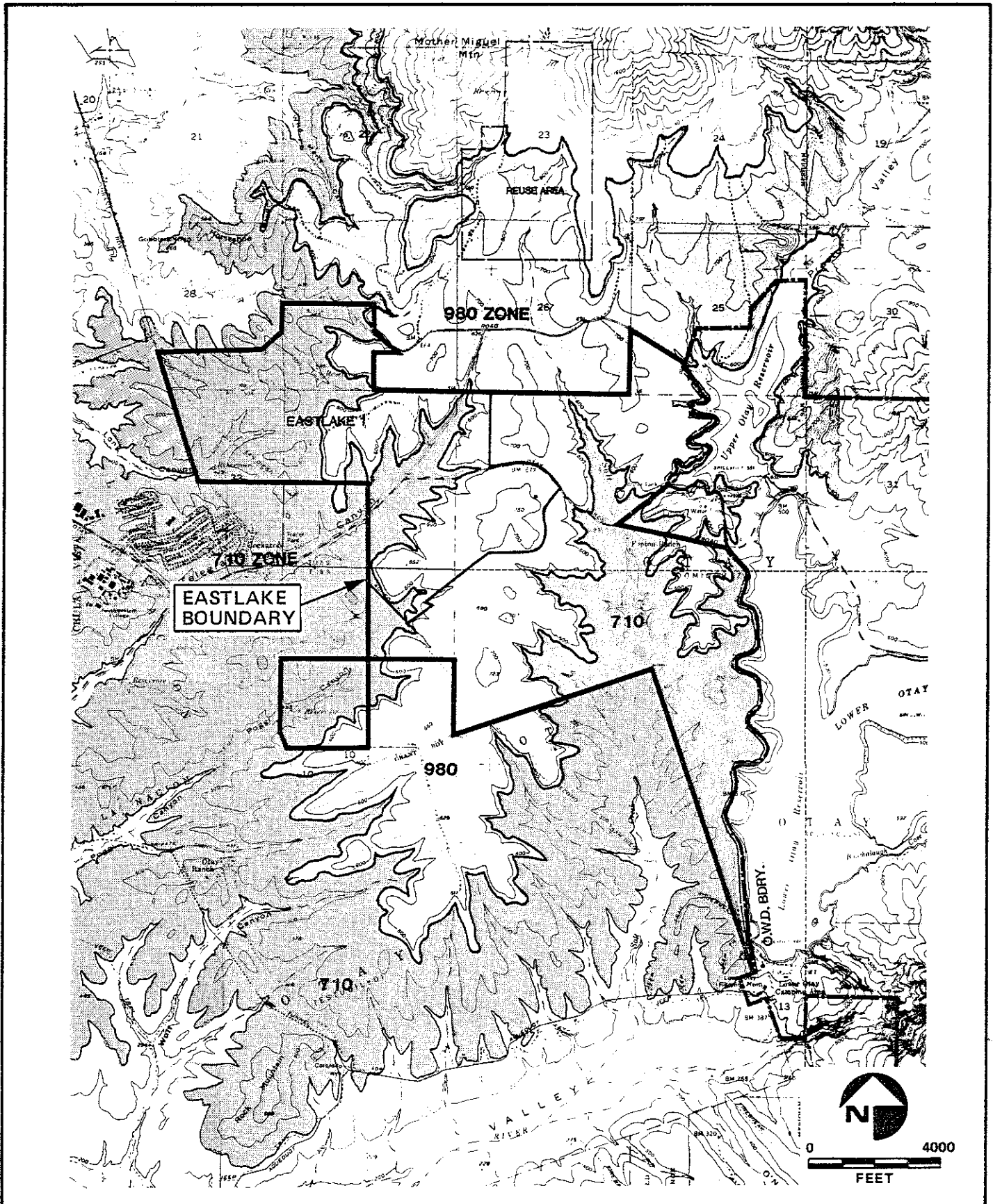
The following water improvement projects are proposed to supply water to the EastLake Planned Community and surrounding properties. Figure 2-2 depicts the location of these projects.

PROJECT NO. 1 (16-inch, 18-inch and 20-inch Transmission Main from the EastLake 980-Zone Pump Station (Project No. 3) to the 5.0 mg 980-Zone Reservoir (Project No. 4))

The development of a new pressure zone with a hydraulic gradient reaching elevation 980 above MSL is required to provide potable water to a large portion of EastLake I. Transmission mains will be necessary to carry water to the new reservoir and to serve as the backbone distribution system for the EastLake I development. The mains are sized to serve surrounding developments within the 980 pressure zone.

Within the boundaries of the EastLake Planned Development, the distribution mains will be located in streets. Outside of EastLake the mains will be located in existing county roads, within private easements which appear to be logical extension of future roads, and across OWD land. The two existing County roads are Proctor Valley Road and Rancho Janal Road.

North of Proctor Valley Road, there are two possible alignments, for the 20-inch transmission main. Alternate 1 follows the existing access road easement to the OWD Reuse Area and Alternate 2 follows an easement proposed by the landowner, United Enterprises, Inc. The selection of the final route will depend on future street



710 Zone and 980 Zone Service Areas

**FIGURE
2-3**

grades which have not yet been established. The portion of the 20-inch main within OWD's Reuse Area will follow an existing road to the reservoir site.

PROJECT NO. 2 (Relocation of Existing 20-inch Water Main in Otay Lakes Road)

The Otay Water District has a 20-inch water main in the south side of the existing alignment of Otay Lakes Road. The approved tentative map for EastLake will relocate the road requiring abandonment of 3300 feet of existing 20-inch main replacing it with 3070 feet of new 20-inch main.

PROJECT NO. 3 (980 Zone Pump Station No. 1)

The EastLake project contains areas that are above the elevation of the Otay Water District's existing pressure zone therefore requiring the establishment of a higher zone to provide water service. The ultimate capacity of the pump station to provide water to this zone will be 4000 gallons per minute (gpm) at 450 horsepower (hp).

The first phase of construction for EastLake I will require water service from pressure zone 980. Pump Station No. 1 would provide water to the new 980-zone reservoir from the existing 710-zone system. Ultimate development of the 980-zone will require a second pump station to be constructed within 10 years at a different connection to the San Diego County Water Authority's filtered water aqueduct. Pump Station No. 1, to be located at the intersection of Rancho Janal Road and Otay Lakes Road, will be enclosed within an aesthetically pleasing structure which attenuates noise.

PROJECT NO. 4 (10.0 mg 980 Zone Reservoir)

Development of the first phase of EastLake I in the 980 pressure zone will require the construction of a pump station, transmission mains and a reservoir. Project No. 4 consists of a 10.0 mg storage reservoir to be built in two 5.0 mg increments. The developer of EastLake will be required to construct the first increment and the second increment will be constructed when the balance of the 980-zone develops.

The site for the reservoirs is located on OWD land north of Proctor Valley Road and South of San Miguel Mountain. The area has been graded and open storage ponds were constructed in 1980. The site will be regraded to accommodate both reservoirs as part of the proposed project.

PROJECT NO. 5 (16-inch Transmisison Main From the Central Area Pump Station to Otay Lakes Road)

The OWD master plan includes a 16-inch transmission main to augment the water supply to the 710-zone and to support anticipated demands from the 980-zone. The main will run from the Central Area Pump Station, which lies approximately

1/2 mile south of Otay Lakes Road, to Otay Lakes Road and will connect to an exiting 20-inch main.

PROJECT NO. 6 (Expansion of 22-3 Reservoir from a Planned 3.0 mg to 8 mg Capacity)

The proposed 22-3 reservoir was originally planned to have 3.0 mg capacity. An EIR for this reservoir was approved on September 11, 1978, by the Board of Directors of the Otay Water District. The proposed 8.0 mg reservoir will be approximately 200 feet in diameter and 32 feet in height. Expansion of the reservoir will require the acquisition of 100 feet of land east of the existing site and 30 feet on the south (or about 0.99 acres). The District will provide landscaping to blend the reservoir with its surrounding neighborhood.

The proposed reservoir was designed to store water from a new connection to the San Diego County Water Authority's filtered water aqueduct and establish a 621 pressure zone for the El Rancho del Rey development. Subsequently, emergence of the Bonita Long Canyon and EastLake projects has required a new analysis of the system's hydraulics. This review indicates that the capacity of the 22-3 reservoir must be increased to accommodate projected additional demands. Future phases of EastLake, and development of the 980-zone outside EastLake's boundaries, will require the installation of a 980-Zone Pump Station No. 2 at this reservoir (Project No. 9).

PROJECT NO. 7 (20-inch Reclaimed Water Main from Otay Water District Use Area to Future Golf Course South of Otay Lakes Road)

The EastLake SPA proposes two 18-hole golf courses and a recreational lake. In addition, there will be road median strips and slope bank irrigation systems which typically utilize potable water. Reclaimed water for irrigation is available from the OWD within their Reuse Area north of Proctor Valley Road. EastLake has investigated the feasibility of using reclaimed water and has concluded that it is environmentally and economically feasible. The proposed 20-inch main has been designed to handle projected ultimate demands.

There are two alternate alignments for the water main between the District's boundary and Proctor Valley Road. The selection of an alignment will be made at a later date. From Proctor Valley Road, the main will be located in Rancho Janal Road along the north edge of EastLake's Business Center. From there, it will be located within a dedicated street running to Otay Lakes Road. The alignment then goes west along Otay Lakes Road to a future street approximately 1800 feet east of Route 125 where this phase of the pipeline will terminate.

PROJECT NO. 8 (24-inch Transmission Main From 22-3 Reservoir to 5.0 mg 980 Reservoir)

The ultimate development of EastLake and/or the balance of pressure zone 980 will require a second pump station to be located at the 22-3 Reservoir site. This pump station No. 2 will be connected to the basic transmission system of the EastLake Shores residential project by a 24-inch main which must be installed prior to paving of streets and development over easements. This portion of the transmission system is relatively short and serves to connect the proposed No. 2 pump station to the backbone distribution system.

PROJECT NO. 9 (980 Zone Pump Station No. 2)

The ultimate development of the EastLake project and the remaining 980 zone will require an additional pump station from the connection to the filtered water aqueduct at the 22-3 reservoir. The pump station will have an ultimate capacity of 12,000 gpm at 2000 hp. It will be enclosed within a building which will match the surrounding home styles and serve to attenuate and provide security and weather protection. The pump station will be constructed within the limits of the 22-3 Reservoir site and will not require additional land. It will be connected to the distribution system by the 24-inch transmission main discussed previously as Project No. 8.

PROJECT NO. 10 (2.0 mg 22-4 Reservoir)

The projected demand on the water system of EastLake I requires additional storage in the 710 pressure zone. The approved OWD water master plan includes the construction of a new 2.0 mg reservoir to be located adjacent to the existing 22-1 reservoir located off Otay Lakes Road approximately 1 mile east of Rancho Janal Road. The existing site and the landscaping will be extended to accommodate the new reservoir.

PROJECT NO. 11 (Expansion of the Central Area Pump Station)

The Otay Water District's Central Area Pump Station, located approximately 1/2 mile south of Otay Lakes Road near the San Diego County Water Authority's filtered water aqueduct, presently serves all of the areas within OWD boundaries east of U.S. 805, north of the Otay River and south of the Sweetwater River. The projected demand on the 710-zone requires the expansion of capacity at this central pump station from 5000 gpm to 9000 gpm. This project will require modifying piping, adding pumps and related site work at the existing pump station.

SECTION III
IMPACT ANALYSIS

3.1 VISUAL QUALITY

The proposed Otay Water District Improvement project involves a number of components that will collectively provide water service for the EastLake development. Some of these components, the subterranean pipelines, will not constitute a permanent visual impact on the region. Others, however, (i.e., Project Nos. 3, 4, 6, 9, 10 and 11) will be above ground and could create a visual impact. Only those sites which will be visually affected by permanent improvements are discussed in this section of the EIR.

3.1.1 Existing Conditions

The project area occupies land in the western foothills of the Peninsular Range. The region is typical of the foothills, with rolling hills cut by drainages. Elevations range from 750 feet above mean sea level (MSL) in the center of the site to 370 feet above MSL in the northwestern corner, where the site slopes down to Proctor Valley.

The area is used almost entirely for growing barley, though a small part in the southeastern and northwestern areas remain natural. During the spring, the hills present a green, pastoral appearance. In the summer and fall, the grain turns brown and, after harvesting, bare fields remain. The land is plowed during the fall and winter and remains bare through these seasons.

Project No. 3

Project No. 3 is located on the south side of Otay Lakes Road at the southeast corner of the EastLake property. The surrounding land, although vacant, is currently used for agricultural production. Hills exist directly south of the site as well as directly north across the road restricting views of the site from those directions. Views of the site from the east and west are available from Otay Lakes Road only and are restricted due to the winding nature of the road. Likewise, views from the site are restricted to the surrounding topography.

Project No. 4

Project No. 4 will be located north of Proctor Valley Road, south of San Miguel Mountain in the Jamacha reuse area. Specific sites in the area have already been graded and open storage ponds were constructed in 1980 under an Environmental Impact Report approved by the Board of Directors of the Otay Water District. The site is surrounded by mountains to the north, east and west and by Proctor Valley to the

south. Adjacent land is vacant with a sparse covering of grass and inland sage scrub. A stand of eucalyptus trees exists north of the site at the foot of the mountains. A second stand of eucalyptus trees exists southeast of the site. Views of the site are blocked to the north, east and west by the surrounding mountains. The site is partially visible from the south. Views from the site include the mountains, existing trees and Proctor Valley in the distance to the south.

Project Nos. 6 and 9

These projects would be at the top of a hill at the terminus of Gotham Road south of the EastLake Shores development. Down the hill to the east, extensive grading is occurring for proposed residential development. To the south, land is still undisturbed although it too is designated for eventual development. Further to the south on an adjoining ridge is a single-family residence. To the north of the site is a second ridge where grading is occurring for the EastLake Shores development. West of the site are single-family residences. The site itself, has been partially graded at the top of the hill. However, much of the natural vegetation and topography, still exists, thus the site is not completely flat.

The site is highly visible from the north, east and south due to its prominent location on a hilltop. However, present viewers consist primarily of travellers on Otay Lakes Road, residents of an existing single-family house, and construction workers since surrounding lands have not yet been developed. Views of the site to residents of development to the west are restricted by both trees and walls. In addition, the existing topography is such that the site, located on the northeastern part of the hill, is also screened from residents to the west by the hill crest itself. Views from the site include the foothills of the San Miguel Mountains and Proctor Valley to the distant north, east and south as well as Otay Lakes Road and grading for both EastLake I and other proposed development in the foreground.

Project No. 10

Project No. 10 is proposed to be located adjacent to the existing reservoir located south of Otay Lakes Road approximately 1 mile east of Rancho Janal Road. The existing facility consists of a 3.0 mg water tank, light green in color, set into the side of a hill. The site is fenced off and partially hidden from view by pine and eucalyptus trees surrounding the structure. Land on both sides of Otay Lakes Road is vacant and plowed under for the later planting of crops. Views of the site from the south are restricted by the peak of the hill and from the west by the contours of the hillside. The facility is visible to westbound traffic on Otay Lakes Road and from the ridge north of the site across Otay Lakes Road.

Project No. 11

Project No. 11 is located at the Otay Water District Central Pump Station, approximately 1/2 mile south of Otay Lakes Road near a filtered water aqueduct belonging to the San Diego County Water Authority. The pump station is currently surrounded by agricultural land and is located at the base of two hills, one to the northeast and one to the southwest. At the top of the hill to the southwest is a 12.0 mg open reservoir. This facility covers approximately 36.7-acre feet and is surrounded by a fence. The pump station itself consists of four pumps located inside a blue concrete pumphouse approximately 10 feet tall. Three additional pumps are located outside the pumphouse.

The site is isolated by the surrounding vacant land. However, it is visible from the peaks of both adjacent hills and from the southeast. It is not visible from Otay Lakes Road to the northwest. Views from the site include the surrounding agricultural land, the open reservoir and a dirt access road.

Otay Lakes Road

Various subprojects, specifically Project Nos. 3 and 10, can be seen from Otay Lakes Road, a road offering panoramic views of surrounding pastoral hills and mountains. Otay Lakes Road, partially lined with pepper and olive trees, is designated as an unofficial Scenic Route, i.e., a local scenic route not designated as an official State scenic route, by the City of Chula Vista Scenic Highways Element (City of Chula Vista, 1974:3). From various points along the road, one can see hills to the east, the valley to the north and downtown San Diego to the northwest.

3.1.2 Impacts

Project No. 3

This project will consist of a pump station (Pump Station #1), set back 40 feet from Otay Lakes Road. The pump itself will be enclosed in a concrete block pumphouse both to ensure noise attenuation and for aesthetic purposes. The pumphouse will be designed by an architect to blend with the theme and color scheme of surrounding development. Preliminary plans call for a bi-level pumphouse in the shape of a "L". The back portion will be 20 feet in height with the front portion 13 feet in height. Width will be approximately 32 feet with the legs of the "L" 20 feet and 21 feet, respectively. The building will be painted with colors to match the EastLake color scheme and will be enclosed with an ivy-covered chain link fence.

Residential development is proposed directly south of the pump station; however, the development will be separated vertically from the station by natural

topography. North of the site, proposed development involves an employment and business center. Since the station will be specifically designed to blend with the urbanized community, no visual impacts will result from plan implementation.

Project No. 4

This project will involve the phased construction of two reservoirs, each with a holding capacity of 5.0 million gallons, and constructed corresponding to the phasing of surrounding developments. The tanks will be metal, approximately 32 feet in height and 160 feet in diameter. They will also be painted although the color has not been determined at this time.

Visual impacts from the reservoirs should be negligible due to the surrounding topography. Mountains on three sides of the site will block views of the reservoirs and enable them to blend in with the natural terrain more effectively. The site is visible from the south, thus the reservoirs will be as well. However, the site is in an isolated location with no existing sensitive surrounding land uses. No visual impacts will occur as a result of their construction.

Project Nos. 6 and 9

Project Nos. 6 and 9 consist of an 8.0 million gallon (mg) capacity reservoir and Pump Station #2. Although the site chosen for Pump Station #2 and Reservoir 22-3 has the advantage of vertical separation from adjoining land uses, the size and magnitude of the facilities, i.e., the reservoir, could create a significant visual impact if mitigation measures are not implemented. The reservoir itself will be located east of the summit of the hill as shown in Figure 2-2, approximately 275 feet from the nearest existing residential community, Southwestern College Estates (Otay Municipal Water District, 1979), with approximate dimensions of 32 feet high and 200 feet in diameter. The acquisition of 0.99 acres of land will be required to accommodate the proposed facility. The proposed Pump Station #2 will lie southwest of the reservoir.

Retention of the remainder of the hilltop to the south and west, and the character of the topography southeast of the site, will diminish or block visibility of the project site from Southwestern College Estates and Otay Lakes Road. In addition, houses on the northeasterly portion of the Southwestern College Estates will be separated from views of the facilities by existing fences, earthen berms, tree barriers or a combination of all three as well as the existing topography. The primary visual impacts resulting from proposed facilities would affect the EastLake Shores residential development north and northeast of the site as well as future residential development to the east. Although some vertical separation exists here also, residents of both developments would have views of the reservoirs and, in some cases, the pump station.

Project No. 10

Project No. 10 involves the construction of a 2.0 mg reservoir adjacent to an existing 3.0 mg (22-1) reservoir located south of Otay Lakes Road. The existing site and landscaping would be extended to include the new reservoir and would not significantly increase the present visibility of the facilities. The new facility will be painted light green to match the existing tank and will be the same height for hydraulic engineering reasons. The present facility is visible from the north and from Otay Lakes Road. However, although residential development is proposed for land north of the site and possibly for land immediately adjacent on either side of the facility, the site has been so extensively landscaped with pine and eucalyptus trees that it does not constitute an adverse visual impact. Any additional facilities at that site will be similarly treated.

Project No. 11

The existing Central Area Pump Station could represent a visual impact once development of adjacent areas occurs. Project No. 11 consists of modifications to this station to expand its pumping capacity from 5000 gallons per minute (gpm) to 9000 gpm. While modifications proposed should not increase visual impacts associated with the pump station, the existing visual impacts will need to be addressed before any adjoining development begins. Current land use designations in the surrounding area are Agriculture and Reserve, however, ultimate development of the area is almost certain to occur. At that time, the Central Area Pump station will constitute a significant adverse impact if mitigation measures are not implemented to integrate the pump station into the surrounding community theme.

Otay Lakes Road

No adverse visual impacts to the scenic quality of Otay Lakes Road would occur due to the proposed projects. The site for Project No. 10 and existing facilities can already be viewed from the road. Pump Station #1, (Project No. 3), would be set back 40 feet from the road and would blend in with other proposed development. In addition, it remains to be seen if Otay Lakes Road will retain its scenic quality once proposed development on the surrounding hills takes place.

3.1.3 Mitigation Measures

Project No. 3

Mitigation measures would be incorporated into the pumphouse design to negate adverse visual impacts. These include designing and painting the pumphouse to blend in with surrounding development. Landscaping would also be used to further

create an aesthetically-pleasing project and to screen the facility. Landscaping plans would also be subject to approval by the City landscape architect. These measures would mitigate adverse visual effects to a level of insignificance.

Project No. 4

Mitigation measures for the two reservoirs comprising Project No. 4 are not extensive. The site will be revegetated with grasses similar to existing species. The reservoirs will be painted an earth tone to blend the structures into their surroundings as much as possible. No further mitigation is considered necessary due to the isolated nature of the facility location.

Project Nos. 6 and 9

These projects will not be constructed for several years and project designs have not been finalized. However, there are several mitigation measures that would be incorporated into the design to help reduce visual impacts. These include:

- Reservoir height would be restricted to 32 feet above the ground surface to enable the structure to blend in more fully with adjacent hilltop development to the west.
- The reservoir would be painted an earth tone to blend in with surrounding development as much as possible.
- Topsoil would be returned to the site to ensure long-term growth of the landscaping.
- Landscaping, including mature trees and shrubs of varying heights, would be used to extensively screen the tank. Proposed landscaping around these facilities would also be compatible with that of the surrounding development and be subject to approval of the City's landscape architect.
- The pumphouse would also be designed and landscaped so as to blend with adjacent development.

Project No. 10

Landscaping around the present reservoir would be extended to include the proposed reservoir. The proposed reservoir would also be painted to match the existing facility. No further mitigation is necessary.

Project No. 11

Although surrounding land is currently vacant, eventual development of land adjacent to the existing pump station will necessitate mitigation measures for visual impacts. These measures would include enclosure in pumphouses designed to reflect the

theme of surrounding development, and use of aesthetically-pleasing landscaping to create a vegetative screen. These improvements would be phased to coincide with adjacent development as it occurs so the station can be blended with the area to the fullest extent possible.

3.1.4 Analysis of Significance

The proposed water improvements will not create adverse visual impacts if adequate landscaping and/or aesthetically pleasing designs are implemented. Visual impacts of Project Nos. 3 and 10 would be mitigated through project design and landscaping. Project Nos. 6 and 9 (Reservoir 22-3 and Pump Station #2) and the existing Central Area Pump Station are facilities which will not create visual impacts in the immediate future, but have the potential to create impacts at a later date once surrounding areas are developed. Before surrounding development occurs mitigation measures will be incorporated into the project designs. In summary, mitigation measures are available and would be implemented to mitigate any impacts to a level of insignificance. No impacts are expected to be associated with Project No. 4 due to its isolated nature.

3.2 NOISE

3.2.1 Existing Conditions

There are few noise sources in the project area. The land is primarily vacant and in agricultural production although some grading associated with the proposed EastLake Shores development is occurring. Noise sources, therefore, involve traffic from Otay Lakes Road, and construction noise generated from grading activity. An existing pump station located approximately 1/2 mile south of Otay Lakes Road just west of the Second San Diego Aqueduct is also a noise source. The pump station currently utilizes two natural gas engines which, although equipped with a muffler system, are not enclosed. The resulting noise is excessive. The only sensitive receptor in the project vicinity is a residential development located south of the proposed East-Lake Shores development and immediately west of proposed Projects 6 and 9.

The City of Chula Vista has established noise standards to ensure land uses that are compatible with the noise environment. Residential development should occur in areas exposed to noise levels below 45 dB(A) during evening hours and 55 dB(A) during daylight hours.

3.2.2 Impacts

The proposed Otay Water District improvement project involves the installation of a water facility system capable of supplying the ultimate development of

EastLake and surrounding property with adequate water. Potential noise impacts could result from proposed improvements - Project No. 3, 980 Zone Pump Station No. 1; Project No. 9, 980 Zone Pump Station No. 2; and Project No. 11, expansion of the existing Central Area Pump Station. This section will address operation noise impacts only; construction noise impacts are addressed in a separate section (Section 3.3).

Proposed pump stations will consist of electric pumps enclosed in sound attenuating, block pumphouses. Mufflers integrated into the pump design will also ensure that noise levels due to pump operations are in compliance with City of Chula Vista noise standards. A stand-by diesel engine unit, generating slightly higher noise levels, will be in operation 1 hour, once a week, as well as during electrical failures.

Project No. 3, (Pump Station No. 1), will be located at the intersection of Rancho Janal Road and Otay Lakes Road (Figure 2-2). Surrounding land uses will eventually include the proposed EastLake Village Center and Business Center to the northwest, vacant "urban" reserve land to the northeast and the proposed EastLake Greens residential "golf course" community to the south. However, the Greens residential development, the most noise-sensitive land use in the vicinity, will be separated vertically from the pump by existing topography. Project No. 9, (Pump Station No. 2), will be constructed on the south edge of the EastLake Shores project near the 22-3 reservoir. This pump will be surrounded by residential and open space land uses. Noise levels from either pump are expected to be between 40 and 45 dB(A) (Tebbetts, 1985), which conforms with City Standards. Therefore no significant noise impacts will occur.

Expansion of the existing Central Area Pump station (Project No. 11) will involve modification of piping and expansion of the pumping capacity. At this time, no specific plans have been developed, thus noise impacts cannot be determined. However, mitigation measures will be incorporated into future design plans to ensure compliance with City of Chula Vista noise standards. It is, therefore, feasible that noise levels generated after expansion of the facility may be lower than existing levels. This would, of course, be offset by the increased sensitivity to noise of adjoining land uses as development occurs. However, compliance with City noise standards would ensure that no significant adverse noise impacts eventuate.

3.2.3 Mitigation Measures

Mitigation measures incorporated into the project design include the use of mufflers and the placement of pumps in noise attenuating, block pumphouses. The pumphouses are physically setback from sensitive adjoining land uses wherever feasible. Future pump improvements would also include measures into project design to ensure compliance with appropriate noise standards. No further mitigation is necessary.

3.2.4 Analysis of Significance

Noise levels resulting from proposed pump facilities will not raise ambient sound above acceptable levels for any surrounding land use. Therefore, the proposed project is in compliance with existing noise standards. No significant acoustical impact will be incurred.

3.3 CONSTRUCTION IMPACTS

3.3.1 Existing Conditions

The project area has been in agricultural production or in the process of being developed for a considerable length of time. The only area sensitive to construction noise and dust is the residential area, Southwest College Estates, located in the vicinity of Gotham Street.

The EastLake Hills and EastLake Shores portion of EastLake I located in the westernmost portion of the project area is currently under construction. Presently 60 to 70 percent of the "Hills and Shores" area has been graded. To date the construction project managers have received no complaints regarding excessive noise or dust although 23 pieces of heavy equipment are being used for construction. The construction site is watered regularly to control dust and heavy equipment operates only during daylight hours.

3.3.2 Impacts

Dust

Dust generated during construction and emissions due to the combustion of fossil fuels by construction equipment would originate during grading and trenching for the development of Otay Water District improvements. Excavation, earthmovement and travel on unpaved surfaces could create considerable quantities of fugitive dust. Construction dust is comprised primarily of large, chemically inert particles which, when inhaled, can be filtered through the human respiratory tract.

Dust generated from grading and trenching for OWD water improvements would not be significant relative to the dust generated during grading of the EastLake I project. The majority of the OWD water improvement projects are located on EastLake I property. Water lines would be constructed beneath proposed roadways in the EastLake I project area. The central water distribution supply system would be constructed before the residences of EastLake I are occupied. Any potential impacts from these proposed water improvements would be mitigated by City of Chula Vista development standards and measures outlined in the erosion control plan contained in the previously certified EIR for EastLake I. Construction areas located outside the erosion

control plan area such as Projects 6 and 9, located adjacent to Southwest College Estates, would be required to conform with strict City of Chula Vista development standards to avoid potential effects from construction activities.

Traffic

Traffic disruptions and detours would occur where water mains are constructed below the existing roadway surfaces. These disruptions and detours will affect Rancho Janal Road between Proctor Valley Road and Otay Lakes Road, and Proctor Valley Road east of Rancho Janal Road. However, these detours would have a very low potential to cause traffic congestion due to the few cars that travel these dirt roads. The majority of the construction would be completed before traffic would increase in EastLake due to buildout. No significant impacts are anticipated from the temporary road realignments which would last for 2 to 3 months. Thus no mitigation measures would be required.

Noise

The development (construction) noises associated with EastLake/Otay Water District improvements are expected to be of relatively short duration during daylight hours on weekdays when residential noise sensitivity is usually low. Noise impacts from the proposed OWD water projects would be minimal relative to EastLake I because the projects would require only a fraction of the earthmovement. Construction is usually carried out in several reasonably discrete steps, each with its own mix of equipment and consequently its own noise characteristics. The phases are:

- A. Reservoir/Pump Station Construction
 - Excavation
 - Placing Foundations
 - Frame erection
 - Floors, roof, skin
 - Machinery hookup (pumps)
 - Cleanup
- B. Pipeline construction
 - Excavation (trenching)
 - Pipe bedding preparation
 - Pipeline installation
 - Backfill and compaction
 - Cleanup

The most prevalent noise source in construction equipment is the prime mover, i.e., the internal combustion engine (usually the diesel type) used to provide motive and/or operating power. The primary sources of equipment noise for the construction of water improvements would include a bulldozer for the grading required for reservoirs and pump stations, and a backhoe and crane for trenching and pipe laying activities. Internal combustion engines are used for propulsion (either on wheels or tracks) and for powering working mechanisms (buckets, arms, trenchers, etc.). Engine power varies from about 50 hp to over 650 hp. Engine noise typically predominates with exhaust noise usually being most significant and with inlet noise and structural noise being of secondary importance. Typical operating cycles may involve 1 or 2 minutes of full-power operation, followed by 3 or 4 minutes at lower power. Noise levels at 50 feet from earthmoving equipment and materials handling equipment, such as cranes, range from about 73 to 96 dB(A).

Construction noise from Project Nos. 6, 8 and 9 could affect residences on the east end of Gotham, Duke, Kent and Bucknell Streets and on the north end of Lehigh Avenue. However, this would be a short-term impact, lasting only several months.

3.3.3 Mitigation

Dust and Siltation

Dust and erosion control measures would be implemented despite the relatively low level of dust and erosion that are anticipated. Watering will be employed to partially mitigate the impact of construction-generated dust.

Noise

In recent years, considerable progress has been made in the reduction and control of construction noise through modification of equipment to reduce noise through modifications of construction procedures and by selection of those construction procedure alternatives which are less noisy. Examples of noise reduction measures which would be utilized to reduce the relatively small noise impact of the required grading and trenching activities include:

- Keeping noisy equipment as far as possible from residential areas.
- Construction activities should be limited to 7 a.m. - 6 p.m. on weekdays.
- Construction equipment should be in good working order and equipped with mufflers.

- Scheduling of equipment operations to keep average levels low, to have noisiest operations coincide with times of highest ambient levels and to keep noise levels relatively uniform in time; also turning off idling equipment.

3.3.4 Analysis of Significance

Due to the short-term nature of the proposed construction projects, impacts to the surrounding natural environment and to residences in the immediate vicinity of EastLake I would not be considered significant. All feasible measures would be implemented to reduce potential construction impacts. These mitigation measures are discussed in the preceding section.

3.4 ARCHAEOLOGY

3.4.1 Existing Conditions

A records check was conducted at both the Museum of Man and San Diego State University. No sites were reported within 1/8 mile of Project Nos. 2, 3, 4, 5, 6, 8, 9, 10 and 11. Three sites (SDi-7198, SDi-8657 and SDi-7197) are located within route alignments for Project Nos. 1 and 7. A field survey was conducted on July 22, 1985, for previously unsurveyed areas within Project Nos. 1, 6, 7, 8 and 9. No sites were located within project areas 6, 8 and 9. No new archaeological sites were found in the area of Project Nos. 1 and 7.

3.4.2 Impacts

Archaeological sites SDi-7198 and SDi-8657 together contain eight surface artifacts (cores, flakes, debitage). The paucity of artifacts and the limited range of artifacts identifies these two sites as non-significant archaeological resources. Since sites SDi-7198 and SDi-8657 have been identified as non-significant archaeological resources, Project Nos. 1 and 7 which would intercept these sites would not result in significant archaeological impacts.

Site SDi-7197, which would have been impacted by Project No. 1, was previously identified as a significant archaeological resource and mitigated during the SDG&E Miguel to Tijuana Interconnect Project (Larry Seeman Associates, Inc., 1983). A data recovery program (mitigation) including surface collection and subsurface excavation was conducted for the SDG&E Miguel to Tijuana Interconnect Project at Locus B, where the proposed project would intercept the site. This data recovery program mitigated potential impacts to site SDi-7197, Locus B.

3.4.3 Mitigation

Since no significant archaeological resources will be disturbed as a result of project implementation, no mitigation measures are necessary. Previous mitigation at site SDi-7197, Locus B included surface collection and subsurface excavation.

3.4.4 Analysis of Significance

As discussed above, no significant archaeological sites will be impacted by the proposed projects. Site SDi-7197, Locus B has been mitigated through surface collection and subsurface excavation thus eliminating the potential for impacts.

3.5 BIOLOGY

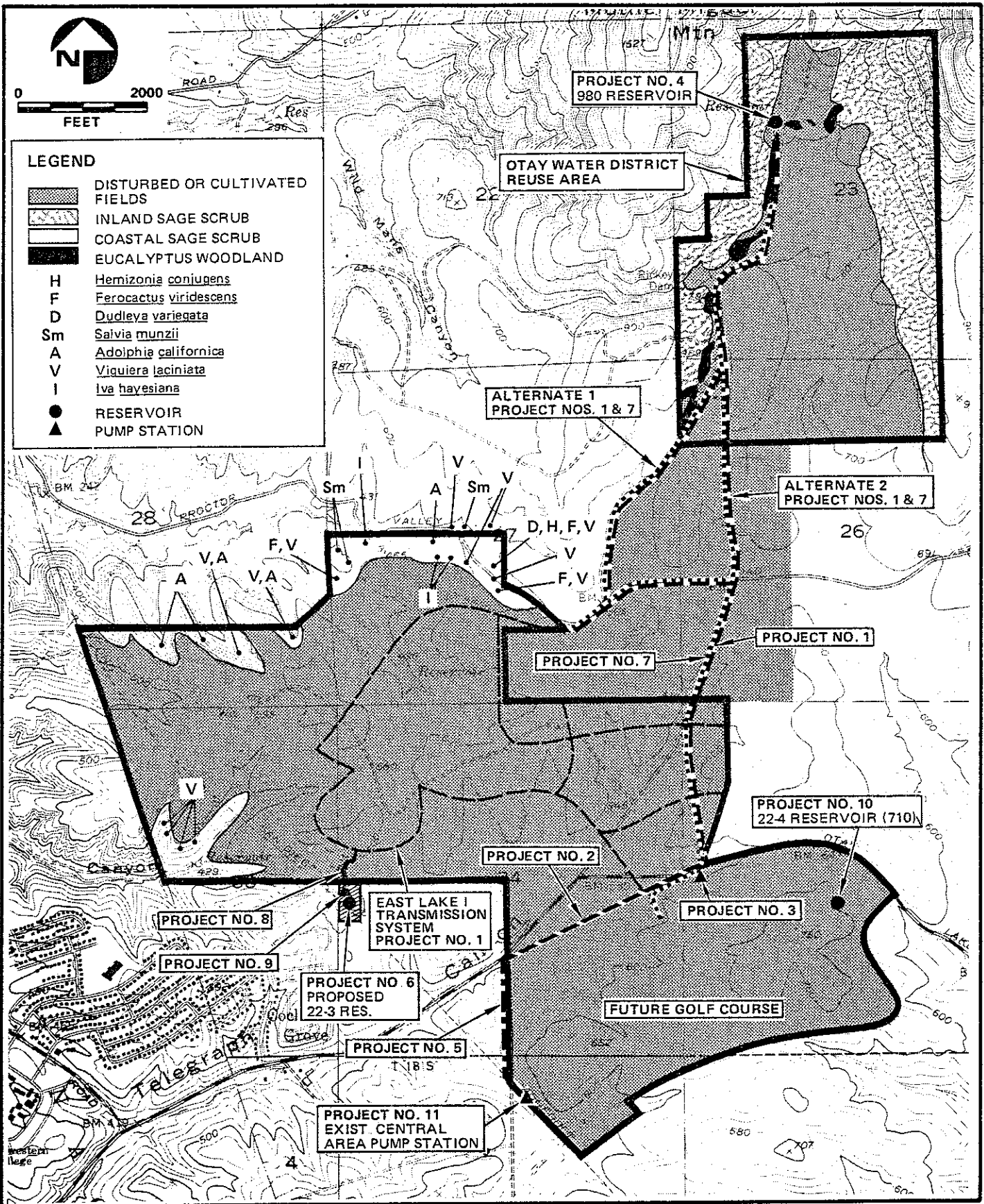
3.5.1 Existing Conditions

The Otay Water District Improvements project area encompasses areas which have been previously surveyed for potential biological resources. These previous surveys has been reviewed and the applicable EIRs listed below are hereby incorporated by reference into this document. A survey of the project area on June 21 and 26, 1985, confirmed that biological conditions have not changed since the previous surveys.

- EastLake FEIR 81-03, February 1982, SCH 80121007
- EastLake I Sectional Planning Area Plan FEIR 84-1, January 1985, SCH 84022206
- 22-3 Reservoir, 20-inch AC Pipeline, and No. 6 Aqueduct Connection Construction Project EIR, October 1979
- Jamacha Basin Effluent Force Main and Land Application Area FEIR, July 1978 (Supplemental FEIR December 1978)
- Proponent's Environmental Assessment Miguel to Tijuana Interconnection Project kV Transmission Line, September 1979

Most of the project sites have been disturbed by cultivation and consist of non-native grasses and forbs associated with agricultural activities (Figure 3-1). The plowing of fields over the past years has completely removed the natural plant cover and sensitive plant taxa which might have occurred. The remainder of the sites have been disturbed by previous grading or are located in roadways; therefore no sensitive plant taxa exist.

Water Improvement Projects which are located in previously cultivated areas include portions of Project Nos. 1 and 7 (Alternate 2) Project Nos. 2, 3, 5, 6, 8, 9 and 10. The site area where Project No. 10 is located has been extensively vegetated by Eucalyptus in order to screen the existing 22-1 Reservoir from views.



Biological Resources

**FIGURE
3-1**

Project No. 11, which involves the expansion of the existing Central Area Pump Station, would take place in an area which was disturbed during construction of the Central Area Pump Station. Project No. 4 would be located on an area which was disturbed during grading activities for reuse ponds in the Jamacha Reuse Area. The site was also partially graded to accommodate one 5 mg reservoir. Portions of Project Nos. 1 and 7 (Alternate 1) would be located in existing dirt roadways.

Few animal species inhabit the project area due to agricultural activity and extensive grading associated with the developing portions of EastLake Shores and East-Lake Hills. Furthermore, implementation of the approved EastLake I SPA plan will result in a further reduction in wildlife.

3.5.2 Impacts

Proposed water distribution system improvements would be limited to disturbed areas of the project area which do not support significant vegetative or wildlife species. Implementation of the proposed project would result in the elimination of a variety of common weedy species. Project No. 10 will, however, require the removal of several Eucalyptus trees that serve to screen the existing 22-1 Reservoir tank. These trees would be replaced to screen the proposed reservoir. Implementation of the proposed project would not result in the loss of any significant vegetative species; therefore, no significant biological impacts are associated with the proposed project.

3.5.3 Mitigation

No sensitive biological resources will be impacted by the proposed project; therefore, no mitigation is needed.

3.5.4 Analysis of Significance

Construction of the proposed water distribution system would not result in the disturbance of any significant biological resources. No significant biological impacts would occur as a result of project implementation.

3.6 GEOLOGY

3.6.1 Existing Conditions

This summary of geological conditions in the project area is based on the following studies:

- Jamacha Basin Reclamation System Preliminary Geologic Reconnaissance (Geocon, 5/9/78)
- Proposed Relocation of Reservoir No. 22-3 Addendum to Geologic Reconnaissance (Geocon, 2/19/79)

- Geotechnical Investigation for Planning Purposes EastLake I (Leighton and Associates, 7/15/83)

Available USGS maps and other literature were also reviewed for this EIR. The above-mentioned investigations indicate that the entire EastLake I project area is underlain by the Otay and Sweetwater Formations and the Santiago Peak Volcanics. These units are covered by layers of topsoil, alluvium/colluvium, and in the extreme northwest part of the project area, two small landslides represent. The geologic units present in the project area are described below in order of increasing age.

- Landslide Deposits

Due to the bedrock stratigraphy and the topographic setting, landslides are not prevalent in the project area. As depicted in Figure 3-2, two small landslides exist in the northern portion of the site.

- Topsoil

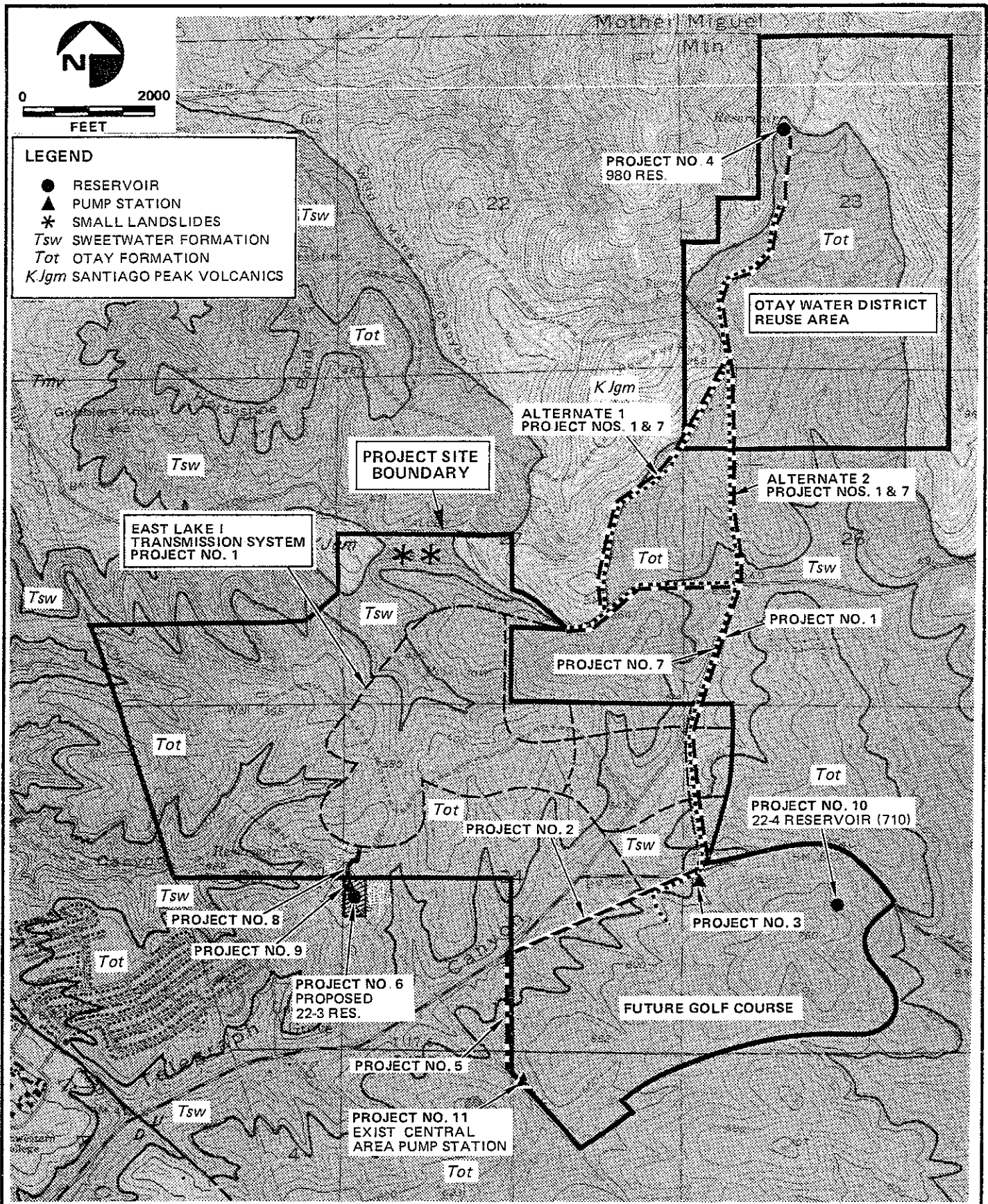
The project area is almost entirely covered by a veneer of topsoil. These soils are composed of highly expansive, black, stiff clays which tend to swell and shrink during wetting and drying periods. The topsoils are estimated to be 2 to 3 feet thick.

- Alluvium/Colluvium

Alluvial and colluvial soils occur in the project area's major drainages and have accumulated at the base of slopes. These soils consist of sandy clays and clayey sands that are typically unconsolidated, moderately compressible and highly expansive. The thickest alluvial/colluvial deposits appear to be along Long, Telegraph and Poggi Canyons and range from an estimated thickness of 5 to 8 feet and may be as much as 15 feet thick in isolated cases.

- Otay Formation (To)

The Otay Formation is the predominant bedrock formation in the project area. The Otay Formation is composed of massive, light gray to brown, dense to very dense, fine- to medium-grained silty sands. In the northern portion of the project area, the sand becomes a coarse-grained "gritstone." Local cementation of the sand by calcium carbonate was encountered in several borings. Interbedded in the sands are dense, very fine-grained sandy silts. Thin beds of red-brown to white bentonitic clays occur in the sands in the southeastern portion of the site.



Water Improvement Projects and Geologic Formations

**FIGURE
3-2**

- Sweetwater Formation (Tsw)
The Sweetwater Formation underlies the Otay Formation in the extreme northern portion of the study area. The Sweetwater Formation was deposited as an alluvial fan, the sediments derived mainly from metavolcanic and granitic terrain to the east. It consists of red-brown to olive green, fine-grained sandy clays with interbeds of clayey fine- to medium-grained sands and sandy gravels.
- Santiago Peak Volcanics (Jsp)
The Santiago Peak volcanics consist of very hard, fractured, metavolcanic rock. These rocks outcrop in the extreme northern portion of the project area along Proctor Valley Road and form the base on which younger sedimentary units have been deposited. The soil cover formed by weathering of the in-situ rock ranges from 1 to 2 feet in thickness.

3.6.2 Impacts

Projects that would entail reservoir or pump station construction include Project Nos. 3, 4, 6, 9, 10 and 11 (Figure 3-2). The Otay and Sweetwater Santiago sandstones and Peak Volcanics underlying the reservoir and pump station sites would generally provide adequate support for the proposed reservoir and pump station structures which would be installed at ground level. The minimal grading required for construction in sandstone formations could be completed without great difficulty. However, claystone interbeds associated with the Sweetwater and Otay formations may exhibit expansive characteristics and require some remedial foundation measures for additional stability. Grading required for Project No. 4, the reservoirs located in the Otay Jamacha Reuse area, would require minor blasting where Santiago Peak Volcanics are intercepted. The potential blasting would be minor since the site underwent preliminary grading during installation of the adjacent reclamation ponds. The majority of the EastLake project area consists of uniform, tight soil units overlain by thin topsoils (E. Artim, 1985). Thus no significant adverse geological constraints are anticipated during the reservoir construction in conjunction with other Otay Water District improvements.

Projects that would entail pipeline construction include Project Nos. 1, 2, 5, 7 and 8 (Figure 3-2). The pipeline connecting EastLake I with the OWD Reuse area, as well as all water mains within EastLake I, would require trenches of approximately 5 feet deep and 2-1/2 feet wide. Where pipelines are to be installed in conjunction with

a road, the road bed would be rough graded in advance to within 6 inches of finished grade. During this rough grading, pipeline trenching would occur to install water mains 42 inches below the finish grade of the roadway surface (Warda, 1985).

At the 5-foot depth, most soil and formational materials have undergone considerable weathering. The predominant Otay Formation consists of 2 to 3 feet of weathered material below 2 to 3 feet of topsoil and underlain by deeper sandstone. The Sweetwater Formation is quite similar to the Otay, having 1 to 2-1/2 feet of topsoil over 2 to 3 feet of weathered material and underlain by a sandstone bed. The Sweetwater Formation, for most of the project area, underlies the Otay Formation and will occur below the depth of construction. No prohibitive construction problems are anticipated with the trenching activities required to install the pipeline, and few oversized rocks or boulders are anticipated in the regions of the Otay or Sweetwater Formations (E. Artim, 1985). The Otay and Sweetwater Formations also have low levels of conductivity, thus greatly reducing the chance of pipeline corrosion.

The third formation in the immediate vicinity of the project is the Santiago Peak Volcanics. Where pipelines would have to be installed through this formation, trenching activities could become costly depending on the extent of oversized material (boulders, solid rock). However, it is anticipated that only a minimal amount of trenching, if any, would occur in the Santiago Peak Volcanic Formation.

3.6.3 Mitigation

Due to the nature of the formational units encountered, conventional continuous or spread footings may be used for the support of the proposed structures. (Leighton & Associates, 1983). The tight uniform soil units are favorable for construction purposes. The proposed reservoirs would benefit from resting on hard rock--the Sweetwater and Otay Formations and the Santiago Peak Volcanics (Warda, 1985). All backfill material for reservoirs, pump stations and pipelines would be compacted to a uniform level to mitigate the possibility of settlement. The pipeline which would be required to be 42 inches below ground would be encompassed in a sand bedding to further reduce the possibility of pipeline corrosion. The sand bedding would also further reduce the chance for settling.

3.6.4 Analysis of Significance

Geological information contained in the geotechnical reports listed in the front of this section, indicate that there are no major geologic features in the project area which would preclude or pose a major constraint to development of the proposed water district improvements. No significant impacts are anticipated due to the tight uniform soil units which are favorable for most construction purposes.

3.7 PALEONTOLOGY

3.7.1 Existing Conditions

A paleontological study was completed as part of the EIR for the EastLake I project. With the exception of the proposed reservoir 22-3 (project 6) site and water lines connecting the EastLake I property to the OWD Reuse area, all areas within EastLake I have been surveyed for paleontological resources. The Otay Water District improvement projects located outside the EastLake I project boundary are underlain by the same formation materials which underlie the EastLake I project area.

Subsequent to the previous EIR (WESTEC Services, 1982), many sites have been uncovered that are rich in fossil remains. Well preserved skeletal materials have been found in the Otay Formation located in the southwest portion of the EastLake I project area. Bone remnants from the following animals have been recovered: turtle, snake, antelope, dog, fox and an extinct pig-like species.

3.7.2 Impacts

Proposed reservoirs and pump stations would require no sub-surface construction (only remedial grading would occur for building pads) with the exception of grading for Projects 6 and 9. Where grading for Projects 6 and 9 would result in the disturbance of the underlying Otay Formation, there is the potential for disturbance to paleontological resources and mitigation measures would be necessary to avoid significant impacts.

The water pipeline projects would not require extensive grading and would consist of trenching activities being limited to approximately 5 feet deep and 3 feet wide. Trenching that would occur in undisturbed areas would impact topsoil and underlying weathered soil units to a depth of 5 feet. Soil layers above 10 feet are generally weathered and have a low potential for fossil recovery. However, in areas which have been cut by grading the potential for fossil recovery during trenching is substantially increased (Demere, 1985). This potential impact would require mitigation measures to salvage any resources that are encountered.

3.7.3 Mitigation

Water pipelines proposed to cross ungraded areas do not present potential impacts because grading will occur above the depth of weathered material which could contain remnant resources. Thus no mitigation would be required. However, mitigation measures would be required where pipelines would be located in areas with fresh exposures of the Otay Formation. Additionally, it is anticipated that Projects 6 and 9 would result in the disturbance of the underlying Otay Formation, thus requiring mitigation.

It is recommended that a geotechnical map for the project area be combined with future site specific grading plans to identify the areas that need to be watched. Those areas which have already been cut below the existing grade during previous grading activities or will result in substantial cut into the Otay Formation are of particular concern due to the numerous paleontological sites that have been discovered in the area.

To ensure that significant and potentially unique fossils and paleontological resources are not destroyed without examination and analysis, a qualified paleontologist will monitor the initial trenching activities in the southeast portion of EastLake I and in the Otay Formation as it appears in previously graded areas. Additionally, monitoring would take place during cutting activities for construction of Projects 6 and 9.

The paleontologist will have the authority to temporarily halt grading in and around exposed areas that contain significant resources. If required, the contractor will cease grading operations for a period of time sufficient to allow for thorough examination, and if necessary, removal of fossil resources. All field notes, photographs and fossil resources would be deposited at a recognized museum or repository.

3.7.4 Analysis of Significance

The EastLake I water improvement projects could adversely impact paleontological resources in the project area. However, available measures would fully mitigate these impacts.

SECTION IV
GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

The proposed OWD water system improvements will service the approved EastLake development and the surrounding area. Although the surrounding area is currently undeveloped or in agricultural production, several projects have been approved by the City of Chula Vista for the EastLake vicinity. The El Rancho del Rey Specific Planning Area has been approved for development of a mix of residential and commercial uses on 2272 acres west of the EastLake site. Between El Rancho del Rey and the EastLake site is the Bonita Long Canyon Specific Planning Area, another proposed residential development for which the tentative map for the first phase has already been approved. The Bonita Long Canyon site is adjacent to a small portion of the northwestern boundary EastLake, and its western side is contiguous with existing development in the City of Chula Vista. The Chula Vista General Plan (1970) estimates that by 1990, nearly half of the City's population will be living in new communities located on the mesas and foothills easterly of Interstate 805 (City of Chula Vista, 1982).

Due to the probability of ultimate development of the project area, prudent planning requires that the improvements to provide water service to EastLake should allow for the long-term water demands of the entire service area. The proposed water improvements involve both expansion of the existing 710 pressure zone and the creation of a 980 pressure zone. The existing pump station currently pumps at a rate of 5000 gpm. Proposed pump stations and upgrading of the existing pump station will provide a cumulative pumping capacity of 29,000 gpm in the project area. These improvements will provide an additional 4000 gpm of water to pressure zone 710 and 16,000 gpm of water to pressure zone 980 (Table 4-1). The existing reservoir in the area has a holding capacity of 3.0 million gallons (mg). Proposed reservoirs will contain an additional 20.0 mg. Transmission mains to supplement existing mains along Otay Lakes Road will connect proposed facilities to each other and their service area.

The new 980 pressure zone and associated pipelines will be sized to adequately service the ultimate service area. This involves 3500 acres north and northeast and 1100 acres south of EastLake. These areas will be served from facilities that will traverse EastLake and carry water from the 2 pump stations to the 980-foot elevation reservoirs. Therefore, the pipelines installed in EastLake will be sized based on projected ultimate demand. Currently, land uses located outside of EastLake I are being studied for possible revision; therefore, it is not possible to forecast precise water

demands. However, demands equivalent to EastLake I densities were assumed for the remaining 980 zone service area (Lowry and Associates, 1984:III-4).

Table 4-1
CAPACITY OF PROPOSED FACILITIES

<u>Proposed Pump Stations</u>		<u>Proposed Reservoirs</u>	
No. 1 (zone 980)	4,000 gpm*	Zone 980 (two 5.0 mg tanks)	10.0 mg**
No. 2 (zone 980)	12,000 gpm	22-3	8.0 mg
<u>Upgraded Central Area</u>		22-4	<u>2.0 mg</u>
Zone 710 (additional)	<u>4,000 gpm</u>		20.0 mg
	20,000 gpm		

*gpm = gallons per minute.

**mg = million gallons.

Although proposed water improvements will ultimately service areas other than the EastLake development, including areas currently undeveloped, determining the cause of growth is imprecise. The question lies with whether the extension of public service facilities induce growth or whether the extension of facilities is necessary to serve approved projects. In the present case, the extension of water facilities is a result of an approved development, i.e., EastLake, as is the extension of other services associated with that project. Further growth, then, is induced by the EastLake development and other proposed developments in combination with the extension of public services which will be sized to serve a larger service area.

This distinction is necessary because the term "growth inducement" often has negative connotations. Unplanned, "leapfrog" growth can result in the loss of valuable and sometimes irretrievable resources, inadequate public services or development in inappropriate or unsuitable areas. However, these issues should be addressed at the first encroachment of development into a new area. These issues are documented in the Growth Inducement section of the EastLake Final EIR (City of Chula Vista, 1982).

The provision and planning of water facilities to accommodate future growth in the EastLake area will make future development of the surrounding areas more feasible. This is considered to be a contributing factor in growth inducement since an obstacle to future development will be removed. However, the significance of this impact can only be defined in the context of growth inducing impacts of the surrounding approved developments. Thus the proposed water improvements will contribute cumulatively along with the extension of other public services and approved projects to growth inducement in the area, especially in the area serviced by the new 980 zone.

SECTION V
ALTERNATIVES

CEQA Guidelines Section 15126(d) requires that EIRs contain a description of alternatives to the proposed action which could feasibly attain the basic objectives of the project. The "no project" alternative must also be evaluated. The discussion of alternatives must be focused on those alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance.

It has been determined that the proposed project would not cause significant effects which cannot be mitigated to a level of insignificance. Thus, in accordance with CEQA, only the No Project alternative is discussed in this section.

5.1 NO PROJECT

The No Project alternative would result in the retention of existing water improvements and the construction of improvements associated with the approved East-Lake I project. Additionally several other projects associated with previous OWD approvals would still be implemented, however, future developments in this OWD service area would not be accommodated under this alternative. The implications of the No Project alternative on the proposed projects are described below.

1. Transmission mains from proposed 980-Zone Pump Station in EastLake to 980-zone reservoir would not be constructed.
2. Relocation of existing 20-inch main in Otay Lakes Road would still occur.
3. The 980-zone pump station would still be developed.
4. An approved 5 mg reservoir located in the Reuse Area could be constructed; however, the proposed additional 5 mg reservoir situated adjacent to the approved reservoir would not be constructed.
5. Construction of 16-inch transmission main from Central Area Pump Station to Otay Lakes Road would still occur.
6. The approved 3 mg reservoir 22-3 would not be upsized to an 8 mg reservoir.
7. Construction of reclaimed water main for EastLake golf courses would still occur.
8. Construction of the 24-inch main to connect EastLake with Pump Station 2 would not occur.

9. Pump Station No. 2 would still be constructed but would not be sized to accommodate the demands of the previously approved 22-3 reservoir.
10. The approved construction of a 2 mg reservoir (22-4) adjacent to the existing 3 mg reservoir (22-1) would still occur.
11. The central pump station which currently has a capacity to pump 5000 gallons per minute (gpm) would still be upgraded.

With implementation of the No Project alternative, the resulting facilities would not have capacity to serve the entire approved and developing EastLake area or additional surrounding properties. As a result current activities would be halted on the EastLake property and no development would occur. The EastLake area and surrounding property, which would utilize the water distribution system improvements, would remain undeveloped.

5.2 ALTERNATIVES FOR PROJECT NOS. 1 AND 7

Both the portion of Project No. 1, which involves the potable water transmission main between the Otay Reuse Area and EastLake, and the portion of Project No. 7, which involves the reclaimed water line between the Reuse Area and EastLake (on United Enterprises property), have two alternative routes. All of the potential routes were considered as part of the project description and analyzed in the impacts section of the EIR. Alternative 1 would allow Project Nos. 1 and 7 to be located in the existing dirt road which runs through United Enterprises property and Alternative 2 would allow Project Nos. 1 and 7 to be located in disturbed agricultural land on United Enterprises property. In terms of an environmentally preferred alternative, either alternative would be considered appropriate since the alignments of the proposed pipelines would not result in the disturbance to any significant environmental resources.

SECTION VI

REFERENCES

- Chula Vista, City of, 1982, EastLake Final Environmental Impact Report, EIR 81-03, prepared for the City of Chula Vista by WESTEC Services, Inc.
- Chula Vista, City of, 1985, EastLake I Sectional Planning Area Plan Final Environmental Impact Report, EIR 84-1, prepared for the City of Chula Vista by WESTEC Services, Inc.
- Chula Vista, City of, 1974, Noise Element of the Chula Vista General Plan.
- Chula Vista, City of, Section 19.66, Performance Standards.
- Leighton and Associates, 1983, Geotechnical Investigations for Planning Purposes EastLake I.
- Lowry and Associates, 1984, EastLake I Water System Subarea Master Plan, prepared for EastLake Development Company.
- Otay Municipal Water District, 1978, Jamacha Basin Effluent Force Main and Land Application Area Final EIR.
- Otay Municipal Water District, 1979, Final Addendum #1 to Environmental Impact Report for 22-3 Reservoir, 20AC Pipeline, and No. 6 Aqueduct Connection Construction Project, prepared for the Otay Water District by Hirsh and Company Consulting Engineers.
- WESTEC Services, Inc., 1979, Proponent's Environmental Assessment Miguel to Tijuana Interconnection Project 230 kV Transmission Line, prepared for San Diego Gas and Electric Company.

SECTION VII

ORGANIZATIONS AND PERSONS CONTACTED

Arroyo, Manuel, 1985, telephone conversations, Otay Municipal Water District, June, July.

Artim, Ernest R., 1985, telephone conversation, Leighton and Associates, July 5.

Barber, Ralph, 1985, telephone conversation, Otay Municipal Water District, June 20.

Demere, Tom, 1985, telephone conversation, San Diego Museum of Natural History, July 5.

Tebbets, Matt, 1985, telephone conversation, Lowry & Associates, June 20, 21.

Warda, George, 1985, telephone conversation, Lowry & Associates, July 5.

SECTION VIII
CERTIFICATION OF ACCURACY AND QUALIFICATIONS

This environmental impact report was prepared by WESTEC Services, Inc. of San Diego, California. Members of the WESTEC Services' professional staff contributing to the report are listed below:

David Claycomb, B.S. Botany, M.S. Natural Resources Management

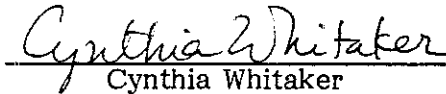
Cynthia Whitaker, B.A. Environmental Sciences

Judi Oliveira, B.A. Environmental Studies

Jim Hunter, B.S. Environmental Planning and Management

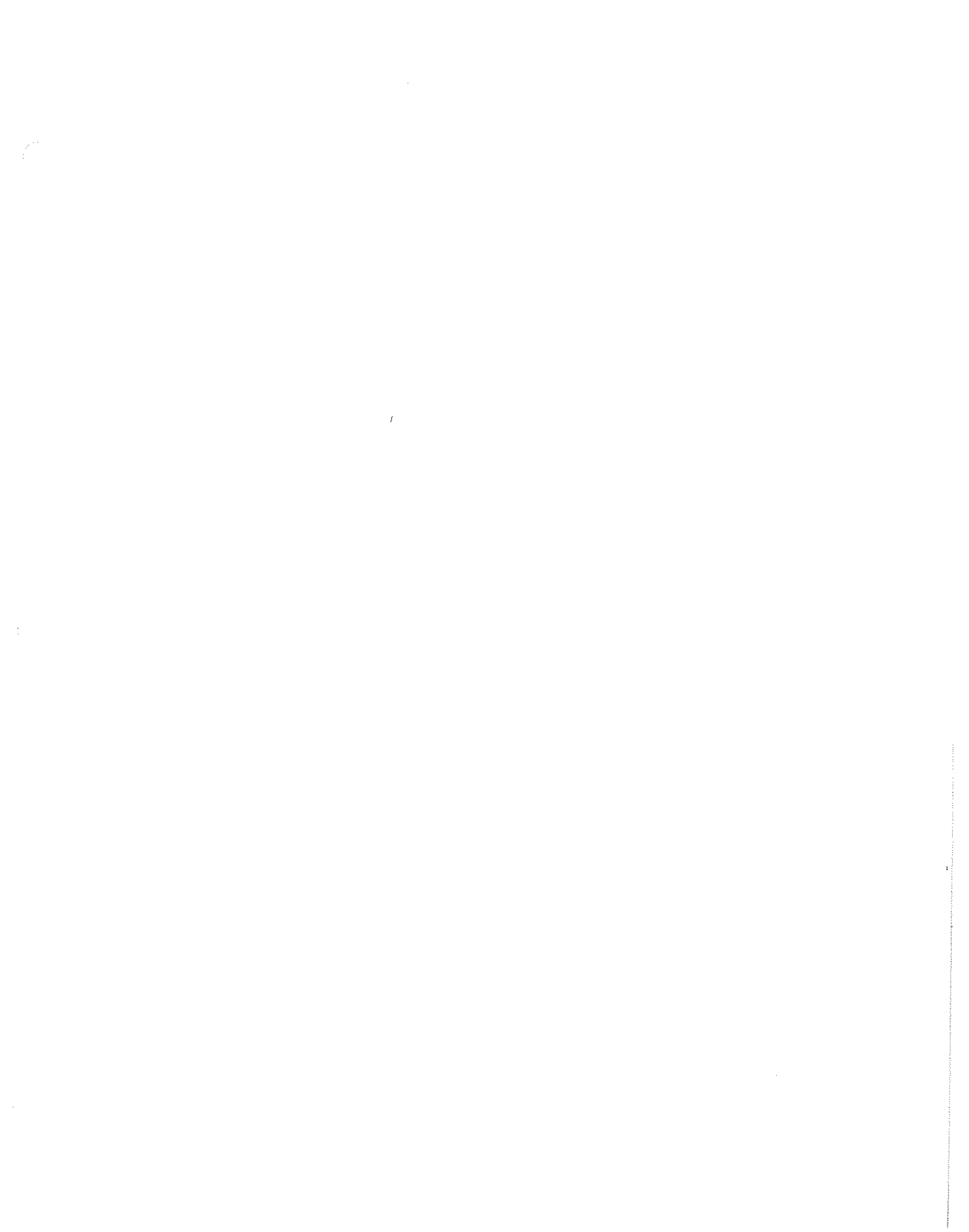
Stephen B. Lacy, M.S. Biology

It is hereby affirmed that, to the best of our knowledge and belief, the statements and information herein contained are in all respects true and correct and that all known information concerning the potentially significant environmental effects of the project has been included and fully evaluated in this EIR.



Cynthia Whitaker
Project Manager

RESPONSE TO COMMENTS



RESPONSE TO PUBLIC COMMENTS
EASTLAKE/OTAY WATER DISTRICT IMPROVEMENTS

Section 15088 of the State CEQA Guidelines requires that the Lead Agency respond to letters of comment received as a result of public review of a Draft EIR. One letter of comment was received on the EastLake/Otay Water District Improvements Draft EIR and it is reproduced verbatim on the following pages with responses adjacent to the numbered comments. Some of the comments were addressed by revising the EIR text, which is noted in the responses where applicable, while others were responded to in this section of the EIR only. The letter of comment and responses, combined with the revised EIR text, comprise the Final EIR for the proposed project.

RESPONSES

COMMENTS

Mark T. Longley-Cook, Ph.D., R.C.E.
Wendy Longley-Cook, Ph.D., P.E., J.D.
L.H. Longley-Cook, M.A., F.C.A.S.

LONGLEY-COOK ENGINEERING, INC.

Civil, Environmental and Transportation Engineering; Computer Modeling Consultants

1007 Fifth Avenue, Suite 1110, San Diego, California 92101 (619) 239-3056

Mr. Douglas D. Reid
Environmental Review Coordinator
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

September 11, 1985

Dear Doug:

Enclosed are the comments on the Draft Supplementary EIR 85-3 -- EastLake/Otay Water District Improvements. These comments primarily request clarification of the wording of the EIR. In a few instances, suggested mitigation is recommended.

It is felt that a plan for the public facilities needed to make water available to support ultimate development of the entire area is desirable and the project has our support as long as mitigation is required. We note that the Draft EIR commonly uses the term "should" instead of the mandatory term "will" for suggested mitigation measures.

Thank you for the opportunity to comment.

Very truly yours,
LONGLEY-COOK ENGINEERING, INC.

by: *B.A. Wendy Longley-Cook*
B.A. Wendy Longley-Cook
Vice-President

cc: United Enterprises, Inc.
EastLake Development Company
Michael C. Spata, Esq.

The text has been altered to indicate that mitigation measures would be implemented.

LONGLEY-COOK ENGINEERING, INC.

Civil, Environmental and Transportation Engineering, Computer Modeling Consultants

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COMMENTS OF UNITED ENTERPRISES, INC.

TO THE DRAFT SUPPLEMENTARY EIR 85-3

EASTLAKE/OTAY WATER DISTRICT IMPROVEMENTS

1. Notice pages, accompanying the draft EIR page 3 entitled "Project Description". Description for Project #1 is "Installation of 16-inch, 18-inch and 20-inch transmission mains" The Draft EIR, page 1-2, paragraph 1.2.1 describes Project #1 with the same wording. The Draft EIR, page 2-5 describes Project #1 as "Transmission Mains ..." and "transmission mains will be necessary to carry water to the new reservoir...." We have understood that only one potable water main was involved. Precisely how many water mains are proposed from the 980-zone reservoir, either to be constructed now or in the future?
2. Page 2-3, Map of Project location. The map shows the location of Project #11 as an existing central area pump station. A field trip out to the site and discussions with OWD personnel have revealed no such central pump station exists at the location shown on page 2-3, or described on pages 2-9, 3-3, 3-5, 3-6. There is a small pump for the aqueduct approximately 4600 feet southwest of Patzig Reservoir, which pump is not operated by OWD. Noise measurements taken at this pump were 46dB(A). There is also a natural gas powered pump (not operating during the visit)

1. The transmission mains loop through the development to Proctor Valley Road, from where a single 20" main proceeds northerly to the 980-1 Reservoir (Protect No. 4). This single main has been designed to carry the pressure zone demands for the Fast-lake 1 development. A parallel main will be required from Proctor Valley Road to the 980-1 Reservoir for ultimate pressure zone demands.

2. The Central Area Pump Station is located on an 8.1 acre site approximately 1,100 feet west of the District #2-4 connections to the aqueduct. This site contains the Patzig Reservoir and the Central Area Pump station. The location of the Central Area Pump Station shown on Figure 2-2, page 2-3 of the EIR has been revised to more precisely locate the facility. The expansion of this pump station consists of adding two to four pumps depending on the increments of expansion.

at the connection to the Aqueduct near the Patzig Reservoir northwest of the location on the map. The main pump facility appears to be located at Patzig Reservoir. The Draft EIR needs to be revised to accurately describe what Project #11 is and exactly where it will be located.

3. Pump Noise. Several pumps are included in the overall projects. These are sized at up to 2,000 horsepower (Draft EIR, page 2-9). The EIR assumes that Projects 3 and 9 will be kept to 45dB(A). OWD must agree to reduce the pump noise to 45dB(A) or less at all locations, including that at Patzig Reservoir.

Based on our field measurements, it is believed that pump noise at Patzig Reservoir may now exceed the 45dB(A) criterion that will apply if the area is developed as single family residential in Chula Vista. Existing problems should be mitigated by OWD before any development in the area occurs.

4. Page 2-5, Project #1. If the route north of Proctor Valley Road is across the property of United Enterprises, Inc. (Alternative 2), the depth of pipe must be sufficient for a road to be built over the water and reclaimed water mains (Project #7) This road must meet the standard criteria for a residential collector, principally a 12% maximum grade and vertical and horizontal curves to satisfy a 30 mph design speed. The dumping of excess soil and location and protection of valves and other appurtenances must be to the satisfaction of the property owner.

5. Page 2-7, Project #3. EastLake II and part of the property of United Enterprises, Inc. has been included in Chula

3. The new pump stations will be designed to comply with the City of Chula Vista noise standards. The existing pump station will be brought into compliance with the standards when development surrounding the pump station occurs and when the property is annexed to the City of Chula Vista.

4. If the Alternative #2 route is selected, the main will be placed at the proper depth below an approved grade established by the responsible governing body. All excess spoil material will be removed from the route or utilized to obtain grade. The locations of valves and other appurtenances would be coordinated with the property owners; however, to allow these appurtenances to function correctly, the variety of locations will be limited.

5. Project No. 3 has been designed to pump from the 710 zone to the 980 zone for the demands of EastLake I. Eastlake II or other property in the 980 zone will require

Vista's Sphere of Influence. This means development in 10 to 15 years. Hence Project #3 should be designed to include at least Eastlake II and United Enterprises, Inc. property in the Sphere that can be served by the pump station and not be limited only to Eastlake I (Draft EIR, page 2-7). The same point applies to all expansion of the OWD system that can affect United Enterprises, Inc. development within the Chula Vista Sphere.

The second paragraph describing Project #3 states that ultimate development of the 980-zone will require a second pump station to be constructed within 10 years at a different connection to the CWA's aqueduct. Where will this pump station likely be located, how big will it be, who will build it, what other pipelines will be constructed, why will it be located at another location, and will the new pump stations operate solely to supply water to the 980-zone reservoirs from the 710-zone system or will one or both of them serve any other function?

6. Page 2-9, Project #8. The wording of the first sentence is ambiguous. Will there be one or two pump stations at the 22-3 site? If there are two pump stations, there is no analysis of the second pump station on page 3-4.

7. Page 3-5, Project #3. The Draft EIR stipulates to the design and painting of the pumphouse. The landscaping mitigation measure is conditioned by "if necessary." It is up to the EIR to specify feasible mitigation measures necessary to reduce significant impacts. There is no mention either of impacts or of mitigation for the second pump station to be built in the future.

Project No. 9, which will provide the major portion of the ultimate demand for pressure zone 980. Project No. 9 (Pump Station No. 2) will be located at the 621-3 (22-3) Reservoir, which will be at a new aqueduct connection (No. 9). This project is described in detail on page 2-9 of the EIR. It will be built by developers and the Otay Water District jointly. No other pipelines will be required to serve the 980 pressure zone other than those described in this EIR or in previous EIRs. Specifically refer to the Final EIR for the 22-3 Reservoir, 5000-foot AC Pipeline, and No. 6 (currently No. 9) Aqueduct Connection Construction Project (Hirsch & Company, August 1978) and Final Addendum #1 to that EIR (Hirsch & Company, October 1979). The pump station is located at the 621-3 reservoir site because the capacity of the 710 zone will be utilized in that zone. Both pump stations will provide water to the 980 pressure zone, Pump Station No. 1 from the 710 zone and Pump Station No. 2 from the 621 zone.

6. There will be one pump station at the 621-3 (22-3) site; Pump Station No. 2.

7. The developer has engaged the services of an architect to design Pump Station No. 1 and coordinate its aesthetic appearance with the Chula Vista Planning and Building Departments. The condition, "if necessary," has been removed from the EIR text. The pump station will be landscaped to fit in with the surrounding structures. Impacts of Pump Station No. 2 (Project No. 9) are discussed on page 3-4 of the EIR, mitigation measures are discussed on page 3-6.

8. Page 3-6, Projects #6 and 9. The Draft EIR points out on page 3-4 that very significant visual impacts will occur. A 32 foot high reservoir will be extremely obtrusive. Mitigation measures such as a reservoir with a larger diameter but lower in height should be examined. If this is infeasible, it is suggested that the installation of mature trees at least 25 feet high be required to be planted now around the site so that when the reservoir is constructed in the future (page 3-6), the trees will be tall enough to block the view of the tank. Such planting should not get in the way of construction within the site. It is also recommended that required mitigation also include landscaping around the reservoir, around the pumphouse and around the grounds.

9. Page 3-7, paragraphs 3.2.2. The Draft EIR states that the project involves installation of a water facility system to supply ultimate development of the area, i.e., EastLake and surrounding property. The EIR should include a map showing exactly what property will be served for ultimate development. Will the entire be served by ID-22 or will any other improvement districts be established? What are the expected ultimate boundaries of the IDs for the entire area?

10. Page 3-7, Paragraphs 3.2.2, and continuing to page 3-8. The Draft EIR quotes noise levels from either pump are expected to be between 40 and 45 dB(A). What is the noise analysis which serves as a basis for this statement? The noise data for the pump should be summarized or supplied. It is believed that a battery of several pumps will be placed at each location, so that each pump station will consist of more than one pump. The configuration should be described. How many pumps will be installed at each

8. The land proposed to be acquired for the reservoir is configured so as to preclude the planting of trees now without their later removal during construction. The high water elevation of the reservoir must be maintained to match the existing 621 pressure zone to the west. It is not feasible to reduce the height of the reservoir because of topographic constraints of the site. This reservoir and associated pump station would be fully landscaped after construction with mature trees and shrubs to mitigate the visual impact.

9. The proposed 710 and 980 pressure zones are shown to the extent possible on Figure 2-3, page 2-6 of the Draft EIR. A more extensive map showing the entire 710 and 980 zones is available for review at the Otay Water District Office. The extension of I.D. 22 to property within these two pressure zones would be logical however, that is a decision which would be made when development occurs. No ultimate boundaries for I.D. 22 have been considered at this time.

10. Section 3.2.2 utilizes information provided by Lowry and Associates (Tebbetts 1985), the EastLake developer's consulting hydraulic and sanitary engineer. This information is based on their prior observations and knowledge of required City standards. The pump stations will be designed to meet the City's noise standards regardless of the number of pumps required at each pump station. The configuration of the pump stations will not be determined until after the final EIR is approved. Preliminary data have been assembled and a hydraulic report has been approved by the District which indicates that there will be one to four pumps at each pump station. The pump station building will be designed for ultimate demands and to attenuate noise levels to meet City noise standards.

location? Will OWD and EastLake stipulate that each and every pump station will not exceed 45dB(A) at the easement or property boundary? Will there be more room in the block house to house more pumps in the future? If so, how many?

11. Page 4-1, Growth Inducing Impacts. Page 2-7 refers to a future pump station as part of Project #3. If this project is for the design of "ultimate development" of the area (Draft EIR, Page 3-7) then there must be plans as to the probable location and configuration of this pump station. Although plans might not be finalized, preliminary plans must exist for this pump station. CEQA requires that a project be analyzed in an EIR at the earliest possible opportunity and not be split up into smaller projects. Page 4-2 should be accompanied by a map showing what areas this project will ultimately serve.

12. Page 5-2, Alternatives. Page 2-8 discusses that the 22-3 Reservoir site will be expanded to the south and east. Alternate locations for expansion of this reservoir should be considered, such as an area north of the 22-3 site. Since this reservoir is being expanded allegedly to serve only EastLake and Bonita Long Canyon, then it should be located on that property if at all feasible, since the flow will be to the north, east, and northwest. The EIR should examine whether two smaller reservoirs might be operationally or environmentally preferable as opposed to one large reservoir at the 22-3 site. The second reservoir might be located elsewhere. The use of many reservoirs scattered around the service area offers advantages during high use times such as a fire. Friction losses due to long runs of fast moving water can create dangerously low pressures when the water is desperately needed.

11. The future pump station referred to is Project No. 9, Pump Station No. 2. The pressure zones served by Pump Stations No. 1 and No. 2 are shown on Figure 2-3, page 2-6 of the Draft EIR. A more extensive map showing the ultimate service area is available for review at the Otay Water District.

12. The 621-3 (22-3) Reservoir is designed to take care of the ultimate demands for pressure zone 980 and a portion of pressure zone 621. The reservoir location has been thoroughly investigated to take advantage of the proximity of the County Water Authority's 69" aqueduct and the required high water to low water depth of 32 feet. The original planned size of the reservoir was 3.0 million gallons to serve only pressure zone 621. The proposed expansion would serve pressure zone 980 which includes property located north, south, and east of EastLake. Two smaller reservoirs are not cost effective and would be impossible to construct on the present site. The transmission mains and distribution mains are designed not to exceed 6 feet per second in velocity, therefore, no low pressure problems should occur.

13. General Comment. The Draft EIR fails to mention the use of reclaimed water, particularly for irrigation. The EIR should specify an operation plan which includes maximum application rates per unit area. Irrigation must not be continued for long periods to allow deep percolation below the root zone, and must be interrupted for extended periods to allow the soil to dry out; otherwise high build up of nitrates can occur in the groundwater. The concept of using reclaimed water for beneficial uses should be applauded; however, operational planning of the use of the reclaimed water needs to be performed so that future impacts can and will be avoided.

13. The developer and the District will be governed in the use of reclaimed water by discharge requirements issued by the Regional Water Quality Control Board, San Diego Region. Irrigation practices, once established, will be submitted for that Board's review and approval. Until plans for the area south of Telegraph Canyon road and a reclaimed water operation plan are submitted and approved, the proposed reclaimed water line would remain unused.