CHAPTER 4
PROJECT ALTERNATIVES

4.1 INTRODUCTION

CEQA requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, that could avoid or substantially lessen any significant environmental impacts and could feasibly attain most of the basin objectives of the project. An EIR should also evaluate the comparative merits and feasibility of the alternatives. Chapters 2 and 3 of this EIR describe, discuss and compare 7 different alternatives by which the District could implement the proposed project. The analysis is performed in project-level detail. Thus, Chapters 2 and 3 contain a substantial amount of the alternatives analysis that is required by CEQA. This Chapter 4 analyzes the "No Project" alternative and discusses information bearing on the feasibility of each of the alternatives analyzed in project-level detail in Chapters 2 and 3.

Key provisions of the CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below:

The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

The No-Project Alternative shall be evaluated along with its impact. The no-project analysis shall discuss the existing conditions at the time the notice of preparation is published as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved based on current plans and consistent with available infrastructure and community services.

The range of alternatives required in an EIR is governed by a "rule of reason" therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.

For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

A determination of feasibility involves a balancing of various economic, environmental, social and technological factors. Infeasibility does not mean impossibility, a mitigation measure or alternative that is undesirable or impractical from a policy standpoint may be rejected as infeasible. For example, a conflict between the lead agency's planning goals and a proposed mitigation measure or alternative may support a finding of infeasibility.

4.2 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible, and therefore merit in-depth consideration, and which are infeasible. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (CEQA Guidelines, Section 15126(f)(3)). Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (CEQA Guidelines, Section 15126.6(c)). The EIR evaluates seven alternatives at an equal level of detail. No other reasonable alternatives were identified that were rejected from further consideration. The District identified Alternative 2C as the preferred alternative based on evaluation each of the reasonably feasible alternatives.

4.3 COMPARISON OF PROJECT ALTERNATIVES

Chapter 2 describes two general alignment alternatives. Alternative 1 generally follows the alignment of PCH and include four variations. Alternative 2 generally follows the existing Newport Trunk sewer and force mains and includes three variations. Therefore, collectively, the EIR describes seven (7) project-level alignment alternatives. The potential environmental impacts of each of these alternatives have been analyzed in the individual impact sections in Chapter 3.

The District conducted a screening evaluation of the seven alternative alignments to determine a preferred alternative.[1] Each alternative was given a score from 1 to 10 with 10 being the most favorable. Each criteria was weighted according to importance. The final scores reflect the score multiplied by the weighting factor. The screening criteria and results are summarized in **Table 4-1**.

4.3.1 CONSTRUCTION CORRIDOR

Alternatives were evaluated with respect to the size and availability of the construction corridor. This category includes right of way requirements, construction considerations, and right of way

[1] Black & Veatch, July 27, 2004.

TABLE 4-1: SUMMARY OF ALTERNATIVE SCREENING RESULTS

	Weight	Alignment Alternative Scores						
		1A	**1B**	**1C**	**1D**	**2A**	**2B**	**2C**
Construction corridor	*10*	85	85	53	83	48	45	85
Permitting	*5*	44	41	28	43	28	25	44
Utility crossings	*4*	29	29	29	34	34	33	32
Constructability	*10*	50	50	58	58	80	65	95
Coordination with other projects	*3.5*	28	28	28	28	25	25	25
Project cost	*7.5*	53	53	45	30	60	60	71
Operation and Maintenance	*5*	40	43	33	43	45	45	45
Pipe length	*4*	40	39	35	40	30	28	38
Pipeline profile	*5*	30	33	45	30	45	45	45
Hydraulics	*5*	45	45	44	45	43	43	46
TOTAL		444	446	398	434	438	414	526

Note: the higher the score the more favorable the score.
Source: Black & Veatch, July 27, 2004

acquisition. Alternatives 1A, 1B, and 2C scored the highest in this category. The need for obtaining new easements along Alternatives 1C, 2A, and 2B reduced their scores in this category. The preferred alternative (Alternative 2C) would be constructed entirely within the existing easement, which is considered to be a significant advantage.

4.3.2 PERMITTING

Alternatives were evaluated with respect to the permits necessary. Permits include coastal development permits, encroachment permits, and biological resources permits. Alternatives 1C, 2A, and 2B ranked the lowest in this category since Section 404 permits and Section 7 consultation with USFWS would likely be necessary. This would considerably affect project schedule. The preferred alternative (Alternative 2C) scored the highest in this category since it would be constructed entirely within the existing easement, avoiding the need to obtain permits for impacts to wetlands and biological resources. This is considered a significant advantage of the preferred project, reducing biological impacts, time and permitting costs.

4.3.3 UTILITY CROSSINGS

Each alternative was evaluated with respect to the utilities to be crossed during drilling or open trench excavation. Alternative 2 alignments generally scored better than Alternative 1 alignments. The preferred alternative (Alternative 2C) would avoid utility conflicts within PCH and within the West Newport Oilfield.

4.3.4 CONSTRUCTABILITY

Each alternative was evaluated with respect to ease of constructability. Each alternative was assumed to be technically feasible. The construction of Alternative 2 was seen as considerably

more favorable than Alternative 1, primarily due to the constraints posed by the need to avoid the pilings and other infrastructure supporting the PCH bridge and Talbert channel. The preferred project (Alternative 2C) scored the highest in this category since it avoids the SAR bridge piling constraints and follows an accessible easement.

4.3.5 COORDINATION WITH OTHER PROJECTS

Each alternative was evaluated with respect to other projects approved and underway by the District including the headworks project and the Bitter Point Pump Station upgrade project. The alternatives generally scored evenly in this category. The construction schedule of the preferred alternative (Alternative 2C) would be adequate to avoid interference with the Bitter Point Pump Station and headworks projects.

4.3.6 PROJECT COST

The alternatives were evaluated with respect to total capital costs. Alternative 1D was the highest costing alternative by a considerable margin due to the length of tunneling required. The preferred alternative, Alternative 2C was the least costing alternative.

4.3.7 OPERATION AND MAINTENANCE

Each alternative was evaluated with respect to ease of operation and maintenance including access and equipment needs. The alternatives were generally even in this category. Alternative 2 alignments scored slightly better due to lack of traffic control needs. The preferred alternative (Alternative 2C) scored the highest in this category.

4.3.8 PIPE LENGTH

Each alternative was evaluated with respect to pipe length. The results are as follows:

1A - 6,260 feet
1B - 6,280 feet
1C - 6,610 feet
1D - 6,240 feet
2A - 6,900 feet
2B - 7,020 feet
2C - 6,370 feet

4.3.9 PIPELINE PROFILE

The alternatives were evaluated with respect to the depth and angle of installation. Shallow and straight profiles were considered more favorable. Since the Alternative 2 alignments would avoid the deeper piles associated with the SAR bridge and Talbert channel, they faired better in this category. The preferred alternative (Alternative 2C) scored the highest in this category.

4.3.10 HYDRAULICS

The alternatives were evaluated with respect to hydraulics, specifically head pressure. Lower head losses in the force main were considered favorable due to lower pumping requirements. The alternatives were ranked relatively evenly with respect to this technical performance category. The preferred alternative (Alternative 2C) scored the highest in this category.

4.3.11 SUMMARY

As summarized in Table 4-1, Alternative 2C was ranked as the superior project. Based on this ranking, the Alternative is considered the preferred alternative.

4.4 NO PROJECT ALTERNATIVE

Under the No Project Alternative, routine maintenance would continue with the District's easement in the SAR Marsh, as under existing conditions. As part of ongoing sewer maintenance activities, one of three force mains traversing the SAR Marsh would also be relined to reduce corrosion of the steel pipes. The project objective, which is to accommodate wastewater flows projected in the 1999 Strategic Plan and to provide operational flexibility, would not be achieved since no sewer capacity improvements would be implemented.

CEQA requires that EIRs evaluate the No Project Alternative. The following sections provide a discussion on potential effects of the No Project Alternative. **Table 4-2** summarizes the comparison of the No Project Alternative with the two Project Alternatives. As shown in Table 4-2, the No Project Alternative would result in fewer effects for some resources and greater effects for other resources. Generally, the construction effects associated with the Project Alternatives would be avoided under the No Project Alternative.

TABLE 4-2: COMPARISON OF NO PROJECT ALTERNATIVE WITH PROJECT ALTERNATIVES

	Alternative 1	Alternative 2
Air Quality	+	+
Odor	-	-
Biological Resources	-	-
Cultural Resources	+	+
Geology	-	-
Hazards	-	-
Hydrology/Water Quality	-	-
Land Use/Recreation	+	+
Public Services/Utilities	+	+
Traffic	+	+

+ = Effect would be greater under Project Alternative than under the No Project Alternative
- = Effect would be greater under the No Project Alternative than under the Project Alternative

4.4.1 AIR QUALITY

Under the No Project Alternative, no new construction would occur, so construction-related air pollutants would not be generated. Air quality in the project area would remain the same as current conditions. However, odors from the existing trunk sewer would remain a potential adverse effect to local sensitive receptors.

4.4.2 BIOLOGICAL RESOURCES

Under the No Project Alternative, no new construction would occur. Therefore, construction-related impacts to wetlands, sensitive habitat and wildlife identified in Chapter 3 would not occur. However, routine maintenance of the existing sewer would be similar to Alternative 2. Biological resources could also be affected by sewage spills, should the existing sewer lines experience continued failures. Emergency clean-up or maintenance tasks could adversely affect the marsh habitat.

4.4.3 CULTURAL RESOURCES

Since no construction or ground disturbance would occur, impacts to known and unknown cultural resource sites would not occur under the No Project Alternative.

4.4.4 GEOLOGICAL RESOURCES

Under the No Project Alternative, no new facilities would be constructed that would be subject to damage as a result of a seismic event. No facilities would be placed on unstable or expansive soils. However, the existing wastewater system would still be subject to possible damage in the event of an earthquake.

4.4.5 HAZARDS

Since no construction or ground disturbance would occur under the No Project Alternative, workers and the public would not be exposed to potentially contaminated soils or groundwater. No improperly abandoned oil wells would be encountered since no excavation would occur.

4.4.6 HYDROLOGY/WATER QUALITY

Since no construction would occur, storm water runoff quality would not be adversely affected. No excavation would occur and thus no dewatering be needed. No structures would be built that would subject people or structures to flooding hazards. Continued failures of the existing sewers could result in sewage spills which could affect water quality in the SAR Marsh.

4.4.7 LAND USES/RECREATION

Under the No Project Alternative, no construction would occur and no change in land use would occur. Access to residences and recreational areas would not be disrupted.

4.4.8 NOISE

Noise levels would remain the same under the No Project Alternative. Operation of construction equipment would not occur in the project area. Vibration resulting from construction activities would not occur.

4.4.9 PUBLIC SERVICES/UTILITIES

Under the No Project Alternative, no construction-related disruptions to utility service would occur. However, the existing Newport Trunk Sewer and Force Main would not be able to accommodate wastewater flows projected in the 1999 Strategic Plan. If, in the future, wastewater flows increase and the wastewater system does not have sufficient capacity, utility service could be disrupted.

4.4.10 TRAFFIC

No construction traffic would be generated under the No Project Alternative. Levels of service in the project area would not be affected. No lane closures would occur since construction would not take place. Access to residences would not be affected.

4.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify the environmentally superior alternative of a project. **Table 4-3** provides a comparison of potential effects of each alternative alignment assessed in the EIR. As shown in Table 4-3, Alternatives 1D and 2C would result in the fewest adverse effects when compared to the other alternatives. As such, these two alternative alignments would be environmentally superior to the other alignments considered as well as the No Project Alternative.

4.5.1 NO PROJECT ALTERNATIVE

The No Project Alternative would avoid all of the construction impacts associated with the project including traffic effects on PCH. However, the risk of future sewage spills would be greater, thereby increasing risks to biota and water quality in the SAR Marsh in the case of an accidental sewage spill. In addition, the existing junction structure at the SAR generates odors during low flow periods that cause nuisance along the river and bike path. The project alternatives would minimize this nuisance odor problem.

TABLE 4-3: COMPARISON OF CONSTRUCTION AND OPERATIONAL EFFECTS FOR EACH ALTERNATIVE

Potential Impact	No Project Alternative	Alternative 1A	Alternative 1B	Alternative 1C	Alternative 1D	Alternative 2A	Alternative 2B	Alternative 2C
Operational Effects								
Impacts to biological resources	**Yes**	No	No	No	No	No	No	No
Potential degradation of surface water quality	**Yes**	No	No	No	No	No	No	No
Potential odor emissions	**Yes**	No	No	No	No	No	No	No
Construction Effects								
Impacts to biological resources	No	No	No	**Yes**	No	No	**Yes**	No
Lane closure during construction	No	**Yes**	**Yes**	**Yes**	No	No	No	No
Disruption of access to residences	No	**Yes**	**Yes**	**Yes**	No	No	No	No
Obstruction of beach parking	No	No	**Yes**	No	**Yes**	No	No	No
Obstruction of bike paths	No	**Yes**	**Yes**	**Yes**	No	No	No	No
Abandoned oil wells constraints	No	No	No	**Yes**	No	**Yes**	**Yes**	No
Potential odor emissions	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Construction impacts to air and noise	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

4.5.2 ALTERNATIVE 1A

Alternative 1A would eliminate all of the operational risks associated with the No Project Alternative. However, construction would cause lane closure on PCH for an 11-month period, and would disrupt access to residential areas on the coastal side of PCH. Alternative 1A would place a jacking pit adjacent to the least tern nesting area on the beach, requiring a restriction of construction during non-breeding times of year. In addition, the bike path along PCH would be detoured for the entire construction period. Construction air emissions and noise could affect residents on the coastal side of PCH as the open trenching activities proceeded along PCH.

4.5.3 ALTERNATIVE 1B

Alternative 1B would eliminate all of the operational risks associated with the No Project Alternative. However, Alternative 1B would disrupt traffic by closing lanes in PCH south of the SAR for a portion of the construction period. The trenching activities would disrupt access to the residential area on the coastal side of PCH. The bike path along PCH would be detoured for the entire construction period. Alternative 1B would place a jacking pit adjacent to the least tern nesting area on the beach, requiring a restriction of construction during non-breeding times of year. In addition, the Huntington State Beach parking lot would be partially restricted to accommodate the construction. Construction air emissions and noise could affect residents on the coastal side of PCH as the open trenching activities proceeded along PCH.

4.5.4 ALTERNATIVE 1C

Alternative 1C would disrupt traffic on PCH, result in bikepath detours, and restrict coastal residential access similar to Alternative 1B. Alternative 1C would also traverse the Talbert Marsh and could result in destruction of biological resources. In addition, the easement would cross near several abandoned oil wells near the Talbert Marsh that would have to be avoided or re-abandoned. Alternative 1C would place a jacking pit adjacent to the least tern nesting area on the beach, requiring a restriction of construction during non-breeding times of year. Construction air emissions and noise could affect residents on the coastal side of PCH as the open trenching activities proceeded along PCH.

4.5.5 ALTERNATIVE 1D

Alternative 1D would avoid impacts to PCH, residential access, bike path, and beach parking. However, some parking would be temporarily removed during construction to accommodate the jacking pit north of the Talbert Channel. Construction air emissions and noise could affect residents on the coastal side of PCH as the open trenching activities proceeded along PCH.

4.5.6 ALTERNATIVE 2A

Alternative 2A would avoid operational impacts associated with the No Project Alternative as well as construction impacts to PCH, the bikepaths and coastal residential area associated with Alternative 1. The alignment alternative would follow a utility road, traverse an oil field, and tunnel under the SAR Marsh and SAR. Since the easement would cross near several abandoned oil wells, they would have to be avoided or re-abandoned. Construction air emissions and noise could affect residents on the Northshores canal as the open trenching activities proceeded along the utility road.

4.5.7 ALTERNATIVE 2B

Alternative 2B would avoid operational impacts associated with the No Project Alternative as well as construction impacts to PCH, the bikepaths and coastal residential area associated with Alternative 1. The alignment alternative would follow a utility road, traverse the SAR Marsh and tunnel under the SAR. Alternative 2B could result in the destruction of biological resources within SAR Marsh. The project would require obtaining permits from the US Fish and Wildlife Service and the USACE. Since the easement would cross near several abandoned oil wells, they would have to be avoided or re-abandoned. Construction air emissions and noise could affect residents on the Northshores canal as the open trenching activities proceeded along the utility road.

4.5.8 ALTERNATIVE 2C

Alternative 2C would avoid operational impacts associated with the No Project Alternative as well as construction impacts to PCH, the bikepaths and coastal residential area associated with Alternative 1. The alignment alternative would follow an existing sewer easement within a utility road and tunnel under SAR. Construction air emissions and noise could affect residents on the Northshores canal as the open trenching activities proceeded along the utility road. As

CHAPTER 5
OTHER CEQA REQUIREMENTS

5.1 CUMULATIVE EFFECTS

Under CEQA, an EIR is required to assess the cumulative impacts of a project with respect to current and probable future projects within the region. CEQA Guidelines (Section 15255) define cumulative effects as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impacts from several projects result from the incremental impacts of the proposed project when added to other closely related, and reasonably foreseeable, future projects."

The City of Newport Beach Planning Department and OCTA were consulted to determine planned projects in the area that could be considered in a cumulative baseline. **Table 5-1** shows the planned and approved projects within approximately two miles of the proposed project site.

The proposed project would temporarily contribute to cumulative impacts to air quality, traffic, and noise. The projects listed in Table 4-1 constitute the cumulative baseline condition for the area. Once the project is constructed, operation of the pipeline would be similar to existing conditions, and would not contribute to cumulatively significant impacts. Since construction would be short term, the project would not contribute significantly to the regional cumulative condition. The following discussions summarize cumulative condition of the region.

5.1.1 AIR QUALITY

Project construction would temporarily contribute to the poor air quality condition of the SCAB. The SCAB is in nonattainment for PM_{10}, ozone, and NO_x. The 1999 PEIR comprehensively evaluated the cumulative effects of a number of collection system projects in Section 7.11. The 1999 PEIR concluded that the cumulative contribution of air emissions from construction of collection system projects would be cumulatively significant. While the proposed project was not specifically identified in the 1999 PEIR, construction of this project would not alter the conclusions of the 1999 PEIR, or add to the cumulative condition considerably. The project would not a have a significant long-term cumulative air quality impact because project emissions during operation would similar to existing conditions.

5.1.2 BIOLOGICAL RESOURCES

Construction of Alignment 2B could affect biological resources in the marsh adjacent to the SAR. This marsh was restored by the USACE in 1989 as mitigation for biological impacts resulting

TABLE 5-1: PLANNED AND APPROVED PROJECTS IN TWO-MILE PROXIMITY TO THE PROPOSED PROJECT

Project Applicant / Location	Description	Status	Proponent
St. Andrews Presbyterian Church 600 St. Andrews Road Newport Beach	Replacement and construction of additional buildings and a parking structure.	EIR under preparation	City of Newport Beach
Regent Newport Beach Resort 1700 West Balboa Blvd., Newport Beach	Planned Community Development Plan for a 110 room hotel.	EIR under preparation	City of Newport Beach
South Coast Shipyard & Design Center Mixed Use Project 2300 Newport Blvd, Newport Beach	Demolition of all existing structures. Construction of 30 residential units and 36,000 sf of office/retail space.	Revised project under review, EIR under preparation	City of Newport Beach
Random Interactive, Inc. (Josh Slocum's)	2601 W. Coast Highway, Newport Beach, CA 92663-4708	Hearing pending	City of Newport Beach
TRP Development Services 494/496 Old Newport Blvd., Newport Beach	Use Permit to allow for construction of 12,500 sf medical office building.	Hearing pending	City of Newport Beach
OCTA Banning Avenue, Huntington Beach to 19th Street, Newport Beach	Santa Ana River Crossing Project	EIR completed for removal of this project from the Master Plan of Arterial Highways. However, consensus not reached between the affected cities yet.	OCTA

Source: OCTA, City of Newport Beach.

from the SAR Flood Control Project. Destruction of marsh habitat would be considered a significant impact. However, the project impact would be temporary and would not ultimately contribute to a cumulative decline in salt marsh habitat.

5.1.3 CULTURAL RESOURCES

Alternative 1 would cross currently developed areas and therefore project construction would not disturb previously undisturbed areas that could contain archaeological or paleontological resources. Nonetheless, excavation could uncover previously unknown resources. Alignments 2A and 2B would be constructed in previously undisturbed areas. Discovery of new resources could add to the cumulative understanding of cultural resources in the region. Mitigation measures would ensure that potential cultural resources would not be adversely impacted. The project would not result in adverse cumulative impacts.

5.1.4 NOISE

The project would temporarily contribute to noise generation in the general area. PCH is the primary noise generator in the area. The temporary noise associated with construction would not be cumulatively considerable within the residential or commercial district fronting the highway. Operation of the project would not create additional noise in the project area.

5.1.5 LAND USE

The pipeline would be constructed underground and would not conflict with existing or proposed land uses along any of the alignments. Alternatives 2A, 2B, 2C, and 1C would traverse marshy areas connected with other marsh areas along the SAR and with the ocean. The pipeline would require periodic maintenance. However, the project would not restrict use of the area for habitat conservation or recreational uses. The project would not alter existing conditions and would not contribute to cumulative land use impacts.

5.1.6 TRAFFIC

The Alternative 1 alignments would impact traffic during a period of construction within PCH. The work would disrupt 1½ southbound lanes and bikepath. Prior to construction, the District would obtain an encroachment permit from Caltrans that would commit the District to minimizing impacts to traffic. Other planned projects listed in Table 4-1 may increase traffic in the region. Once construction is complete, the proposed project would not contribute to the cumulative increase in local traffic. Construction within PCH would contribute to traffic delays experienced frequently in the area. Additional delays and detours may result from the Caltrans projects listed in Table 4-1. However, the temporary impact would not contribute significantly to the overall traffic condition on PCH.

5.1.7 GEOLOGY, HAZARDS, AND HYDROLOGY

Geologic impacts are generally site specific. The project would not result in cumulative geologic impacts or increase geologic hazards. The project would replace an existing pipeline. Operation of the project would reduce the potential for sewage spills and overflows and therefore would have beneficial effects on cumulative local water quality conditions.

5.2 GROWTH INDUCING IMPACTS

The *CEQA Guidelines* Section 15126(D) require that an EIR evaluate the growth inducing impacts of a proposed action. A growth inducing impact is defined by the *CEQA Guidelines* as:

> The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this definition are public works projects which would remove obstacles to population growth. It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth would result if a project involved construction of new housing. A project can have indirect growth inducement if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or even if it would involve a substantial construction effort

with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would have an indirect growth inducement effect if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service.

The PEIR for the 1999 Strategic Plan included an extensive discussion of the growth inducing impacts of the 1999 Strategic Plan. That PEIR included a discussion of the relationship between the local land use authority of local governments and the District approval of a Strategic Plan based on local planning decisions, a discussion of the population and wastewater flow projections upon which the Strategic Plan is based, and the growth inducing impact of the Strategic Plan. This discussion also notes the relationship of population forecasts to those of local governments, the Southern California Association of Governments (SCAG) and the Air Quality Management Plan (AQMP) approved by the South Coast Air Quality Management District (SCAQMD).

The 1999 PEIR noted that the flow rates identified in the 1999 Strategic Plan were actually reduced from those identified in the previous 1989 Strategic Plan. The construction of additional treatment capacity was phased to accommodate the estimated future flow rates and as such, the 1999 Strategic Plan proposed less treatment capacity than proposed in the previous 1989 Plan. Nonetheless, the 1999 PEIR concluded that providing wastewater treatment to accommodate future growth removed an obstacle to growth and as such could be considered growth inducing under CEQA. The 1999 PEIR evaluated the secondary effects of growth and found those effects to be significant and unavoidable impacts that the 1999 Strategic Plan would contribute to. Therefore, the District's Board of Directors adopted a statement of overriding considerations pursuant to Section 15093 of the CEQA Guidelines, acknowledging that the benefits of providing wastewater treatment facilities outweighed the significant effects caused by regional growth.

Although the Newport Trunk Sewer Project was not specifically identified in the 1999 PEIR, the flow rate assumptions dictating the sewer's capacity requirements are identical to those assumed for the 1999 PEIR. The proposed project would not increase wastewater collection capacity to accommodate flows beyond growth planned for in the Newport Beach General Plan. As such, the Project is consistent with the growth assumptions and analysis of growth inducement and secondary effects of growth provided in the 1999 PEIR. This EIR incorporates by reference the analysis and conclusions of growth inducement contained in the 1999 PEIR.

5.3 SIGNIFICANT IRREVERSIBLE EFFECTS

Section 15126.2(c) of the *Guidelines* requires that an EIR identify significant irreversible environmental effects that would occur as a result of the project. This section states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway

improvements which provide access to previously inaccessible areas) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The construction of the Newport Trunk Sewer and Force Mains will result in an irretrievable and irreversible commitment of natural resources through direct consumption of fossil fuels during construction and through the use of construction materials. The temporary use of fuel and construction materials to construct the project would not be considered significant. No other irreversible effects would result.

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CHAPTER 6
REFERENCES

Amick, Hal and Gendreau, Michael, Colin Gordon & Associates, Construction Vibrations and Their Impact on Vibration-Sensitive Facilities, Presented at ASCE Construction Congress 6. Orlando, Florida. February 22, 2000.

Bender, Kirsten, Biological Resources Report for EIR No. 158 Banning Avenue – 19th Street Bridge across the Santa Ana River. Prepared for Environmental Management Agency, County of Orange, January 1980.

Black and Veatch, Newport Trunk Sewer and Force Mains Bitter Point Pump Station to Coastal Trunk Sewer, TM2 Alignment Study, June 8, 2004

Black and Veatch, Newport Trunk Sewer and Force Mains Bitter Point Pump Station to Coastal Trunk Sewer, Contract No. 5-58, Draft Prelimnary Design Report, July 27, 2004.

Bolt, Baranek, and Newman, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

California Air Resources Board, Ambient Air Quality Standards, January 25, 1999.

California Coastal Act 1976.

California Coastal Conservancy. NOP Comment Letter, 2003

California Coastal Conservancy. Southern California Coastal Wetlands. http://www.coastal conservancy.ca.gov/scwrp/swetland.htm Accessed July, 2003.

California Department of Fish and Game, Natural Diversity Database, version 2.1.2, updated January 2, 2003. Data request for the USGS 7.5 minute quadrangles containeing and adjacent to the Project area.

California Department of Fish and Game, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database, May 2002 Edition. Available online at http://www.dfg.ca.gov/whdab/natcomlist.pdf.

California Geological Survey website, accessed June 2, 2003, http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_newb.pdf.

California Geological Survey, Seismic Hazard Mapping Program, Newport Quadrangle, http://gmw.consrv.ca.gov/shmp/index.htm.

California Integrated Seismic Network, website: http://www.trinet.org/shake/about.html#scenario, maintained by ShakeMap Working Group, last updated October 9, 2001, accessed July 7, 2003.

California Native Plant Society, Electronic Inventory of Rare and Endangered Vascular Plants of California, 2003. Data request for the OCSD and Mountain View USGS 7.5 minute quadrangles and for San Mateo County.

California Natural Diversity Database.

City of Huntington Beach, General Plan, 1995.

City of Newport Beach, website http://www.city.newport-beach.ca.us/ZONING/distbar.htm accessed June 24, 2003.

Coastal Zone Management Act of 1972.

Converse Consultants, Final Geologic Hazards and Geotechnical Investigation Report Proposed Headworks Replacement P2-66, August 2002.

County of Orange. 1995. Central and Coast Subregion Natural Community Conservation Plan/Habitat Conservation Plan Joint Programmatic Environmental Impact Report No. 553 and Environmental Impact Statement. Prepared by R.J. Meade Consulting, Inc., La Jolla. December.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, Classification of Wetlands and Deepwater Habitats of the United States. US Fish and Wildlife Service, Office of Biological Services, Washington, D.C. Publ. No. FWS/OBS-79/31, 1979.

Cunniff, Environmental Noise Pollution, 1977; Federal Transit Administration, 1995; Bolt, Baranek and Newman, 1971.

Department of Toxic Substances Control, http://www.dtsc.ca.gov/database/Calsites/Deed_List_Name.cfm

DeRivera, Catherine E. 2000. Belding's savannah sparrows eat eggs from live fiddler crabs. Wilson Bulletin. 112(3):427-428.

EPA Superfund site, http://www.epa.gov/superfund/sites/npl/ca.htm#El_Toro_Marine_Corps_Air_Station.

EPA, http://cfpub.epa.gov/supercpad/cursites/srchrslt.cfm?start=1&CFID=15964419&CFTOKEN=67253946.

FEMA, Flood Insurance Rate Map Number 06059C0054F, February 13, 2001.

Friends of Harbors, Beaches & Parks, Orange Coast River Park Proposal, April 2002.

George Dunn Engineering, Newport Trunk Sewer and Force Mains, Bitter Point Pump Station to Coast Trunk Project – Assessment of Construction Impacts on Traffic Flow/Local Access, July 25, 2003.

Hickman, J.C., (Ed.) 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, California.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California, Department of Fish and Game, Sacramento, CA.

Huntington Beach Municipal Code Section 8.40.050 Exterior Noise Standards.

Integrated Program Management Consultants, Construction Impacts in Support of CEQA Documentation for the Newport Trunk Sewer and Force Mains, Bitter Point Pump Station to Coast Trunk Sewer Project, August 31, 2003.

Integrated Program Management Consultants, Construction Impacts in Support of CEQA Documentation for the Newport Trunk Sewer and Force Mains, Bitter Point Pump Station to Coast Trunk Sewer Project, Addendum 1, October 17, 2003.

Integrated Waste Management Board, Solid Waste Information System Database, 2001.

Keer, G. H. and J. B. Zedler. 2002. Salt marsh canopy architecture differs with the number and composition of species. Ecological Applications. 12(2):456-473.

Kelsey, R. and C.T. Collins, Avifaunal Surveys of Santa River Marsh, Newport Beach, California. Prepared for U.S. Fish and Wildlife Service, Southern California Refuge Complex and U.S. Army Corps of Engineers, Los Angeles District. January, 1997.

Mason, R.D., H.C. Koeper, and P.E. Langenwalter, Middle Holocene Adaptations on the Newport Coast of Orange County. In Archaeology of the California Coast During the Middle Holocene. Pp. 35-60. Perspectives in California Archaeology, Vol. 4, Institute of Archaeology, UCLA, 1997.

Mayer, K.E. and W.F. Laudenslayer, Jr. (Eds.), A Guide to Wildlife Habitats of California. 1988. State of California, Resources Agency, Department of Fish and Game, Sacramento, CA. 166 pp.

Morton, D.M., R.M. Hauser, K.R. Ruppert 1999. Preliminary digital geologic map of the Santa Ana 30'x60' quadrangle, Southern California. Map scale 1:100,000. United States Geological Survey, Open file report, OF-99-172.

Munz, P.E., and D. Keck. 1968. A California Flora. University of California Press, Berkeley.

Newport Beach Municipal Code Section 10.26.025 Exterior Noise Standards.

Ninyo & Moore, Preliminary Geotechnical Evaluation PCH Force Mains OCSD Project No. 5-58, Huntington Beach, California, June 2003.

Ninyo & Moore, Preliminary Geotechnical Evaluation PCH Force Mains OCSD Project No. 5-58, Huntington Beach, California, July 2003.

Ninyo & Moore, Preliminary Geotechnical Evaluation PCH Force Mains OCSD Project No. 5-58, Huntington Beach, California, September 2003.

NPDES permit No. CAG998001, Order No. 98-67, 1998.

Orange County General Plan, Safety Element, 1999.

Orange County Transportation Authority, 2001 Traffic Flow map, July 1, 2002. http://www.octa.net/streets/volume/2001.pdf.

Orange County, Advanced Planning Program, Land Use Element, 1995.

Pacific Biodiversity Institute http://www.pacificbio.org/ESIN/ESIN.html accessed August, 2003.

Reish, D.J. Marine Invertebrates and Fish Communities in the Restored Area of the Santa Ana River Marsh, Orange County, California. Prepared for U.S. Fish and Wildlife Service, Southern California Coast Complex, Carlsbad, California. June 1997. .

Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, California.

Simons, Li & Associates. Marsh Restoration Lower Santa River Channel, Orange County, California. Prepared for U.S. Army Corps of Engineers, Los Angeles District. September 1987.

South Central Coastal Information Center, California State University, Fullerton, 2003.

South Coast Air Quality Management District and Southern California Association of Governments, Final 1989 Air Quality Management Plan, March 1989.

South Coast Air Quality Management District. Air Quality Data Summaries, 1997-2001.

South Coast Air Quality Management District. CEQA Air Quality Handbook, April 1993.

South Coast Air Quality Management District. Rule 403. December 1998.

SWIS site, http//www.ciwmb.ca.gov/SWIS/SiteListing.

SWRCB Geotracker database, www.geotracker.swrcb.ca.gov, accessed April 13, 2004.

U.S. Army Corps of Engineers website, http://www.spl.usace.army.mil/resreg/htdocs/PrdoFIM/plate7.pdf, accessed October 8, 2003.

U.S. Army Corps of Engineers. 1987a. Marsh Restoration Lower Santa Ana River Channel, Orange County, California.

U.S. Army Corps of Engineers. 1987b. U.S. Army Corps of Engineers Wetland Delineation Manual, January 1987, Final Report, Department of the Army Waterways Experiment Station, Vicksburg, Mississippi.

U.S. Army Corps of Engineers. 2002a. Draft Supplemental Environmental Assessment and Addendum to the 1988 Phase II General Design Memorandum SEIS/R, Santa Ana River Mainstem Project, Lower Santa Ana River, Reach 2 Channel Excavation to Design Grade. March.

U.S. Army Corps of Engineers. 2002b. Regulatory Guidance Letter No. 02-2. Subject: Guidance on Compnsatory Mitigation for Aquatic Resource Impact Under the Corps Regulatory

Program Pursuant to Section 404 of the clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. December 24, 2002.

Uniform Building Code 1997, Volume 2 Chapter 16- Table 16-U.

West Newport Oil, NOP comment letter, 2003.

Whiffen and Leonard, "A Survey of Traffic-induced Vibrations," Transport and Road Research Laboratory, RRL Report LR418, Crowthorne, Berkshire, England, 1971.

Wiss, J.F., "Construction Vibrations: State of the Art," Journal of the Geotechnical Division, ASCE, v.107, no. GT2, Proc. Paper. 16030, Feb. 1981.

Zeiner, D.C., W.F. Laudenslayer, and K.E. Mayer. 1990. California's Wildlife. Vols. II and III. California Statewide Wildlife Habitat Relationships System. California Department of Fish and Game. Sacramento, California.

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CHAPTER 7
ACRONYMS AND ABBREVIATIONS

ADT	Average Daily Traffic
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BMP	Best Management Practice
B.P.	Before the Present
CAA	Clean Air Act
CAL OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
cm/s	Centimeters per Second
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level

CNPS	California Native Plant Society
CO	Carbon Monoxide
CWA	Clean Water Act
cy	Cubic Yards
DAMP	Draninage Area Management Plan
dB	Decibel
dBA	A-Weighted Decibel
DISTRICT	Orange County Sanitation District
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FHBP	Friends of Harbors Beaches and Parks
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
g	Acceleration due to Force of Gravity
GLO	General Land Office
hp	Horsepower
H_2S	Hydrogen Sulfide
ICS	Incident Command System
IERP	Integrated Emergency Response Program
L_{dn}	Day-Night Sound
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
L_{min}	Minimum Sound Level
L_{xx}	Percentile Exceeded Sound Level
LCP	Local Coastal Programs

LF	Linear Foot
LOS	Level of Service
LUFT	Leaking Underground Fuel Tank
mgd	Million Gallons per Day
MMRP	Mitigation Monitoring and Reporting Plan
mph	Miles per Hour
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permit
O_3	Ozone
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCH	Pacific Coast Highway
PEIR	Program Environmental Impact Report
PFRD	Public Facilities and Resources Department
PM_{10}	Particulate Matter

$PM_{2.5}$	Particulate Matter less than 2.5 Microns
ROC	Reactive Organic Compounds
RWQCB	Regional Water Quality Control Board
SAA	Stream Alteration Agreement
SAR	Santa Ana River
SAWPA	Santa Ana Watershed Project Authority
SCAB	South Coast Air Basin
SCAQMD	Southern California Air Quality Management District
SEIR	Supplemental Environmental Impact Report
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SPCC	Spill Prevention Containment and Countermeasure
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SY	Square Yard
TAC	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
UBC	Uniform Building Code
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
v/c	Volume-to-Capacity Ratio
WRP	Wetlands Recovery Project

CHAPTER 8

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Acevedo, Alberto. Integrated Program Management Consultants (IMPC). Personal Communications, September 2004.

Franklin, Sylvia. Neighborhood Watch, Huntington Beach Police Station. Telephone communication, July 7, 2003.

Green, Dave. Newport Beach Fire Department. Telephone conversation, July 7, 2003.

Klein, John. Lieutenant, Newport Beach Police Station. Telephone communication, July 8, 2003.

Lovan, Hayley, et al. United States Army Corps of Engineers (USACE). Meeting regarding Alternative 2 in SAR Marsh, August 2003.

Mead, Frank. Captain, Huntington Beach Fire Station. Telephone communication, July 15, 2003.

Moralles, Anthony. San Gabriel Rancheria. Telephone communication, July 8, 2003.

Smith, Kathleen. Native American representative, Native American Heritage Commission. Personal communication, June 24, 2003.

WEBSITE DATABASES CONSULTED

http://www.coastal conservancy.ca.gov/scwrp/swetland.htm

http//www.ciwmb.ca.gov/SWIS/SiteListing

http://cfpub.epa.gov/supercpad/cursites/srchrslt.cfm?start=1&CFID=15964419&CFTOKEN=67253946

http://www.dfg.ca.gov/whdab/natcomlist.pdf

http://www.dtsc.ca.gov/database/Calsites/Deed_List_Name.cfm

http://www.epa.gov/superfund/sites/npl/ca.htm#El_Toro_Marine_Corps_Air_Station

http://www.octa.net/streets/volume/2001.pdf

http://www.geotracker.swrcb.ca.gov

http://www.spl.usace.army.mil/resreg/htdocs/PrdoFIM/plate7.pdf