Executive Summary

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) intends to disburse direct grant funds provided under the 1995 Appropriations Act (Public Law 103-327) to the County Sanitation Districts of Los Angeles County (Districts). The purpose of the grant is to fund the planning, design, and construction of wastewater treatment facilities to upgrade the Joint Water Pollution Control Plant (JWPCP) in the City of Carson, California, to 400 million gallons per day (mgd) of secondary treatment capacity.

PURPOSE OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT

This final environmental impact statement (FEIS) has been prepared in compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality Regulations for implementing NEPA, and EPA NEPA procedures. The purpose of the FEIS is to identify significant environmental impacts associated with the proposed action and alternatives, identify mitigation measures that could avoid or reduce significant impacts, and disclose all substantive comments and responses on the draft EIS (DEIS).

BACKGROUND

In January, 1992, the EPA and the California Regional Water Quality Control Board filed suit against the Districts under Section 309 of the Clean Water Act to require full secondary treatment at the JWPCP in Carson. A Consent Decree (Consent Decree) was negotiated between the Districts, the United States, the State of California, the Natural Resources Defense Council, and Heal the Bay, which mandated that the Districts provide full secondary treatment to all wastewater flows by December 31, 2002. In response to the requirements of the Consent Decree, the Districts have prepared the Joint Outfall System (JOS) 2010 Master Facilities Plan (2010 Plan), which addresses the need to provide full secondary treatment at the JWPCP by 2002. The 2010 Plan also addresses long-term needs for wastewater treatment, opportunities for reuse, and disposal through 2010.

Previous CEQA Review

The Districts have completed a draft environmental impact report (EIR) that analyzes the impacts of the 2010 Plan, including the full secondary treatment upgrade project at the JWPCP, as required by the California Environmental Quality Act (CEQA). The Districts solicited comments from agencies, organizations, and individuals on the draft EIR, which was circulated for public review between November 14, 1994, and January 17, 1995. The Districts also held two public information meetings in December 1994 and two public hearings in January 1995 to summarize the 2010 Plan and the environmental impacts of the 2010 Plan alternatives, to answer questions on the 2010 Plan and the EIR, and to receive comments. In response to the comments received, a final EIR was prepared and circulated on June 1, 1995. The Districts will consider certification of the final EIR at a Board meeting on July 12, 1995.

The EIR was prepared to support a decision by the California State Water Resources Control Board (SWRCB) to issue a State Revolving Fund (SRF) loan for the secondary treatment upgrade project element of the 2010 Plan. Because the SRF loan program is authorized by the federal Clean Water Act, approval of the SRF loan requires that the SWRCB initiate a consultation and review process with federal agencies similar to that required by NEPA during the draft EIR preparation and review.

Relationship between Previous CEQA Review and Current NEPA Process and Incorporation of the EIR by Reference

EPA proposes to provide direct grant funding to the Districts for the proposed full secondary treatment upgrade project (Upgrade Project). Public Law 103-327 authorized a $50 million grant for this purpose. An EIS was prepared to meet the requirements of NEPA to provide federal environmental review of the EPA grant funding for the Upgrade Project. Because the Upgrade Project included in the alternatives proposed in the draft EIR and final EIR is the same as the proposed EPA action and alternatives for this FEIS, the environmental analysis required under NEPA has already been conducted in the draft EIR and final EIR. To avoid duplication of effort in complying with CEQA and NEPA policies, EPA has chosen to incorporate the draft EIR and final EIR by reference in the FEIS. Pursuant to 40 Code of Federal Regulations (CFR) 1506.5, EPA has independently reviewed the information in the draft EIR and final EIR and has determined the information to be accurate for its needs. Additional discussion of issues in this FEIS focuses on topics needed for compliance with NEPA, Council on Environmental Quality Regulations for implementing NEPA, EPA NEPA procedures, and comments received on the DEIS.

Contents of the Final Environmental Impact Statement

This document constitutes the FEIS for the Upgrade Project. The DEIS was distributed for public review on March 13, 1995. The comment period ended April 28, 1995. Three comment letters on the DEIS were received, from the following agencies:

- U.S. Department of Interior,
- Southern California Association of Governments, and
- Metropolitan Water District of Southern California.

These comment letters and EPA's responses are provided in Appendix B of this FEIS, "Comments on the DEIS and Responses". Minor changes to the text of this FEIS in response to comments or as modifications or updates are shown as double underlined text.

Volume I of this document consists of the main body of the FEIS, Volume II (separately bound) consists of the draft EIR, and Volume III (separately bound) consists of the final EIR. Requests for copies of Volumes II and III should be directed to:

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DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Purpose of and Need for Proposed Action

Under the proposed action, EPA intends to disburse direct grant funds to the Districts provided under Public Law 103-327. The purpose of the grant is to fund the planning, design, and construction of wastewater treatment facilities to upgrade the JWPCP in the City of Carson, California. The Upgrade Project at the JWPCP is needed to provide full secondary treatment for all flows as required by the Consent Decree.

EPA's Proposed Action

Under the proposed action, EPA would disburse grant funds for the planning, design, and construction of facilities to upgrade the JWPCP to 400 mgd of secondary treatment capacity. The

proposed action is included in the Districts' recommended alternative (Alternative 1) for the 2010 Plan.

Alternatives to the Proposed Action

An EIS is required to identify the alternatives to the proposed action, including those considered by the applicant and those available to EPA (40 CFR 6.203 [b]). In addition to EPA's proposed action, alternatives to the Upgrade Project consist of:

- those alternatives analyzed in the draft EIR and final EIR, which include upgrading the JWPCP to either 400 mgd or 350 mgd of secondary treatment capacity; and
- the No-Action Alternative, under which EPA would not disburse funding to upgrade the level of treatment at the JWPCP.

The four alternatives analyzed in the draft EIR and final EIR are described below under "Summary of 2010 Plan Alternatives", and the No-Action Alternative is described below.

No-Action Alternative

Under the No-Action Alternative, EPA would not disburse the grant funding through Public Law 103-327; however, to meet legal requirements pursuant to the Consent Decree, the Districts would remain legally obligated to construct and operate the facilities for full secondary treatment at the JWPCP. The estimated cost to upgrade the JWPCP to full secondary treatment has been revised and the current estimated cost is approximately $309 million. Implementation of the No-Action Alternative would require existing users of the JOS, of which the JWPCP is a part, to finance the entire project cost. The current $50 million grant represents approximately 16% of the total project cost. Without the grant, existing users would have to pay higher annual service charges to finance the Upgrade Project.

Summary of 2010 Plan Alternatives

The four alternatives analyzed in detail in the 2010 Plan EIR are summarized below and shown in Table ES-1. As Table ES-1 indicates, the four alternatives proposed in the 2010 Plan would involve an upgrade of the JWPCP to full secondary treatment to either 400 or 350 mgd.

The Districts evaluated a wide range of alternatives based on emphasizing either coastal treatment or inland treatment, or a combination of the two. These concepts were based on the distribution of the projected flow between the JWPCP and inland water reclamation plants (WRPs). Fourteen preliminary alternatives (combinations of plant expansions and upgrades that

Table ES-1. Summary of the 2010 Plan Alternatives Evaluated in the Draft EIR and Final EIR

Districts' 2010 Plan Alternative	2010 Facility Capacity (mgd)					
	JWPCP	San Jose Creek WRP	Los Coyotes WRP	Whittier Narrows WRP	Long Beach WRP	Pomona WRP
1	***400***	***125 (25)***	***50 (12.5)***	15	25	13
2[a]	***400***	100	***75 (37.5)***	15	25	13
3	***400***	100	37.5	***52.5 (37.5)***	25	13
4[a]	***350[b]***	***125 (25)***	***62.5 (25)***	***52.5 (37.5)***	25	13
No Project	385[c]	100	37.5	15	25	13

Notes: Shading indicates full secondary upgrade project element of the 2010 Plan.
Bold print indicates an upgrade or change in capacity of a facility.
Numbers in parentheses indicate expansion increment.

[a] Additional conveyance system improvements required.

[b] JWPCP capacity reduced to 350 mgd of full secondary treatment under this alternative.

[c] Although the existing permitted capacity at the JWPCP is 385 mgd, the existing treatment capacity is 400 mgd. Under the No-Project Alternative, the treatment capacity would not increase.

could satisfy the wastewater treatment needs of the JOS service area) were developed and screened based on sewer system capacity constraints, cost effectiveness, refined flow projections, and operational constraints. The Long Beach WRP was eliminated from consideration for expansion because projected flows in its service area were insufficient to justify expansion. The Pomona WRP was eliminated from further consideration because expansion at that plant would not be cost effective due to substantial site improvement costs and the additional flow tributary to this plant could be diverted to other treatment plants downstream.

Seven feasible alternatives were developed, based on analysis of preliminary alternatives, and descriptions of the alternatives were mailed to agencies and the public in the notice of preparation for the EIR. Several criteria were used to select the four alternatives for detailed evaluation, including: public and agency input, conveyance and outfall system constraints, operational constraints, optimal use of existing site capacities, environmental impacts, and cost effectiveness. Based on these screening criteria, the Districts considered modifications to the JWPCP and one or more of the following WRPs: the Los Coyotes, San Jose Creek, and Whittier Narrows WRPs.

The JWPCP currently provides advanced primary treatment to all influent wastewater, and secondary treatment to approximately 60% of influent wastewater. Treated effluent is discharged to the Pacific Ocean. The WRPs provide tertiary treatment to all influent wastewater and provide reclaimed water for direct reuse, groundwater recharge, or discharge to surface waters. Under each of the 2010 Plan alternatives, the Districts would upgrade the JWPCP to provide full secondary treatment, expand one or more of the WRPs to provide additional reclaimed water for reuse, and manage additional biosolids generated in the JOS. As part of the 2010 Plan, implementation of certain alternatives would require sewer improvements in addition to those required as part of the Districts' ongoing sewer relief and rehabilitation program.

Alternative 1: Upgrade JWPCP/Expand Los Coyotes WRP/San Jose Creek WRP. Under Alternative 1, which is the recommended alternative, the Districts would upgrade the JWPCP (to 400 mgd of secondary treatment capacity), expand the Los Coyotes WRP (from 37.5 mgd to 50 mgd), and expand the San Jose Creek WRP (from 100 mgd to 125 mgd).

Alternative 2: Upgrade JWPCP/Expand Los Coyotes WRP. Under Alternative 2, the Districts would upgrade the JWPCP (to 400 mgd of secondary treatment capacity) as in Alternative 1, expand the Los Coyotes WRP (from 37.5 mgd to 75 mgd), and construct a relief sewer roughly parallel to the existing JO "B" and JO "H" trunk sewers beginning downstream of the San Jose Creek and Whittier Narrows WRPs and ending at the Los Coyotes WRP Interceptor.

Alternative 3: Upgrade JWPCP/Expand Whittier Narrows WRP. Under Alternative 3, the Districts would upgrade the JWPCP (to 400 mgd of secondary treatment capacity), which is the same as Alternative 1, and expand the Whittier Narrows WRP (from 15 mgd to 52.5 mgd).

Alternative 4: Upgrade JWPCP/Expand Los Coyotes WRP/San Jose Creek WRP/ Whittier Narrows WRP. Under Alternative 4, the Districts would upgrade the JWPCP (to 350 mgd of secondary treatment capacity); expand the Los Coyotes WRP (from 37.5 mgd to 62.5 mgd); expand the San Jose Creek WRP (from 100 mgd to 125 mgd), as under Alternative 1; expand the Whittier Narrows WRP (from 15 mgd to 52.5 mgd), as under Alternative 3; and construct an approximately 2-mile-long sewer roughly parallel to the existing JO "B" trunk sewer between the Whittier Narrows WRP and the juncture of the JO "B" and JO "H" trunk sewers downstream of the Whittier Narrows WRP. This sewer would be used to route solids removed at the Whittier Narrows WRP directly to the JWPCP for processing.

Environmentally Preferable Alternative

The lead agency preparing an EIS must specify which alternative is the environmentally preferable alternative (40 CFR 1505.2[b]). The impacts of the alternatives analyzed for the 2010 Plan are similar. Differences typically occur for two reasons: differential conveyance system impacts in Alternatives 2 and 4 would not occur under Alternatives 1 and 3, and different local impacts result from the extent and location of inland WRP expansions under each alternative. Similarly, the impacts associated with the Upgrade Project at the JWPCP are essentially the same for the 2010 Plan alternatives. Because the Districts are legally required by the Consent Decree to construct and operate the facilities for full secondary treatment at the JWPCP, impacts of the EPA No-Action Alternative would be the same as under the EPA's proposed action.

IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Impacts of the 2010 Plan Alternatives and EPA Alternatives

Impacts and proposed mitigation measures for each 2010 Plan alternative identified in Table ES-1 are defined and summarized below and listed in Tables ES-2, ES-3, and ES-4 at the end of this executive summary. Impacts associated specifically with the JWPCP Upgrade Project (i.e., impacts occurring from the JWPCP Upgrade Project or from disposal or reuse of biosolids) are shaded and shown with an "**X**". Impacts associated with other elements of the 2010 Plan (i.e., impacts on the inland WRPs and sewers) are indicated with a check mark (✓). The following description of impacts applies to all elements of the 2010 Plan. Impacts related specifically to the Upgrade Project are shown as single-underlined text.

Impact Terminology

Table ES-2 identifies the significant unavoidable impacts for each 2010 Plan alternative. A *significant unavoidable impact* is a substantial adverse effect on the environment for which available mitigation measures are insufficient to reduce the impact to a less-than-significant level. Table ES-3 identifies the significant avoidable impacts for each 2010 Plan alternative. A *significant avoidable impact* is a substantial adverse effect on the environment that can be reduced to a less-than-significant level by implementing mitigation measures. Table ES-4 identifies the less-than-significant and beneficial impacts for each 2010 Plan alternative. A *less-than-significant impact* causes no substantial adverse change in the environment and requires no mitigation measures. A *beneficial impact* represents a positive change in the environment.

To ensure that the proposed mitigation will be carried forward to implementation, the Districts prepared a draft mitigation monitoring and reporting program identifying agencies responsible for implementing and monitoring the measures, specific monitoring actions for each mitigation measure, and timing for implementation. The final mitigation monitoring and reporting program will be adopted by the Districts' Board of Directors once the final EIR is adopted, and the Districts would ensure that requirements for monitoring specified in 40 CFR 6.512 will be met.

Organization of Impact Discussion

The discussion of impacts for each topic is divided into three parts. *Construction* impacts result from the process of building new facilities and modifying existing facilities. *Operations* impacts are those that would result from the operation of facilities related to the 2010 Plan. *Biosolids disposal and reuse* impacts are those that would result from either the transport of biosolids or their end use at offsite locations.

Receiving Waters

Construction of treatment plant improvements would cause the following significant avoidable impacts related to hydrology and water quality:

- potential for short-term water quality degradation during modification of treatment plants (all alternatives), which can be mitigated through implementing a stormwater pollution prevention plan (SWPPP), and
- loss of Whittier Narrows Flood Control Basin storage capacity (Alternatives 3 and 4), which can be mitigated through offsite excavation within the basin to replace lost storage capacity.

Less-than-significant construction-related impacts on hydrology and water quality involve the minimal potential for short-term water quality degradation during sewer construction.

No significant *operations* impacts on hydrology and water quality or the marine environment would occur from the 2010 Plan alternatives except under the No-Project Alternative. EPA believes that the continued discharge of flows not treated to the level of full secondary would result in continued discharge of contaminants (see discussion under "Background" in this Executive Summary). Several less-than-significant impacts would occur. These include less-than-significant marine environment impacts of upgrading the JWPCP and subsequent reduction of emissions from the JWPCP. However, with regard to reduction of emissions of effluent suspended solids, a major concern addressed in the Consent Decree is that the reservoir of historically deposited DDT and other contaminants preserved in the Palos Verdes sediments may be released as a result of reduced suspended solids discharges from the outfalls.

Additionally, there is minimal potential for water quality degradation in the San Gabriel River and Rio Hondo from increased discharge of reclaimed water from the inland WRPs proposed for expansion and minimal potential for water quality degradation from increased reuse of reclaimed water from these inland WRPs. There is also a potential for flooding of facilities at the Whittier Narrows WRP; however, all proposed facilities at the Whittier Narrows WRP will be built on fill above the 100-year flood level. The increased availability of reclaimed water for reuse from the inland WRPs would have a beneficial impact on the water supply.

Biosolids disposal and reuse would result in the minimal potential for degradation of water quality at existing or proposed disposal and reuse sites.

Geologic Hazards and Soils

Construction of treatment plant improvements would cause the following significant avoidable impacts related to geologic hazards and soils:

- potential for increased short-term erosion (all alternatives), which can be mitigated to a less-than-significant level by implementing an erosion control and rehabilitation plan;

- potential for increased short-term and long-term erosion at the Whittier Narrows WRP (Alternatives 3 and 4), which can be mitigated by implementing an erosion control and rehabilitation plan;

- potential for structural damage from construction on expansive soils at the JWPCP (all alternatives), which can be mitigated by implementing appropriate engineering considerations; and

- potential for unstable earth conditions from construction on high fill and ground with liquefaction potential at the Whittier Narrows WRP (Alternatives 3 and 4), which can be mitigated by implementing appropriate engineering considerations.

Several less-than-significant construction-related impacts on geology and soils would also occur from the 2010 Plan alternatives. At the JWPCP these include a minimal potential for structural damage or injury resulting from construction of facilities on ground subject to liquefaction, on expansive soils, or in Seismic Risk Zone IV; creation of unstable temporary slopes; and increased short-term erosion during sewer construction.

No significant *operations* impacts on geology and soils would occur form the 2010 Plan alternatives.

The minimal potential for soil and topographic disturbance resulting from *biosolids disposal and reuse* is a less-than-significant impact.

Energy and Chemicals

All energy and chemical impacts related to construction, operations, and biosolids disposal and reuse are considered less than significant. Less-than-significant impacts related to *construction* include a minimal increase in energy consumption at the treatment plants. Less-than-significant *operations* impacts include the minimal increase in electricity, natural gas, and chemical consumption. *Biosolids disposal and reuse* would result in a minimal increase in diesel fuel consumption from the transport of biosolids from the JWPCP to end-use sites.

Transportation

Construction of treatment plant improvements would cause the following significant avoidable transportation-related impacts:

- increased truck traffic on existing roadways (all alternatives), which can be mitigated by developing and implementing a traffic control plan, and

- alteration of present patterns of vehicle circulation and increased traffic hazards (all alternatives), which can be mitigated by developing and implementing a traffic control plan.

Less-than-significant construction-related impacts on transportation involve the minimal degradation of the level of service at intersections near the JWPCP, a minimal increase in construction-related traffic on Interstate 110 near the JWPCP, and a minimal potential for alteration of present patterns of vehicle circulation and increases in traffic hazards during construction of sewer lines.

Operations and *biosolids disposal and reuse* would result in a minimal increase in employee and truck traffic. These impacts would be less than significant.

Air Quality

Construction of treatment plant improvements (including demolition activities) would cause the following significant unavoidable air quality impacts:

- short-term increase in emissions of nitrogen oxides at the JWPCP and inland WRPs (all alternatives), which can be reduced, but not to a less-than-significant level, by reducing vehicle trips associated with lunch breaks, reconfiguring parking, providing temporary traffic control, scheduling activities affecting traffic flow during off-peak hours, and developing a construction traffic management plan;

- short-term increased emissions of reactive organic gases at the JWPCP (all alternatives), which can be reduced, but not to a less-than-significant level, by implementing the mitigation measures described above, using coatings that have a low content of volatile organic compounds, and using high-efficiency coating applicators; and

- short-term increased emissions of inhalable particulates at the JWPCP and inland WRPs (all alternatives), which can be reduced, but not to a less-than-significant level, by applying nontoxic soil stabilizers, replacing ground cover, reducing wind erosion of exposed soil stockpiles, watering exposed sites and unpaved areas, enforcing requirements that trucks either be covered or meet freeboard requirements before leaving the worksite, removing loose soil from adjacent streets, paving long-term construction roads, and limiting traffic speeds.

One significant avoidable air quality impact related to construction would occur from the 2010 Plan alternatives:

- short-term increase in emissions of reactive organic gases at the inland WRPs (all alternatives), which can be reduced to a less-than-significant level by implementing the measures described above for reducing ROG emissions at the JWPCP.

Less-than-significant construction-related air quality impacts include the potential for short-term increases in microscale carbon monoxide levels, the potential for release of asbestos from demolition of existing structures (all alternatives), and the potential for short-term increases in criteria pollutant emissions from construction of sewer lines.

No significant *operations* impacts would occur from the 2010 Plan alternatives. However, several less-than-significant impacts would occur. These include a minimal potential for long-term increases in emissions of criteria and toxic air pollutants and odor levels at the JWPCP and inland WRPs.

Odor concerns associated with operations are considered less than significant. It is anticipated that odor levels would be similar to or less than existing levels because improved odor control measures (similar to those in use, which have proven effective) would be employed. Additionally, a consistency analysis conducted for the 2010 Plan determined that the 2010 Plan is consistent with the 1994 Air Quality Management Plan.

Biosolids disposal and reuse would cause the following significant unavoidable impact:

- potential for generation of nitrogen oxides emissions from truck transport of biosolids (all alternatives), which can be reduced, but not to a less-than-significant level, by performing routine truck maintenance.

The potential for criteria pollutants and odors to be generated at biosolids disposal and reuse sites is a less-than-significant impact.

Noise

Construction of treatment plant improvements would cause the following significant avoidable impact:

- increased noise levels at the JWPCP (all alternatives), which can be mitigated by implementing noise-reducing construction practices.

Construction of sewers and WRP expansions would cause less-than-significant impacts on noise levels.

Operations would cause the following significant avoidable impact:

- increased noise levels at the JWPCP (all alternatives), which can be mitigated by designing and employing mechanical systems to reduce noise levels.

Additionally, a less-than-significant noise impact from increased noise levels during operations at the inland WRPs would occur.

Biosolids disposal and reuse would result in minimal increases in noise that are less than significant.

Public Health

Construction is not anticipated to create any significant adverse public health impacts, although less-than-significant impacts would occur. These include a minimal risk of exposure to contaminated soils or hazardous materials, and a minimal potential for exposure to safety risks associated with open trenches during construction.

No significant *operations* impacts on public health would occur from the 2010 Plan alternatives.

Several less-than-significant public health operations impacts would occur, including a minimal potential for accidental release of acutely hazardous materials, a minimal increase in health risk resulting from emissions of toxic air pollutants, potential exposure to hazardous materials from modifications to treatment plants, and a minimal potential for increased risk of exposure to pathogens from increased availability of reclaimed water. No increased health risks are associated with discharge of JWPCP effluent to the ocean off Whites Point.

Biosolids disposal and reuse impacts on public health would be less than significant.

Botanical and Wildlife Resources

Construction of treatment plant improvements would cause the following significant adverse impacts related to botanical and wildlife resources:

- potential degradation of a small area of riparian and marsh habitat adjacent to the Wilmington Drain at the JWPCP (all alternatives), which can be mitigated to a less-than-significant level by implementing an SWPPP, and

- loss of riparian scrub habitat from construction at the Whittier Narrows WRP (Alternatives 3 and 4), which can be mitigated to a less-than-significant level by restoring riparian scrub and forest habitats.

Several less-than-significant construction-related impacts on botanical and wildlife resources would occur from the 2010 Plan alternatives, including removal of horticultural plantings, lawn, and nursery stock and the minimal potential for disturbance of natural habitat from sewer construction.

The following significant avoidable *operations* impact would occur:

- potential degradation of riparian and marsh habitat resulting from changes in runoff at the JWPCP (all alternatives), which can be reduced to a less-than-significant level by implementing an SWPPP and preparing and implementing a marshland management plan.

Additionally, a less-than-significant operations impact related to the potential disturbance of wildlife at the riparian and marsh habitat resulting from increased human activity near the marsh site would occur at the JWPCP.

Biosolids disposal and reuse impacts on sensitive biological communities and special-status species would be less than significant.

Urban Uses and Infrastructure

Construction of treatment plant improvements would cause the following significant avoidable impacts related to land use and public services and facilities:

- conflict with the existing open space zoning and Significant Ecological Area Designation at the Whittier Narrows WRP (Alternatives 3 and 4), which can be reduced to a less-than-significant level by obtaining a Conditional Use Permit from the county for the expansion, and

- potential for increased emergency response times during construction (all alternatives), which can be mitigated by the Districts notifying local emergency response agencies of the proposed construction activities.

Several less-than-significant construction-related impacts would affect land use and public services and facilities. These include conversion of existing land uses; conversion of a driving range adjacent to the Los Coyotes WRP; potential disruption of vehicular or pedestrian access during sewer construction; and minimal increases in demand for fire protection, emergency medical response times, and landfill capacity. Increases in construction-related jobs at the JWPCP and inland WRPs would result in a beneficial impact on employment.

Operations are not anticipated to cause any significant impacts on public service or facilities or any significant adverse land use impacts. Less-than-significant operations impacts include increases in hazardous materials, demand for fire protection, and emergency medical response times. An increase in permanent operating jobs at the JWPCP and inland WRPs would be a beneficial impact on employment, and an increase in the availability of reclaimed water would be a beneficial impact on public facilities.

No significant impacts would occur on urban uses and infrastructure as a result of *biosolids disposal and reuse* for any of the 2010 Plan alternatives.

Visual Quality and Cultural Resources

Construction of treatment plant improvements would cause the following significant avoidable impacts:

- temporary, short-term reduction in visual quality from construction at the JWPCP and inland WRPs (all alternatives), which can be mitigated by implementing measures to improve visual quality, and

- potential for disturbance of important buried archeological resources during construction at the Whittier Narrows WRP (Alternatives 3 and 4), which can be mitigated through site testing, if necessary.

Less-than-significant construction-related impacts would include the potential for disturbance of important buried archeological resources during construction at the JWPCP, the Los Coyotes and San Jose Creek WRPs, and sewers, and the minimal potential for reduction in visual quality from construction of sewers.

Operations of treatment plants would result in the following significant avoidable impacts:

- reduction in visual quality from the introduction of new elements at the JWPCP (all alternatives), which can be reduced to a less-than-significant level by implementing mitigation measures to improve visual quality;

- reduction in visual quality from increased light and glare at the JWPCP (all alternatives), which can be reduced to a less-than-significant level by minimizing sources of light and glare; and

- reduction of visual quality resulting from the removal of existing vegetative screening at the Los Coyotes WRP (Alternative 1), which can be reduced to a less-than-significant level by implementing several mitigation measures to improve visual quality.

Visual quality and cultural resource impacts associated with *biosolids disposal and reuse* would be less than significant. These impacts include a minimal potential for reduction in visual quality and disturbance of important buried archeological resources.

OTHER IMPACT CONCLUSIONS

Cumulative Impacts

Lead agencies are required to discuss cumulative impacts resulting from the proposed action, pursuant to 40 CFR 1508.7. Cumulative impacts result from the incremental effects of the proposed action when added to other past, present, and reasonably foreseeable future actions. The program EIR evaluates cumulative impacts of 2010 Plan implementation primarily using a summary of projections contained in planning documents designed to evaluate regional conditions. Cumulative impacts evaluated in the draft EIR and final EIR are incorporated by reference.

The program EIR also evaluates cumulative impacts using a "project" approach by considering the cumulative impacts of collectively implementing all component projects of the 2010 Plan, by assessing cumulative public health risks associated with accidental releases of hazardous constituents near the JWPCP, and by assessing cumulative impacts associated with any proposed projects near the JWPCP. This cumulative impact analysis concluded that no signifi-

cant cumulative impacts would occur.. Table ES-5 of this executive summary lists the cumulative impacts of the Upgrade Project.

Indirect Impacts

Pursuant to 40 CFR 1508.8(b), lead agencies are required to discuss indirect impacts associated with growth inducement and with changes in land use patterns, population density, or growth rate. Several factors affect the magnitude, timing, and type of economic and population growth. These factors include local government planning, economic climate, quality of life, and availability of public services and natural resources.

Public services and natural resources that affect economic and population growth include developable land, water supply and infrastructure, wastewater treatment facilities, and energy availability and cost. The configurations of utility systems such as water and wastewater systems are usually identified in master plans prepared by utility providers. The service area boundaries and system configurations ostensibly present constraints to new development. However, state laws mandate that local utilities must extend service to new development. Also, economic and political pressures that influence local government development decisions can potentially override concerns regarding infrastructure constraints. Therefore, although utility providers develop master plans for their service areas, the ultimate configurations of their systems can be altered by local government decisions.

The expansions of the individual WRPs under the 2010 Plan were designed based on the 2010 population projections adopted by SCAG in the 1994 Regional Comprehensive Plan. The existing permitted capacity of the JOS (576 mgd) falls far short of accommodating projected population growth and would have to be expanded to support growth projected by SCAG to occur in this area by 2010. Because implementing the 2010 Plan can be seen as removing an obstacle to service area growth, it can be considered growth inducing, based on a strict interpretation of the CEQA definition of growth inducement, even if it does not directly affect regional economic and population growth. Growth-inducement and growth-related impacts are evaluated in detail for Alternative 1 (the recommended alternative) in Chapter 17 of the final EIR, which is incorporated by reference. Additionally, growth-inducement and growth-related impacts of the 2010 Plan are summarized in Table ES-5 of this FEIS.

The indirect growth-related impacts associated with the projected growth in the JOS service area include the potential for water quality degradation; exposure of people to flood, geologic, and seismic hazards; increased soil erosion; increased gas and electricity consumption; wildlife habitat and sensitive biological community losses; increased traffic congestion; air quality degradation; increased noise; land use conversions; increased employment; increased demand for public services and utilities; degradation of aesthetic character; and disturbance of cultural resources. Local governments and regulatory agencies have the primary authority for mitigating these indirect impacts of growth.

Irreversible and Irretrievable Commitment of Resources

Pursuant to 40 CFR 1502.16, an EIS is required to include a discussion of significant irreversible environmental changes that would result from implementation of a project. Irreversible commitments of resources would occur as a result of implementing the 2010 Plan. These resources include the building materials, fossil fuels, labor, and energy required to construct, operate, and maintain wastewater treatment and sewer facilities associated with the 2010 Plan. These resources also include land converted from its existing uses for construction of additional treatment facilities, for biosolids disposal and reuse sites, and for extraction of construction materials such as soil and/or aggregate.

Short-Term Uses of the Environment versus Long-Term Productivity

Lead agencies are required to consider the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity (40 CFR 1502.16). Short-term uses as a result of implementation of the proposed EPA action or alternatives include such benefits as:

- proportional reduction of contaminant discharges to the ocean,
- increase in construction-related jobs during the construction period at the JWPCP, and
- addition of approximately 22 permanent operating jobs resulting from expansion of the JWPCP.

These benefits are realized at the expense of both short-term costs and long-term productivity costs. Short-term costs are incurred during construction and include:

- building material and fossil fuel costs;
- costs related to disruption of community services and activities, such as emergency response routes and roadway detours; and
- increased short-term air emissions and noise levels.

The effects of these costs and benefits are analyzed in detail in the "Air Quality", "Noise", "Land Use", "Population, Housing, and Employment", "Geologic Hazards and Soils", "Energy and Chemicals", "Public Services and Facilities", and "Transportation" sections of this report, which are incorporated by reference in Volumes II and III.

Long-term productivity refers to valuable uses for the existing environment. Although several impacts were associated with the Upgrade Project, valuable uses of the existing environ-

ment would not be lost permanently as a result of implementation of the proposed action because the impacts are either temporary and construction-related or would be fully offset by proposed mitigation measures.

The Upgrade Project would result in the permanent conversion of bedding plant nurseries and ruderal vegetation on JWPCP property west of Figueroa Street. The permanent conversion of these resources is described in detail in the "Land Use" and "Botanical and Wildlife Resources" sections of the final EIR.

Energy Requirements and Conservation Potential

Lead agencies are required to consider the energy requirements and conservation potential of the alternatives (40 CFR 1502.16[f]). Construction of facilities to upgrade the JWPCP to full secondary treatment for any of the 2010 Plan alternatives would result in the consumption of substantial amounts of energy over the construction period. However, the construction methods proposed would avoid wasting energy and would not consume so much energy that additional facilities for energy generation or distribution would be needed. The effects of the proposed Upgrade Project are discussed in detail in the "Energy and Chemicals" section of the final EIR.

Effect on Historical and Cultural Quality

An EIS is required to evaluate the proposed action's effects on historical and cultural quality, pursuant to 40 CFR 1502.16(g). The proposed action and alternatives would have no effect on historical and cultural quality because after several reconnaissance surveys and literature searches for the JWPCP area, the State Historic Preservation Office (SHPO) determined that there would be no effect on any historical property at the JWPCP. See Appendix A for a copy of the letter indicating the SHPO's finding.

KNOWN AREAS OF CONTROVERSY AND UNRESOLVED ISSUES

Known Areas of Controversy

EPA NEPA procedures (40 CFR 6.202[b]) require an EIS to identify areas of controversy known to the lead agency, including issues raised by other agencies and the public. Although no known areas of controversy were identified during the development of the 2010 Plan and the scoping process, several issues of concern were raised by other agencies and the public in writing and at meetings held during scoping. These include concerns about traffic, noise, and air quality

effects of construction at the JWPCP; potential treatment plant odors; the use of hazardous chemicals for wastewater treatment; and conversion of a driving range on the Districts' property for wastewater treatment facilities at the Los Coyotes WRP. Impacts related to these issues were fully evaluated in the draft EIR and final EIR.

Unresolved Issues

The comment period for the draft EIR for the 2010 Plan closed on January 17, 1995. Resolutions to issues raised in comment letters on the draft EIR related to the Upgrade Project are currently underway by EPA and the Districts and include the following:

- The U.S. Fish and Wildlife Service (USFWS) expressed concern that the 2010 Plan would result in the loss of least Bell's vireo habitat in the vicinity of the Whittier Narrows WRP near South El Monte, that the Districts' Biosolids Management Plan would adversely affect threatened and endangered species, and that the 2010 Plan should also include long-range planning to procure land with high biological value for the purpose of protecting fish and wildlife resources. The Whittier Narrows WRP expansion, however, is not included in the Districts' recommended alternative and any potential proposed expansions at the Whittier Narrows WRP would require subsequent detailed environmental review, including provisions for avoiding or minimizing the loss of the least Bell's vireo habitat. The Districts will provide additional details of the environmental review requirements for the existing and potential future biosolids disposal and reuse sites currently under contract to demonstrate that threatened and endangered species would not be adversely affected and will describe the current planning efforts underway in the JOS region by various entities to preserve high-value habitat.

- The Ken Malloy Harbor Regional Park Advisory Board requested that the proposed Phase I digesters adjacent to the JWPCP marsh site be located in other areas of the JWPCP, or that mitigation measures proposed to reduce impacts related to botanical and wildlife resources at the JWPCP marsh site to less-than-significant levels be expanded to include more detailed descriptions. It also requested that the Districts conduct a study addressing the feasibility of the JWPCP producing reclaimed water and providing it for irrigation at the JWPCP marsh. The Districts are preparing more detailed design plans and specifications of the proposed facilities adjacent to the marsh, and are providing the technical evaluation used for site selection and more details of the mitigation measures in response to the comment.

Detailed response to the issues raised in the draft EIR are provided in the final EIR on the 2010 Plan, which was circulated for public review in June 1995.

REQUIRED PERMITS AND APPROVALS

No federal permits or approvals are required by other agencies for the proposed action.

COORDINATION WITH OTHER ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

An EIS must describe how the proposed action will comply with various federal environmental review and consultation requirements, pursuant to 40 CFR 6.300. The laws and executive orders that are applicable to EPA's proposed action are described below.

- **Historic, architectural, archeological, and cultural sites**. If an EPA undertaking affects any property with historic, architectural, archeological, or cultural value that is listed on or eligible for listing on the National Register of Historic Places, the responsible official is required to comply with the procedures for consultation and comment promulgated by the Advisory Council on Historic Preservation in compliance with Section 106 of the National Historic Preservation Act (NHPA), 16 U.S. Code (USC) 470, and Executive Order 11593. Additionally, a programmatic agreement between the SWRCB and the State Historic Preservation Office requires that projects receiving federal funds administered by the SWRCB comply with Section 106 of the NHPA. The Districts have determined that the proposed action will have no effect on any historic property at the JWPCP. The SWRCB has received a letter of concurrence from the State Historic Preservation Office confirming the finding. See Appendix A for a copy of this correspondence. Because it was concluded that no historic, architectural, archeological, or cultural sites located near the JWPCP would be affected by the proposed Upgrade Project, the project complies with the requirements set forth in Section 106 of the NHPA.

- **Historic, prehistoric, and archeological data**. Under the Archeological and Historic Preservation Act of 1974, 16 USC 469 et seq., if any EPA activity may cause irreparable loss or destruction of significant scientific, prehistoric, historic, or archeological data, the responsible official or the Secretary of the Interior is authorized to undertake data recovery and preservation activities. Based on an extensive cultural resources study conducted in 1979 (which included excavating several backhoe trenches) and a records and literature search conducted in 1994, the proposed action was determined not to affect any historic, prehistoric, or archeological data.

- **Wetlands protection**. Executive Order 11990, "Protection of Wetlands", requires federal agencies conducting certain activities to avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists. Although wetlands occur at the JWPCP marsh site, compliance with this executive order does

not apply to the proposed action because no construction would occur directly in the wetlands and the proposed mitigation measures for construction and operation of nearby facilities would reduce any potential indirect impacts on the wetlands to a less-than-significant level.

- **Coastal zone management**. The Coastal Zone Management Act, 16 USC 1451, requires that all federal activities in coastal areas be consistent with approved State Coastal Zone Management Programs, to the maximum extent possible. If an EPA action may affect a coastal zone area, the responsible official is required to assess the impact of the action on the coastal zone. A consistency analysis will not be required because the JWPCP is not located in the coastal zone and secondary effluent discharges do not trigger the need for a consistency analysis (Delaplaine, Mark. Supervisor, Federal Consistency Section, California Coastal Commission, San Francisco, CA. January 24, 1995 - telephone conversation).

- **Fish and wildlife protection**. The Fish and Wildlife Coordination Act, 16 USC 661 et seq., requires federal agencies involved in actions that will result in the control or structural modification of any natural stream or body of water for any purpose to take action to protect the fish and wildlife resources that may be affected by the action. This act does not apply to the proposed action because no control or structural modification of water bodies is proposed.

- **Endangered species protection**. The Federal Endangered Species Act, 16 USC 1536, prohibits agencies from jeopardizing threatened or endangered species or adversely modifying habitats essential to their survival. The Section 7 consultation process between EPA and U.S. Fish and Wildlife Service (USFWS) to determine the effects of the proposed action on listed species was recently completed. During informal consultation with USFWS, SWRCB, and EPA staff, it was determined that formal consultation under Section 7 would not be required. See Appendix A for a copy of the correspondence between SWRCB and USFWS staff leading to this determination.

- **Air quality**. The Clean Air Act requires federal actions to conform to any state implementation plan approved or promulgated under Section 110 of the act. For EPA action, the applicable conformity requirements specified in 40 CFR Part 51, Subpart W; 40 CFR Part 93, Subpart B; and the applicable state implementation plan must be met. According to the Federal Rule on General Conformity, 40 CFR 51.853(d)(4), a conformity determination is not required for federal action where alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations occurs. Therefore, a conformity analysis for the Upgrade Project at the JWPCP addressed in the 2010 Plan is not required because it is required by an existing environmental regulation. See Appendix A for a copy of the correspondence between the Districts and EPA leading to this determination.

Table ES-2. *Significant Unavoidable Impacts* for Each Alternative

(Significant unavoidable impacts cause substantial adverse effects for which insufficient feasible mitigation measures are available to reduce the impacts to less-than-significant levels)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
AIR QUALITY													
Construction Impacts													
Impact: Potential for short-term increase in emissions of nitrogen oxides resulting from construction	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 8-1. Reduce vehicle trips associated with lunch breaks													
Mitigation Measure 8-2. Configure parking to minimize traffic interference													
Mitigation Measure 8-3. Provide temporary traffic control during all phases of construction activities to improve traffic flow													
Mitigation Measure 8-4. Schedule construction activities that affect traffic flow to off-peak hours to the extent feasible													
Mitigation Measure 8-5. Develop a construction traffic management plan that includes, but is not limited to, rerouting construction trucks off congested streets, and providing dedicated turn lanes for movement of construction trucks and equipment onsite and offsite													
Impact: Potential for short-term increase in emissions of reactive organic gases resulting from construction	X			X			X		X				
Mitigation Measures 8-1 through 8-5													
Mitigation Measure 8-6. Apply coatings with a low VOC content and use high-efficiency applicators													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-2. Continued

(Significant unavoidable impacts cause substantial adverse effects for which insufficient feasible mitigation measures are available to reduce the impacts to less-than-significant levels)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impact: Potential for short-term increase in emissions of inhalable particulates resulting from construction	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 8-7. Apply nontoxic soil stabilizers													
Mitigation Measure 8-8. Replace ground cover in disturbed areas as quickly as possible													
Mitigation Measure 8-9. Enclose, cover, water twice daily, or apply nontoxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content													
Mitigation Measure 8-10. Water active sites (heavily trafficked areas) at least twice daily													
Mitigation Measure 8-11. Ensure that all trucks hauling dirt, sand, soil, or other loose material are covered, or maintain freeboard in accordance with CVC Section 23114													
Mitigation Measure 8-12. Sweep streets at the end of the day if visible soil is carried onto adjacent public roads													
Mitigation Measure 8-13. Pave the first 100 feet onto site of all unpaved, heavily trafficked construction roads													
Mitigation Measure 8-14. Pave or apply nontoxic soil stabilizers to all unpaved parking and staging areas													
Mitigation Measure 8-15. Limit traffic speeds on all unpaved roads to 15 mph or less													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-2. Continued

(Significant unavoidable impacts cause substantial adverse effects for which insufficient feasible mitigation measures are available to reduce the impacts to less-than-significant levels)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Biosolids Disposal and Reuse (SCAB)[a]													
Impact: Potential for generation of NO_x emissions from truck transport of biosolids	X			X			X		X				
Mitigation Measure 8-16. Perform routine truck maintenance													
Impacts of Biosolids Disposal and Reuse (SEDAB)[b]													
Impact: Potential for generation of NO_x emissions from truck transport of biosolids	X			X			X		X				
Mitigation Measure 8-16													

[a] South Coast Air Basin

[b] Southeast Desert Air Basin

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-3. *Significant Avoidable Impacts* for Each Alternative

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
HYDROLOGY AND WATER QUALITY													
Construction Impacts													
Impact: Short-term water quality degradation during construction	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 3-1. Prepare and implement a stormwater pollution prevention plan													
Impact: Loss of flood storage capacity behind the Whittier Narrows Dam from construction of proposed facilities at the Whittier Narrows WRP								✓				✓	
Mitigation Measure 3-2. Replace flood storage capacity													
GEOLOGIC HAZARDS AND SOILS													
Construction Impacts													
Impact: Potential for increased short-term erosion during construction	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 4-1. Prepare and implement an erosion control and rehabilitation plan													
Impact: Potential for increased short-term and long-term erosion at the Whittier Narrows WRP								✓				✓	
Mitigation Measure 4-1													
Impact: Potential for structural damage from construction at the JWPCP on expansive soils	X			X			X		X				
Mitigation Measure 4-2. Implement appropriate engineering considerations for facilities													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impact: Potential for unstable earth conditions from construction on high fill on compressible soils Mitigation Measure 4-2								✓				✓	
Impact: Potential for unstable earth conditions from construction on ground with liquefaction potential Mitigation Measure 4-2								✓				✓	
TRANSPORTATION **Construction Impacts** Impact: Increased truck traffic on existing roadways during construction Mitigation Measure 7-1. Develop and implement a traffic control plan for the construction site	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Potential alteration of present patterns of vehicle circulation and increase in traffic hazards during construction Mitigation Measure 7-1	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
AIR QUALITY Impact: Potential for short-term increase in emissions of reactive organic gases resulting from construction Mitigation Measures 8-1 through 8-6		✓	✓		✓			✓		✓	✓	✓	
NOISE **Construction Impacts** Impact: Increase in noise levels during construction Mitigation Measure 9-1. Implement noise-reducing construction practices as required by local ordinances	X			X			X		X				

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-3. Continued

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Treatment Plant Operations													
Impact: Increase in noise levels during operation	X			X			X		X				
Mitigation Measure 9-2. Design and employ mechanical systems to keep noise below local noise ordinance standards													
BOTANICAL AND WILDLIFE RESOURCES													
Construction Impacts													
Impact: Degradation of riparian and marsh habitats resulting from construction at the JWPCP	X			X			X		X				
Mitigation Measure 3-1													
Impact: Loss of riparian scrub habitat resulting from construction at the Whittier Narrows WRP								✓				✓	
Mitigation Measure 11-3. Restore riparian scrub and forest habitats													
Impacts of Treatment Plant Operations													
Impact: Potential degradation of riparian and marsh habitats resulting from changes in runoff at the JWPCP	X			X			X		X				
Mitigation Measure 3-1													
Mitigation Measure 11-2. Prepare and implement a marshland management plan													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-3. Continued

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
LAND USE													
Construction Impacts													
Impact: Conflict with existing open space zoning and Significant Ecological Area Designation at the Whittier Narrows WRP								✓				✓	
Mitigation Measure 12-1. Obtain a Conditional Use Permit for Significant Ecological Area from the county for the expansion of the Whittier Narrows WRP													
PUBLIC SERVICES AND FACILITIES													
Construction Impacts													
Impact: Potential increase in emergency response times resulting from construction at treatment plants	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 14-1. Notify local emergency response agencies of proposed construction and minimize disruption of traffic flow													
AESTHETICS													
Construction Impacts													
Impact: Temporary, short-term reduction in visual quality resulting from construction at treatment plants	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Mitigation Measure 15-1. Locate staging and storage areas outside visually sensitive areas or screen them from view where feasible													
Mitigation Measure 15-2. Minimize excavation, clearing, and grading activities													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Mitigation Measure 15-3. Restore graded areas close to original contours and revegetate cleared areas													
Mitigation Measure 15-4. Minimize sources of light and glare and use glare-reducing light fixtures during construction													
Impacts of Treatment Plant Operations													
Impact: Reduction in visual quality resulting from introduction of new elements at the JWPCP	X			X			X		X				
Mitigation Measure 15-5. Partially screen new elements from public view where feasible													
Mitigation Measure 15-6. Minimize use of reflective materials and avoid use of high-contrast colors													
Mitigation Measure 15-7. Maintain structures at minimum necessary heights and reduce large-scale elements to smaller component elements as feasible													
Mitigation Measure 15-8. Establish parkway planting strips and improve existing greenbelt areas													
Impact: Reduction in visual quality resulting from increased light and glare at the JWPCP	X			X			X		X				
Mitigation Measure 15-9. Minimize sources of light and glare and use glare-reducing light fixtures													
Impact: Reduction in visual quality resulting from removal of existing vegetative screening at the Los Coyotes WRP		✓											
Mitigation Measures 15-6, 15-7, 15-9													
Mitigation Measure 15-10. Partially screen new elements from public view where feasible													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-3. Continued

(Significant avoidable impacts are adverse impacts that can be reduced to less-than-significant levels with mitigation)

Impacts and Mitigation Measures	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
CULTURAL RESOURCES													
Construction Impacts													
Impact: Potential for disturbance of important buried archeological resources during construction at the Whittier Narrows WRP								✓				✓	
Mitigation Measure 16-1. Test sites to determine importance and perform data recovery if necessary													

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. *Beneficial* and *Less-than-Significant Impacts* for Each Alternative

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
HYDROLOGY AND WATER QUALITY													
Construction Impacts													
Impact: Short-term water quality degradation during construction of sewers (LT)						✓							✓
Impacts of Treatment Plant Operations													
Impact: Minimal potential for water quality degradation from algal blooms resulting from increased effluent discharge at the Los Coyotes and San Jose Creek WRPs (LT)		✓	✓		✓					✓	✓		
Impact: Potential for increased availability of reclaimed water for reuse (B)		✓	✓		✓			✓		✓	✓	✓	
Impact: Minimal potential for water quality degradation in the San Gabriel River resulting from increased discharge of reclaimed water from the Los Coyotes WRP (LT)		✓			✓					✓			
Impact: Minimal potential for water quality degradation in the San Gabriel River and the Rio Hondo resulting from increased discharge of reclaimed water from the San Jose Creek and Whittier Narrows WRPs (LT)			✓					✓			✓	✓	
Impact: Minimal potential for water quality degradation resulting from increased reuse of reclaimed water (LT)		✓	✓		✓			✓		✓	✓	✓	
Impact: Potential flooding of facilities at the Whittier Narrows WRP resulting from construction in the 100-year floodplain (LT)								✓				✓	
Impacts of Biosolids Disposal and Reuse													
Impact: Minimal potential for degradation of water quality resulting from biosolids disposal and reuse (LT)	X			X			X		X				

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. Continued

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
GEOLOGIC HAZARDS AND SOILS													
Construction Impacts													
Impact: Minimal potential for structural damage and injury resulting from construction in Seismic Risk Zone IV (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Potential for the creation of unstable temporary slopes during construction at the JWPCP (LT)	X			X			X		X				
Impact: Minimal potential for structural damage resulting from construction on ground subject to liquefaction (LT)	X		✓	X			X		X		✓		
Impact: Potential for increased short-term erosion during construction of sewer lines (LT)						✓							✓
Impact: Potential for structural damage resulting from construction of sewer lines over expansive soils (LT)						✓							✓
Impacts of Biosolids													
Impact: Minimal potential for soil and topographic disturbance resulting from biosolids disposal and reuse (LT)	X			X			X		X				
MARINE ENVIRONMENT													
Impacts of Treatment Plant Operations													
Impact: Potential for degradation of marine water quality resulting from disposal of treated effluent at the JWPCP (LT)	X			X			X		X				
Impact: Potential for improved conditions for marine biota resulting from disposal of treated effluent at the JWPCP (LT)	X			X			X		X				

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. Continued

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
ENERGY AND CHEMICALS													
Construction Impacts													
Impact: Increase in energy consumption during construction (LT)	X	✓	✓	X	✓	✓	X	✓	X	✓	✓	✓	✓
Impacts of Treatment Plant Operations													
Impact: Minimal increase in electricity, natural gas, and chemical consumption resulting from the increase in operations (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Minimal increase in energy consumption resulting from pumping of reclaimed water for reuse (LT)		✓	✓		✓			✓		✓	✓	✓	
Impacts of Biosolids Disposal and Reuse													
Impact: Minimal increase in diesel fuel consumption resulting from biosolids disposal and reuse through 2010 (LT)	X			X			X		X				
TRANSPORTATION													
Construction Impacts													
Impact: Degradation of the level of service at the intersection of Sepulveda Boulevard and Figueroa Street during construction at the JWPCP (LT)	X			X			X		X				
Impact: Minimal increase in construction-related traffic on I-110 at the JWPCP (LT)	X			X			X		X				
Impact: Minimal potential for alteration of present patterns of vehicle circulation and increase in traffic hazards during construction of sewer lines (LT)						✓							✓
Impacts of Treatment Plant Operations													
Impact: Minimal increase in employee traffic volume (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Biosolids Disposal and Reuse													
Impact: Minimal increase in truck traffic resulting from biosolids disposal and reuse (LT)	X			X			X		X				
AIR QUALITY													
Construction Impacts													
Impact: Potential for short-term increase in microscale carbon monoxide levels resulting from construction (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Minimal potential for release of asbestos during demolition (LT)	X	✓		X	✓		X	✓	X	✓		✓	
Impact: Potential for short-term increase in criteria pollutant emissions resulting from construction of sewer lines (LT)								✓					✓
Impacts of Treatment Plant Operations													
Impact: Potential for long-term increase in emissions of reactive organic gases, nitrogen oxides, carbon monoxide, sulfur oxides, and particulates resulting from increase in operations at the JWPCP (LT)	X			X			X		X				
Impact: Minimal potential for long-term increases in odor levels at the JWPCP and the inland WRPs (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Minimal increase in health risk resulting from emissions of toxic air pollutants (LT)	X	✓	✓	X	✓		X	✓		✓	✓	✓	
Impact: Minimal potential for long-term increase in emissions of criteria pollutants resulting from expansion of operation of the inland WRPs (LT)		✓	✓		✓			✓		✓	✓	✓	
Impact: Decrease in health risk resulting from emissions of toxic air pollutants at the JWPCP (LT)									X				
Impact: Consistency of 2010 Plan with the 1994 Air Quality Management Plan (LT)	X	✓	✓	X	✓	✓	X	✓	X	✓	✓	✓	✓

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Biosolids Disposal and Reuse													
Impact: Potential for generation of criteria pollutants and odors resulting from biosolids disposal and reuse in the SCAB and SEDAB (LT)	X			X			X		X				
NOISE													
Construction Impacts													
Impact: Increase in noise levels during construction of sewers and treatment plant improvements (LT)		✓	✓		✓	✓		✓		✓	✓	✓	✓
Impacts of Treatment Plant Operations													
Impact: Increase in noise levels during operation at the inland WRPs (LT)		✓	✓		✓			✓		✓	✓	✓	
Impacts of Biosolids Disposal and Reuse													
Impact: Minimal increase in noise levels resulting from biosolids disposal and reuse (LT)	X			X			X		X				
PUBLIC HEALTH													
Construction Impacts													
Impact: Minimal risk of exposure to contaminated soil during construction at JWPCP (LT)	X			X			X		X				
Impact: Minimal risk of exposure to hazardous materials during construction (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Minimal potential exposure to risks associated with open trenches during construction of sewers (LT)						✓							✓
Impacts of Treatment Plant Operations													
Impact: Minimal potential for accidental release of acutely hazardous materials at the JWPCP (LT)	X			X			X		X				
Impact: Minimal increase in health risk resulting from emissions of toxic air pollutants (LT)	X	✓	✓	X	✓		X	✓		✓	✓	✓	

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impact: Decrease in health risk resulting from emissions of toxic air pollutants (LT)									X				
Impact: Potential exposure to hazardous materials from modifications to treatment plants (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: No increase in exposure to pathogens off Whites Point from discharge of full secondary-treated effluent (LT)	X			X			X		X				
Impact: Minimal potential for increased risk of exposure to health hazards from increased availability of reclaimed water at the inland WRPs (LT)		✓	✓		✓			✓		✓	✓	✓	
Impacts of Biosolids Disposal and Reuse Impact: Minimal potential for public exposure to health hazards resulting from biosolids disposal and reuse (LT)	X			X			X		X				
BOTANICAL AND WILDLIFE RESOURCES **Construction Impacts** Impact: Removal of horticultural plantings and lawn resulting from construction at the Los Coyotes and San Jose Creek WRPs (LT)		✓	✓		✓					✓	✓		
Impact: Removal of horticultural plantings and nursery stock for construction at the Whittier Narrows WRP (LT)								✓				✓	
Impact: Minimal potential for disturbance of natural habitat resulting from sewer construction (LT)						✓							✓
Impacts of Treatment Plant Operations Impact: Potential disturbance of wildlife at the riparian and marsh habitat resulting from increased human activity associated with modification of the JWPCP (LT)	X			X			X		X				

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. Continued

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Biosolids Disposal and Reuse Impact: Minimal potential for degradation of sensitive biological communities or disturbance of special-status species from biosolids disposal and reuse (LT)	X			X			X		X				
LAND USE **Construction Impacts** Impact: Conversion of existing land uses at the JWPCP (LT)	X			X			X		X				
Impact: Conversion of Ironwood Driving Range at the Los Coyotes WRP (LT)					✓					✓			
Impact: Potential disruption of access to adjacent lands as a result of sewer construction (LT)						✓							✓
POPULATION, EMPLOYMENT, AND HOUSING **Construction Impacts** Impact: Increase in construction-related jobs during the construction period at the JWPCP (B)	X			X			X		X				
Impact: Minimal increase in construction-related jobs resulting from expansion of inland WRPs (B)		✓	✓		✓			✓		✓	✓	✓	
Impacts of Treatment Plant Operations Impact: Addition of approximately 22 permanent operating jobs resulting from expansion of the JWPCP (B)	X			X			X		X				
Impact: Minimal increase in permanent operating jobs resulting from expansion of the inland WRPs (B)		✓	✓		✓			✓		✓	✓	✓	

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. Continued

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
PUBLIC SERVICES AND FACILITIES													
Construction Impacts													
Impact: Minimal increase in demand for fire protection and emergency medical response resulting from construction at the JWPCP (LT)	X			X			X		X				
Impact: Increase in demand for landfill capacity resulting from generation of construction waste (LT)	X	✓	✓	X	✓	✓	X	✓	X	✓	✓	✓	✓
Impacts of Treatment Plant Operations													
Impact: Minimal increase in demand for fire protection, hazardous materials, and emergency medical response (LT)	X	✓	✓	X	✓		X	✓	X	✓	✓	✓	
Impact: Increase in availability of reclaimed water resulting from expansion of the inland WRPs (B)		✓	✓		✓			✓		✓	✓	✓	
AESTHETICS													
Construction Impacts													
Impact: Temporary, short-term reduction in visual quality during construction of sewer lines (LT)						✓							✓
Impacts of Biosolids Disposal and Reuse													
Impact: Minimal potential for reduction in visual quality resulting from biosolids disposal and reuse (LT)	X			X			X		X				
CULTURAL RESOURCES													
Construction Impacts													
Impact: Potential for disturbance of important buried archeological resources from construction (LT)	X	✓	✓	X	✓	✓	X		X	✓	✓		✓
Impacts of Treatment Plant Operations													
Impact: Potential change in the settings of two historic buildings at the JWPCP (LT)	X			X			X		X				

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-4. Continued

Impacts	Alternative 1			Alternative 2			Alternative 3		Alternative 4				
	JWPCP	LC	SJC	JWPCP	LC	Sewers	JWPCP	WN	JWPCP	LC	SJC	WN	Sewers
Impacts of Biosolids Disposal and Reuse													
Impact: Potential for disturbance of important buried archeological resources resulting from biosolids disposal and reuse (LT)	X			X			X		X				

B = beneficial. LT = less than significant.

✓ = impact associated with 2010 Plan elements other than EPA's Upgrade Project. X = impact associated with Upgrade Project (EPA's proposed action and alternatives).

Table ES-5. Cumulative, Growth-Inducing, and Growth-Related Impacts of the 2010 Plan Preferred Alternative

Impacts and Mitigation Measures	Agency Responsible for Implementing Mitigation
Hydrology and Water Quality	
Impact: Potential degradation of surface water and groundwater quality	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-1. Implement local, RWQCB, and SCAG RCP water quality protection policies and programs	
Impact: Potential increase in exposure to flooding	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-2. Implement local and SCAG RCP groundwater recharge and flood protection policies and programs	
Geologic Hazards and Soils	
Impact: Potential for increase in soil erosion	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-3. Implement local and SCAG RCP erosion control policies and programs	
Impact: Potential for structural damage and injury resulting from development in Seismic Risk Zone IV	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-4. Implement local and SCAG RCP plans and policies for seismic risk reduction	
Energy	
Impact: Increase in gas and electricity consumption	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-5. Implement local and SCAG RCP energy conservation plans and policies	
Transportation	
Impact: Increase in traffic congestion	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-6. Implement local and SCAG RCP transportation plans and policies	
Air Quality	
Impact: Increase in generation of reactive organic gases and nitrogen oxides	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-7. Implement local and SCAG RCP air quality plans and policies	

Impacts and Mitigation Measures	Agency Responsible for Implementing Mitigation
Noise	
Impact: Exceedance of normally acceptable noise levels	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-8. Implement local and SCAG RCP noise plans and policies	
Public Health	
Impact: Increase in potential for exposure of people to hazardous materials	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-9. Implement local and SCAG RCP hazardous materials plans and policies	
Botanical and Wildlife Resources	
Impact: Loss of substantial amounts of plant and wildlife habitat and sensitive biological communities	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-10. Implement local and SCAG RCP biological habitat preservation plans and policies	
Impact: Loss of special-status species habitat and at-risk biological communities	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-11. Implement local and SCAG RCP plans and policies for preservation of special-status species habitat and at-risk habitat	
Land Use	
Impact: Conversion of vacant land to developed uses	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-12. Implement local and SCAG RCP plans and policies regarding minimizing extension of development to vacant lands	
Public Services and Facilities	
Impact: Increase in demand for water supply and distribution	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-13. Implement local and SCAG RCP programs and policies designed to ensure future water supply	
Impact: Increase in demand for wastewater collection and treatment	Los Angeles County and cities in the JOS service area
Mitigation Measure 17-13	

Impacts and Mitigation Measures	Agency Responsible for Implementing Mitigation
Impact: Increase in demand for solid waste collection and disposal Mitigation Measure 17-14. Implement local and SCAG RCP solid waste programs and policies	Los Angeles County and cities in the JOS service area
Impact: Increased demand for law enforcement protection Mitigation Measure 17-15. Implement local and SCAG RCP law enforcement programs and policies	Los Angeles County and cities in the JOS service area
Impact: Increase in demand for school facilities Mitigation Measure 17-16. Implement local and SCAG RCP programs and policies designed to ensure adequate school facilities	Los Angeles County and cities in the JOS service area
Impact: Increase in demand for parks and recreation facilities Mitigation Measure 17-17. Implement local and SCAG parks and recreation programs and policies	Los Angeles County and cities in the JOS service area
Impact: Increase in demand for fire protection, hazardous materials, and emergency medical response Mitigation Measure 17-18. Implement local and SCAG RCP emergency services programs and policies	Los Angeles County and cities in the JOS service area
Aesthetics Impact: Reduction in visual quality resulting from introduction of aboveground wires and cables Mitigation Measure 17-19. Implement local and SCAG RCP aesthetic quality plans and policies	Los Angeles County and cities in the JOS service area
Cultural Resources Impact: Loss of important cultural resources Mitigation Measure 17-20. Implement local and SCAG RCP cultural resource preservation plans and policies	Los Angeles County and cities in the JOS service area