

# Executive Summary

## ES1 Introduction

This *City of Los Angeles, Integrated Resources Plan Final Environmental Impact Report* (EIR) analyzes in accordance with the California Environmental Quality Act (CEQA) Guidelines the impacts that would occur from implementing the proposed wastewater treatment and water resource management components documented in the *City of Los Angeles Integrated Resources Plan, Volumes 1 through 4—IRP Facilities Plan* (City of Los Angeles; 2004).

The IRP Facilities Plan is an inaugural visionary process for stakeholder-based integrated water resources planning. The plan integrates planning for the three interdependent water systems: wastewater, recycled water, and stormwater. The IRP Facility Plan reviewed the water and wastewater needs of the City of Los Angeles (City) for the next 20 years and identified necessary infrastructure improvements and policy recommendations.

Future population increases in the City of Los Angeles and its service areas would result in increased wastewater flows that must be managed safely. Flow model projections developed by the City (based in part on the Southern California Association of Governments [SCAG] population and employment projections) show that wastewater generation in the Hyperion Service Area (HSA) will increase to over 511 million gallons per day (mgd) by 2020 from the 443 mgd generated in 2000. Existing and future laws and regulations are likely to require additional facilities, facility improvements, or new strategies for managing wastewater, recycled water, and urban runoff in the future.

## ES2 Content of Final EIR and Relationship to Draft EIR

This Final EIR presents the City staff Recommended Alternative and provides updates, where applicable, to the Draft EIR. It also presents the responses to comments received on the Draft EIR for the IRP Facilities Plan (City of Los Angeles et al., 2005). The City of Los Angeles Department of Public Works (LADPW) is the Lead Agency for the CEQA process and has evaluated, directed, and supervised the preparation of this document. In accordance with CEQA, the Draft EIR and this Final EIR, together, comprise the Lead Agency environmental analysis of the IRP Facilities Plan.

Numerous references are made throughout this Final EIR to the Draft EIR and to the Draft EIR appendixes. These documents were circulated previously and are not being reproduced. Copies, however, are available for inspection at the LADPW. The Draft EIR and supporting appendixes (State Clearinghouse Number [SCH No.] 2004071091 and Southern California Association of Governments Number [SCAG No.] 120040466) together with this Final EIR are the CEQA documentation for the IRP Facilities Plan.

## **ES3 Alternatives Evaluated**

The City of Los Angeles, in partnership with various community organizations and stakeholders, developed four Project Alternatives as part of the IRP Facilities Plan for meeting future needs for wastewater, recycled water, and urban runoff. The alternatives evaluated in the Draft EIR are summarized in Section 1.5 of this Final EIR. Additional detail on the development process of these alternatives and their descriptions are in the Draft EIR (City of Los Angeles et al., 2005). The four alternatives evaluated in the IRP Facilities Plan and in the EIR are:

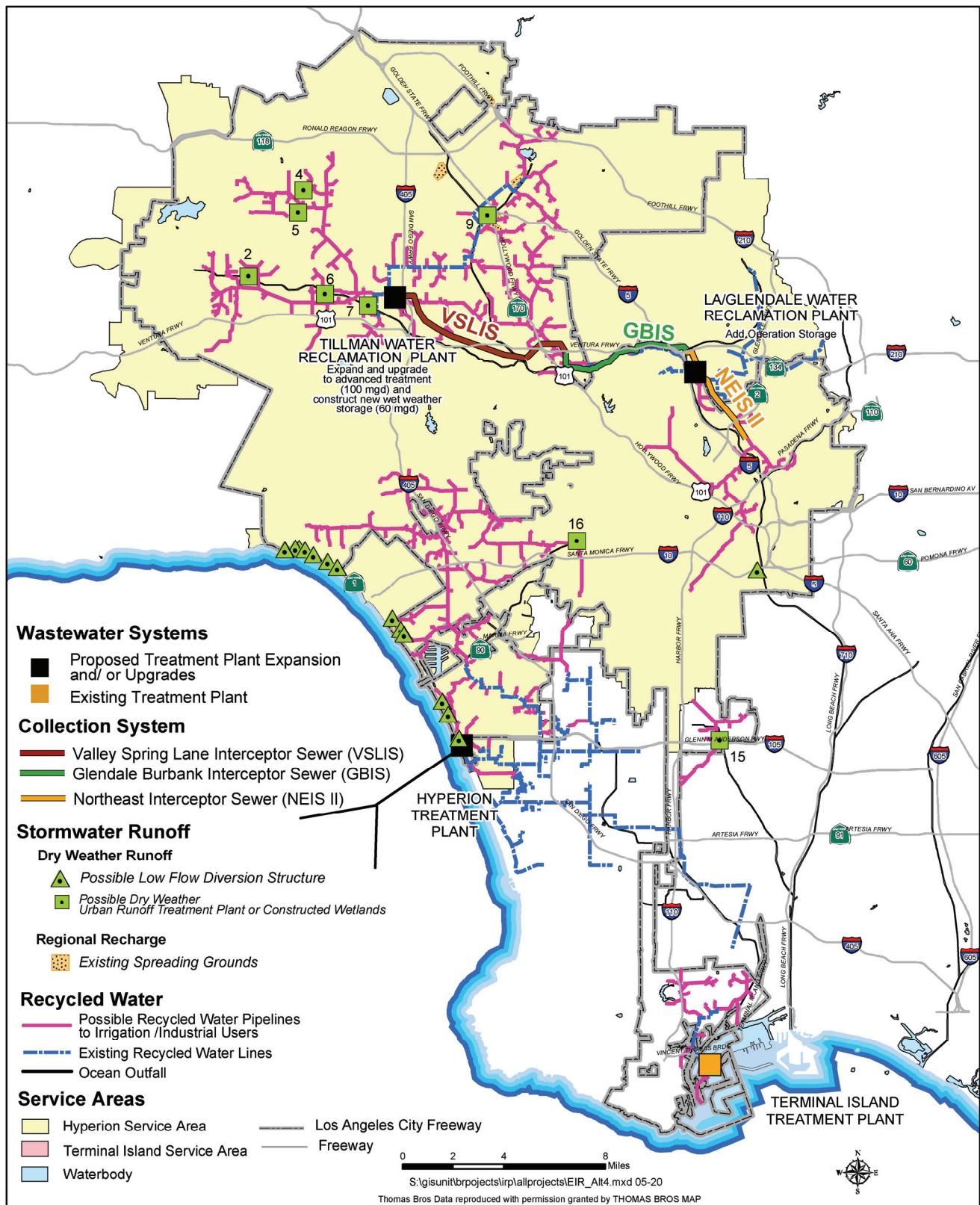
- Alternative 1: Expansion of Hyperion Treatment Plant (Hyperion) to 500 million gallons per day (mgd)
- Alternative 2: Donald C. Tillman Water Reclamation Facility (Tillman) Expansion (to 80 mgd) and Los Angeles-Glendale (LAG) Expansion (to 30 mgd)
- Alternative 3: Tillman Expansion (to 100 mgd) without Cisterns
- Alternative 4: Tillman Expansion (to 100 mgd)
- No Project Alternative

## **ES4 Staff Recommended Alternative**

On the basis of an evaluation of the alternatives, Alternative 4 is the staff Recommended Alternative. This section summarizes the staff Recommended Alternative and its timing for implementation. Section 1.5 of this Final EIR describes in detail the staff Recommended Alternative and presents the process, criteria, and rationale for its selection. The decisionmakers, at their discretion, could select either the staff Recommended Alternative for implementation or a different systemwide alternative.

### **ES4.1 Summary of the Staff Recommended Alternative**

Figure ES-1 shows the overall system components that make up the staff Recommended Alternative. The staff Recommended Alternative includes expanding Tillman to 100 mgd; adding storage to Tillman and LAG; and adding a truck-loading facility, digesters, and secondary clarifiers to Hyperion. Wastewater treatment capacity at Tillman would be expanded by increasing the assumed derated capacity of 64 mgd to 100 mgd and upgrading treatment processes to advanced treatment. Wastewater and recycled water storage would be added at LAG. The staff Recommended Alternative would use up to 56,100 acre-feet per year of recycled water (79,900 acre-feet with groundwater replenishment) and would manage 42 percent and 47 percent of the dry weather and wet weather urban runoff, respectively, generated in the City.



**Figure ES-1**  
**Staff Recommended Alternative – Tillman Expansion**

The staff Recommended Alternative includes increasing the amount of effluent from Tillman and LAG that is recycled; onsite percolation of wet weather runoff at schools and government properties; and neighborhood-scale percolation at vacant lots, parks, and open spaces in the eastern San Fernando Valley. Timing and specifics of the implementation of runoff management will be coordinated with requirements of the total maximum daily load (TMDL) and subsequent Implementation Plans. The staff Recommended Alternative also includes continued implementation of water conservation programs, such as the use of smart irrigation devices.

Under the staff Recommended Alternative, three sewer projects will have to be implemented to provide adequate wastewater conveyance capacity downstream of Tillman. These are the Northeast Interceptor Sewer II (NEIS II); the Glendale-Burbank Interceptor Sewer (GBIS); and the Valley Spring Lane Interceptor Sewer (VSLIS), a program-level component for which potential alignments have not yet been identified (see Section ES7.2 of this Final EIR).

On the basis of selection criteria that include constructability, availability of existing rights-of-way, and other factors (such as accessibility and the potential to encounter hazardous materials), City staff identified the NEIS II West Alignment, Option B, as the recommended NEIS II alignment. The Division Street Shaft Site, the Griffith Park Shaft Site, and the Pecan Grove Shaft Site would be used to construct the NEIS II West Alignment. Figure ES-2 shows the staff recommended NEIS II alignment.

The Draft EIR evaluated two GBIS alignments (the GBIS South Alignment and the GBIS North Alignment) at a project level of analysis (see Section 2.2.1.10 of the Draft EIR). The GBIS alignment recommended by staff for implementation connects the eastern half of the GBIS South Alignment and the western half of the GBIS North Alignment with a short section of tunnel beneath Pass Avenue in the City of Burbank. This recommendation is based on selection criteria that include surface construction activity, contingency response, system relief, system risks, and public rights-of-way. Tunneling would occur from or between the following shaft sites: Pecan Grove Shaft Site, Travel Town Shaft Site, Barham Shaft Site, and California Department of Transportation (Caltrans) North Hollywood Maintenance Yard Shaft Site. Figure ES-3 shows the staff recommended GBIS Alignment.

To be responsive to public comments on the proposed GBIS alignments (see Section 1.3 and Section 3 of this Final EIR) in a way that also facilitates the objectives of the City for designing and constructing the Project improvements in accordance with sound engineering practices that ensure public health and safety, the staff Recommended Alignment will substantially reduce impacts and alleviate many of the concerns expressed by various commenters, yet still will adhere to the Project objectives and to the City goals for design feasibility. In addition, City staff met with various representatives of the City of Burbank to discuss the concerns expressed by the City of Burbank and how best to address those concerns, as described in Section 1.3.

## **ES4.2 Timing of Implementation**

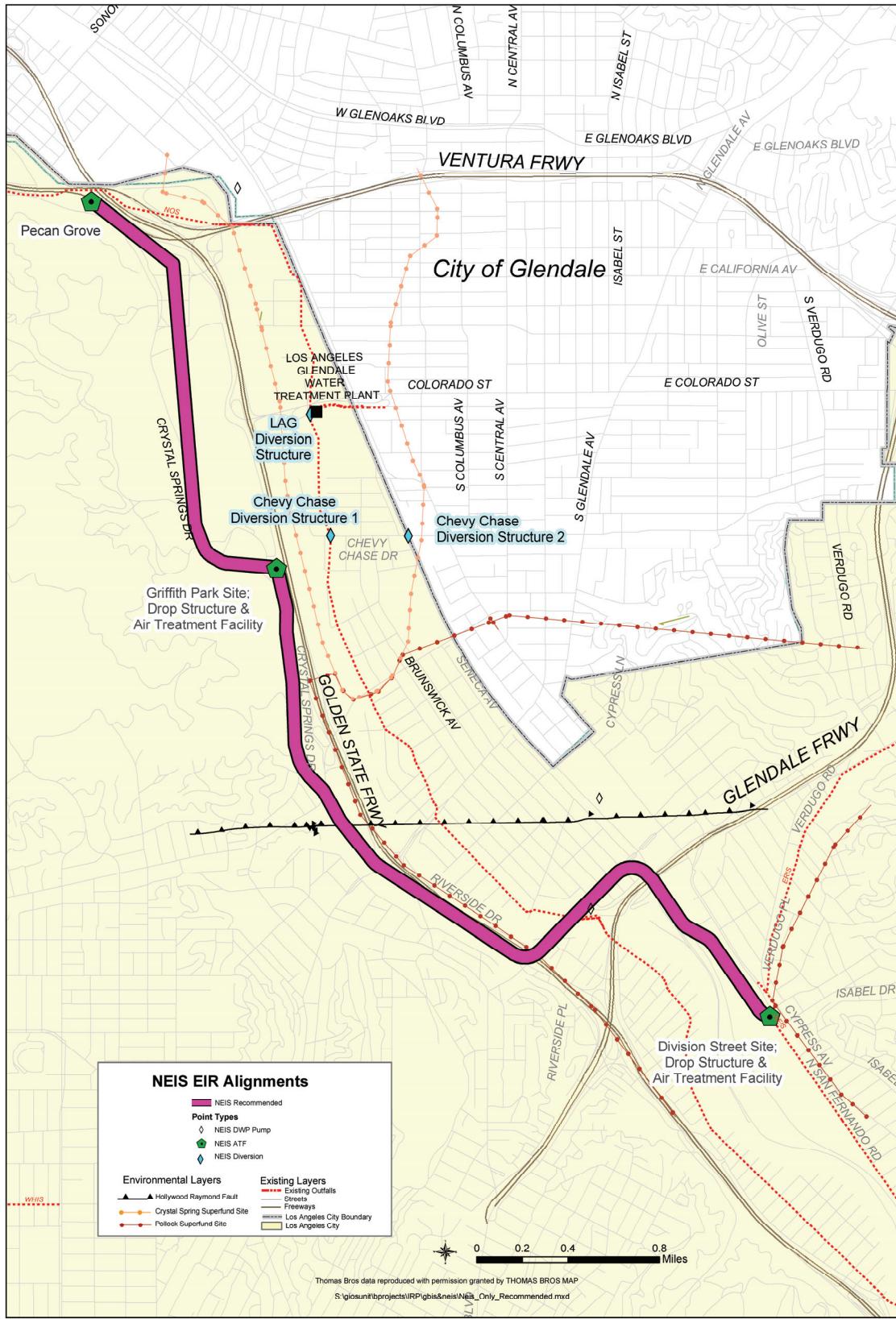
The actual timing and implementation of the components that comprise the staff Recommended Alternative will be initiated by monitored triggers, which include increases in wastewater flow resulting from population growth, regulatory changes, and other policy decisions. Implementation of the components under Alternative 4 is organized into: (1) immediate, or “Go Projects,” which are projects where the population or flow trigger already has been reached or will be reached within the next several years; (2) “Go When Triggered,” which are projects that will be implemented in the future when the trigger is reached; and (3) “Go Policy Directions,” which are specific directions to staff on the next studies and evaluations required to provide progress on the programmatic elements (recycled water and runoff management) in the staff Recommended Alternative.

The choice of the staff Recommended Alternative was based, in part, on its recycled water benefits. Groundwater replenishment or other recycled water use might not feasible (based on public acceptability, costs, and future regulations). If population increases (and associated increases in wastewater) trigger a need for additional wastewater capacity, however, then wastewater flows would be diverted to Hyperion, and Alternative 1 would be recommended. The staff Recommended Alternative reserves the ability for future expansion at Tillman, while recognizing and supporting potential groundwater replenishment that the City could decide to pursue at a later time.

## **ES5 Certification of the EIR and Approval of the Staff Recommended Alternative**

As discussed in the Draft EIR, LADPW is the CEQA Lead Agency for this EIR, and the Los Angeles City Council will use this EIR to help with the selection and approval of an alternative to implement. Certification of the EIR is separate from approval of the Recommended Alternative. Certification refers to the process of: (1) completing the EIR in compliance with CEQA, (2) confirming that the Los Angeles City Council reviewed and considered the information in the EIR, and (3) affirming that the EIR reflects independent judgment and analysis by the City of Los Angeles (Section 15090 of CEQA Guidelines). For this EIR, certification will be brought forward to the Los Angeles City Council with the recommendation of LADPW for approval of individual components of the project within the LADPW jurisdiction.

For components related to wastewater systems, conveyance, and urban runoff, the Board of Public Works will consider staff recommendations. For components related to nonpotable water recycling and water reuse, the LADWP Board of Commissioners will consider staff recommendations. Although the staff Recommended Alternative recognizes the potential for groundwater replenishment, groundwater replenishment is not recommended at this time. For project-level approval of each component of an alternative, the certified EIR will be the CEQA clearance for the approval of the individual component, regardless of the entity having jurisdiction over that component.

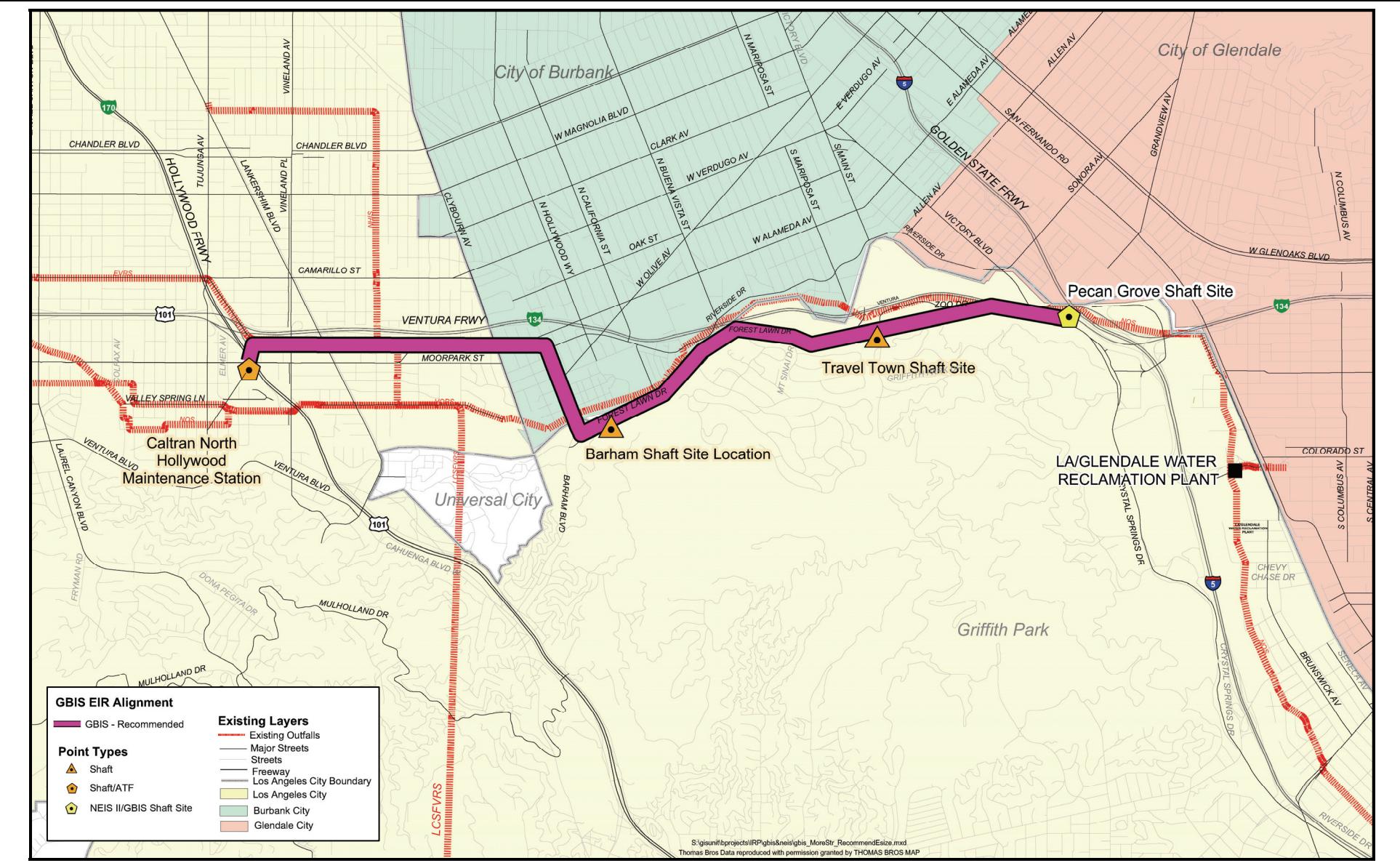


**Figure ES-2**  
**Staff Recommended NEIS II Alignment**

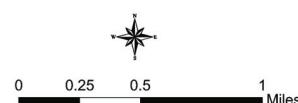


Source: Bureau of Sanitation, City of Los Angeles

Integrated Resources Plan  
Environmental Impact Report



**Figure ES-3**  
**Staff Recommended GBIS Alignment**



For components analyzed at a program level in this EIR, supplemental environmental review will be conducted in the future. In addition, if the City decides to pursue groundwater replenishment in the future, a project-level environmental review will be conducted. Approval of each component will require findings (CEQA Guidelines, Section 15091), a possible Statement of Overriding Considerations (CEQA Guidelines, Section 15093), and a Mitigation Monitoring and Reporting Program (CEQA Guidelines, Section 15097).

## ES6 Areas of Controversy

In accordance with Section 15123 of the CEQA Guidelines, this section summarizes the areas of controversy known to the City of Los Angeles and includes issues raised by the public as part of the scoping process. The following areas of controversy are known to exist and were discussed in the Draft EIR: location of upgrades to treatment plants, replenishment of groundwater with recycled water, and construction of tunnels in areas of groundwater contamination. This section discusses an additional area of controversy (the selection of a staff recommended GBIS Alignment) that was raised during the Draft EIR public review and comment period.

Of the approximately 2,750 letters received during the public review period for the Draft EIR, the majority focused on the GBIS alignment. Many residents who live in the City or in Burbank, including the Rancho area, expressed concerns about impacts of the GBIS North Alignment, specifically about construction and operational impacts associated with the Valley Heart Shaft Site. As a consequence, many of the comments received expressed that the GBIS South Alignment should be implemented rather than the GBIS North Alignment.

Contrary views also were expressed regarding the GBIS South Alignment, particularly by many residents located in the community of Toluca Lake who opposed the GBIS South Alignment on the basis of potential impacts to residential areas.

In response to these comments and in an effort to minimize the impacts of independently implementing either of the GBIS alignments evaluated in the Draft EIR, the City determined that combining portions of the two GBIS alignments would substantially reduce potential impacts and concerns for the GBIS alignment (see Section ES4.1 and Section 1.5 of this Final EIR). The City distributed a notice to various stakeholders and agencies on February 27, 2006 (during the review and comment period), identifying the staff recommended GBIS Alignment and extending the public review and comment period to March 31, 2006 (the public review period commenced November 30, 2005). Some of the comments received were in support of or opposed to the staff recommended GBIS Alignment. Sections 1.3 and 1.5 discuss in greater detail the actions that occurred subsequent to the release of the Draft EIR and the rationale for the selection of the staff Recommended Alternative.

## ES7 Issues to be Resolved

The issues to be resolved, as required by Section 15123 of the CEQA Guidelines, are the same as those presented in the Draft EIR. These issues are discussed in the subsections below.

### **ES7.1 Selection of a Staff Recommended Alternative**

This Final EIR resolves this issue by recommending Alternative 4 as the staff Recommended Alternative. The recommendation has been made, in part, because Alternative 4 reserves the ability for future expansion of wastewater treatment capacity at Tillman, while recognizing and supporting potential groundwater replenishment that the City could decide to pursue at a later time. The staff Recommended Alternative is described in Section 1.5 of this Final EIR.

### **ES7.2 Construction Method for the VSLIS**

The VSLIS would be approximately 8.5 miles long, extending generally from the western terminus of GBIS in the Toluca Lake area (Caltrans North Hollywood Maintenance Yard) northwest to Tillman. VSLIS could be constructed using either standard open-trench methods or tunneling. If the VSLIS is constructed by tunneling, drop structures could be required. Design parameters will determine the better method to use, which would be the subject of future environmental review. The VSLIS is evaluated at a program level in this EIR and is discussed in greater detail in Section 2.2.2.1 of the Draft EIR.

### **ES7.3 Groundwater Replenishment with Recycled Water**

Groundwater replenishment with advanced treated recycled water is included in the EIR as a potential option for increasing recycled water usage in the City of Los Angeles. As discussed in Section ES1.5.2 and in Section 2.2.2.2 of the Draft EIR, groundwater replenishment with advanced treated water for indirect potable reuse is evaluated in a program-level analysis in the Draft EIR. If the City decides to pursue groundwater replenishment in the future, a project-level environmental review would be conducted.

Following certification of this EIR and approval of an Alternative, groundwater replenishment with recycled water would not be implemented until the City of Los Angeles makes an independent decision to do so. A focused public discussion of the use of recycled water for groundwater replenishment would be necessary and would have to be considered during the decisionmaking process for implementing groundwater replenishment with recycled water. Future environmental documentation would be required for project-level implementation of this approach to increasing recycled water use in the City of Los Angeles.

## **ES8 Unavoidable Significant Adverse Impacts**

CEQA Guidelines (Section 15126.2) require the disclosure of significant environmental effects that cannot be avoided if a project is implemented. Section 3 of the Draft EIR identifies the anticipated environmental effects for each resource area, identifies mitigation measures for potentially significant impacts, and determines if impacts are significant after implementation of mitigation. Significant impacts that remain after implementation of mitigation are considered to be significant unavoidable adverse impacts. Significant unavoidable adverse impacts are summarized in Table ES-1 of this Final EIR and are described in detail in Section 3 of the Draft EIR.

## **ES9 Environmentally Superior Alternative**

As discussed in the Draft EIR, all of the project alternatives are deemed to be superior to the No Project Alternative because they: (1) are designed to ensure that adequate wastewater treatment and conveyance capacity exist to prevent sewage overflows, (2) would comply with effluent quality requirements of the National Pollutant Discharge Elimination System, and (3) would meet the requirements of applicable laws and regulations. On the basis of the analysis conducted in the Draft EIR Alternative 1, Hyperion Expansion to 500 mgd, is deemed to be the Environmentally Superior Alternative. The identification of the staff Recommended Alternative, Alternative 4, is based on how effectively the alternative achieves the Project objectives, which translates into Project benefits. Section 1.5 of this Final EIR discusses the Recommended Alternative selection process.

## **ES10 Summary of Environmental Effects**

Table ES-1 provides a summary of the environmental effects that would result from implementation of potential mitigation measures of the Project Alternatives, and the level of significance of the environmental impacts after mitigation.

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Aesthetics (AES)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>AES-1 Contrasting Elements:</b> Construction activities at the treatment plants and various shaft sites temporarily would introduce elements that could contrast with existing features that represent the valued aesthetic image of an area. However, because construction is temporary, potential contrasting elements are not considered substantial or significant.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ Alternatives 2 and 4 include the construction of Dry Weather Runoff – Treatment Wetlands. Treatment wetlands have the potential to enhance the aesthetic character of an area.</li> <li>▪ Although construction of the program-level components could introduce activities that contrast with valued views, such impacts are not considered substantial because they could be temporary.</li> <li>▪ New structures at the treatment plants would not be visible (Tillman and LAG) and/or would not exceed the height of existing plant facilities (Hyperion) and, therefore, would not introduce elements that substantially contrast with valued views or features.</li> <li>▪ New facilities at Hyperion would not offset the valued view of the ocean from Dockweiler Beach.</li> </ul>			

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
	<ul style="list-style-type: none"> <li>▪ Air treatment facilities (ATFs) at the Griffith Park, Pecan Grove, Valley Heart, and/or Woodbridge Park shaft sites could result in permanent facilities that contrast with existing features and the valued aesthetic image at the respective recreational areas.</li> <li>▪ Aboveground program-level structures such as pump stations, recycled water tanks, or Urban Runoff Plants (URPs) could introduce features that contrast with the existing areas or valued aesthetic conditions.</li> </ul>	Potentially Significant	<p><b>AES-MM-1:</b> Screen shaft sites in recreational and residential areas to minimize aesthetic incompatibility with nearby uses.</p> <p><b>AES-MM-2:</b> If air treatment facilities are in recreational facilities, they will be located in a manner that least affects the adjacent recreational uses.</p> <p><b>AES-MM-3:</b> Screen aboveground structures with architectural treatment and landscaping.</p> <p><b>AES-MM-4:</b> Design and locate permanent structures so that the existing valued natural or urban feature is not removed, altered, or destroyed; or so that key views are not blocked.</p> <p><b>AES-MM-5:</b> Construct pumping stations and storage tanks below ground if feasible. For portions or all of storage tanks located aboveground, paint the tanks with nonglare material and an appropriate color. Provide landscaping.</p> <p><b>AES-MM-6:</b> Design URPs to minimize contrast with nearby areas.</p> <p><b>AES-MM-9:</b> To further avoid potential conflicts with the existing equestrian trails at Pollywog during construction, the Valley Heart Shaft Site would be relocated to the west end of the site. Access to the relocated shaft site would occur from Keystone Street to minimize potential vehicle-equestrian</p>	Less Than Significant

Table ES-1. Summary of Environmental Effects <i>Integrated Resources Plan EIR</i>				
Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
			<p>conflicts. This measure would also minimize potential aesthetic impacts to nearby residences.</p> <p><b>AES-MM-10:</b> To further minimize potential visual and recreational resource impacts specific to the location of an ATF at the Valley Heart Shaft Site, the ATF shall be relocated to the west end of the Pollywog site. Access to the ATF would occur from Keystone Street.</p>	
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AES-2 View Obstructions:</b> Construction activities associated with the Alternatives temporarily would introduce elements that could obstruct recognized or valued views including views of the ocean. However, construction activities would be temporary and would result in less-than-significant impacts.</li> <li>▪ The new digesters and truck-loading facility would be below the 120-foot landscape mitigation level and would not be visible from residences along the northern portion of the bluffs. The new truck-loading facility would be visible from some southern residences along the bluff, but would not result in new view blockages. Views of the new digesters from the southern residences along the bluff would be blocked by the existing dunes.</li> <li>▪ Operational activities associated with the Proposed Alternatives would permanently obstruct recognized or valued views, particularly from the Wet Weather Runoff URP and recycled water storage tanks. Alternatives 2 and 4 include the construction of treatment wetlands that have the potential to enhance views of the area.</li> </ul>	<p>Less Than Significant</p> <p>Potentially Significant</p>	<p>None Required</p> <p><b>AES-MM-3 through AES-MM-5</b></p>	<p>Less Than Significant</p> <p>Less Than Significant</p>

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>AES-3 Scenic Designations:</b> Construction activities associated with Hyperion, LAG, NEIS II, and the GBIS North Alignment would not occur along City-designated scenic highways, corridors, or parkways.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ Although construction at Tillman could be visible from Woodley Avenue, a scenic highway, construction would be temporary and not significant.</li> <li>▪ Although construction at the Travel Town Shaft Site and Barham Shaft Site could be visible from Forest Lawn Drive, a scenic highway, construction would be temporary and not significant.</li> <li>▪ Construction of program-level components next to or along scenic highways would not be significant because such activities would be temporary.</li> <li>▪ Operation of project-level components would not result in impacts to scenic highways because they would be underground or would not affect the scenic highway designations.</li> <li>▪ Operation of the program-level components (except recycled water distribution and URPs) would not significantly affect scenic highways.</li> </ul>			
	<ul style="list-style-type: none"> <li>▪ Potential aesthetic impacts could occur to state- or City-owned scenic highways, corridors, or parkways during the operation phase, related to aboveground structures associated with the recycled water distribution system and dry and/or wet weather URPs.</li> </ul>	Potentially Significant	<b>AES-MM-3 through AES-MM-6</b>	Less Than Significant

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<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	<ul style="list-style-type: none"><li>▪ <b>AES-4 Intrusive lighting:</b> Construction for the NEIS II and GBIS shaft sites under all Alternatives temporarily would introduce new nighttime lighting that could be intrusive.</li></ul>	Potentially Significant	<b>AES-MM-7:</b> Screen from view construction sites in residential areas to minimize light intrusion. Direct lighting onto the construction area and avoid use of outwardly directed spotlights. Shield lights to isolate the illuminated area.  <b>AES-MM-8:</b> Minimize light intrusion during operation of the ATF at Valley Heart and Woodbridge Park, pumping stations, storage tanks, and URPs, located in residential areas. Direct lighting onto the structure, avoid outwardly directed spotlights, and shield lights.	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"><li>▪ Operation associated with the ATF at Valley Heart and Woodbridge Park (GBIS) and the program-level components for all Proposed Alternatives would permanently introduce structures that would include additional lighting that could impact adjacent light-sensitive areas.</li></ul>			

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
	<ul style="list-style-type: none"> <li>▪ Nighttime construction at the treatment plants would be minimal and would not intrude on residences.</li> <li>▪ Construction of NEIS II and GBIS accessory structures at night would not be extensive and would be directed away from residences.</li> <li>▪ Construction of program-level components is not expected to require substantial levels of night lighting; if night lighting is required, it would be of short duration and shielded from residences.</li> <li>▪ Operation of the project-level components of the Proposed Alternatives would introduce security lighting at various facilities, but substantial impacts are not anticipated for most facilities because such lighting would be similar to existing conditions or because light-sensitive receptors are not present.</li> </ul>	Less Than Significant	<p><b>AES-MM-10</b> To further minimize operational light and glare from the proposed improvements at Hyperion on the adjacent light-sensitive areas along the bluff in the City of El Segundo, the following mitigation has been added:</p> <p><b>AES-MM-11:</b> Prior to the operation of the proposed improvements at Hyperion, a lighting control plan shall be required for each of the new facilities. The lighting control plan would include, as applicable, but not limited to, measures that minimize light intrusion (such as installing the lowest illumination feasible, using soft yellow/orange/pink lighting elements, and low-pressure sodium elements), and directing lighting away from adjacent light-sensitive areas and/or adding elements to shield adjacent light-sensitive areas from spillover lighting (elements such as baffles, shades, and hoods that would direct lighting downward).</p>	Less Than Significant
<b>Agricultural Resources (AG)</b>				
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AG-1 Conversion of Important Farmland:</b> Improvements at Hyperion, Tillman, LAG, NEIS II, and GBIS, or the program-level components, would not affect important farmland.</li> <li>▪ Biosolids generated at Hyperion would be applied to land at the City of Los Angeles Green Acres Farm in Kern County, but the farmland is designated as Irrigated Farmland not Important Farmland. Land applications of biosolids to irrigated farmland would convert agricultural land to nonagricultural uses.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
<b>Air Quality (AQ)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>AQ-1 Construction Emissions:</b> Construction of the Proposed Alternatives would exceed the South Coast Air Quality Management District (SCAQMD) threshold of significance for all criteria pollutants. Construction of Alternative 1 would emit a greater amount of carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxide (SO<sub>x</sub>) than Alternatives 2 through 4, but equal or slightly lower levels of nitrogen oxide (NO<sub>x</sub>) and particulate matter of less than 10 microns (PM<sub>10</sub>) emissions. Construction emissions could cause localized exceedances of the California ambient air quality standards (CAAQS) and national ambient air quality standards (NAAQS) at sensitive receptor locations during construction.</li> </ul>	Significant	<b>AQ-MM-1:</b> Emulsified diesel fuel will be used for all construction equipment. <b>AQ-MM-2:</b> Diesel particulate filters will be used for all construction equipment. <b>AQ-MM-9:</b> The following measures shall be implemented at Hyperion, Tillman or LAG, as applicable and feasible, to further reduce emissions during construction: Provide onsite lunch trucks/facilities to reduce offsite worker vehicle trips; use zero-VOC or low-emitting architectural coatings on buildings; apply paint by hand instead of spray guns. <b>AQ-MM-10:</b> To further reduce odors during demolition of existing facilities at Hyperion, the surfaces of the old equipment shall be rinsed with chemicals, such as sodium hypochlorite, hydrogen peroxide or other oxidants; and, if applicable to the process being used, odor-suppressing foams shall be used to minimize release of odors.	Significant
Alternative 2				
Alternative 3				
Alternative 4				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>AQ-2 Operational Emissions:</b> Operation of the Proposed Alternatives would exceed the SCAQMD threshold of significance for volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) but not for other criteria pollutants.</li> <li>▪ Of the four Proposed Alternatives, Alternative 2 would result in the greatest level of emissions during operation.</li> </ul>	Significant	No feasible mitigation is available to reduce NO <sub>x</sub> emissions from motor vehicles.	Significant
Alternative 2				
Alternative 3				
Alternative 4				

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Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AQ-3 Construction Odors:</b> During construction at Hyperion, Tillman, and LAG, NEIS II, GBIS, and VSLIS, odors could be released.</li> </ul>	Potentially Significant	<b>AQ-MM-3:</b> Schedule construction activities such that odorous sources are uncovered or unsealed for as short a time as possible. <b>AQ-MM-4:</b> Schedule construction activities such that odorous sources are uncovered or unsealed during the time of day when odors are observed to be at a minimum (generally during low-flow hours).	Not Significant
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AQ-3 Operational Odors:</b> Increased wastewater and/or biosolid throughput at Hyperion for Alternative 1, and only increased biosolids throughput for Alternatives 2, 3, and 4, potentially could increase odor impacts at nearby receptors relative to existing conditions.</li> <li>▪ Storage at Tillman and LAG for Alternatives 1 through 4 could result in potential odor impacts to nearby receptors.</li> <li>▪ Operation of ATFs for NEIS II, GBIS, and possibly VSLIS under Alternatives 1 through 4 could result in objectionable odors at nearby receptors.</li> <li>▪ Of the four Proposed Alternatives, Alternative 1 could have the greatest potential for odor to occur because of the increased water capacity at Hyperion.</li> </ul>	Potentially Significant	<b>AQ-MM-5:</b> Implement a multiphased odor mitigation program at Tillman and LAG. Conduct odor control studies to identify odor sources and possible odor reduction measures, then implement the identified measures. For Hyperion, implement various odor control projects. <b>AQ-MM-6:</b> Implement short-term and long-term odor control projects at Hyperion. <b>AQ-MM-7:</b> Locate ATF exhaust stacks a minimum of 100 feet from the nearest sensitive receptor, if feasible. <b>AQ-MM-8:</b> Set an ATF stack exhaust concentration performance standard limit equal to or less than 0.5 part per million, if feasible.	Potentially Significant at Hyperion. Potentially Significant for NEIS II, GBIS, and VSLIS. Less Than Significant for Tillman and LAG.

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AQ-4 Toxic Air Contaminants-Construction:</b> The incremental health risk impacts from construction emissions (diesel particulate matter) are expected to be less than the SCAQMD significance threshold for individual lifetime cancer risk because construction emissions would occur over a relatively short period of time compared to an assumed 70-year exposure period for residential cancer risk.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>AQ-4 Toxic Air Contaminants-Operation:</b> Increased wastewater and biosolids throughput at Hyperion would increase toxic air contaminant (TAC) emissions and associated health risk impacts relative to existing conditions; however, the health risk impacts would be less than significant for all health risk categories.</li> <li>▪ Improvements at Tillman would not result in substantial changes in TAC emissions or associated health risks. The storage tanks at Tillman and LAG potentially could generate additional emissions of hydrogen sulfide and ammonia at the plants. However, the health risk impacts from Tillman and LAG would remain less than significant.</li> </ul>	Less Than Significant	None Required	Less Than Significant

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	<ul style="list-style-type: none"><li>▪ <b>AQ-5 Air Quality Management Plan Conflicts:</b> Implementation of Proposed Alternatives would not generate enough trips to exacerbate any existing violations of the state 1- and 8-hour CO concentration standard or to result in new CO violations and, therefore, is consistent with the Air Quality Management Plan (AQMP).</li></ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"><li>▪ The Proposed Alternatives would not directly increase population in the region because no residential uses are being proposed. The Proposed Alternatives would result in a small increase in employment, which would not cause exceedances in the Southern California Association of Governments (SCAG) projections for employment. Therefore, the Proposed Alternatives would be consistent with the AQMP.</li><li>▪ The Proposed Alternatives were developed to meet the projected 2020 population; therefore, the emissions generated from the Proposed Alternatives have been accounted for in the applicable State Implementation Plan (SIP). The Proposed Alternatives meet the general conformity requirements per 40 CFR 93.158.</li></ul>			

Table ES-1. Summary of Environmental Effects <i>Integrated Resources Plan EIR</i>				
Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Biological Resources (BIO)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>BIO-1 Designated Species:</b> Nesting raptor and other native birds could be affected by construction activities at the Griffith Park Riverside East and Barham shaft sites, if present. Additionally, at the Barham Shaft Site, construction activities could affect Greata's aster, Braunton's milk-vetch, Nevin's barberry, and Parish's gooseberry, if present.</li> <li>▪ Potential impacts to biological resources from construction of program-level components could occur if future locations of these components were to be in a non-urban, undeveloped, or open space area.</li> </ul>	Potentially Significant	<p><b>BIO-MM-1:</b> If habitat suitable for raptor nesting or other native bird species occurs on any Proposed Project site, a survey for active raptor nests will occur prior to construction. Restrict construction activities in the vicinity of active nests.</p> <p><b>BIO-MM-2:</b> Conduct surveys at the Barham Shaft Site to identify the presence of special-status plant species. Mitigation will be determined through coordination between the City and applicable resource agencies.</p> <p><b>BIO-MM-3:</b> If future locations of program-level components have the potential to affect biological resources, conduct surveys for biological resources during the design process. Avoid biological resources through design modification, or other measures as determined in coordination with applicable agencies.</p>	Less Than Significant
Alternative 2	<ul style="list-style-type: none"> <li>▪ Operation of Alternative 1 would not result in impacts to the related marine environment in and around the 5-mile outfall from Hyperion.</li> </ul>	Less than Significant	<p>None Required</p> <p>Mitigation measure <b>WQ-MM-1</b> will be implemented under potential Hydrology and Water Quality impacts.</p>	Less Than Significant
Alternative 3				
Alternative 4				

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>BIO-2 Wetlands:</b> Potential impacts to wetlands from construction of program-level components could occur.</li> </ul>	Potentially Significant	<b>BIO-MM-3</b> <b>BIO-MM-4:</b> Survey for the presence of wetlands in watercourses at locations downstream of where water would be diverted to the wastewater system, URPs, and/or treatment wetlands. If wetlands are present and could be affected by reduced flows, redesign the diversion and/or discharge locations to avoid an impact.	Less Than Significant
	<ul style="list-style-type: none"> <li>▪ None of the project-level components under Alternative 1 would affect wetlands.</li> <li>▪ Alternative 1 would result in slight reductions in the amount of flow to the Los Angeles River; and Alternatives 2, 3, and 4 would result in slight increases in flow to the Los Angeles River. However, impacts to wetlands are not anticipated because they are supported by groundwater and water levels are maintained by existing hydraulic controls.</li> </ul>	Less Than Significant	None Required	Less Than Significant

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>BIO-3 Sensitive Species Habitat:</b> Program-level components could affect biological resources if present at future component locations.</li> </ul>	Potentially Significant	<b>BIO-MM-3</b>	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ None of the project-level components under the Proposed Alternatives would affect the long-term survival of any special-status species.</li> <li>▪ Algal mats along the concrete sills of the lower portion of the Los Angeles River are used for foraging by shorebirds. The Proposed Alternatives would result in a minor reduction (Alternative 1) or minor increases (Alternatives 2, 3, and 4) in the average depth of flow on the concrete sill during the summer low flows. The minor changes in water depth on the sill are not anticipated to result in a substantial reduction in the extent or quality of the algal mats, which would continue to support foraging shorebirds.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>BIO-4 Tree Ordinances and Policies:</b> Construction at LAG could affect coast live oak and California sycamore, construction at the Riverside East Shaft Site could affect coast live oak, California black walnuts, and California sycamores, and construction at the Barham Shaft Site could affect oak trees.</li> <li>▪ Program-level components could affect protected trees if present at future component locations.</li> </ul>	Potentially Significant	<b>BIO-MM-5:</b> Prior to construction, a qualified biologist will review the City of Los Angeles tree ordinances. The qualified biologist then will identify and quantify the protected trees that need to be removed at the Riverside East Shaft Site, Barham Shaft Site, and/or other component locations, as applicable. Any replacement requirements listed in the City of Los Angeles ordinance with regard to protected oak trees will be obeyed.	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ The Proposed Alternatives would not affect the Griffith Park SEA or conflict with any Habitat Conservation Plans or Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans</li> </ul>	Less Than Significant	None Required	Less Than Significant

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Coastal Resources (CR)</b>				
Alternative 1	▪ <b>CR-1 Coastal Access:</b> Construction of low-flow diversion devices along the Santa Monica Bay, Wet Weather Runoff – URPs, and recycled water distribution systems in the coastal zone temporarily could delay access to beaches and coastal recreation	Less Than Significant	None Required	Less Than Significant
Alternative 2	▪ Operation of the Proposed Alternatives would not impede coastal access and would comply with coastal permit requirements, if applicable.			
Alternative 3				
Alternative 4				
Alternative 1	▪ <b>CR-2 Coastal Recreation:</b> Construction for Hyperion and program-level components in the coastal zone generally would be confined to the project sites and would be temporary; significant impacts to coastal recreation would not occur.	Less Than Significant	None Required	Less Than Significant
Alternative 2	▪ Operation of the Proposed Alternatives would not affect coastal recreation.			
Alternative 3				
Alternative 4				
Alternative 1	▪ <b>CR-3 Marine Environment:</b> Alternative 1 would increase wastewater treatment capacity at Hyperion, which would increase the amount of effluent discharge from the 5-mile outfall, but the additional discharges would meet discharge requirements.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
Alternative 1	▪ Construction activities would be required to regulate discharges during construction in compliance with discharge permit standards and requirements. This would ensure that any potential secondary impact of construction on the marine environment would be less than significant.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	▪ Advanced treatment at upstream treatment plants (Tillman and/or LAG) would discharge brine to the sewer system, which could affect the ability of Hyperion to meet effluent quality standards at the 5-mile outfall.	Potentially Significant	<b>WQ-MM-1:</b> Complete a pilot study on brine effects at Hyperion and establish the operating parameters at upstream plants.	Less Than Significant

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	▪ <b>CR-4 Coastal Land Resources:</b> None of the Proposed Alternatives would affect sensitive coastal land resources.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
<b>Cultural Resources (CUL)</b>				
Alternative 1	▪ <b>CUL-1 Paleontological Resources:</b> Construction in sensitive geologic units could encounter paleontological resources. Construction at Hyperion, Tillman, and LAG could encounter paleontological resources. Tunneling for NEIS II, GBIS, and VSLIS could damage paleontological resources.	Potentially Significant	<b>CUL-MM-1:</b> Prepare paleontological resources awareness material by a qualified paleontologist and distribute it to project staff, as applicable. <b>CUL-MM-2:</b> Monitor excavations with a high potential to encounter resources. <b>CUL-MM-3:</b> Halt construction to allow removal of abundant or large specimens of regional or statewide importance. <b>CUL-MM-4:</b> Curate recovered resources of regional or statewide importance to a qualified repository. <b>CUL-MM-5:</b> Prepare a findings report on the recovered specimens and submit to the LACM.	Less than significant for construction at Hyperion, Tillman, LAG, and program-level components.
Alternative 2				Potentially Significant for NEIS II, GBIS, and VSLIS.
Alternative 3				
Alternative 4	▪ Construction of the program-level components of the Proposed Alternatives would have a low to high potential to encounter paleontological resources depending on the sensitivity of the geologic units.			

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	<ul style="list-style-type: none"><li>▪ <b>CUL-2 Archaeological Resources:</b> Hyperion, Tillman, and LAG have a low potential to encounter archaeological resources.</li></ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3	<ul style="list-style-type: none"><li>▪ For NEIS II and GBIS, surface construction at locations greater than 0.25 mile of the Los Angeles River or other tributaries have a low potential to encounter archaeological resources.</li></ul>			
Alternative 4	<ul style="list-style-type: none"><li>▪ Smart Irrigation would not affect archaeological resources.</li><li>▪ For NEIS II and GBIS, excavations and tunneling within 0.25 mile of the Los Angeles River or other tributaries have a high potential to affect archaeological resources.</li><li>▪ Program-level components other than Smart Irrigation would have an indeterminate potential to affect archaeological resources.</li></ul>	Potentially Significant	<p><b>CUL-MM-6:</b> Develop a Cultural Resources Monitoring Plan for the IRP.</p> <p><b>CUL-MM-7:</b> Monitor excavations in Holocene deposits with a high potential to contain archaeological resources.</p> <p><b>CUL-MM-8:</b> Develop a Discovery and Treatment Plan for the IRP.</p> <p><b>CUL-MM-9:</b> Prepare a Findings Report for recovered artifacts.</p> <p><b>CUL-MM-10:</b> Conduct project-level studies for program-level components when design and location details are known.</p>	Potentially significant for tunneling associated with NEIS II, GBIS, and VSLIS.  Less than significant for surface construction of Proposed Alternatives.
Alternative 1	<ul style="list-style-type: none"><li>▪ <b>CUL-3 Traditional Cultural Property:</b> No traditional cultural properties were identified in the vicinities of the Proposed Alternatives but program-level component locations are unknown.</li></ul>	Low Potential for Significance	<p><b>CUL-MM-6 through CUL-MM-10</b></p> <p><b>CUL-MM-11:</b> Coordinate with Native American tribes once specific locations of program-level components are known.</p>	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				



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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	▪ <b>CUL-4 Human Remains:</b> Hyperion and Tillman would have a low potential to encounter human remains.	Low to high potential to encounter human remains	<b>CUL-MM-6 through CUL-MM-10</b>	Potentially Significant
Alternative 2	▪ LAG would have a low potential to encounter human remains.			
Alternative 3	▪ NEIS II and GBIS would have a low potential to encounter human remains, except with 0.25 mile of the Los Angeles River or tributaries, which could have a high potential.			
Alternative 4	▪ Program-level components (except Smart Irrigation) would have an indeterminate to low potential for encountering human remains. Smart irrigation would have a low potential.			
Alternative 1	▪ <b>CUL-5 Historic Resources:</b> None of the Proposed Alternatives would affect historic resources.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
<b>Environmental Justice</b>				
Alternative 1	▪ <b>Disproportionate Effects:</b> The Proposed Alternatives would not disproportionately affect minority or low-income populations.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Geology (GEO)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>GEO-1 Geologic Hazards:</b> There is a potential for breakage of NEIS II from a surface rupture along the Hollywood-Raymond fault.</li> </ul>	Potentially Significant	<b>GEO-MM-1:</b> In the event of a catastrophic break in NEIS II, reroute flows and repair the break. <ul style="list-style-type: none"> <li>▪ Incorporate design features to minimize the potential for breakage.</li> <li>▪ Consider a vault reach at the fault crossing.</li> <li>▪ Consider a larger diameter tunnel in the fault reach.</li> </ul>	Potentially Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ Improvements at Hyperion, Tillman, and LAG would not result in significant geologic impacts.</li> <li>▪ NEIS and GBIS would be below soils susceptible to liquefaction or would incorporate design features recommended in geotechnical reports.</li> <li>▪ NEIS II West Alignment would not cause landslides along the Elysian Hills.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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Table ES-1. Summary of Environmental Effects <i>Integrated Resources Plan EIR</i>				
Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1				
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>GEO-2 Erosion or Settlement:</b> Tunneling for NEIS II, GBIS, and VSLIS could cause ground settlement from ground loss at the tunnel boring face. Such ground loss could adversely affect structures located above.</li> </ul>	Potentially Significant	<p><b>GEO-MM-2:</b></p> <ul style="list-style-type: none"> <li>▪ Require the tunnel contractor to limit surface settlement to 0.75-inch (19 mm) along the tunnel alignment as a performance standard, but establish a goal to limit surface settlement to 0.50-inch (12.7 mm) or less.</li> <li>▪ Require the use of compaction grouting or other method to fill voids.</li> <li>▪ Grout in advance of the tunnel to provide adequate soil support.</li> <li>▪ Monitor settlement along the Project alignment.</li> <li>▪ Conduct a preconstruction survey of buildings.</li> <li>▪ Monitor soils from tunneling relative to the anticipated soil conditions in the geotechnical report.</li> <li>▪ Specify the capability of the earth pressure balance or slurry shield tunneling machines to process large cobbles and boulders.</li> <li>▪ Consult and coordinate with the U.S. Army Corps of Engineers (USACE) prior to the start of construction.</li> </ul>	Potentially Significant

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	▪ <b>GEO-3 Mineral Resources:</b> There would be no impacts related to mineral resources associated with the Proposed Alternatives.	No Impact	None Required	No Impact
Alternative 2				
Alternative 3				
Alternative 4				
<b>Hazards and Hazardous Materials (HAZ)</b>				
Alternative 1	▪ <b>HAZ-1 Emergency Response:</b> Proposed Alternatives would not substantially affect emergency response plans/routes during construction. Construction occurring at the treatment plants would not substantially interfere with emergency response plans. Construction occurring outside the treatment plants would be coordinated with emergency response providers and Los Angeles Department of Transportation (LADOT) for traffic lane requirements.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
Alternative 1	▪ <b>HAZ-2 Public or Environmental Hazards:</b> Construction, demolition, and earthwork could encounter contaminated soil, groundwater, or construction- and demolition-derived waste. Following proper health and safety plans, sampling and analysis plans, and Occupational Safety and Health Administration guidelines would protect workers and the environment.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
Alternative 2	▪ <b>HAZ-3 Health Hazards:</b> Alternatives 2 and 4 could result in health nuisances related to mosquito vectors from treatment wetlands.	Potentially Significant	<b>HAZ-MM-1:</b> Implement design and operational controls to minimize vector nuisances. Controls may include alternative wetlands designs (subsurface-flow wetlands) and/or a vector control plan and measures approved by the Vector Control District.	Less Than Significant
Alternative 4				



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<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
<b>Hydrology and Water Quality (WQ)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>WQ-1 Water Hazards:</b> Implementation of the Stormwater Pollution Prevention Plan (SWPPP) or local construction program Best Management Practices (BMPs) for the project-level and program-level components would prevent the construction process from exposing people or property to water-related hazards, such as flooding.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ During operation, overall runoff volume generated by the additional impervious areas would be minimal compared to the overall impervious area within the Los Angeles River watershed and would not expose people or property to water-related hazards.</li> <li>▪ All stormwater generated at the treatment plants would be collected onsite and discharged to the headworks for treatment. Stormwater generated onsite combined with the proposed effluent discharge volume would not exceed the discharge capacities of the facility. For construction of components outside the treatment plants, Stormwater Pollution Prevention Plans could be required as part of construction.</li> </ul>			

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>WQ-2 Violations or Movement:</b> Operation of Proposed Alternative 1 would generate up to 16 mgd of brine from advanced treatment at Tillman. Proposed Alternative 2 would generate up to 27.5 mgd, and Proposed Alternatives 3 and 4 up to 25 mgd. The brine water quality potentially could affect the ability of Hyperion to comply with its National Pollutant Discharge Elimination System discharge permit.</li> </ul>	Potentially Significant	<b>WQ-MM-1:</b> Prior to installing advanced treatment facilities at Tillman and/or LAG, additional studies will be completed to determine if brine from the advanced treatment process will be compatible with the treatment processes and to establish operating parameters for Tillman and/or LAG to ensure that brine will not cause water quality violations at the point of discharge from Hyperion and/or LAG, as applicable.	Less Than Significant
Alternative 2	<ul style="list-style-type: none"> <li>▪ Proposed Alternative 2 would discharge the most brine to the Hyperion influent.</li> </ul>			
Alternative 3	<ul style="list-style-type: none"> <li>▪ Dewatered groundwater (during construction) would be treated prior to discharge to the sewer.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 4	<ul style="list-style-type: none"> <li>▪ Construction would implement BMPs and comply with SWPPP to minimize impacts to runoff quality on receiving waters.</li> </ul>			
	<ul style="list-style-type: none"> <li>▪ NEIS II and GBIS would cross beneath the Los Angeles River but would not affect flow in the River.</li> </ul>			
	<ul style="list-style-type: none"> <li>▪ Initial dilution ratios at the Hyperion outfall would not be substantially affected, and Tillman effluent quality would be improved.</li> </ul>			
	<ul style="list-style-type: none"> <li>▪ Implementation of runoff measures would improve water quality.</li> </ul>			
	<ul style="list-style-type: none"> <li>▪ Alternative 1 would result in somewhat lower levels of discharges to the Los Angeles River than currently occurs (84 mgd) and Proposed Alternatives 2, 3, or 4 would result in somewhat higher levels of overall discharges to the Los Angeles River. The changes would not affect water movement in the river or result in permit violations.</li> </ul>			

**Table ES-1. Summary of Environmental Effects  
Integrated Resources Plan EIR**

Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>WQ-3 Groundwater:</b> Construction of the Proposed Alternatives would have the potential to encounter groundwater. Depending on the depth to groundwater, subsurface dewatering could be necessary. Existing groundwater contamination plumes would not be affected. Treatment of contaminated groundwater would keep impacts below significance.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2	<ul style="list-style-type: none"> <li>▪ The use of grouting during NEIS II and GBIS construction would keep the tunnels from serving as potential pathways for groundwater contamination movement.</li> <li>▪ Potential breaks along recycled water pipelines would not result in significant impacts because they would comply with Title 22 separation requirements and because breaks would be repaired quickly.</li> <li>▪ Capture and percolation projects would not affect groundwater quality or contamination plumes.</li> <li>▪ Replenishment at spreading grounds would occur within existing operational parameters and would not result in groundwater quality or quality-related impacts.</li> <li>▪ Groundwater replenishment with recycled water from Tillman could only occur under permit from DHS and would only use high-quality water that undergoes advanced treatment. Diminished groundwater quality or production wells are not anticipated.</li> <li>▪ No increases in replenishment would occur at the Tujunga Spreading Grounds; therefore, no impacts related to methane migration in the vicinity of the Sheldon-Arleta Landfill would occur.</li> </ul>	Less Than Significant	None Required	Less Than Significant
Alternative 3	<ul style="list-style-type: none"> <li>▪ During operation, NEIS II, GBIS, and VSLIS pipelines associated with components could suffer a break or leak from an earthquake, although this is highly unlikely. Potential, therefore, would exist for a significant secondary impact to water quality at extraction wells downgradient of a pipeline break or leak.</li> </ul>	Potentially Significant	<b>GEO-MM-1</b> <b>WQ-MM-2:</b> Design fault crossings for NEIS II, GBIS, and possibly VSLIS to accommodate fault ruptures. Inspect and repair sewers after each major earthquake.	Potentially Significant
Alternative 4				

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
<b>Land Use (LU)</b>				
Alternative 1	▪ <b>LU-1 Plan Consistency:</b> Construction of the facilities could result in temporary disruption to recreational uses and temporary delays or disruptions to coastal access.	Less Than Significant	None Required	Less Than Significant
Alternative 2	Operation of ATFs within open space or public facility designated areas would require a Conditional Use Permit (CUP). Therefore, with construction being temporary and the successful issuance of a CUP for operation, no land use plan inconsistencies are anticipated.			
Alternative 3				
Alternative 4				
Alternative 1	▪ <b>LU-2 Neighborhood/Community Disruptions:</b> None of the Proposed Alternatives is expected to disrupt, divide, or isolate existing land uses or communities.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				

Table ES-1. Summary of Environmental Effects <i>Integrated Resources Plan EIR</i>				
Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Noise and Vibration (NV)</b>				
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>NV-1 Construction Noise:</b> Construction at Hyperion, Tillman, and LAG would increase noise levels by 5 or more A-weighted decibels (dBA).</li> </ul>	Potentially Significant	<p><b>NV-MM-1:</b> Require all construction equipment to be equipped with mufflers and other suitable noise-attenuation devices.</p> <p><b>NV-MM-2:</b> Install temporary noise barriers along the perimeter of the construction sites, as applicable.</p> <p><b>NV-MM-3:</b> Prepare a noise control plan that complies with the City of Los Angeles noise ordinance, which identifies the best locations for noise-monitoring activities, establishes reporting requirements and complaint response procedures, sets restrictions on equipment with backup alarms or any other devices that typically emit banging, clanging, buzzing, or other annoying noises.</p> <p><b>NV-MM-4:</b> Notify nearby (within 2,000 feet of construction shaft sites) residents of the construction schedule. Post signs at the construction sites to identify the duration of construction, and provide call numbers for complaints and information.</p> <p><b>NV-MM-5:</b> Establish a community liaison program to provide communication between the community and the City of Los Angeles and help resolve noise problems that may arise during project construction.</p>	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ Construction of NEIS II West Alignment would incrementally increase noise levels by 5 or more dBA at about 15 single-family residences, 2 multifamily residential buildings, 2 schools, and 2 parks.</li> <li>▪ Construction of NEIS II East Alignment would increase noise levels by 5 dBA or more at approximately 28 single-family residences, 14 multifamily residential buildings, 3 schools, 1 church, and 1 park.</li> <li>▪ Construction of GBIS South Alignment would increase noise levels by 5 dBA or more at approximately 88 single-family residences, 19 multifamily residential buildings, 2 schools, 2 churches, 4 parks, and 1 other sensitive receptor.</li> <li>▪ Construction of GBIS North Alignment would increase noise levels by 5 dBA or more at approximately 175 single-family residential units, 47 multifamily residential buildings, 2 schools, 1 church, and 5 parks.</li> <li>▪ Construction of VSLIS, the Recycled Water Distribution System, the Dry Weather Runoff Low-Flow Diversion, Dry Weather Runoff URPs, Wet Weather Runoff Onsite Management, Wet Weather Runoff URPs, and Wet Weather Runoff Non-Urban Regional Recharge would increase noise levels at nearby sensitive receptors by 5 dBA or more.</li> </ul>			

**Table ES-1. Summary of Environmental Effects  
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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>NV-2 Operational Noise:</b> Air treatment facilities for NEIS II, GBIS, and possibly VSLIS could generate noise levels that exceed 3 decibels (Community Noise Equivalent Level [CNEL]) at sensitive receptors.</li> </ul>	Potentially Significant	<b>NV-MM-6:</b> Conduct an acoustical analysis to determine the noise effects that dry and wet weather runoff URPs or air treatment facilities would have on nearby sensitive receptors. Locate the noisiest equipment for URPs and ATFs farthest from sensitive receptor.	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ Operation of the low-flow diversions and onsite management systems would not result in substantial noise increases. Operation of dry and wet weather URPs could result in increased noise levels at the sensitive receptors greater than 3 decibels (CNEL).</li> </ul>		<b>NV-MM-6:</b> Conduct an acoustical analysis to determine the noise effects that dry and wet weather runoff URPs or air treatment facilities would have on nearby sensitive receptors. Locate the noisiest equipment for URPs and ATFs farthest from sensitive receptor.	Less Than Significant
	<ul style="list-style-type: none"> <li>▪ Operation of the improvements at Hyperion, Tillman, and LAG would result in minor increases (less than 1 dBA) ambient noise levels at any of the nearby sensitive receptors.</li> <li>▪ Operational noise from maintenance vehicles would not be significant.</li> <li>▪ Pumps for low-flow diversion and onsite management systems would not cause substantial noise.</li> </ul>	Less than Significant	None Required	Less than Significant

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	▪ <b>NV-3 Groundborne Noise and Vibration:</b> Tunneling construction for NEIS II and GBIS could result in groundborne noise and vibrations that exceed thresholds along the tunnel alignments, which could be annoying to building occupants and sensitive receptors. Impacts could be more noticeable at night if continuous tunneling is required. Groundborne vibration levels from tunneling activities would not occur during operations.	Potentially Significant	<p><b>NV-MM-7:</b> Prepare and implement a control plan to the satisfaction of the Bureau of Engineering Geotechnical Engineering Division that ensures that groundborne vibration does not exceed the applicable levels at locations along the NEIS II and GBIS alignments. Tunneling and tunnel lining will not exceed "threshold" or "limiting" levels for groundborne noise and vibration.</p> <p><b>NV-MM-8:</b> Conduct preconstruction surveys to document the condition of buildings along the NEIS II, GBIS, and VSLIS alignments. If the VSLIS Alignment is constructed by tunneling, a groundborne vibration study will be conducted to determine the impact zone.</p> <p><b>NV-MM-9:</b> Monitor vibration levels along the selected NEIS II, GBIS, and VSLIS (tunnel). Implement a community information program during construction to inform residents about potentially intrusive groundborne noise and vibration and the expected duration of those effects. If vibration exceeds the threshold values, require the contractor to perform one or more of the following: 1) limit muck train operations beneath residential areas to between 7:00 a.m. and 9:00 p.m., 2) reduce muck train travel speed, and/or 3) inspect and maintain track and muck car wheels.</p>	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				

<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
<b>Population and Housing (PH)</b>				
Alternative 1	▪ <b>PH-1 Unplanned Growth:</b> Construction activities would not involve the construction of any new housing.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3	▪ Operation of the Proposed Alternatives would not involve the construction of any new housing.			
Alternative 4	▪ Secondary impacts from construction include the increase in the number of employment opportunities by construction of the entire IRP, by approximately 2,745 direct jobs and 1,446 indirect jobs. This would not induce substantial unplanned growth because nearly all jobs could be filled by the existing and expected labor pool in the region. ▪ Secondary impacts from operation of the Proposed Alternatives include a net increase in employees at Hyperion and Tillman. Alternative 1 would result in an increase of 9 employees; Alternative 2 in 13 employees; and Alternatives 3 and 4 would each result in an increase of 11 employees. However, no new housing or development in undeveloped areas would be induced or accelerated.			
Alternative 1	▪ <b>PH-2 Acquisitions and Displacements:</b> New facilities and improvement associated with the Proposed Alternatives would be constructed and operated within existing public rights-of-way and on publicly owned property, with two possible exceptions. Only a very few property acquisitions would be required; minimal, if any, displacements would occur (possibly an automotive repair facility would be relocated) as part of GBIS; and construction of replacement housing elsewhere would not be needed.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	▪ Minimal displacements could be required for the program-level components, but relocation assistance would be provided as required.			

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
Alternative 1	▪ <b>PH-3 Housing Plans and Policies:</b> No City of Los Angeles or regional housing policies, including affordable housing plans and policies, would be associated with either the construction or operation of the Proposed Alternatives.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4				
<b>Public Services (PS)</b>				
Alternative 1	▪ <b>PS-1 Police Services:</b> Construction in public rights-of-way and other areas subject to lane or street closures could result in an overall increase in police response times. However, planning and consultation would occur with the Los Angeles Police Department regarding access restrictions to public rights-of-way, streets, and proposed lane closures so that alternate routes could be planned.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	▪ Operation of the Proposed Alternatives would not affect the provision of police services.			
Alternative 1	▪ <b>PS-2 Fire Services:</b> Construction in public rights-of-way and other areas subject to lane or street closures could result in an overall increase in fire response times. However, planning and consultation would occur with the Los Angeles Fire Department regarding access restrictions to public rights-of-way, streets, and proposed lane closures so that alternate routes could be planned.	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	▪ Operation of the Proposed Alternatives would not affect the provision of fire protection services.			

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	<ul style="list-style-type: none"> <li>▪ <b>PS-3 Schools:</b> Access to public schools generally would not be affected by project-level components. However, the Observatory Annex site could be located near the Zoo Magnet Center. Although significant impacts to access to the Zoo Magnet Center are not anticipated, mitigation is proposed.</li> <li>▪ Operation of the other Proposed Alternative components would not affect schools.</li> </ul>	Less Than Significant	<b>PS-MM-1:</b> To minimize impacts to the Zoo Magnet Center if the Observatory Annex site is selected for NEIS II construction, coordination with school officials would occur and protective devices would be provided.	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"> <li>▪ The Woodbridge Shaft Site could result in significant impacts to the pedestrian and student access to Oakwood Elementary School.</li> <li>▪ Other program-level components could occur on or within the vicinity of a public school, and potential hazards could result to school children pedestrian routes during construction.</li> </ul>	Potentially Significant	<b>PS-MM-2:</b> To minimize student and pedestrian access impacts to Oakwood Elementary School, the City of Los Angeles will coordinate with school officials and provide crossing guards at the Woodbridge Shaft Site to ensure safe and managed access across shaft site ingress and egress points. Alternative access routes to the elementary school could be provided as an option and as approved by school officials.	Less Than Significant

**Table ES-1. Summary of Environmental Effects  
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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Recreation (REC)</b>				
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>REC-1 Recreational or Park Services:</b> Construction of the program-level components (except smart irrigation) under the Proposed Project Alternatives could cause a temporary increase in construction traffic, which could impede access to nearby recreational resources. In addition, construction of the Proposed Alternatives temporarily would reduce access, limit the use of, or prevent the use of recreational facilities.</li> <li>▪ Construction of Tillman wastewater storage will result in the temporary closure of the cricket field.</li> <li>▪ Construction of NEIS II and GBIS would affect the following recreational facilities: Crystal Springs picnic grounds, Los Angeles Zoo parking lot, Observatory Annex, Pecan Grove picnic area, along Zoo Drive near Sonora as extended, a Griffith Park golf course, Weddington Park, Bette Davis picnic grounds, equestrian trail near Valley Heart Street, and the Johnny Carson Park.</li> <li>▪ ATFs for NEIS II and GBIS could result in permanent losses of recreational areas (Crystal Springs picnic area, Los Angeles Zoo parking lot, Pecan Grove picnic area, Weddington Park, Woodbridge Park, and equestrian access near Valley Heart Street).</li> <li>▪ Some program-level components, such as pumping stations, storage tanks, and dry and wet weather runoff URPs, if placed on recreational facilities, permanently could limit the use of and possibly access to those recreational resources.</li> <li>▪ Alternatives 2 and 4 include Dry Weather Runoff – Treatment Wetlands. Construction of these wetlands temporarily would reduce the amount of open space areas that are used as existing recreational resources.</li> <li>▪ Secondary impacts associated with odors from air treatment facilities could affect users at recreational facilities.</li> </ul>	Potentially Significant	<p><b>REC-MM-1:</b> Temporarily relocate the existing cricket field to a location approved by the City of Los Angeles Department of Recreation and Parks for the Tillman Wastewater Storage component.</p> <p><b>REC-MM-2:</b> The City of Los Angeles Bureau of Engineering will coordinate with the Department of Recreation and Parks and/or City of Burbank minimize construction impacts to affected recreational facilities and make improvements to other recreational resources.</p> <p><b>REC-MM-3:</b> Coordinate with the Department of Recreation and Parks and locate ATFs in areas that will least affect parking or on public use areas of recreational facilities.</p> <p><b>REC-MM-4:</b> Do not place dry weather URPs and wet weather URPs on recreational resources or facilities, or in their parking areas.</p> <p><b>REC-MM-5:</b> Access to the equestrian trail at the Valley Heart Shaft Site will be relocated temporarily. The temporary access location will be approved by the City of Los Angeles Department of Recreation and Parks. Upon completion of construction, permanent access to the equestrian trail will be constructed and landscaped away from the ATF.</p>	Less Than Significant for construction at the Observatory Annex (from TRA-MM-9), Zoo Drive at Sonora extended, equestrian trail near Valley Heart Street (with REC-MM-6 through REC-MM-8), and program-level components.  Potentially Significant for construction at the Crystal Springs picnic area, Los Angeles Zoo Parking Lot, Pecan Grove picnic area, Golf Course, Weddington and Woodbridge Parks, Bette Davis picnic grounds, and Johnny Carson Park; and for operational impacts at the Crystal Springs picnic area, Pecan Grove picnic area, and Woodbridge Park, (for ATFs).

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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
			<p><b>REC-MM-6:</b> To further avoid potential conflicts with the existing equestrian trails at Pollywog during construction, the Valley Heart Shaft Site would be relocated to the west end of the site. Access to the relocated shaft site would occur from Keystone Street to minimize potential vehicle-equestrian conflicts. This measure would also minimize potential aesthetic impacts to nearby residences.</p> <p><b>REC-MM-7:</b> To further minimize potential visual and recreational resource impacts specific to the location of an ATF at the Valley Heart Shaft Site, the ATF shall be relocated to the west end of the Pollywog site. Access to the ATF would occur from Keystone Street.</p>	

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<b>Table ES-1. Summary of Environmental Effects Integrated Resources Plan EIR</b>				
<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
			<p><b>REC-MM-8:</b> To further minimize impacts from the loss of equestrian-related recreational area at the Valley Heart Shaft Site from the placement of an ATF at this site, the following improvements to other equestrian resources in the same service area shall be implemented:</p> <ol style="list-style-type: none"> <li>1. Place equestrian water stations along the Griffith Park trail system or at locations as approved by the Department of Recreation and Parks; and/or,</li> <li>2. Provide equestrian exercise improvements at Pollywog Park, as approved by the Department of Recreation and Parks.</li> </ol>	Less Than Significant
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ Construction of process improvements at Hyperion, Tillman, and LAG would occur onsite and could cause minor delays in accessing nearby recreational facilities, but would not prevent the use of those resources.</li> <li>▪ Operation of the treatment wetlands under Alternatives 2 and 4 would contribute to the number of open space areas in the region, which is considered a benefit.</li> </ul>	Less Than Significant	None Required	Less Than Significant

**Table ES-1. Summary of Environmental Effects  
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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
<b>Transportation and Traffic (TRA)</b>				
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>TRA-1 Volume to Capacity:</b> Operations of the Proposed Alternatives would not generate enough trips to permanently increase the volume/capacity (V/C) ratio of any intersection or street segment beyond the threshold limits during peak hours.</li> <li>▪ Construction-related trips would not be considered to be significant because they would be of limited duration.</li> <li>▪ Temporary lane closures necessary to construct NEIS II and GBIS would result in adverse but not significant impacts on up to 17 affected streets and would differ with the specific alignment selected for each interceptor sewer.</li> <li>▪ Most of the program-level components could require temporary lane closures during construction, which, while could be adverse, would not be considered significant.</li> </ul>	Less Than Significant	<p>Although significant impacts would not occur, mitigation to minimize traffic inconveniences will be implemented, as follows:</p> <p><b>TRA-MM-1:</b> Prepare construction traffic management plans to the satisfaction of LADOT.</p> <p><b>TRA-MM-2:</b> Prepare construction work site traffic control plans to the satisfaction of LADOT for construction in the public rights-of-way.</p> <p><b>TRA-MM-3:</b> Fully use available street space to minimize lane reductions on affected streets.</p> <p><b>TRA-MM-4:</b> Provide alternative pedestrian and bicycle access routes where applicable.</p> <p><b>TRA-MM-5:</b> Provide advance notice to any affected residents, businesses, and property owners in the vicinity of each construction site</p> <p><b>TRA-MM-6:</b> Coordinate with emergency service providers (police, fire, ambulance, and paramedic services) to provide advance notice of any lane closures, construction hours, and changes to local access.</p> <p><b>TRA-MM-7:</b> Coordinate with public transit providers to provide advance notice of any lane closures, construction hours and, where necessary, to identify sites for temporary bus stops.</p>	Less Than Significant

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<b>Resource Areas and Alternatives</b>	<b>Environmental Impacts</b>	<b>Significance Determination</b>	<b>Mitigation Measures</b>	<b>Impact after Mitigation</b>
			<b>TRA-MM-11:</b> If the Travel Town and/or Barham shaft site were used for construction of the GBIS alignment, and the nearby LADWP SLRC Storage Replacement Project were constructed concurrently, the construction work site Traffic Control Plan associated with the Travel Town Shaft Site, the Barham Shaft Site, and the SLRC Storage Replacement Project shall include the establishment of haul routes and restrictions to avoid potential adverse cumulative construction traffic impacts from concurrent construction of these related projects. Although LADOT does not consider construction traffic to be significant, LADOT shall review and revise all the traffic control plans, while considering the concurrent nature of construction of these related projects, to avoid substantial adverse cumulative construction traffic impacts. As appropriate, LADOT shall apply measures and restrictions equally to GBIS and the SLRC Storage Replacement Project (if construction is concurrent), as applicable.	

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Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>TRA-2 Safety Hazards:</b> Safety impacts from operation would not occur because streets would be restored or improved following construction.</li> <li>▪ Construction in public streets could increase safety risks to vehicles, bicyclists, and pedestrians due to narrowed lanes, altered travel patterns, and temporarily obstructed or removed bicycle lanes and sidewalks. Standard safety practices would be employed.</li> </ul>	Less Than Significant	Although significant impacts would not occur, mitigation to minimize traffic concerns will be implemented, as follows:	Less Than Significant



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Resource Areas and Alternatives	Environmental Impacts	Significance Determination	Mitigation Measures	Impact after Mitigation
Alternative 1	▪ <b>TRA-3 Parking:</b> Improvement of Hyperion would result in the permanent loss of 248 parking spaces at Hyperion, but adequate surplus parking would accommodate parking demand.	Less Than Significant	<b>TRA-MM-2</b>	Less Than Significant
Alternative 2			Although significant impacts would not occur, mitigation to minimize traffic inconveniences will be implemented, as follows:	
Alternative 3			<b>TRA-MM-2:</b> will be implemented for program-level components that require in-street construction.	
Alternative 4	▪ Construction work crews would require up to 100 parking spaces at Hyperion, up to 50 parking spaces at Tillman, and up to 40 parking spaces at LAG.		<b>TRA-MM-8:</b> To mitigate the loss of 30 parking spaces in Los Angeles Zoo parking lot (Los Angeles Zoo Shaft Site or the Observatory Annex Shaft Site), reconfigure the lot to provide an equivalent number of spaces.	
	▪ ATFs for NEIS II and GBIS components would result in the loss of 30 parking spaces in the Los Angeles Zoo Shaft Site or the Observatory Annex Shaft Site.		<b>TRA-MM-9:</b> Use peripheral parking at Los Angeles International Airport with shuttle service during construction at Hyperion, as applicable. Use other parking areas in the Sepulveda Dam Recreation Area for Tillman construction, as applicable if required.	
	▪ Construction in the vicinity of the Los Angeles Zoo would temporarily displace 35 spaces at Pecan Grove or 50 parking spaces at the Observatory Annex site.		Use available parking area at the North Atwater Park for LAG construction, as applicable. For potential GBIS parking impacts at 10928 West Riverside Drive, provide the existing user with a functionally similar parcel for use as offsite parking.	
	▪ Accessory structure construction for NEIS II and GBIS could result in adverse but not significant parking impacts on up to 15 affected streets.			
	▪ The GBIS North Alignment could require a drop structure on a 0.66-acre site at 10928 West Riverside Drive that currently is used for offsite parking by a nearby automobile dealership.			
	▪ Construction of the program-level components could result in the temporary loss of travel lanes, parking lanes, which is considered adverse but not significant, and/or beach parking.			

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	<ul style="list-style-type: none"> <li>▪ <b>TRA-3 Parking:</b> Construction in the vicinity of the Los Angeles Zoo parking lot for the Los Angeles Zoo Shaft Site would temporarily displace 225 parking spaces at the Los Angeles Zoo.</li> </ul>	Potentially Significant	<p><b>TRA-MM-9:</b> To fully mitigate parking impacts at the Los Angeles Zoo parking lot from the Los Angeles Zoo Shaft Site, select the Pecan Grove Shaft Site, the Observatory Annex Shaft Site, or the Brazil Street Shaft Site (NEIS II East Alignment). If one of these other shaft sites is not feasible and the Los Angeles Zoo Shaft Site is necessary, restripe the Los Angeles Zoo parking lot to increase the number of spaces. However, it does not appear possible to recover enough parking spaces to fully mitigate this impact.</p>	Potentially Significant
<b>Utilities (U)</b>				
Alternative 1 Alternative 2 Alternative 3 Alternative 4	<ul style="list-style-type: none"> <li>▪ <b>U-1 Landfill Capacity:</b> Construction of the Proposed Alternatives would not result in significant impacts to landfills with respect to construction debris. Construction debris from the Alternatives would be recycled with the remaining debris disposed at either Bradley West or Sunshine Canyon Landfills. The amount of construction debris for the Proposed Alternatives would represent approximately 1 percent of the combined remaining volume of both landfills. Alternative 1 would produce slightly more construction debris than Alternatives 2 through 4.</li> <li>▪ The quantity of soil excavated would be similar, except that Alternatives 2 and 4 would generate soil excavation from construction of treatment wetlands. Significant impacts related to soil excavation and reuse would not be anticipated.</li> <li>▪ Operation of the Proposed Alternatives would not result in significant impacts regarding landfill capacity. Alternative 1 would produce slightly less total additional waste generation than Alternatives 2 through 4. Alternative 2 would generate the greatest amount of additional waste.</li> </ul>	Less Than Significant	None Required	Less Than Significant

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Alternative 1	<ul style="list-style-type: none"><li>▪ <b>U-2 New Utility Supplies:</b> Construction of the Proposed Alternatives would not result in any impacts regarding the need for the construction of new energy supply facilities or distribution infrastructure. Proposed Alternatives would use only a minimal amount of additional electricity for emergency and/or construction generators.</li></ul>	Less Than Significant	None Required	Less Than Significant
Alternative 2				
Alternative 3				
Alternative 4	<ul style="list-style-type: none"><li>▪ Operation of the Proposed Alternatives would not require new electricity supplies. Alternative 1 would have the lowest net electricity consumption, followed by Alternative 3, then Alternative 4. Alternative 2 would have the highest net electricity consumption. The Proposed Alternatives would result in a slight increase in demand for natural gas.</li></ul>			