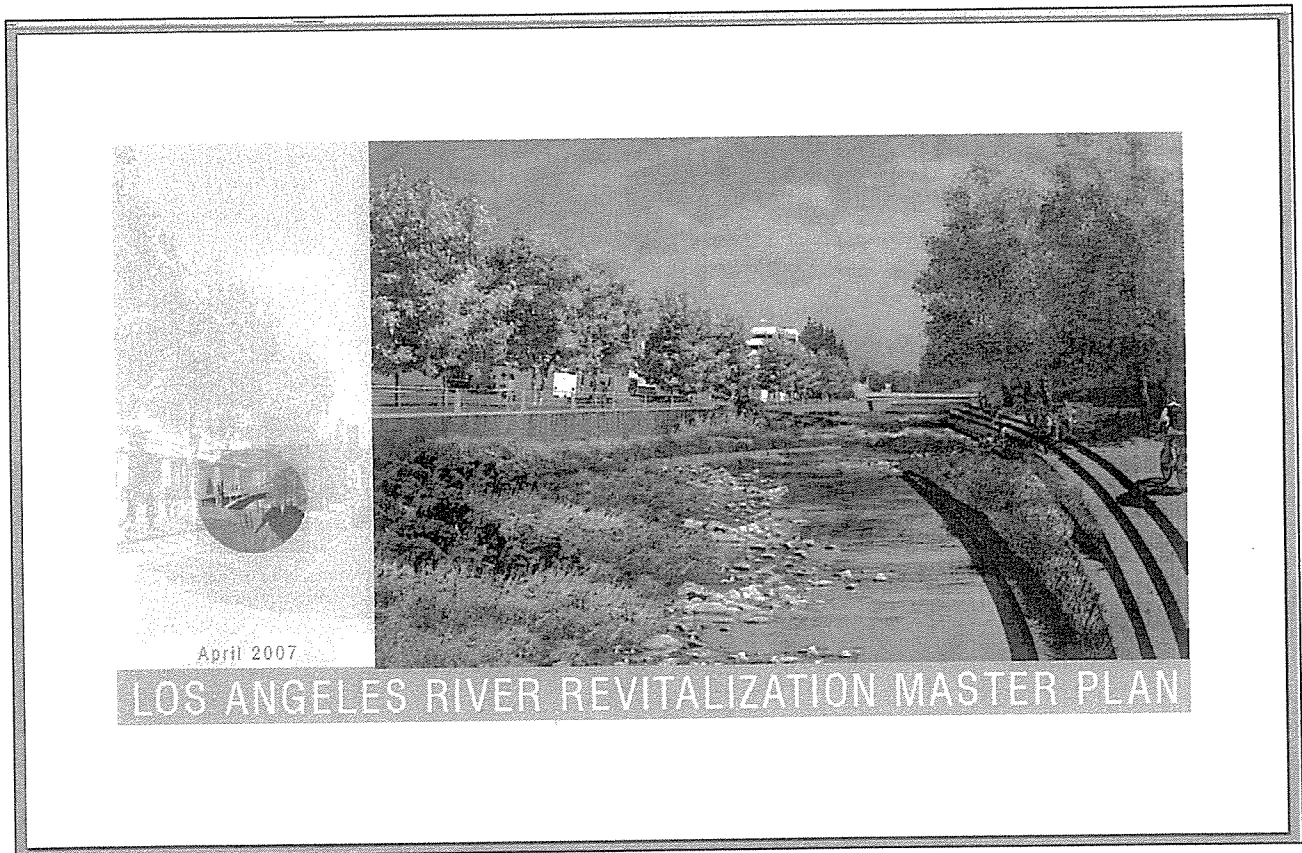


EXHIBIT “47”

Findings and Statement of
Overriding Considerations

LOS ANGELES RIVER
REVITALIZATION MASTER PLAN



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Introduction

PURPOSE

This document constitutes the compliance requirements for the Los Angeles River Revitalization Master Plan (LARRMP) project Final Programmatic Environmental Impact Report/Programmatic Environmental Impact Statement (FPEIR/PEIS) with Section 21081 of the California Public Resources Code and Section 15091 of the California Environmental Quality Act (CEQA) Guidelines, which require a public agency, prior to approving a project, to identify significant impacts of the project and to make one or more written findings for each such impact.

Findings

According to Section 15091(a) of the CEQA Guidelines, “No public agency shall approve or carry out a project for which an EIR [environmental impact report] has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding.”ⁱ Section 15091(a)(2) specifies that possible findings can include, “Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.”

- This subsection applies to the subject project—the LARRMP—and, therefore, its FPEIR/PEIS, because the LARRMP proposes various changes to the 32-mile stretch of the Los Angeles River (River) that flows within the City of Los Angeles and this portion of the River channel falls within the jurisdiction of multiple public agencies, including the County of Los Angeles and the U.S. Army Corps of Engineers. Thus, this is an appropriate finding and other findings may be recommended by the County of Los Angeles and the U.S. Army Corps of Engineers. Additionally, because the findings fall within the purview of agencies other than the City of Los Angeles, additional mitigation measures, as discussed below, are deferred to project-level implementation.

Mitigation

Section 21081.6 of CEQA also requires public agencies to adopt a monitoring and reporting program for assessing and ensuring the implementation of proposed mitigation measures.ⁱⁱ The mitigation measures identified in the LARRMP’s FPEIR/PEIS are those referenced within this document.

Further, according to CEQA Guidelines Section 15097(b), “Where the project at issue is the adoption of a . . . plan-level document (zoning, ordinance, regulation, policy), the monitoring plan shall apply to policies and any other portion of the plan that is a mitigation measure or adopted alternative.” This “may consist of policies included in plan-level documents. The annual report on general plan status required pursuant to the Government Code is one example of a reporting program for adoption of a city or county general plan.”

- This subsection applies to the subject project—the LARRMP—and, therefore, its FPEIR/PEIS, because the LARRMP is a conceptual plan document with a long-term (5-to-50 year) implementation schedule. Thus, an annual reporting plan is an applicable strategy for communicating the status of mitigation compliance. However, as discussed below, programmatic-level mitigations identified serve as guidelines and must be subsequently tailored to specific projects; communicating the status of these activities would become part of the annual reporting plan.

Section 15097(d) specifies that “Lead and responsible agencies should coordinate their mitigation monitoring or reporting programs where possible” and that “Generally lead and responsible agencies for a given project will adopt separate and different monitoring or reporting programs” which can occur for the following reasons, “the agencies have adopted and are responsible for reporting on or monitoring different mitigation

measures; the agencies are deciding on the project at different times; each agency has the discretion to choose its own approach to monitoring or reporting; and each agency has its own special expertise.” Section 15097(e) states that “At its discretion, an agency may adopt standardized policies and requirements to guide individually adopted monitoring or reporting programs.”ⁱⁱⁱ

- This subsection applies to the subject project—the LARRMP—and, therefore, its FPEIR/PEIS because (1) the involved agencies (the City of Los Angeles, the County of Los Angeles, and the U.S. Army Corps of Engineers) will be deciding upon LARRMP-related projects at different times; (2) each would be responsible for reporting on or monitoring different mitigation measures; (3) each has its own special expertise; and (4) each has its own approach to monitoring or reporting. Additionally, the mitigation measures identified are at a conceptual plan scale, and therefore program-level, which approximates standardized, policy-level recommendations. These must be subsequently tailored to the project-level involving the adaptation of location-specific mitigation measures that are relevant to unique areas of the River’s 32-mile corridor and to different monitoring and reporting authorities. Thus, the mitigation measures provided in the FPEIR/PEIS are programmatic-level recommendations equivalent to subsection 15097(e) “standardized policies and requirements to guide individually adopted monitoring or reporting programs” that must be deferred to and addressed in subsequent project-level implementation—where relevant. Mitigation monitoring and reporting at this programmatic level will be done through an annual report prepared by the Bureau of Engineering and reported to the City Council’s Ad Hoc Committee on the Los Angeles River. Other mitigation monitoring and reporting programs may be provided by other agencies having jurisdiction over the Los Angeles River. Future, localized, project-specific mitigation measures may preempt the broader measures presented here in some cases.

Statement of Overriding Considerations

As per Section 21081 of the California Public Resources Code and Section 15093 of the California Environmental Quality Act (CEQA) Guidelines, a decision-making agency must prepare and consider a Statement of Overriding Considerations prior to approval of a project that will result in significant environmental effects, which are identified in the final EIR and which will not be avoided or adequately lessened.^{iv} According to Section 15093(b), “When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record.” This Statement is provided at the end of this document and is derived from the subsequent discussion of information provided in the FPEIR/PEIS.

PROJECT DESCRIPTION

The LARRMP is intended to serve as a blueprint for implementing a variety of greening projects, including the development of parks and open space, pedestrian and bicycle trails, bridges, enhanced connector streets, channel modifications, revitalized riverfront communities in key opportunity areas and a River Improvement Overlay (RIO) district along the 32-mile stretch of the River within the City of Los Angeles. Implementing the LARRMP recommendations over the near-term planning period (5 to 20 years) and the long-term planning period (20 to 50 years) constitutes the proposed action evaluated in the FPEIR/PEIS. The general project area includes approximately one-half mile on each side of the 32-mile River Corridor that begins near Owensmouth Avenue in Canoga Park (at the confluence of Bell Creek and Arroyo Calabasas) and continues downstream to Washington Boulevard, near the northern boundary of the city of Vernon. The LARRMP provides recommendations in four broad categories: physical modifications to the River channel, open space development, multi-purpose revitalization in twenty opportunity areas—with five described in greater detail—and River Corridor governance and management.^v

The Plan intends to revitalize the general environment of the Los Angeles River by providing improved natural habitat, economic values, water quality, recreation, and open space amenities. The Plan area includes several locations where the potential exists for restoring a more natural riverine environment along the River,

while maintaining and improving levels of flood protection. Creation of treatment wetlands in and around the River, to treat storm flows and to restore missing linkages of fragmented habitat, would also be pursued. Restored areas would provide natural riparian habitat to support indigenous wildlife and avifauna along a corridor transecting most of the San Fernando Valley, and extending into downtown Los Angeles. Other LARRMP purposes include the provision of improved public access to the River and the encouragement of reinvestment in the surrounding urban system that would result in economic growth. The City's LARRMP proposes continued collaboration with both the County of Los Angeles and the U.S. Army Corps of Engineers on Plan implementation issues, such as access, maintenance, and public safety, through establishment of a participatory River Authority. The River Authority would function as the governmental branch of a three-tiered River management structure, which would also include an entrepreneurial branch in the form of the River Revitalization Corporation, and a philanthropic branch—the River Foundation.

PROJECT LOCATION

The Los Angeles River flows approximately 52 miles from its origin in the San Fernando Valley region of the City of Los Angeles to Long Beach Harbor and the Pacific Ocean via Queensway Bay. The River runs east/southeastward through Los Angeles and along the cities of Burbank and Glendale in its northern reaches and then heads southward, flowing through the cities of Vernon, Commerce, Maywood, Bell, Bell Gardens, South Gate, Lynwood, Compton, Paramount, Carson, and Long Beach, respectively. The first 32 miles of the River, which comprise the LARRMP project area, flow through the City of Los Angeles, intersecting approximately 20 Neighborhood Council areas and 10 Council Districts (Districts 3, 12, 6, 2, 5, 4, 13, 1, 9, and 14, in respective geographic order, along the River) and 12 community planning areas as follows (in geographic order): Canoga Park-Winnetka-Woodland Hills-West Hills; Reseda-West Van Nuys; Encino-Tarzana; Van Nuys-North Sherman Oaks; Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass; North Hollywood-Valley Village; Hollywood; Northeast Los Angeles; Silver Lake-Echo Park; Central City North; Central City; and Boyle Heights.

EVALUATION OF IMPACTS

For sixteen resource areas (detailed in the subsequent impact discussion sections), the general approach taken in evaluating potential environmental impacts from future LARRMP projects was as follows:

- Identifying and evaluating potential environmental impacts of implementing future LARRMP measures in the River Corridor, which included identifying potential *direct* and *indirect* impacts. Direct impacts are those occurring during the time of construction, or in close proximity to a particular project activity, at a particular location. Indirect impacts would be those occurring as a result of implementing a measure, but later in time, or not in proximity. This approach also includes identifying both *adverse* and *beneficial* impacts, as well as *cumulative* impacts. Cumulative impacts are those that could result from the incremental impact of a measure when added to other past, present, and reasonably foreseeable future actions within the River Corridor and vicinity. The evaluation also involved assigning a predicted *level* to potential impacts, including low, moderate, and high and assessing if the high impacts are considered potentially significant.
- Evaluating two alternative configurations of revitalization measures discussed in the LARRMP at four of the five opportunity areas (only one is suggested at Taylor Yard), as well as a No Project Alternative.
- Identifying potential mitigation actions and “best management practices” that could be employed with implementation of future projects, in order to avoid, minimize, or reduce adverse environmental impacts on certain resource areas.
- Indicating where further project-level investigations, studies, and assessments would be needed to accompany future LARRMP projects in order to better define potential project-specific environmental impacts and to refine potential mitigation actions and best management practices that would reduce impact levels.

Alternatives

OVERVIEW

The LARRMP measures, alternatives, and the revitalization management framework are discussed under four (4) categories: physical modifications to the River channel, open space development, opportunity areas, and revitalization management. The opportunity areas include different combinations of River Channel Modifications and open space development. The details of these are provided below.

1. River Channel Modifications

For evaluation in this PEIR/PEIS, the potential channel modification measures discussed in the LARRMP have been grouped into the two categories described below, River channel modifications without reduction in River flow velocity (referred to as near-term in the LARRMP) and River channel modifications with reduction in River flow velocity (referred to as long-term in the LARRMP).

River Channel Modifications without Reduction in Flow Velocity

These near-term channel modification measures are mainly vegetation enhancement (sometimes referred to as greening in the LARRMP and this PEIR/PEIS) of the existing River channel within the channel right-of-way (ROW). Primary design criteria for these greening measures include vegetation coverage up to a maximum 30 percent of the ROW area, limiting vegetation development to the area above the 50-year storm elevation, and developing intermittent (rather than continuous) habitat areas along the channel bottom. These greening measures also include, where appropriate, enhancing water quality treatment of stormwater outfalls by developing vegetative bio-swales and bio-filtration areas.

River Channel Modifications with Reduction in River Flow Velocity

Three long-term types of River channel modification measures were identified in the LARRMP that include flow velocity reduction measures to enhance flood protection and that would allow for the sustainable development of vegetation in and along the River channel. There are characteristics that are common to the three velocity-reducing channel modification measures that differentiate them from the measures that do not reduce velocity. These characteristics are reducing channel flow velocity to less than 12 feet per second, greening the channel ROW up to a maximum 50 percent coverage (rather than to a maximum of 30 percent), and developing continuous (rather than intermittent) channel bottom habitat areas.^{vi} Reducing the velocity of River water will increase the ability to sustain plant life that would be developed as part of the LARRMP greening effort and the enhancement of habitat.

2. Open Space Development

The LARRMP proposes a suite of open space development measures that could be implemented (either separately or in combination) during the near-term and long-term planning periods along the 32-mile River Corridor. This diverse array of open space development measures was generated from community-based planning criteria and revitalization opportunities identified during LARRMP development. The main goal in implementing the LARRMP open space development measures is to eventually develop a continuous greenway along the entire River Corridor that connects adjacent and surrounding communities to and across the River to each other, while enhancing the habitat, recreation opportunities, aesthetics, water quality, and quality of life. The intention is to employ a suite of open space development measures in selected locations that highlight and increase awareness of revitalization, while providing recreational amenities and improving access to the River.

For evaluation in this PEIR/PEIS, the open space development measures have been organized under eight (8) categories: parks, green streets, paseos (covered walkways/River access points) and promenades, trails and bikeways, pedestrian River crossings, River loops, gateways, and water quality and habitat.

i. Parks

Four (4) types of park measures are proposed within the River Corridor: riverfront parks, linear parks, pocket parks, and recreation fields.

Riverfront parks are those developed along and adjacent to the River in locations when suitable land becomes available for this purpose. In addition to providing a mix of activities, portions of the park would also be used as vegetated open space for water quality enhancement. Potential design criteria include a 30-foot-wide landscaped buffer zone along the River's edge, bio-swale, bio-filtration, detention, and infiltration areas, daylighting of existing storm drains, connections to adjacent communities, and access to the River.

Linear parks can be developed where available land along the River is restricted by other development, with the intention of including landscaped meandering paths, interesting rest areas, and viewpoints. Where practicable, connections to adjacent neighborhoods, promenades, and biofiltration, bio-swale, and infiltration strips for water quality enhancement would be included.

Pocket parks would be developed in small local spaces within the River Corridor to provide a variety of passive, limited active, and rest areas. These park areas could be developed for such purposes as outdoor educational experiences adjacent to schools, joint-use neighborhood areas, and street-end or cul-de-sac parks.

Recreation fields include a variety of active sports fields and associated support facilities at appropriate locations along the River Corridor. Playing fields and courts could include softball, baseball, soccer, tennis, badminton, and basketball.

ii. Green Streets

Three (3) types of green streets could be developed within the River Corridor: local green streets, arterial green streets, and regional greenway connections. Features common to the three types of green streets are landscaping with native trees and shrubs to help achieve the "greenway connection" and "greenway extension" objectives described earlier; safe bike routes; traffic calming measures, such as speed humps, raised crosswalks, neck-downs, and textured paving; river-theme street furniture and direction signs; and water quality enhancement measures, such as biofiltration, bio-swales, and infiltration strips.

iii. Paseos and Promenades

These are land use development features (in construction areas and existing communities) along the River Corridor that would provide local access to the River and integrate with community-oriented pedestrian meeting and shopping places. Features that could be integrated at these locations include plazas and courtyards, pocket parks, habitat areas, water quality enhancement, boulevards, paseos, and river-adjacent promenades.

iv. Trails, Paths, and Bikeways

These features involve developing safe, accessible, and aesthetic pedestrian and bicycle trails and paths that integrate with active and passive recreation opportunities offered by the other open space development measures along the River Corridor. The plan would be to eventually have a network of trails, paths, and bikeways developed along the 32-mile River Corridor that helps achieve the LARRMP greenway connection and greenway extension objectives described earlier.

v. Pedestrian River Crossings and Bridge Underpasses

These types of measures involve developing safe, accessible, and aesthetic structures for pedestrians and bicyclists to be connected to revitalization opportunities and public resources along and across

the River Corridor. The goal is to eventually have a pedestrian River crossing about every half mile along the 32-mile River Corridor and to have as many bridge underpasses as practicable.

vi. River Loops

These linear features would help achieve the main LARRMP goal of developing a continuous greenway along the entire River Corridor that connects adjacent communities. As discussed in the LARRMP, 16 River Loop segments have been identified along the 32-mile River Corridor. The objective in developing 16 loops is to establish distinct community zones along the River Corridor that provide River recreational circuits that are convenient and community oriented.

vii. Gateways

Gateways would be developed to provide river-theme artistic structures at selected access points to the River within adjacent communities. The three types of proposed gateways include regional gateways at arterials and major access points, neighborhood gateways at local street ends, cul-de-sacs, and paseos, and infrastructure gateways at areas along River edges that are isolated by freeways. Design features common to the three gateway measures are river-theme amenities (such as trash containers and drinking fountains), ADA-compliant access, public art, native vegetation, interpretive and directional signs, and safety lighting.

viii. Water Quality and Habitat

These measures would involve developing new or enhancing existing areas with native vegetation and landscaping to provide local habitat areas. Depending on the location and extent of land area available, these areas could also provide links to other natural or developed habitat areas within or adjacent to the River Corridor. Where appropriate, these open space measures could incorporate daylighting of existing and new stormwater outfalls, bio-swales, bio-filtration areas, and infiltration strips for surface runoff, with the goal of improving water quality of runoff in the River Corridor.

3. Opportunity Areas

Five (5) opportunity areas along the River Corridor have been initially selected as demonstration case studies from among the 20-plus sites initially reviewed. The selected opportunity areas are: Canoga Park, River Glen, Taylor Yard, Chinatown-Cornfields, and Downtown Industrial. Each of these presents a distinct set of the River revitalization opportunities (described above) to demonstrate integration of LARRMP measures. Within each of the areas, appropriate River channel modification measures and open space measures have been organized to reflect existing land form and environmental characteristics, as well as community-based LARRMP revitalization opportunities and objectives. Also, the opportunity areas provide suitable locations for what are described in the LARRMP as reinvestment areas. These are specific regions within the opportunity areas where long-term land use changes can be undertaken to help achieve long-term economic viability and sustainability within a revitalized River Corridor. Potential reinvestment measures in the opportunity areas generally include redistributing, retrofitting (upgrading), and replacing land uses and infrastructure to help achieve the economic redevelopment/revitalization objectives identified in the LARRMP. Two (2) alternatives are described for each opportunity area, except for Taylor Yard, where a single concept is proposed. At the other four sites, the second (B) alternative represents a more extensive set of River channel modification, open space, and reinvestment measures than the first (A) alternative. These are detailed in the following tables.^{vii}

CANOGA PARK OPPORTUNITY AREA: ALTERNATIVES CP-A AND CP-B

Measure	Alternative CP-A	Alternative CP-B
Channel Modifications	River channel terraced on both the north and south sides for about 1,200 feet between Canoga and Variel. On the south side, the terrace accommodates public access to the water via a 15-foot-wide walkway, as well as water quality treatment terraces. Additional right-of-way acquired to create treatment terraces and riverfront	Same as for Alternative CP-A, except terrace on north and south sides between Canoga and Variel extends an additional 800 feet, and Arroyo Calabasas is daylighted to provide an urban water feature within the new riverfront park.

CANOGA PARK OPPORTUNITY AREA: ALTERNATIVES CP-A AND CP-B

Measure	Alternative CP-A	Alternative CP-B
	park. On the north side, the channel right-of-way is maintained and the bank is terraced to provide a 15-foot-wide hard surface walkway and linear park. Channel bottom is modified to develop intermittent habitat areas.	
Parks	Riverfront park: On the south side of the River extending south to front on Vanowen Street, and bounded on the east by Alabama Street and on the west by Milwood Avenue.	Same as for Alternative CP-A, except the new riverfront park on the south side of the River would be expanded to extend from Arroyo Calabasas to Variel, with its southern edge remaining on Vanowen Street.
	Linear parks: North from the River to Sherman Way, within the MTA property between Canoga and Deering, currently being used as a landscape materials and stone yard. Along north side of the River at Basset.	Same as for Alternative CP-A.
	Pocket park: On the land currently occupied by temporary high school trailer classrooms; bounded by the River and Hart and Jordan Streets.	Same as for Alternative CP-A.
Green Streets	Regional greenway connections: North/south streets between Victory and Sherman Way (Topanga Canyon, Owensmouth, Canoga, Variel, and De Soto). East/west streets between Topanga Canyon and De Soto (Vanowen Street). Along the MTA ROW, extending from the intersection of Canoga and Vanowen, just to the south of the Riverfront park, connecting the River into the existing Orange Line Regional Bikeway and Pierce College.	Same as for Alternative CP-A.
	Arterial green streets: All north/south and east/west roadways not considered regional greenway connections.	Same as for Alternative CP-A.
	Local green streets: Jordan, Remet, Milwood, Independence, Vasser, Alabama Avenues and Variel and Eton Streets.	Same as for Alternative CP-A.
Paseos and Promenades	Paseos: Every 300 feet in new developments.	Same as for Alternative CP-A.
	Paseo promenades: Deering on north side of the River and Variel on south side of the River.	Same as for Alternative CP-A.
Bikeways and Trails	Routes will be developed to integrate and connect with other open space development measures within the opportunity area and along the River Corridor.	Same as for Alternative CP-A.
Pedestrian River Crossings and Bridge Underpasses	Pedestrian bridges at Deering and between Alabama and Remet Avenues. Bridge underpasses at Owensmouth, Canoga, and De Soto Avenues.	Same as for Alternative CP-A.
Gateways	Regional gateways at Owensmouth, Canoga, and De Soto Avenues.	Same as for Alternative CP-A.
	Neighborhood gateways: On north side of the River at Jordan, Remet, Milwood, and Independence Avenues.	Same as for Alternative CP-A.
Water Quality	Water quality enhancement at confluence of Bell Creek and Arroyo Calabasas (see also Parks, above).	Same as for Alternative CP-A.
Reinvestment	Land acquisition for public use would be encouraged for parcels that have near-term potential to be developed as open space measures. Reinvestment would rely on responses of private property owners to revitalization improvements and opportunities.	The level and intensity of reinvestment measures would be substantially increased over the previous alternative (CP-A), including rebuilding the River within this opportunity area from the confluence of Bell Creek and Arroyo Calabasas to demonstrate the potential of collaborative measures; civic investment in River revitalization spurring collaborative private investment; increasing density and

CANOGA PARK OPPORTUNITY AREA: ALTERNATIVES CP-A AND CP-B

Measure	Alternative CP-A	Alternative CP-B
		influencing land use mix based on LARRMP revitalization goals and objectives; developing a mixed-use village within the Canoga Park Opportunity Area with a major retail and entertainment center that is connected to the Orange Line and Westfield Center; developing open space greenway connections and internal greenways to support the mixed-use village concept; and protecting single-family homes in the area.

RIVER GLEN OPPORTUNITY AREA ALTERNATIVES RG-A AND RG-B

Measure	Alternative RG-A	Alternative RG-B
Channel Modifications	The Verdugo Wash confluence is environmentally expanded to serve as a regional water quality treatment wetland. On the east bank, the River channel is terraced and planted above the 50-year storm elevation to provide a River parkway experience, viewable from the I-5 freeway. The channel bottom is modified to develop intermittent habitat areas.	Same as for Alternative RG-A, except Verdugo Wash is realigned to enter the Los Angeles River farther downstream, creating a small island of habitat, and on the east bank, additional ROW is acquired and the River channel is terraced to provide a series of street end parks and water quality treatment terraces.
Parks	A continuous linear terraced park, extending south from the expanded Verdugo Wash confluence area to North Atwater Park.	Same as for Alternative RG-A, except the continuous linear terraced park from Verdugo Wash confluence area to North Atwater Park is developed, with greater emphasis on water quality enhancement measures.
Green Streets	Regional greenway connections: East/west streets between the River and N. Pacific Avenue, with improved pedestrian crossings at San Fernando Road, W. Milford Street, W. Broadway, and W. Colorado Street; San Fernando Road and the frontage road within the industrial area is modified through wider sidewalks, street trees, and other landscape improvements, and a center median to create a more pedestrian-oriented north/south connection. Arterial green streets: All north/south and east/west roadways not considered regional greenway connections. Local green streets: W. Milford Street extension west, Brazil and Colorado Streets.	Same as for Alternative RG-A.
Paseos and Promenades	Paseos: Every 300 feet in new developments. Paseo promenades: Along Brazil Street between San Fernando Road and the River.	Same as for Alternative RG-A.
Bikeways and Trails	Routes will be developed to integrate and connect with other open space development measures within the opportunity area and along the River Corridor.	Same as for Alternative RG-A.
Pedestrian River Crossings and Bridge	Pedestrian bridge: Multiuse bridge south of Ventura Freeway and an improved Colorado Street Freeway exit bridge with pedestrian access.	Same as for Alternative RG-A.
Underpasses	Pedestrian/equestrian bridge: Pedestrian/equestrian bridge south of Colorado Street freeway exit into Griffith Park. Bridge underpasses at Victory Boulevard, Ventura Freeway, and Colorado Street.	Same as for Alternative RG-A.
Gateways	Regional gateways at Doran, Brazil, and Colorado Streets. Neighborhood gateways at W. Milford, Brazil, and Colorado Streets.	Same as for Alternative RG-A.
Water Quality and Habitat	An expanded Verdugo Wash/Los Angeles River confluence that includes a terraced wetland habitat area and a realigned and braided Verdugo Wash. This improved wash is bounded by San Fernando Road on the east and Cutter Street on the south and would require the	Same as for Alternative RG-A, except as mentioned above, Verdugo Wash is realigned to enter the Los Angeles River farther downstream, creating a small island habitat and a water quality/riverine habitat area is

RIVER GLEN OPPORTUNITY AREA ALTERNATIVES RG-A AND RG-B

Measure	Alternative RG-A	Alternative RG-B
	acquisition of several small recycling facilities, a propane gas dealership, and a Caltrans maintenance yard below the Ventura Freeway.	developed to the east of the Golden State Freeway, to bring the River into Griffith Park to the south of the Gene Autry Museum and Griffith Park Zoo.
Reinvestment	Currently underserved by its roadway network, this light industrial area would be the focus of an extensive roadway improvement plan, with the intent to create a contiguous roadway network, with expanded ROW to improve functionality and create a continuous north-south connection within the area. This revitalization alternative also includes creating a new intersection crossing into the area—facilitating north and south movement, where only southern access currently exists. This alternative further includes protecting existing land uses and acquiring recyclers for the confluence business park.	Same as for Alternative RG-A, except grade separated crossings are developed at W. Milford and W. Broadway at San Fernando Road to provide safer vehicular and pedestrian access to the industrial area and the River, and existing land uses are redeveloped to capture economic development opportunities created by ongoing River revitalization.

TAYLOR YARD OPPORTUNITY AREA ALTERNATIVE A

Measure	Proposed Concept
Channel Modifications	The east bank of the River channel is terraced for approximately one mile to provide for water quality treatment terraces. Channel bottom is modified to develop intermittent habitat areas.
Parks	Riverfront park: A regional park is developed on the land parcel between the River and the Metrolink/Rail Corridor to the southwest of the new state park. This park area is bounded on the northwest by Edwards Way and on the southeast by the Golden State Freeway. Linear park: A continuous linear park is developed along the western edge of the River between Fletcher Drive and the Pasadena Freeway.
Green Streets	Regional greenway connections: East/west streets between the River and upland residential properties to the east on Fletcher Drive, Eagle Rock Boulevard, Division Street, Pepper Avenue, and Grenada Street; East/west streets between the River and residential properties to the west on Marsh, Newell, Blimp, and Birkdale Streets. San Fernando Road between Fletcher Drive and the Pasadena Freeway. Arterial green streets at San Fernando Road, Fletcher Drive, and Riverside Drive. Local green streets at Gilroy, Newell, and Riverside Drive.
Paseos and Promenades	Paseos: Along Benedict and Birkdale Streets and Dorris Place. Paseo promenades: Along Worthen and Eads Streets and Denby and Meadowvale Avenues.
Bikeways and Trails	Routes will be developed to integrate and connect with other open space development measures within the opportunity area and along the River Corridor.
Pedestrian River Crossings and Bridge Underpasses	Pedestrian bridges: Multiuse bridges at Marsh, Newell, Blimp, and Birkdale Streets and to the south of Pasadena Freeway overpass. Bridge underpasses at Fletcher Drive, Glendale Freeway, Golden State Freeway, Pasadena Freeway, and North Broadway.
Gateways	Regional gateways at Fletcher and Riverside Drives. Neighborhood gateways at Worthen and Eads Streets and Meadowvale Avenue.
Water Quality and Habitat	As above, the east bank of the River channel is terraced for approximately one mile to provide for water quality treatment terraces, and the channel bottom is modified to provide riparian habitat (see also Parks, above). Habitat improvements at the confluence of the Arroyo Seco and the Los Angeles River.
Reinvestment	Other Taylor Yard planning establishes land use on the east bank of the River. Emphasis is placed on green connections between the east and west banks of the River and to parks and neighborhoods. Also market pressure is expected to gradually cause replacement of west bank small industry with mixed-use development, in keeping with the River revitalization theme.

CHINATOWN-CORNFIELDS OPPORTUNITY AREA ALTERNATIVES CC-A AND CC-B

Measure	Alternative CC-A	Alternative CC-B
Channel Modifications	The west bank of the River channel is terraced back along the River under the existing rail line to provide for a linear park. The east bank of the channel is terraced within the existing ROW to provide public access to the River's edge and an urban promenade (turf and shade	Same as for Alternative CC-A, except a channel diversion would be created, allowing the creation of a small island that supports habitat and passive recreation (hiking, bird watching). The west edge of the diversion would transition from riparian to

CHINATOWN-CORNFIELDS OPPORTUNITY AREA ALTERNATIVES CC-A AND CC-B

Measure	Alternative CC-A	Alternative CC-B
	trees) along the top of the bank. Public access is provided via a 15-foot-wide walkway at the top of the west bank, with steps leading down to the water's edge.	upland habitat and park.
Parks	Riverfront park: The Los Angeles State Historic Park is extended north to the River edge.	Same as for Alternative CC-A.
	Linear parks: A continuous linear park open space loop from the western edge of the historic park, south along Llewellyn Street, and east along the Union Station Rail Line, connecting back to the terraced River linear park; a linear park extending from the historic park southeast along the old Sotello/Leroy Street alignment; and a linear park along Leroy and Elmyra Streets.	Same as for Alternative CC-A, except the above channel diversion introduces a secondary River channel creating a habitat and open space island that is lined on the west side of the River with riparian and upland habitat and open space.
Green Streets	Regional greenway connections: East/west streets between Downtown and Lincoln Heights along Spring and Main Streets.	Same as for Alternative CC-A.
	Arterial Green Streets: Along Broadway, Spring, and Main Streets.	Same as for Alternative CC-A.
	Local green streets: Include all north/south and east/west primary local roads within the opportunity area boundary.	Same as for Alternative CC-A.
Paseos and Promenades	Paseos: Include all east/west roadways except Wilhardt Street.	Same as for Alternative CC-A.
	Paseo promenades: Along Wilhardt Street.	Same as for Alternative CC-A, except an additional paseo-promenade along Mesnager Street.
Bikeways and Trails	Routes will be developed to integrate and connect with other open space development measures within the opportunity area and along the River Corridor.	Same as for Alternative CC-A.
Pedestrian River Crossings and Bridge Underpasses	Pedestrian bridge: Just upstream of Chavez Avenue.	Same as for Alternative CC-A.
	Bridge underpasses at Spring Street, North Main Street, railroad overpasses, Chavez Avenue, and Hollywood Freeway.	Same as for Alternative CC-A.
Gateways	Regional gateways at Main, Leroy, and Elmyra Streets.	Same as for Alternative CC-A.
	Neighborhood gateways: Include all other streets.	Same as for Alternative CC-A.
Water Quality and Habitat	As above, a linear park is developed, extending from the historic park southeast along the old Sotello/Leroy Street alignment.	Same as for Alternative CC-A.
Reinvestment	All properties within the opportunity area would be looked at as potential reinvestment areas, with the exception of the William Mead Housing Project and its associated school and the DWP transfer station. The reinvestment focus would be on creating residential/mixed-use frontage along Spring Street, mixed-use traditional along Main Street, and residential frontage along the linear open space between the state park and the River. Existing lot and block structure would be continued to allow incremental redevelopment to use existing infrastructure where possible.	All properties within the opportunity area would be looked at as potential reinvestment areas, with the exception of the DWP transfer station, which may be relocated or incorporated into the island. The DWP property would be available for redevelopment. Redevelopment would be focused on revised land use based on River revitalization opportunities. A school and public housing would be redeveloped and relocated.

DOWNTOWN INDUSTRIAL OPPORTUNITY AREA ALTERNATIVES DI-A AND DI-B

Measure	Alternative DI-A	Alternative DI-B
Channel Modifications	The River channel is opened up and terraced back in three locations on the east side to provide for small pocket parks and green street connections back into the community. On the west side, an urban promenade is created at the top of the bank, and the existing trapezoidal channel wall is reconfigured as a vertical wall.	Same as for Alternative DI-A, except the east side of the channel would be terraced to provide water quality treatment and open space between the Santa Ana Freeway and 7 th Street.

DOWNTOWN INDUSTRIAL OPPORTUNITY AREA ALTERNATIVES DI-A AND DI-B

Measure	Alternative DI-A	Alternative DI-B
	Public access is enhanced by elevating rail on trestles at selected locations.	
Parks	Linear park: Developing a linear park by realigning the two rail lines on the east side of the River to two innermost storage tracks along the eastern edge of the River. Grade-separated crossings below the rail lines are developed at selected locations to provide access into the park.	Same as for Alternative DI-A, except a larger park would be developed between the eastern banks of the River and Mission Road, by realigning and consolidating the two rail lines on the east side with the two through tracks on the west side of the River. This park would be bounded on the north by the Santa Ana Freeway and on the south by 7 th Street.
	Linear parks: Developed along bank tops on west and east sides of river.	Same as for Alternative DI-A.
	Pocket parks: Created on the east side of the above-mentioned grade separated crossings within the industrial area, to provide additional open space to make up the necessary grades to accommodate the rail crossings. At 3 rd Avenue and Willow and Jesse Streets.	Same as for Alternative DI-A.
Green Streets	Regional greenway connections at east/west streets between Downtown and Lincoln Heights along 1 st , 4 th , 6 th , and 7 th Avenues.	Same as for Alternative DI-A.
	Arterial green streets: Along 1 st , 4 th , 6 th , and 7 th Avenues.	Same as for Alternative DI-A.
	Local green streets: All north/south and east/west primary local roadways within the opportunity area boundary.	Same as for Alternative DI-A.
Paseos and Promenades	Paseos: Every 400 feet in new developments.	Same as for Alternative DI-A.
	Paseo promenades: Along 3 rd Avenue and Willow Street.	Same as for Alternative DI-A.
Bikeways and Trails	Routes will be developed to integrate and connect with other open space development measures within the opportunity area and along the River Corridor.	Same as for Alternative DI-A.
Pedestrian River Crossings and Bridge Underpasses	Bridge underpasses at Hollywood Freeway, 1 st , 4 th , 6 th , and 7 th Avenues and Santa Monica Freeway.	Same as for Alternative DI-A.
Gateways	Regional gateways at 1 st and 6 th Streets.	Same as for Alternative DI-A.
	Neighborhood gateways at 3 rd and Willow Streets.	Same as for Alternative DI-A.
Water Quality and Habitat	As in Parks above, a linear park developed on east side of river.	Same as for Alternative DI-A, except a larger park/open space/habitat would be developed in the space provided by realigning and consolidating the two rail lines on the east side with the two through-tracks on the west side of the River. See Parks above.
Reinvestment	Underused properties within the opportunity area would be identified where new live-work units could be developed that reflect the existing character and use mix of the neighborhood. Existing industrial land uses would be protected. The rail line would be shifted to the easternmost rail lines to provide additional parkland adjacent to the River. The rail would be placed on trestles at select locations to improve access to parks.	Same as for Alternative DI-A, except new mixed-use live-work residential properties would be located within the new open space with street frontage along Mission Road; the rail lines along western edge of the River would be consolidated; and the inefficient industrial uses (in terms of jobs-per-square-foot) located between 7 th Street, the Santa Monica Freeway, and the River would be transformed into a greater density of industrial jobs.

4. River Revitalization Management

As discussed in the LARRMP, the successful implementation of the LARRMP will require the collaboration and cooperation of the governing jurisdictions (City of Los Angeles, Los Angeles County, US Army Corps of Engineers) and the other agencies responsible for the safe and proper functioning of the Los Angeles River. A "River Authority" is proposed in the LARRMP to coordinate the functions of these agencies. The LARRMP identified the need to provide guidance and leadership in implementing measures and

developments within the River Corridor, and the need was identified to create a nonprofit “River Foundation,” to raise funds to achieve the LARRMP revitalization goals and objectives. These key River revitalization management entities are described below, followed by a discussion of other revitalization management tools to help implement the LARRMP.

Los Angeles River Authority

The City, County, and Corps are responsible for the physical structures, safety, maintenance, operations, integrity, and water quality of the Los Angeles River ROW. These jurisdictions would join to form the Los Angeles River Authority and would be jointly responsible for River project operation and maintenance, water quality, public liability, construction permitting, regulatory compliance, River reconstruction, and River greenways and trails.

Los Angeles River Revitalization Corporation

A not-for-profit Los Angeles River Revitalization Corporation would be created with representative membership from willing business enterprises interested in helping develop a revitalized River Corridor. The boundary of the Revitalization Corporation’s jurisdiction would be approximately one-half mile on each side of the River ROW. The Revitalization Corporation would be able to own and develop land and buildings, to manage and operate facilities, and to use legal funding measures and form partnerships to support implementation of the LARRMP objectives. Furthermore, the corporation would be empowered to bring together public and private financing for river-related and community revitalization projects. It would develop collaborative development plans for specific economic development projects using special districts and other available management tools and would promote the establishment of partnerships between public, private, and nonprofit entities to help achieve LARRMP goals and objectives.

Los Angeles River Foundation

A not-for-profit Los Angeles River Foundation would be created by private individuals and private funding, with representation from the arts, the entertainment industry, corporations, and charity organizations. The River Foundation would develop financial assets to fund measures within the River Corridor to further environmental, educational, social, social justice, and sustainability interests of river-related communities. The River Foundation would support and develop programs that were directly responsive to community needs and opportunities that evolved from River revitalization implementation. The boundaries of the foundation would not be restricted to the River Corridor, but its benefits would be directed at Los Angeles River revitalization.

River Improvement Overlay (RIO) District

The RIO district would provide design standards and guidelines for all new development, private development projects and public facilities, as well as arterial and collector streets that connect to the River within this district. The district boundary would typically include 500 feet on either side of the River, but in some locations the boundary would extend to areas where future revitalization opportunities have already been identified, such as the five opportunity areas, based on community planning. Substantial compliance with the RIO district design standards and guidelines would be determined by a Department of City Planning design review process for private development projects. Topics to be addressed in the review process include landscaping, stormwater management, building orientation, view corridors, paseos, exterior lighting, green building technology, setbacks, and signs. Design standards and guidelines for public facilities and public ways would emphasize water quality, pedestrian, bicycle, and equestrian connections to and across the River, landscape character, public parks and open space, compatible public utility easements, building location and orientation, directional and interpretive signs, and public art.

Future Specific Plans

For future specific plans for lands near the River, planning guidelines would be proposed covering topics such as site plans, landscaping, site lighting, building orientation, building setbacks, building density,

parking lot lighting, green architecture, and signage. Although future implementation tools, such as specific plans and rezoning may take place within the boundaries of the RIO district, the integrity and function of the RIO district is anticipated to be maintained.

NO PROJECT ALTERNATIVE

The No Project Alternative was evaluated in FPEIR/PEIS, in accordance with CEQA and NEPA requirements. With the No Project Alternative, the LARRMP measures described above would not be implemented. The No Project Alternative consists of what would be reasonably expected to occur in the study area in the foreseeable future if the LARRMP measures were not implemented, based on current plans and consistent with available infrastructure and community services. If the community-based measures and the governance structure presented in the LARRMP were not implemented, the short-term and long-term goals and objectives specific to the LARRMP would likely not be realized. However, the theme of revitalization of the Los Angeles River is also a prominent theme in other current environmental planning projects. This is especially true for the County of Los Angeles' LA River Master Plan, prepared in 1996. Although the LARRMP is designed to enhance and expand upon the river revitalization goals and objectives inherent in the County's LA River Master Plan, even without the LARRMP, some of the river revitalization themes common to both plans would likely be realized under the County Master Plan, as well as the ongoing habitat restoration efforts of the Army Corps of Engineers in conjunction with the City of Los Angeles Bureau of Engineering and the Los Angeles Department of Water and Power. However, in the decade since completion of the County's Master Plan, there remains a need for the City of Los Angeles and its partnering jurisdictions along the river to share in comprehensive, multi-agency coordination efforts regarding public access to the river, safety, security, and maintenance. The LARRMP's proposed streamlined governance structure would coordinate river management and development--an improvement over localized and fragmented river oversight practices and land use patterns. In addition, through the Plan, the City has an organizing principle to coordinate the implementation of longer-term, broader-scale river revitalization that would better serve residents within the River Corridor and the region.

Significantly, the LARRMP also brings forward new ways to realize the possibility of river restoration through the creation of new green spaces, such as parks and habitat, and through concrete removal that can support more significant environmental improvements. Should the Plan not be implemented, such changes would not take place in the near future. Also, should the Plan not be implemented, the five opportunity areas identified (Canoga Park, River Glen, Taylor Yard, Chinatown-Cornfields, and Downtown Industrial) would not receive comprehensive and concentrated attention and would not likely achieve such comprehensive River revitalization independently.

ENVIRONMENTALLY-SUPERIOR ALTERNATIVE

Typically, the environmentally superior alternative as defined by CEQA should minimize adverse impacts to a project area and vicinity. As discussed above, two alternatives were evaluated at four of the five opportunity areas within the River Corridor (with the exception of Taylor Yard, which has one proposed concept). A comparison of the alternatives evaluated for the other four opportunity areas indicates that, in each case, Alternative A involves less construction, with less associated noise and air and water pollution, less disruption to existing biological resources, land use, and utilities, and less demand for new public services. Consequently, of the alternatives discussed in the FPEIR/PEIS, the "A" Alternatives for the Canoga Park, River Glen, Chinatown-Cornfields, and Downtown Industrial opportunity areas provide the environmentally-superior alternative.

ALTERNATIVES CONSIDERED, BUT NOT EVALUATED

During the process of developing the LARRMP, numerous locations along the 32-mile River Corridor were considered for establishing designated opportunity areas to demonstrate integrating different configurations of River channel modification, open space development, and reinvestment measures. The initial consideration of potential locations resulted in the selection of 20 "potential opportunity areas": Canoga Park, Reseda

Boulevard, Sepulveda Agricultural Area, Sepulveda Basin, Studio City- Coldwater Canyon to Whitsett, Tujunga Wash Confluence, Ventura Boulevard, Weddington Park, Spreading Grounds, Ferraro Fields, River Glen, Taylor Yard, Arroyo Seco Confluence, Chinatown-Cornfields, Mission Road Rail Yards, Boyle Heights Connector, Downtown Arts District, Downtown Industrial Area, Santa Fe Warehouse, and Sears/Crown Coach. Several of the 20 locations initially selected already have initiatives in progress to begin to transform the Los Angeles River, and it was hoped that the LARRMP could expand the revitalization effort, as well as add momentum to these initiatives. On this basis, and through subsequent analysis and extensive community discussion, the list of 20 areas was narrowed to nine. These nine areas, from which the five focused opportunity areas evaluated in this PEIR/PEIS were derived, included Canoga Park, Sepulveda Basin, Spreading Grounds, River Glen, Taylor Yard, Arroyo Seco Confluence, Chinatown-Cornfields, Mission Road Yard, and Downtown Industrial.

Through further interactive community and public discussions and additional site investigation, the five opportunity areas were chosen for further design development in the LARRMP and evaluation in this PEIR/PEIS. The process of choosing the five opportunity areas was guided by the following considerations:

- The selected opportunity areas should demonstrate ideas for all three River areas, as initially categorized by Los Angeles County's 1996 River Master Plan. These include the San Fernando Valley, the Glendale Narrows, and the Downtown area.
- Opportunity areas should capture opportunities for "quick-wins," as well as for their potential to demonstrate a range of issues and opportunities to meet plan goals. Therefore, industrial land, land that is going through transition, and areas with transportation/railway challenges, for example, would also be considered as examples of how best to address multiple issues simultaneously.
- The opportunity areas should show practicality by having initial phasing components as well as bold longer-term implementation potential demonstrating strong civic value.
- The opportunity areas should be highly visible and beneficial to City residents.
- Priority should be given to opportunity areas that would not otherwise proceed on their own compared to sites that are being pursued by related efforts. For example, the Spreading Grounds, Arroyo Seco, and the Sepulveda Basin Opportunity Areas all have ongoing restoration and open space efforts by the Corps with local partnerships.

The fact that the LARRMP has brought forward five selected opportunity areas for implementation and evaluation at this time does not preclude the future development of revitalization measures at other locations within the River Corridor. If and when such development takes place, subsequent CEQA and NEPA evaluation of future projects would be required.

Insignificant Impacts without Mitigation

The City of Los Angeles finds that the LARRMP is not expected to, at a programmatic-level, result in significant adverse impacts on the following six (6) environmental resource areas and there is no need for the formulation of mitigation measures for these at this time:

- Agricultural Resources
- Geology, Soils, and Seismic Hazards
- Mineral Resources
- Recreation
- Utilities and Infrastructure
- Aesthetic Resources

It is important to reemphasize that the evaluation of potential environmental impacts presented in the FPEIR/PEIS is at a “programmatic level” not at a “project level” since no specific LARRMP projects have yet been identified in the study area for evaluation at this time. Therefore, the evaluation of environmental impacts presented addresses potential impacts that would be *likely* to affect projects that *may* be proposed within the River Corridor and the five (5) opportunity areas during the near-term and long-term planning periods. Overall, sixteen (16) environmental resource areas are addressed in FPEIR/PEIS:

- Agricultural Resources
- Air Quality
- Geology, Soils, and Seismic Hazards
- Hydrology, Floodplain, and Water Quality
- Mineral Resources
- Biological Resources
- Land Use
- Recreation
- Noise
- Public Health and Safety
- Transportation
- Utilities and Infrastructure
- Socioeconomics
- Environmental Justice
- Cultural Resources
- Aesthetic Resources

Overall, long-term beneficial impacts are expected on *air quality, water quality, biological resources, recreation, and aesthetic resources.*

Since location-specific, project-level impacts cannot be ascertained at this time, none of the resource areas may be reliably identified as resulting in “insignificant impacts without mitigation.” Subsequent environmental reviews at the project level should be conducted to further characterize potential impacts on resource areas, once specific designs are prepared with additional site details and boundaries and building or structure locations have been determined.

Potentially Significant Adverse Impacts Prior to Mitigation

The City of Los Angeles finds that the LARRMP may be expected to, at a programmatic-level, result in potentially significant adverse impacts prior to applying the identified programmatic-level mitigation measures in the following ten (10) resource areas:

- Air Quality
- Hydrology, Floodplain, and Water Quality
- Biological Resources
- Land Use
- Noise
- Public Health and Safety
- Transportation
- Socioeconomics
- Environmental Justice
- Cultural Resources

Many of the potential impacts of the LARRMP are projections of these impacts when specific projects are implemented. For each of these future site-specific projects, there would be an appropriate environmental review with public input. Subsequent activities in the program must be examined in the light of the FPEIR/PEIS to determine the nature of the additional environmental documentation that must be prepared.

Air Quality

Impacts

Both adverse and beneficial air quality impacts could result from implementing the two main types of River channel modification measures (non-velocity-reducing and velocity-reducing) and the suite of open space measures described above. Potential adverse impacts include short-term increases in fugitive dust and vehicle emissions associated with construction activities and incremental long-term increases in vehicle emissions that could accompany increased traffic from those seeking to use new amenities. Potential short-term adverse air quality impacts are expected to be higher for those measures involving more extensive construction activities, such as velocity-reducing channel modifications and sports fields. PM₁₀ is the pollutant of greatest concern with respect to these activities. PM₁₀ emissions can occur as fugitive dust from demolition, excavation, grading, and vehicle travel on paved and unpaved surfaces, as well as from vehicle and equipment exhausts. On-road vehicles associated with short-term construction activities and potential increased traffic on the long term would contribute to NO_x, ROG, CO, PM₁₀, and PM_{2.5} emissions. ROG form O₃ when they react with nitrogen oxides. Potential health risks from NO_x and ROG include chronic pulmonary fibrosis, breathing difficulties, and lung tissue damage. CO could cause health problems and reduced mental alertness.

On the beneficial side, establishing green vegetation in the River channel and developing parks, green streets, paseos and promenades in the River Corridor could have long-term beneficial improvements on ambient air quality. Many of these measures include enhanced pedestrian access, which could help reduce vehicle emissions. Also, increasing the amount of green open space and adding trees along streets could help reduce levels of greenhouse gases, such as carbon dioxide (CO₂) and reduce greenhouse gas emissions as required by the State's Global Warming Solutions Act of 2006.

For each of the five opportunity areas, the FPEIR/PEIS indicates that air quality impacts may result; however, in each case, they are expected to be reduced to less than significant levels with the use of mitigation

actions described below, and because future projects are expected to be implemented over an extended period of time rather than all at once.

As future LARRMP implementation projects are identified in the River Corridor, each project should conform to applicable ambient air quality standards. To that end, it is anticipated that sources and types of potential emissions would be identified, emission levels would be determined for each project, localized significance analysis would be performed, and potential cumulative air quality impacts from other planned projects would be accounted for. Because it is likely that implementing the LARRMP revitalization measures would involve major demolition and construction activities along the 32-mile-long River Corridor, potential adverse impacts on air quality are expected to be high and potentially significant.

Mitigation Measures

When future LARRMP implementation projects are undertaken, potentially significant air quality impacts associated with construction of these projects can be reduced to less than significant levels through the application of the following best management practices:

- Minimize the area disturbed by clearing, earthmoving, or excavating;
- Use water trucks or sprinkler systems in sufficient quantities to contain fugitive dust on-site; increased watering frequency should be required whenever wind speeds exceed 15 miles per hour; reclaimed (nonpotable) water should be used whenever possible;
- Spray all dirt stockpile areas daily or as needed;
- Implement permanent dust control measures, such as revegetating and landscaping, as soon as possible following completion of any soil-disturbing activities.
- Treat ground areas that are planned to be exposed for at least a month after initial grading with a fast-germinating native grass seed and watering until vegetation is established;
- Stabilize all disturbed soil areas not subject to revegetation using state- and federally approved chemical soil binders;
- Pave all roadways, driveways, walkways (if so designed) as soon as possible; similarly, finishing building pads as soon as possible after grading unless seeding or soil binders are used;
- Limit construction vehicle speeds to 15 miles per hour on any unpaved surface at the construction site;
- Cover all trucks hauling dirt, sand, soil, or other loose materials or maintaining at least two feet of freeboard (minimum vertical distance between top of load and top of trailer), in accordance with California Vehicle Code Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets or washing off trucks and equipment leaving the site;
- Sweep streets at the end of each day if visible soil is carried onto adjacent paved roads; use water sweepers with reclaimed water, where feasible; and
- Have a dust control program and a monitor on-site to oversee watering or other measures to prevent off-site transportation of dust; contact information for the monitor should be provided to the SCAQMD.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Air quality impacts are largely expected to result from short-term construction activities; long-term impacts are expected to result in beneficial outcomes since new tree plantings—particularly in the aggregate—can absorb significant amounts of carbon dioxide, provide cooling of the urban heat island effect through

evapotranspiration and shading, provide a buffer against noise and particulates near roadways, and River channel improvements—particularly mobility enhancements—can provide alternatives to more air pollution-intensive automobile use.

Hydrology, Floodplain, and Water Quality

Impacts

There are two types of River channel modification measures discussed in the LARRMP: those that do not reduce River flow velocity and those that do. Potential impacts and mitigations associated with these two types of channel modifications are discussed below.

Without Flow Velocity Reduction Type

For channel modifications that do not reduce flow velocity, vegetative cover would be increased up to 30 percent within the channel ROW, and intermittent habitat would be developed along the River bottom. Greening measures also include enhancing water quality treatment of stormwater outfalls by developing vegetative bio-swales and bio-filtration areas. LARRMP goals and objectives include improving the aesthetics, recreational use, water quality, and ecological productivity of the River Corridor, while maintaining or improving flood protection. Flood control channels, like much of the Los Angeles River, are designed to move stormwater rapidly and efficiently. Flood control basins like Sepulveda Basin are designed to impound flood waters so they can be released in a controlled manner to avoid flooding downstream. Most of the study area is outside the 100-year floodplain except for the River channel itself (below the top of the riverbank) and Sepulveda Basin.

Increasing in-channel vegetation and creating vegetative bio-swales and bio-filtration areas would help improve water quality. Vegetation helps to filter out pollutants. Bacteria and other microbes then have the opportunity to break down pollutants. The sources of the pollutants still would need to be addressed, but treating stormwater runoff with bio-swales and bio-filtration areas would help the City and County meet TMDL (Total Maximum Daily Load) and other NPDES (National Pollutant Discharge Elimination System) requirements.

Trash, such as bags, clothes, and plastic bottles, in the Los Angeles River is also a concern to many people. Trash washes off area streets into storm drains and then eventually into the River. Installing trash racks and booms to catch the material could help control this pollution, but trash racks and booms must be periodically cleaned and the material hauled to area landfills. Public education could also help inform people that trash they throw on the ground often makes its way into area streams and rivers.

Vegetation and infiltration areas outside the River channel would decrease the amount of impermeable surface area and help reduce runoff water velocities. Slowing down this runoff allows the water to soak into the ground and recharge groundwater supplies. Allowing the water to soak into the ground also aids in decreasing runoff volumes, peak discharge rates, and the magnitude, frequency, and duration of bankfull and flash flows.

Future LARRMP construction sites could increase sedimentation and erosion rates by removing vegetation and concrete. Disturbed soils are then subject to erosion from wind and runoff. Extensive erosion and subsequent impacts to air and water quality could occur due to the extensive amount of ground clearing and earth work involved with the project. A stormwater pollution control plan should be developed for each future project that includes best management practices to help control erosion and loss of soil.

With Flow Velocity Reduction Type

For channel modifications with flow reduction, vegetative cover would be increased by up to 50 percent within the channel ROW, and more continuous habitat would be developed along the River's bottom. Work would also include measures to reduce water velocity, such as constructing underground linear culverts parallel and adjacent to the River. Increasing the amount of vegetation in the channel and reducing water

velocities would improve water quality and the ecological productivity of the River, along with improving the aesthetics and recreational use of the area.

If properly designed, flow reduction measures, such as using off-channel attenuation areas, widening and terracing the channel, and piping high water flows, can improve on existing flood protection levels and the ecological productivity of the River. It is thus important that changes to the River channel be designed with these considerations.

As with the without-flow velocity reduction types, disturbed soils at project sites would be subject to erosion from wind and rain. Extensive erosion and subsequent impacts to air and water quality could occur, especially since this alternative would necessitate considerable amounts of ground clearing and earth work. Soils would be subject to erosion until construction is complete and vegetation becomes re-established. A stormwater pollution control plan would be developed that includes best management practices to help control erosion and loss of soil.

Increased vegetation in the channel would also increase the amount of woody material and vegetative debris that could be washed down stream during high water events. This material would likely get caught on bridge pilings and inhibit water flow. Increased sedimentation would be expected if vegetation is uprooted. When the vegetation planting plan is developed, these factors would be taken into consideration. The operation and maintenance plan should include provisions for addressing debris jams.

In addition to accounting for potential adverse impacts on biological resources during construction of the velocity-reducing channel modification measures, the project-specific water quality studies should address any potential long term impacts to water quality and habitat caused by transitioning storm flows into and out of culverts from the channel.

Open Space Development Measures

As discussed above, open space development measures include greenway connections, expansions, and extensions. More specifically, they include the development of parks, green streets, paseos and promenades, trails and bikeways, pedestrian River crossings, River loops, gateways, and water quality and habitat improvements.

Open space, parks, recreation fields, and pedestrian trails are the types of features that can generally be located in flood hazard areas. Typically, these types of features do not adversely affect floodplain elevations. These types of areas can be inundated by flood waters with minimal damage. River crossings would need to be designed so as to not impede high water flows (sufficient span and height). Parks and green streets would help to reduce the amount of impermeable surface area, allowing rainwater to soak into the ground and recharge groundwater supplies. Water quality and habitat improvements, such as bio-swales and filtration areas, would help improve water quality by filtering stormwater.

Exposed soils during construction can erode and adversely affect water quality. Often, recreational fields, especially golf courses, can create water quality concerns due to the amount of fertilizer and pesticides used. Minimizing the use of fertilizers and pesticides and designing the facilities to control and treat stormwater on-site can help reduce these potential impacts.

Project features that attract people to the River could also result in more trash being thrown on the ground, eventually making its way into area streams and the Los Angeles River. Trash buries vegetation and wildlife can ingest or get entangled in it. Trash adversely affects public health and aesthetics. There is also a cost to taxpayers to remove and dispose of the trash. The trash boom in Long Beach catches much of the trash (hundreds of tons annually), but a lot of the trash makes its way to the ocean and area beaches.

With the use of appropriate mitigation (presented below), potential impacts from implementation of the River modification and open space measures would range from low to high. There is also the potential for high and potentially significant adverse impacts on water quality due to soil erosion from wind and stormwater runoff. Disturbed soils would need to be stabilized and best management practices implemented to reduce potential impacts on water quality to less than significant levels. Additional trash entering the River from increased recreational activity would likely have low to moderate adverse impacts on public health and aesthetics. Low to moderate impacts are also anticipated from vegetation becoming uprooted during high water events and becoming entangled on bridge pilings and restricting water flow. Proposed LARRMP River channel modification and open space development measures would also be expected to have low to moderate beneficial impacts on water quality.

Opportunity Areas

Open space, parks, recreation fields, and pedestrian trails are the types of features that can generally be located in flood hazard areas. Typically, these types of features do not adversely affect floodplain elevations. These types of areas can be inundated by flood waters with minimal damage. River crossings would need to be designed with sufficient span and height so as to not impede high water flows. Parks and green streets help to reduce the amount of impermeable surface area, allowing rainwater to soak into the ground and recharge groundwater supplies. Water quality and habitat improvements, such as bio-swales and filtration areas, would help improve water quality by filtering stormwater. Exposed soils during construction could erode and adversely affect water quality. Sometimes recreational developments can create water quality concerns due to the amount of fertilizer and pesticides used. Minimizing the use of fertilizers and pesticides and designing the facilities to control and treat stormwater on-site can help reduce these potential impacts.

With the use of appropriate mitigation (presented below), potential impacts from implementation of the proposed revitalization and reinvestment measures in each opportunity area would range from low to high. There is also the potential for high and potentially significant adverse impacts on water quality due to soil erosion from wind and stormwater runoff. Disturbed soils would need to be stabilized and best management practices implemented to reduce potential impacts on water quality to less than significant levels. Additional trash entering the River from increased recreational activity would likely have low to moderate adverse impacts on public health and aesthetics. Low to moderate impacts are also anticipated from vegetation becoming uprooted during high water events and becoming entangled on bridge pilings and restricting water flow. Some of the proposed LARRMP revitalization measures would also be expected to have low to moderate beneficial impacts on water quality.

Mitigation Measures

The following mitigation measures are recommended for all future projects to avoid and minimize potential adverse impacts related to hydrology, floodplains, and water quality:

- Incorporate and design stormwater management facilities to reduce or retard the amount of peak runoff and to filter stormwater runoff;
- Include kiosks with environmental education information on the effects and costs of littering;
- Install trash booms and racks to collect trash.
- Establish erosion control plans;
- Revegetate exposed soils as soon as feasible after grading or construction;
- Incorporate best management practices designed to ensure control of potential pollutant loading, consulting with Regional Water Quality Control Board as appropriate;
- Employ the *Stormwater Best Management Practice Handbooks*, published by the California Stormwater Quality Association, and other suitable publications for guidance in designing and implementing project-specific construction Stormwater Management Plans;
- In subsequent construction of Open Space Development Measures, such as, walking and bike paths, picnic areas and nearby parking, incorporate the use of permeable pavement and other surfaces, where feasible, to reduce stormwater runoff;

- In subsequent construction of Open Space Development Measures, such as recreation fields, golf courses, and other landscaped areas, specific measures should be developed to control and treat irrigation and stormwater runoff that may contain pesticides and fertilizers;
- The California Regional Water Quality Control Board should be consulted to help define appropriate mitigation measures;
- Project-specific water quality studies and impact analyses should be conducted to properly account for potential water pollution in future implementation project areas within the River Corridor;
- Continue BMPs post-construction to ensure ongoing efficiency and protection of water quality;
- Incorporate best management practices, such as siltation fences and hay bales, during construction to minimize soil erosion from runoff; and
- Access roads, maintenance roads, and invert access roads should be constructed in accordance with accepted design standards, and in consultation with Los Angeles County, to ensure that maintenance activities are not unduly hampered, especially during emergencies and high channel flows.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

The Los Angeles River is the center of the LARRMP and therefore its functions as a River are critical to the Plan's success—thus all benefits are related to its hydrologic capacity and condition—e.g., how it handles flows, manages flood events, and the quality of its water. These characteristics are reflected in LARRMP elements—such as runoff management and greening through bioswales and detention basins that are intended to provide multiple-benefits, including water treatment and, in some cases, removal of concrete to restore a more natural flow pattern. These are also evidence that the long-term impacts to hydrology, flood plain, and water quality resources are intended and expected to be beneficial.

Biological Resources

Impacts

River Channel Modification Measures

For the without-flow-reduction type of channel modification, vegetative cover would be increased up to 30 percent within the channel ROW, and intermittent habitat would be developed along the River bottom. This type of modification would help connect fragmented habitats and provide increased habitat for wildlife, such as migratory birds, and for keystone species, such as coyotes, shrikes, quail, acorn woodpeckers, and Lorquin's admiral butterfly. Temperatures in the area might also decrease due to shading by trees and the reduction in the amount of concrete. Water quality might also be expected to improve from vegetative bioswales and biofiltration areas filtering stormwater runoff. Improvements in water quality would help enhance conditions for fish and aquatic wildlife.

Some of the highest value habitats in the River Corridor are the riparian vegetation growing in the River channel in the Sepulveda Basin and through the Glendale Narrows. Providing more of this type of habitat would greatly enhance the fish and wildlife resources of the area, especially native species. It would provide nesting, feeding, and migration areas for birds and mammals. Fish populations would also increase as the amount of riparian/streamside vegetation increases.

For the with-flow-reduction type of channel modification, vegetative cover would be increased by up to 50 percent within the channel ROW, and more continuous habitat would be developed along the River's bottom. This type of modification would provide greater benefits to biological resources than the without-flow-reduction type of modification. The potential for developing sustainable fish and wildlife populations in the River Corridor would be enhanced. Populations of migratory birds and small mammals would be expected to increase appreciably. Species density and richness would also be expected to increase. Keystone

species, such as coyotes, shrikes, quail, acorn woodpeckers, and Lorquin's admiral butterfly, would be expected to be able to migrate within the corridor and to have improved access to the Griffith Park Significant Ecological Area.

Reducing peak flow rates also benefits fish and wildlife. During floods, habitats are destroyed and washed down stream, along with fish and wildlife not able to move out of the River channel in a timely manner. Reducing flow rates reduces the amount of impact high flows inflict on biological resources. It also allows for in-stream habitats and riparian gravel/sediment bars to more fully develop, thus allowing for greater species diversity and sustainability.

With either type of channel modification, impacts on biological resources are expected to be mostly beneficial, providing more and improved fish and wildlife habitat. The less concrete and the more vegetation, velocity reduction measures, and bio-swales/filtration areas, the better it is for biological resources. However, construction work, especially for the with-flow reduction measures, would require large amounts of excavation and the subsequent disposal of the materials. Adverse impacts on biological resources during construction would be temporary and low since most of the corridor is of extremely poor habitat quality, except for Sepulveda Basin and Griffith Park/Glendale Narrows. In these areas, impacts to existing biological resources could be high and potentially significant. Work would need to be coordinated with land managers and resource agencies to ensure that adverse impacts were reduced to less than significant levels.

In the Sepulveda Basin and through the Glendale Narrows, wetlands are expected to be encountered within the River channel. The wetland habitats are associated with vegetation growing along the edges of the wetted channel and on in-channel gravel/sediment bars. As individual revitalization projects become identified for implementation, ground surveys to assess the location of wetlands and to help develop measures to enhance and incorporate existing habitat into the project designs to the extent practicable. The functions and the values of the habitats would also be assessed. In spite of potential adverse impacts on the riparian habitat and wetlands during construction of individual projects, it can be expected that there would be overall net beneficial impacts on biological resources. The acreage of wetlands and higher value habitats is expected to increase, in addition to improved function and values of the habitat.

The greatest potential for long-term adverse impacts on biological resources would be human interactions with wildlife, such as skunks, raccoons, coyotes, and snakes. Coyotes and raccoons can get into trash, and coyotes can prey on domestic dogs and cats. These types of adverse interactions are inevitable if the habitat in the River Corridor improves and greater numbers of these types of species inhabit the area.

There are also potential impacts from ponded water on ecosystems that may develop upstream, downstream, and within ponded areas, especially at times when the water held in these dams may be released. These potential impacts will need to be identified and evaluated when such projects are identified along the River Corridor.

Open Space Development Measures

As discussed above, open space development measures include greenway connections, greenway expansions, and greenway extensions. They also include the development of parks, green streets, paseos and promenades, trails and bikeways, pedestrian River crossings, River loops, gateways, and water quality and habitat improvements.

Features such as play grounds, ball fields, paseos and promenades, bike trails, pedestrian crossings and gateways would provide minimal wildlife habitat benefits. They are designed for human use, and as such they do not typically provide suitable habitat for wildlife. The landscaping associated with these features, along with the greening of the streets, can provide some benefit to passerine (perching) birds, such as sparrows and small mammals. The greatest benefit is the establishment of vegetation and the reduction in the amount of

impermeable surface area. Vegetation also helps cool air temperatures and absorbs surface water when it rains.

Habitat enhancing measures like establishing riparian zones around ponds and creeks and establishing thickets of vegetation would help increase the diversity of species in the River Corridor. These types of measures would also aid in establishing linkages between disconnected habitats. Measures would need to be taken to control nonnative species, to help ensure the productivity of the sites. In addition to providing water quality benefits, features such as vegetated bio-swales, infiltration areas, and retention ponds can also provide habitat benefits if designed properly.

Potential adverse impacts on biological resources from these features are similar to those for the River channel modification measures described above. These include impacts from construction and human and wildlife interactions. Another potential adverse effect is that isolated wooded areas near city centers tend to attract vagrants. Security patrols would likely be needed to deter them from establishing homeless camps and to ensure public safety.

Overall, the levels of adverse impacts on biological resources from implementing the LARRMP River channel modification measures and the open space development measures are expected to be low to moderate. Most of the River channel has minimal habitat values, except for Sepulveda Basin and through the Glendale Narrows. Higher value habitats should be avoided to the extent possible and/or should be incorporated into project designs. Channel modifications in the Sepulveda Basin and the Glendale Narrows areas would potentially have short-term high and significant adverse impacts.

Adverse impacts on wetlands and higher value habitat in the stream channel would be offset by creating and enhancing these habitats. Construction-related impacts would be temporary and minor. No threatened or endangered species are known or expected to inhabit the corridor. On this basis, therefore, a net gain of ecological benefits is expected by implementing the LARRMP measures. Beneficial impacts on biological resources have the potential of being major to significant, depending on the amount and type of habitat constructed. Implementing these measures, especially the River Channel Modifications, would contribute to the cumulative amount of fish and wildlife habitat in the River Corridor, along with contributing to the amount of open space in the Los Angeles basin.

Opportunity Areas

When project implementation would require large amounts of excavation and subsequent disposal of the materials, impacts would likely result. Short-term impacts to existing biological resources could be high to significant. However, with proper planning and coordination with resource agencies and land managers, impacts could be reduced to less than significant levels. For instance, adverse impacts on wetlands and higher value habitat in the stream channel would be offset by creating and enhancing these habitats in other project elements. Overall, there would be a net gain of ecological benefits from implementation of any of the alternatives. Measures should be developed to enhance and incorporate existing habitat into the project designs to the extent practicable. In spite of minor and temporary adverse impacts on riparian habitat and wetlands during construction, revitalization measures are expected to have an overall benefit. The acreage of wetlands and higher value habitats would increase, and function and values of the habitat would improve.

Features such as playgrounds, ball fields, paseos and promenades, bike trails, pedestrian crossings, and gateways are designed for human use and do not typically provide suitable habitat for fish and wildlife. The landscaping associated with these features, along with the greening of the streets, could provide some benefit to migratory birds and small mammals. The greatest ecological/biological benefit would be from the establishment of vegetation and the reduction in the amount of impermeable surface area. Vegetation also helps cool air temperatures and absorbs surface water when it rains.

Potential adverse impacts are associated with construction, particularly in-channel work, and human-wildlife interactions. Construction impacts are related to such things as removing concrete, tearing down buildings, clearing landscaping in areas where it could not be avoided, and increasing sedimentation from stormwater runoff. Surveys to identify and assess wetlands and higher value habitat should be performed as necessary for each implementation project. As wildlife begins to inhabit the area after construction, interactions with wildlife, such as skunks, coyotes, and snakes, is expected to increase. There is also the potential for increased use of wooded areas by vagrants. Increased security patrols would likely be needed to deter them from establishing homeless camps and to ensure public safety. No rare, threatened, or endangered species are known or are expected to inhabit the five opportunity areas.

Mitigation Measures

As specific LARRMP implementation projects are identified and undertaken in the future, site-specific biological surveys would likely need to be conducted to better define biological resources, such as the presence of and potential impacts on wetlands and higher value habitats. Future project plans and designs would need to be coordinated with appropriate resource agencies and land managers to ensure to the greatest extent possible that high value habitats could be accounted for and their functions and values enhanced.

Potential mitigation measures and best management practices for future projects to reduce levels of potential adverse impacts on biological resources include the following:

- Identifying seasonal restrictions to construction based on bird migration and breeding patterns and other wildlife issues;
- Adhering to the County's Los Angeles River Master Plan *Landscaping Guidelines and Plant Palettes* (January 2004), which require the use of native, drought-tolerant plants that provide habitat for indigenous wildlife and avifauna;
- Incorporating existing native vegetation into the design, where practicable, so as to avoid removing vegetation;
- Using stormwater best management practices, such as silt fences and hay bails, to help minimize siltation and erosion during storms;
- Using native vegetation in revegetation plans, along with developing invasive species control plans;
- Incorporating pockets of thicker vegetation into the designs to provide areas with higher habitat value;
- Conducting surveys of Sepulveda Basin and the Glendale Narrows to identify wetlands or other high value habitats and, where wetlands exist, incorporating them into project designs and including features to enhance their function and values;
- Identifying and evaluating potential impacts on associated ecosystems from the development of ponded areas, and especially from the periodic release of ponded water;
- Including kiosks with environmental education information on how to minimize adverse human/wildlife interaction; and
- Providing increased security patrols and lighting to improve public safety.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects.

Adverse biological resource impacts are largely expected to result from short-term construction activities; long-term impacts are expected to result in beneficial outcomes since new plantings, habitat linkages, partial ecological restoration and water quality improvements are supportive of greater biological diversity and survival.

Land Use

Impacts

River Channel Modifications

Community Plans throughout the study area show the approved land use for the Los Angeles River ROW as Open Space. All proposed River channel modifications in the LARRMP are consistent with the Open Space land use designation. In some cases, proposed River channel modification measures may require additional lands outside of the Los Angeles River ROW. These adjoining lands may be approved for different land uses that are not consistent with the proposed Open Space use of the expanded River ROW. If in the future, River channel modification measures are considered for implementation during the subsequent community planning process that would result in land use inconsistency with approved land use in the applicable General Plan Land Use Element, then a specific assessment of the significance of the land use impact would be required. Mitigation actions may also be required. Any proposed land use that is not consistent with existing land uses as approved in the area's Community Plan could result in high and potentially significant land use impacts.

All River channel modification measures would impact the configuration of the River channel and would need to be coordinated with the Corps and Los Angeles County, the flood control regulatory agencies to fully evaluate compatibility with existing uses of the River channel for flood conveyance. In addition, any of the

Open Space Development Measures

At a programmatic level, any of the identified Open Space Development Measures could result in inconsistencies with the adopted land use/density designation in the General Plan, Community Plan, redevelopment plan, specific plan for the site, or adopted environmental goals and policies of other applicable plans. If in the future an Open Space Development Measure is considered for implementation during the subsequent community planning process at a specific site, further analysis to identify all relevant land use plans and policies and to evaluate the measure's consistency with those plans and policies will be required. Evaluation of consistency and compatibility should include the Master Plans in place for the Los Angeles River, Sepulveda Basin, and Griffith Park and the General Plans for Rio De Los Angeles and Los Angeles State Historic Parks in the River Corridor, where applicable. Consistency and compatibility with the IRWMP and any projects approved for funding therein should also be evaluated. Any proposed land use that is not consistent with existing land uses as approved in the area's Community Plan could result in high and potentially significant land use impacts. If significant impacts are identified, mitigation measures will need to be identified and evaluated to reduce potential impacts to less than significant levels.

Since most of the Open Space Development Measures serve to connect communities to the River and thus each other, implementing the measures is not expected to introduce permanent features that would disrupt, divide, or isolate neighborhoods, communities, or land uses. If in the future an Open Space Development Measure is considered for implementation during the subsequent community planning process at a specific site, further analysis would be required to evaluate the compatibility of that measure with existing land uses in the project area. If impacts were identified, mitigation measures would need to be identified and evaluated.

Some general considerations specific to each major category of Open Space Development Measures include the following:

Parks: Four types of parks are included in the LARRMP that correspond to varying levels of land availability and recreational use. Creating the parks may require acquiring lands currently approved for other land uses. Any conversion of lands currently identified for other uses in the area's General Plan, Community Plan, and Specific Plan would require further analysis to identify the impacts of the land use change and to identify mitigation measures if needed. Impacts for change in land use would be more significant as the area of the proposed change increases. This proposed measure would require coordinating with flood control regulatory agencies to assess any impacts on flood control project inspection and maintenance roads.

Green Streets: Significant land use impacts are not expected to result from implementation of any of the three types of green street measures presented in Section 2 of this PEIR/PEIS. The nature of these proposed features is to modify aspects of the pedestrian and vehicular experience in these River connection corridors rather than change the existing land use.

Paseos and Promenades: Land use impacts from implementing this Open Space Development measure in and of itself are not expected, unless implementing the measure required a change in land use at the implementation site. These measures are typically associated with other reinvestment measures that could result in inconsistencies with approved land uses at specific implementation sites.

Trails and Bikeways: The Nonmotorized Transportation Element of the City of Los Angeles General Plan identifies a bikeway network along the entire River Corridor. No significant land use impacts are expected by implementing trails and bikeways in the River Corridor that are consistent with the General Plans of the associated communities.

Pedestrian River Crossings: There are no expected impacts on land use plans and policies from implementing this Open Space Development measure. Such proposed measures would require coordinating with flood control regulatory agencies to assess any impacts on flood control conveyance and any impacts on inspection and maintenance roads.

River Loops: Land use impacts from implementation of this Open Space Development measure would not be expected unless implementing the measure required lands outside the Los Angeles River ROW that would be inconsistent with existing approved land uses at the implementation site. The River loops will typically be associated with other open space measures and/or reinvestment measures along the loop that could result in inconsistencies with approved land uses. This proposed measure would require assessment of any potential impacts on flood control project inspection and maintenance roads.

Gateways: Land use impacts from implementing this Open Space Development measure are not expected unless implementing the measure required a change in land use at the implementation site. Where the gateways provide access to the Los Angeles River ROW, compatibility with flood control maintenance and inspection paths should be assessed.

Water Quality and Habitat: Development of lands for water quality or habitat enhancements would require that those lands be approved for use as open space. Any conversion of lands currently identified for other than open space uses in the area's General Plan, Community Plan, and Specific Plan would require further analysis to evaluate potential impacts on the approved land use category and to identify mitigation measures. Impacts for change in land use are expected to be more significant as the area of the proposed change increases.

As future LARRMP River channel and open space modification projects are identified in the River Corridor, there would likely be high and potentially significant land use impacts occurring when proposed land use is not consistent with existing land uses as approved in the area's Community Plan. Those River channel modification measures that would require lands outside of the current Los Angeles River ROW are expected to result in inconsistencies with current approved land uses at most implementation sites. Similarly, most open space development measures requiring land acquisition also could result in inconsistencies with current approved land uses at implementation sites. Site-specific impact analyses would be required to assess the significance of these land use impacts as projects are considered for implementation during the subsequent community planning process to reduce potential impacts to less than significant levels.

LARRMP revitalization measures are expected to be implemented over an extended time frame and at various locations along the 32-mile River Corridor. Site-specific impact levels of River channel modification

measures requiring land use changes could be considered to be low since they typically require an incremental extension of the existing River Corridor at specific sites.

Potentially high-impact open space development measures are those that require the largest areas of land acquisition and land use conversion, such as riverfront park measures, relatively large water quality and habitat measures, and the reinvestment measures that could be associated with paseos and promenades and River loops. Other open space measures (green streets, trails and bikeways, pedestrian River crossings, and gateways) are expected to be low impact, relative to land use.

Future evaluation of the significance of land use changes will need to be weighed against the beneficial impacts of land use changes (for example, more open space land use, which is an objective of most community plans in the River Corridor) with adverse impacts (for example, loss of industrial lands which the City is trying to preserve). These future impact analyses will require community involvement and may necessitate modifications to community plans and other general plan elements.

Opportunity Areas

Each opportunity area would require varying degrees of coordination with neighboring jurisdictions and through the Department of City Planning's Community Plan update process.

Community Planning Area	Opportunity Area(s)
Canoga Park/Winnetka/Woodland Hills/West Hills	Canoga Park
Reseda/West Van Nuys	River Corridor only
Encino/Tarzana	River Corridor only
Van Nuys/North Sherman Oaks	River Corridor only
Sherman Oaks/Studio City/Toluca Lake/Cahuenga Pass	River Corridor only
North Hollywood/Valley Village	River Corridor only
Hollywood	River Glen
Northeast Los Angeles	River Glen, Taylor Yard
Silver Lake/Echo Park/Elysian Valley	Taylor Yard, Chinatown-Cornfields
Central City North	Chinatown-Cornfields/Downtown Industrial
Central City	Downtown Industrial
Boyle Heights	Downtown Industrial

Mitigation Measures

Site-specific land use impact studies are required to assess the significance of land use impacts of LARRMP revitalization measures before they are implemented. The findings of these studies are required before appropriate mitigation actions are identified for these projects. Appropriate mitigation actions would vary depending on the type of land use impacted and the extent of the impact. Generally, the types of mitigation measures to be identified should include the following:

- Avoiding land use impact altogether by not taking a certain action or parts of an action and by developing plans that are consistent with community planning area land use plans;
- Minimizing land use impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the land use impact by repairing, rehabilitating, or restoring the impacted land use;
- Reducing or eliminating the land use impact over time by preservation and maintenance operations;
- Compensating for the land use impact by replacing or providing substitute resources.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

The LARRMP, like all City projects, would have to be evaluated for its compatibility and consistency with prevailing City plans and policies. As a conceptual vision document, the LARRMP does not propose specific land use changes. The LARRMP-recommended River Improvement Overlay (RIO) district and opportunity areas could involve future land use changes, but these will each be subject to established community planning processes, including public involvement, and environmental review.

Noise

Impacts

Short-term adverse impacts from construction are expected. Demolition and construction could affect sensitive receptors in the River Corridor. Although the specific type and quantity of demolition and construction vehicles and equipment would not be identified until specific projects are implemented. See table below for typical construction equipment noise levels.

Typical Demolition and Construction Site Equipment Sound Levels

Equipment	Sound Level in Decibels
Pneumatic chip hammer	103-113
Jack hammer	102-111
Circular saw	88-102
Bulldozer	93-96
Crane	90-96
Hammer	87-95
Front-end loader	86-94
Backhoe	84-93

Source: Center to Protect Workers' Rights 2003

As a point of reference, conversation generates approximately 70 decibels (dB), and 73 dB is twice as loud as 70 dB. Generally, demolition and construction would be limited to the daytime, when people are likely to be away from home. Additionally, noise levels would decrease with increasing distance from the project site and would be temporary and intermittent.

In the long term, the increased bike and pedestrian opportunities and open spaces to be implemented in the LARRMP could have the indirect beneficial impact of decreasing vehicle use, which may help in reducing noise sources in the River Corridor.

As future LARRMP implementation projects are identified in the River Corridor, it is anticipated that noise sources and potential levels would be identified and procedures would be followed to ensure that each project conforms to applicable noise regulations. While the levels of noise impacts accompanying future construction projects depends on the topography and landscape, it is expected that construction activities in the vicinity of sensitive receptors would result in short term high and potentially significant noise impacts on sensitive receptors. However, it is likely that the LARRMP revitalization measures would be implemented through a series of local projects over an extended period, would occur at various locations along the 32-mile long River

Corridor, and would have relatively short construction periods. Also, the types of mitigation actions and best management practices listed below would be available to reduce impact to less than significant levels.

Mitigation Measures

General mitigation actions and best management practices to reduce noise levels associated with demolition and construction for LARRMP revitalization projects are as follows:

- Using enclosures or walls to surround noisy equipment;
- Installing mufflers on engines;
- Substituting quieter equipment or construction methods;
- Minimizing time of operation and locating equipment farther from sensitive receptors;
- Suspending construction activities between 7:00 PM and 7:00 AM and on weekends or holidays in residential areas; and
- Requiring contractors to comply with all local sound control and noise level rules, regulations, and ordinances;
- Additional project-specific abatement actions should be identified, as needed.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Public Health and Safety

Impacts

In the FPEIR/PEIS, the public health and safety topics of concern with respect to the implementation of the LARRMP include air quality; hazardous, toxic, and radioactive wastes (HTRW); water safety; school safety; airport operations safety; wildfire; and methane zones.

An Environmental Data Resources, Inc. (EDR) search of federal, state, and local records, tribal records, and proprietary records for HTRW occurrences in the study area, which included one mile on each side of the Los Angeles River and one mile from the boundaries of the five opportunity areas, yielded a list of approximately 1,550 incidents/sites within the database categories searched. This extensive overall list was screened to identify the occurrences/sites that may have the greatest potential to affect implementation of LARRMP measures. These are considered in FPEIR/PEIS to be HTRW sites of interest and are presented in the table beginning on the following page.

Summary of HTRW Sites of Interest

(by Database Category within the Study Area)

Database Category	Description	Number of Sites*
Federal Records		
<u>National Priority List</u> (NPL; also known as Superfund)	This is a list of national priorities of the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The USEPA maintains this list.	3
<u>Comprehensive Environmental Response, Compensation and Liability Information System</u> (CERCLIS)	This system maintains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites that are either proposed to be or are on the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL. The USEPA maintains this list.	27
<u>Resource Conservation and Recovery Act Treatment, Storage, or Disposal Facility</u>	This is a list of facilities that treat, store, or dispose of hazardous waste. The USEPA maintains this list.	20
<u>Formerly Used Defense Sites</u> (FUDS)	This database tracks past and present remediation actions at FUDS properties where the Corps has identified the need for cleanup actions. The Corps maintains this list.	4
<u>US Brownfields</u>	This includes USEPA's listings of brownfields properties reported as Cooperative Agreement Recipients and as Targeted Brownfields Assessments. The USEPA maintains this list.	6
<u>Toxic Chemical Release Inventory System</u>	This database, maintained by USEPA, identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA Title III, Section 313.	38
<u>Mines Master Index File</u>	This is a database of mines, maintained by the Department of Labor, Mine Safety and Health Administration.	1
<u>RCRA Administration Action Tracking System</u>	This USEPA tracking system contains records of enforcement actions issued under RCRA pertaining to major violators. It includes administrative and civil actions brought by USEPA.	7
State and Local Records		
<u>Annual Work Plan</u>	The California Department of Toxic Substances Control (DTSC) maintains this list of known hazardous substance sites targeted for cleanup.	29
<u>Toxic Pits Cleanup Act</u>	This database, maintained by DTSC, included sites suspected of containing hazardous substances where cleanup has not yet been completed.	2
<u>California DTSC Hazardous Waste and Substances Sites List.</u>	This DTSC database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the Abandoned Site Assessment Program, sites with underground storage tanks having a reportable release, and all solid waste disposal facilities from which there is known migration.	597
<u>Leaking Underground Storage Tank Information System</u> (LUST).	The DTSC and California Water Quality Control Board maintain files on LUST incident reports.	673

Summary of HTRW Sites of Interest

(by Database Category within the Study Area)

Database Category	Description	Number of Sites*
<u>Land Use Restricted Sites</u>	A land use restricted site is a property where DTSC has placed limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.	12
<u>EnviroStor</u>	The DTSC's Site Mitigation and Brownfields Reuse Program's EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites; state response, including military facilities and state Superfund; voluntary cleanup; and school sites. EnviroStor provides similar information to the information that was available in CalSites and provides additional site information, including identification of formerly contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts on public health and the environment at contaminated sites.	133

Some sites may be listed in more than one database category.

Source: EDR 2006

Los Angeles River Water Safety

For most of the study area, the proximity of the Los Angeles River to substantial population densities and the ready access to the River make the risk of drowning and other river-related accidents a potential health and safety concern. Most of the River right-of-way in the study area has been reconstructed in past decades to provide a hard-surfaced channel to contain and manage the intermittent flood waters that can accompany storms. During dry periods the channel typically contains low volumes and heights of water. However, during periodic storms, the channel rapidly fills with stormwater runoff, conveying large volumes of fast-moving runoff water to the Pacific Ocean. During and following these storms, when water levels and flow velocities in the River channel rise quickly, the risk of accidental death and injuries to individuals venturing close to the River at these times increases dramatically.

The City and County of Los Angeles Fire Departments have formed special swiftwater rescue teams that respond to emergencies along the Los Angeles River and other rivers, creeks, and arroyos during and following storms. These teams are strategically collocated in selected fire stations throughout Los Angeles County to be able to rapidly respond to such emergencies. These rescue teams are staffed by specially trained and equipped firefighters and lifeguards, who augment the Fire Departments' basic Urban Search and Rescue and Lifeguard staff. Depending on the particular circumstances and location of emergencies, swiftwater rescue personnel have access to the helicopters and ground vehicles to provide rescue services to the Antelope Valley, Santa Clarita, San Gabriel Valley, Malibu, and all stretches of the Los Angeles River system within the Fire Departments' jurisdiction.

School Safety

The safety of students and staff, the risk of river-related accidents and injuries, and exposure to water-borne pollutants and hazardous substances are considerations in the FPEIR/PEIS for those schools in or near the River Corridor. Another consideration is those school-related activities that may periodically bring students and staff close to the River.

Nearly 100 schools are within one mile of the Los Angeles River along the 32-mile study area, with most clustered toward each end. Of these schools, approximately 42 are within the River Corridor (half a mile each side of the River). As shown in the table below, 14 of the schools are within the five opportunity areas, and an additional 31 schools are within one half mile of these opportunity areas.

Number of Schools Within or in Proximity to Opportunity Areas

Opportunity Area	Number of Schools within the Opportunity Area	Number of Schools within Half a Mile of the Opportunity Area
Canoga Park	3	3
River Glen	1	2
Taylor Yard	5	11
Chinatown-Cornfields	1	6
Downtown Industrial	4	9

Airport Operations Safety

Consideration of airport operations safety is included in this FPEIR/PEIS because the Van Nuys Airport is just north of the Los Angeles River, with the southern portion of the airport within one mile of the River. Van Nuys Airport averages nearly one-half million takeoffs and landings annually, with 454,753 total operations in 2004. Also, more than 100 businesses are located on the 730-acre airport.

Wildfire

There are some areas along the Los Angeles River Corridor that may involve interface between urban and more natural (vegetated) areas, creating zones where wildfire fuels can accumulate. Fire hazard zones are established by City Council ordinance. Such zones are prone to incidence of wildfires, which may be caused either by natural forces, such as lightning, or by human negligence or mischief. The most prevalent areas for these zones to occur are where the Santa Monica Mountains and foothills interface with the city of Los Angeles. These areas include Griffith Park and the Santa Monica Mountains National Recreation Area to the west in Los Angeles County and to the east of the Oxnard Plain in Ventura County. High fire-hazard zones occur within the River Glen Opportunity Area on the west side of Interstate-5, along the western and eastern edges of the Taylor Yard Opportunity Area, and along the northern edge of the Chinatown-Cornfields Opportunity Area.

Methane Zones

The FPEIR/PEIS study area includes locations having a potential methane hazard due to their proximity to methane gas sources, such as landfills, oil wells, oil fields, and underground gas storage facilities. Methane zones are established by City Council ordinance. Methane zones are surrounded by a methane buffer zone. Both have established land use restrictions and mitigation policies to manage land use. Methane zones and methane buffer zones occur in various locations along the River Corridor and within each of the five opportunity areas.

Vector-Borne Diseases

Vector-borne diseases are diseases that can be transmitted to, for example, humans from contact with a vector. A vector is any agent, such as a mosquito, that carries and transmits a disease, such as the West Nile virus. The mission of the Greater Los Angeles County Vector Control District (GLACVCD) is to reduce populations of public health vectors below nuisance levels, prevent human infection associated with mosquito-transmitted diseases, and prevent the loss of property values and commercial enterprise as the result of vector occurrence and activity. The GLACVCD is a non-enterprise independent special district, enabled and empowered to act as a public health agency as a result of legislation incorporated in the California State Health and Safety Code. The GLACVCD is one of five mosquito and vector control districts in Los Angeles County and services 4.8 million residents in a 1,330 square mile area.

The objective of the GLACVCD is to prevent and control vectors and vector-borne diseases from emerging. The District prevents and controls three vectors: mosquitoes, black flies, and midges. It is important to control mosquitoes to reduce their potential as a nuisance and carrier (vector) of diseases. Diseases, which are of concern in Southern California, are St. Louis encephalitis, Western Equine encephalomyelitis, West Nile virus, malaria, and heartworm to dogs and cats.

The County of Los Angeles Department of Public Health has a vector management program. This program consists of three units: vector-borne disease surveillance, entomology and vector control. The historic objectives of the vector-borne disease surveillance unit have always been the reduction of the risks of exposure to the pathogens of vector-borne disease through early detection and abatement of those factors which enhance the transmission of disease to humans. The entomology unit performs taxonomic duties and defines the biology, life history, and the complex transmission cycles which permit the transference of diseases to the human population. Vector control is responsible for rodent abatement activities and licensed animal keeper premises inspection and enforcement throughout Los Angeles County (except for the Mountain and Rural Program and District Environmental Services-Antelope Valley Districts).

Mitigation Measures

Project-specific reviews would be required to assess potential impacts of any mapped HTRW sites listed in the table above. The findings of these reviews would determine appropriate site-specific mitigation actions for these future projects. Mitigation measures could include removing any hazardous materials or wastes from contaminated land prior to construction, or adjusting project location or footprint to avoid hazards. Construction BMPs should include: (a) immediately cleaning up all spills; (b) affixing lids to all containers; (c) compliance with state and federal occupational safety and health codes and regulations; (d) disposing of hazardous waste at a certified landfill; (e) removing all hazardous materials from project site after construction; (f) fencing around site to prevent unauthorized access; (g) maintaining equipment in proper working order; (h) complying with regulations regarding construction in methane or methane buffer zones; and (i) watering project sites to minimize dust.

Soils and water quality in the River should be tested at locations where possible contamination is suspected. The DTSC, DHS, and EPA should be contacted to help identify the best sampling locations.

Examples of mitigation for increased risk of accidental drowning and water-related injury include providing electronic signs, audible warnings, and gates to restrict access during flooding; and increasing police patrol units along the River (to a minimum of three additional units) to help ensure the safety of residents.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Transportation

Impacts

River Channel Modification and Open Space Development Measures in the River Corridor

Both adverse and beneficial transportation impacts could result from implementing the two main types of River channel modification measures (non-velocity-reducing and velocity-reducing) and the suite of open space measures. Potential adverse impacts include short-term impacts from construction activities, such as truck traffic and lane closures. Long-term adverse impacts include increased traffic and parking demand due to more visitors to the areas. Green streets can also restrict visibility if the plants are not kept pruned, which in turn could cause an increase in traffic accidents. Acquiring ROW to develop park spaces or terracing along the River could impact arterial streets and railroads. On the beneficial side, green streets that add landscaping and employ traffic calming measures, such as medians, pedestrian bridges, speed humps, raised crosswalks, and textured paving, would generally provide positive impacts. Implementing safe alternative transportation opportunities, such as those for pedestrians and cyclists, would also create positive impacts.

Employing the mitigation actions described below, any temporary adverse impacts from future LARRMP projects would be reduced to a less than significant level. However, depending on the cumulative effects from other planned projects in the vicinity of the River Corridor, potential long-term impacts from increased traffic and parking demand on the area associated with future LARRMP projects could be high, and potentially

significant, especially if roads are closed or parking is lost to ROW acquisitions. Mitigation to potential long-term impacts could include widening of impacted arterials, signal timing modifications, and addition of designated parking spaces/lots or parking meters.

Vehicle Traffic: If ROW acquisition for channel modifications or park development includes local streets, vehicle traffic could be adversely affected. Developing regional greenway connections (north/south streets between Victory and Sherman Way, including Topanga Canyon Boulevard, Owensmouth Avenue, Canoga Avenue, Variel Avenue, and De Soto Avenue, and east/west streets between Topanga Canyon and De Soto, including Vanowen Street), arterial green streets (all north/south and east/west roadways that are not considered regional greenway connections) and local green streets (Jordan, Remmet, Milwood, Independence, Vasser, Alabama Avenues, and Variel and Eton Streets) would generally have positive impacts on street safety. This is because traffic calming measures would be used, and neither the number of lanes nor the lane size would decrease. Increased traffic to the area is expected. A traffic study should be conducted at the project level to determine if the project traffic volume creates a significant impact that would require mitigation.

Transit System Capacity: Paseos would provide links to public transportation in the vicinity, such as Metro bus lines, LADOT's Commuter Express and DASH lines, and the Metro Orange Line. Ridership could increase due to the increased access. Bikeways and trails would also provide additional connections to public transit, potentially increasing demand. Bikeways may also be used as substitutes for public transportation, potentially decreasing demand.

Parking: Some street parking may be lost due to the development of parks, paseos, and promenades, but paseos could provide additional parking. Parking demand will likely increase due to increased visitors to the area.

Mitigation Measures

Traffic analyses should be prepared at the project level to evaluate the potential impacts associated with future LARRMP projects within the River Corridor and each of the five opportunity areas. Each traffic analysis should address the short-term effects within public street ROW, including temporary lane closures, driveway blockages, detours, and disruptions to the normal movement of traffic, transit patrons, and pedestrians, as well as the temporary loss of parking. The long-term impacts of operating the facilities should also be assessed by evaluating the amounts of traffic that would be generated by each implementation project under normal operation and, where relevant, the permanent loss of parking. Depending on the levels of potential impacts identified in the above project-specific studies, mitigation actions may be needed to reduce to a less than significant level the temporary adverse impacts from construction in the vicinity of each construction site.

Mitigation to potential long-term impacts could include widening of impacted arterials, signal timing modifications, and addition of designated parking spaces/lots or parking meters. Mitigation actions that can be applied during the construction phase of future projects to reduce potential short-term transportation impacts include the following: For each construction site, a construction traffic management plan should be prepared and submitted to LADOT for review and approval before any construction work begins. This plan should include: the designation of haul routes for construction-related trucks; the location of access to the construction site; any driveway turning movement restrictions; temporary traffic control devices or flag people; travel time restrictions for construction-related traffic to avoid peak travel periods on selected roadways; and designated staging and parking areas for workers and equipment.

Where construction would occur within a public street ROW, the following mitigation measures should also be applied:

- A traffic control plan should be prepared for each construction site and submitted to LADOT for review and approval prior to the start of any construction work. This plan should include the

location of any lane closures, restricted hours during which lane closures would not be allowed, local traffic detours (where reasonable alternate routes exist), protective devices and traffic controls (such as barricades, cones, flag people, lights, warning beacons, temporary left-turn restrictions, temporary traffic signals, warning signs), access to abutting properties, and provisions to maintain emergency access through construction work areas.

- Available street space should be fully used to minimize lane reductions on affected streets, including eliminating on-street parking where necessary.
- Left-turn restrictions should be implemented as appropriate on restriped street segments to facilitate the movement of through traffic.
- Travel lanes should be eliminated only when absolutely necessary.
- Alternative pedestrian and bicycle access routes should be provided where sidewalks, crosswalks, or bike lanes would be affected.
- Advance notice should be provided to any affected residents and businesses and property owners in the vicinity of each construction site, and, where existing property access would be reduced, alternative means of access should be identified.
- Emergency service providers (police, fire, ambulance, and paramedic services) should be notified of any lane closures, construction hours, or changes to local access and to identify alternative routes where appropriate, and Public transit providers (MTA, LADOT Commuter Express, and Glendale Bee Line) should be notified of any lane closures and construction hours, and temporary bus stops should be established within a reasonable walking distance of any displaced bus stops.

Where future LARRMP projects involve rail crossings and proximity to railroad lines, the following mitigation measures should be applied:

- Construct where practicable, grade separation of major thoroughfares,
- Make safety improvements to existing at-grade highway-rail crossings where there are expected traffic increases,
- Include appropriate fencing to limit access to railroad right-of-way.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Socioeconomics

Impacts

River Channel Modification Measures

Future implementation of River Channel Modifications are not expected to result in significant impacts from excessive population growth, substantial urban growth, acceleration of development, nor the need for new or altered public services related to police, fire protection, schools, and libraries in the River Corridor and vicinity. For those channel modification measures that require expanding the River ROW, there is a potential for impacts on housing and employment, depending on the type of land use that would be displaced. Future LARRMP projects involving revitalization measures would require analyzing site-specific housing and employment impacts, including identifying mitigation actions, if applicable.

Open Space Development Measures

In Chapter 2 is a description of the potential LARRMP open space development measures in the River Corridor evaluated in this PEIR/PEIS. The categories of open space development measures are as follows:

Parks: LARRMP revitalization measures in this category include riverfront parks, linear parks, pocket parks, and recreation fields. Implementing park development measures could increase future population and

employment in the River Corridor by attracting more people to live and work there. Future park development may also displace commercial, industrial, and residential land uses and result in requirements for new public services, such as police protection at new parklands and facilities. Any displacement of existing commercial and industrial businesses could result in high and potentially significant impacts associated with lost jobs. Any potential adverse impacts of park development measures would require analyzing site-specific impacts, including identifying and evaluating mitigation actions, if applicable, to reduce potential impacts to less than significant levels.

Green Streets: Future implementation of the green streets measures is not expected to result in socioeconomic impacts that would exceed the thresholds identified in the screening criteria.

Paseos and Promenades: Future implementation of paseos, paseo promenades, and promenades in the River Corridor could increase future population and employment in the River Corridor by attracting more people to live, work, and visit/recreate/shop there. Developing paseo and promenade measures may also displace commercial, industrial, and residential land uses. Any displacement of existing commercial and industrial businesses could result in high and potentially significant impacts associated with lost jobs. Implementing the measures would likely result in additional public service needs related to police and fire protection. Any potential adverse impacts of future paseo and promenade measures would require analyzing site-specific socioeconomic impacts, including identifying and evaluating mitigation actions, if applicable, to reduce potential impacts to less than significant levels.

Trails and Bikeways: Future implementation of trails and bikeway measures in the River Corridor could increase future population and employment in the River Corridor by attracting more people to live, work, and recreate in the area. Implementing the measures would likely result in additional public service needs related to police protection and emergency medical treatment. Any potential adverse impacts of future trails and bikeways measures would require analyzing site-specific socioeconomic impacts, including identifying and evaluating mitigation actions, if applicable.

Pedestrian River Crossings: Future implementation of pedestrian river crossing measures in the River Corridor would not result in socioeconomic impacts that would exceed the thresholds identified in the screening criteria.

River Loops: Future implementation of river loop measures in the River Corridor would not impact socioeconomic resources. Associated changes in land use from implementing open space development measures and reinvestment measures within river loops could result in impacts on socioeconomic resources and conditions.

Gateways: Future implementation of gateway measures in the River Corridor would not have socioeconomic impacts that would exceed the thresholds identified in the screening criteria.

Water Quality and Habitat: Future implementation of water quality and habitat measures in the River Corridor would not result in socioeconomic impacts that would exceed the thresholds identified in the screening criteria.

As future LARRMP River channel and open space modification projects are identified in the River Corridor, site-specific analyses would be required to assess the significance of any impacts on socioeconomic resources, including population, housing, employment, and public services. Primary factors that drive the level of socioeconomic impact of future projects include the extent of displaced residences and businesses, the level of induced demand for housing, the level of change in need for public services, and changes in employment opportunities that would be expected to result from implementation of LARRMP revitalization measures. Any displacement of existing commercial and industrial businesses could result in high to significant impacts associated with lost jobs.

The general expected level of impact for various revitalization measures are summarized as follows:

- Potential for High and Potentially Significant Impact: Riverfront parks, promenades, paseos, and paseo promenades;
- Potential for Moderate to High Impact: Linear parks, pocket parks, bikeways; and
- Potential for Low to Moderate Impact: Trails, River Channel Modifications, gateways, and green streets.

Mitigation Measures

Site-specific studies are required to assess the significance of any adverse socioeconomic impacts that could result from implementing future LARRMP revitalization projects. These studies should address potential direct, indirect, and cumulative impacts. The findings of these studies are required prior to identifying appropriate mitigation actions for these future projects, to reduce potential impacts to less than significant levels. Appropriate mitigation actions will vary depending on the type of resource impacted and the extent of the impact. Per the Draft Los Angeles CEQA Thresholds Guide, population and housing growth are not considered significant effects on the environment. Secondary or indirect impacts, such as increased traffic or noise, may be significant and may be physical changes caused by population and housing growth. Thus, mitigating these secondary impacts may also reduce potential adverse impacts from population and housing growth. Socioeconomic impacts requiring mitigation would be associated with population and housing displacement and need for new public services. Generally, the types of socioeconomic mitigation measures to be identified include the following:

- Avoiding socioeconomic impacts altogether by not taking a certain action or parts of an action;
- Minimizing socioeconomic impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the socioeconomic impact by repairing, rehabilitating, or restoring the impacted land use (for example, providing on-site recreational amenities where impacts occur);
- Reducing or eliminating the socioeconomic impact over time by preservation and maintenance operations;
- Compensating for the socioeconomic impact by replacing or providing substitute resources;
- Exceeding the statutory requirements for relocation assistance; and
- Increasing the number of housing units affordable to lower income households.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Environmental Justice

Impacts

Minority and Low Income Populations

In 2000, the Caucasian population was the dominant ethnic group along the River Corridor (59.1 percent). The second dominant group was the Hispanic or Latino group (26.1 percent). However, these groups are geographically concentrated in different areas along the River Corridor. Existing and planned affordable housing along the River Corridor exceeds 6,500 units. As future revitalization measures are considered for implementation, evaluation of their potential impacts on affordable housing units, minority populations, and low-income populations in the River Corridor and vicinity will be required and appropriate mitigation identified, where applicable. Potential adverse impacts could include displacement of affordable housing units and minority or low-income residences, noise from construction project sites or vehicle maneuver areas, and construction noise impacts on minority and low-income populations. Noise from construction would last

only for the construction period. Construction would be limited to daytime hours. Air quality impacts from fugitive dust emissions could also have a short-term low to moderate impact on minority or low-income residences; however, these potential impacts would be reduced to less than significant levels by implementing best management practices to control dust, as described in the air quality section.

Protection of Children

In 2000, 13 percent of the population within the River Corridor was under the age of 18. Short-term, low adverse, indirect effects on the health and safety of children could occur with implementation of LARRMP implementation projects in the River Corridor. The proposed measures would be implemented near residential areas and schools, where children may be present. Noise sources associated with construction could result in less than significant adverse noise impacts on nearby schools or residences. However, construction would take place in areas that are off-limits to the general public. Restricted areas would continue to be posted with signs and enclosed by a fence. Strict adherence to applicable safety regulations and procedures would continue to protect the health and safety of children. There would be long-term beneficial impacts on the protection of children with the development of parks, green streets, and pedestrian access.

Any future proposals for displacing affordable housing units in the River Corridor to implement revitalization measures would result in high and potentially significant impacts that would likely require mitigation. With implementation of LARRMP revitalization measures in the River Corridor, the level of potential impacts on environmental justice populations and children's health and safety can be expected to be high and potentially significant during the construction phase, particularly from noise and other construction activities. However, additional consideration of environmental justice issues and children safety should occur during project-level review. This should include consideration of potential local impacts and potential benefits and enhancements for communities near future project sites. Project-level review should include outreach to potentially affected communities as part of the project planning and implementation process. The project-level review should also identify appropriate mitigation actions and best management practices during construction to reduce potential impacts to less than significant levels.

Mitigation Measures

As future revitalization measures are considered for implementation, evaluation of their potential impacts on affordable housing units, minority populations, and low-income populations in the River Corridor and vicinity will be required and appropriate mitigation identified, where applicable. Potential adverse impacts requiring mitigation could include displacement of affordable housing units and minority or low-income residences; Noise from construction project sites or vehicle maneuver areas, and construction noise impacts on minority and low-income populations (Noise from construction would last only for the construction period and construction would be limited to daytime hours.); Air quality impacts from fugitive dust emissions could also have a short-term low-to-moderate impact on minority or low-income residences; however, these potential impacts are expected to be reduced to less than significant levels by implementing best management practices to control dust, as described in the air quality section, above.

- Project-level review of environmental justice impacts should be conducted;
- Mitigation measures pertaining to specific issue areas—such as air quality and noise—should be evaluated for their cultural applicability to minority, low-income communities as well as to a given area's characteristics regarding the presence and needs of children and other sensitive receptors.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects.

Cultural Resources

Impacts

This section discusses the potential impacts on cultural and paleontological resources from implementing the LARRMP River Channel Modifications and open space development measures. In all cases, potential impacts are addressed programmatically based on resource information and understanding of the proposed measures. This is accomplished by first determining whether or not resources are known to be present or may be expected, then by assessing the ways the resource could be affected by the types of contemplated revitalization measures. Further consultation, identification and effects analysis must be conducted when specific measures are proposed through individual projects and completed prior to project implementation.

River Channel Modification Measures

The River Corridor was a center for prehistoric and historic settlement, food procurement, and transportation. As the River was a locus for human activity and use, cultural remains are possible from several time periods. However, the River channel is a highly-disturbed area. When the River flowed naturally, it was dynamic and frequently flooded and changed course. With European and American settlement, further modifications were made to use and control this resource. By 1959 the River channel had been excavated and contained in a series of concrete channels, flood control reservoirs, and debris basins.

There are no recorded archaeological sites in the current River channel. Because of the past disturbance, it is unlikely that intact archaeological resources would be present. However, floods can encapsulate cultural remains in deep layers, and some intact prehistoric or historic deposits could be present, especially below the edges of the River channels. The likelihood of encountering historic archaeological deposits is higher in the reach of the River from the Fletcher Drive Bridge through downtown Los Angeles because of the early transportation and industrial development in the immediate River Corridor. Archaeological resources in the River Corridor could have research value and may meet the eligibility criteria for the NRHP and be significant under CEQA. A research design would help define specific research questions that could be addressed through the use and recovery of archaeological data.

Consultation was not conducted in this phase to determine whether or not any traditional cultural properties are present. Because of past disturbance, traditional cultural properties are possible, but are not expected. If prehistoric or ethnohistoric archaeological sites or burials are encountered, these would likely be important to contemporary Native American communities.

Few historic structures and buildings have been inventoried or evaluated in the immediate River channel area. Some of the bridges over the Los Angeles River are historically significant architecturally, and it is likely that additional historic structures and buildings would be identified in site-specific inventories. River containment and flood control facilities are all over 45 years old and would need to be evaluated for historic significance prior to major alterations.

Both types of channel modification measures would require ground disturbance, which could impact archaeological resources, if present, by altering the spatial relationships of artifacts and features and thus reduce research potential. Sometimes the exposure of archaeological sites can lead to damage from vandalism or erosion. River Channel Modifications that seek to reduce River flow velocity would require more ground disturbance than modifications that do not. This disturbance would be related to off-channel attenuation or in the construction of underground linear culverts parallel to and adjacent to the River.

Both types of channel modification measures could impact the integrity of historic buildings and structures through direct alteration of, removal from, or alterations to setting. River channel modifications that seek to reduce River flow velocity would have more of a potential to impact historic buildings and structures because of acquisition and modification of adjacent properties. Indirect impacts could include beneficial impacts from public and private restoration and rehabilitation of historic structures in conjunction with revitalization.

Conversely, revitalization could stimulate the demolition of older unprotected structures, if property values rise.

Paleontology: Most of the River Corridor, in particular the downtown area, includes subsurface geologic units that could yield scientifically important vertebrate paleontological resources under shallow Holocene alluvium. Because the River has been channelized, there may be locations where paleontological resources could be near the surface and exposed by excavations.

The potential for encountering paleontological resources would be greatest where excavations are most extensive and deep, such as for underground linear culverts. Typically in urban settings paleontological resources are only discovered and made available for study as a consequence of construction projects. Negative impacts could occur if the resources are inadvertently destroyed without being studied during construction or if subjected to unauthorized collection or damage due to exposure and erosion.

Cultural Resources: Prehistoric and historic archaeological sites have been found and are possible throughout the River Corridor. Sensitivity for historic archaeological resources is probably higher than prehistoric or ethnohistoric sites, especially in the old industrial and rail yard areas. Historic buildings and structures such as bridges are present, including resources that are eligible for listing or that are listed on the NRHP, the CRHR, and are City of Los Angeles Cultural-Historical Monuments. Inventories are incomplete, and many unrecorded and unevaluated buildings and structures are assumed to be present. No traditional cultural properties (that is, places that are associated with traditional cultural practices or beliefs) are anticipated, but archaeological sites or burials that may be important to contemporary Native American communities could be encountered.

All of the proposed measures include ground-disturbing activities, such as excavation and grading that could affect the integrity of archaeological sites, if present. The depth of disturbance appears to be generally shallow and in many cases planned for highly disturbed areas, such as urban streets. However, in the absence of specific project information, some relatively undisturbed areas and depths could be excavated that could impact archaeological resources that have research value or may be important to contemporary Native Americans.

The proposed open space measures could impact the integrity of historic buildings and structures through direct alteration, removal, or changes in setting. Alterations could be proposed for historic structures, such as bridges or channel infrastructure. The open space development could require the removal of historic buildings and features. New developments, such as pedestrian bridges and paseos, may impact the setting of older structures. Indirect impacts of the revitalization include beneficial impacts from public and private restoration and rehabilitation of historic structures and the negative impacts of the removing older unprotected structures due to gentrification.

There is a potential for scientifically important vertebrate paleontological resources to be present. The likelihood of encountering resources depends on the location, depth of the sensitive geologic units, and the depth of the disturbance associated with the open space measure. Beneficial impacts could result if resources are discovered and made available for scientific study. Negative impacts could occur if the resources were inadvertently destroyed without being studied during construction or if they were subjected to unauthorized collection or damage due to exposure and erosion.

As particular LARRMP measures are refined, further identification efforts and project-specific impact analysis would be conducted, and the Section 106 process would be completed. Moderate to high and potentially significant adverse impacts on cultural resources are possible. In some cases, impacts may be reduced to less than significant levels through mitigation measures. In other cases, mitigation measures may not be adequate to avoid significant negative impacts. Moderate to high beneficial effects may occur if revitalization in the River Corridor leads to the restoration and rehabilitation of historic structures, although moderate to high

negative impacts could occur if new development results in the loss of historic structures. There would be moderate beneficial impacts on paleontological resources if new fossils were recovered in the course of construction and moderate negative impacts if resources were destroyed without scientific study.

Mitigation Measures

Further project-level investigations, assessments, and evaluations to identify, evaluate, and determine levels of effects on cultural resources are required prior to implementing LARRMP revitalization measures. When specific LARRMP revitalization measures are ripe for analysis, the Corps and the City may choose to enter into a programmatic agreement with the OHP and others to satisfy the requirements of Section 106 of the NHPA for all or portions of the proposed master plan. Because many of the LARRMP revitalization measures and cultural resource impact issues are common to the whole project, a programmatic agreement can set standards and expectations for consistently addressing cultural resources for the plan implementation and avoiding redundant consultations. Alternatively, the Corps and the City may choose to address cultural resources on a project-by-project basis because of the long implementation time frame, project funding or phasing, and differences between specific project sites. For example, there would be differences between the potential types of historical archaeological sites expected in the Downtown Opportunity area and the Canoga Park Opportunity area.

As specific LARRMP implementation projects are identified and undertaken in the future, additional inventory and site- and resource-specific surveys should be conducted to better define resources and potential impacts. Future project plans and designs should be coordinated with planners so that potential issues with cultural and paleontological resources can be avoided, if possible.

Potential mitigation, best management practices, and investigation protocols that could be employed with future projects to reduce levels of potential adverse impacts to cultural resources include the following:

- Define the APE for cultural resources based on the proposed action in consultation with the State of California Office of Historic Preservation (OHP);
- Update the cultural resource record search and resolve any data discrepancies;
- Conduct an in-depth review of cultural resource records and reports, local histories, ethnic neighborhood development, Sanborn Insurance and other historic maps, and other literature relevant to the project area;
- Contact the California Native American Heritage Commission for a Sacred Lands File (SLF) search to obtain information on any known or potential sacred sites or traditional cultural properties at the specific project sites;
- Obtain a list of current tribal contacts in the project vicinity who may have additional cultural resource information and conduct consultation on Native American cultural concerns;
- Determine the need, appropriate level of effort, and methods for effective archaeological and historic built environment surveys;
- Inventory and evaluate resources for eligibility for the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR), which may require test excavations or additional archival research;
- Prepare a professional report detailing the findings and recommendations of the records search and inventories. Report all findings to the OHP and file reports and site forms with the South Central Coastal Information Center;
- By applying the criteria of adverse effect and the City of Los Angeles CEQA thresholds, determine impacts on known or anticipated cultural resources resulting from the proposed action and develop specific mitigation measures with the concurrence of the OHP;
- Avoid impacting resources through project redesign or modification when significant cultural resources are discovered during the course of project planning. Avoidance is defined in §15370 of the CEQA Guidelines;

- Prepare a discovery plan outlining in detailed procedures for discovering unanticipated buried resources;
- Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in the mitigation plans;
- Follow Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec §15084.5 (d) of the CEQA Guidelines procedures in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery;
- Conduct data recovery excavations of archaeological sites that cannot be avoided or are discovered during construction, based on an approved research design appropriate to the anticipated site type. If the buried resources are anticipated, monitor all excavations;
- Protect exposed archaeological sites from vandalism and erosion. Consider covering and encapsulating archaeological sites under sterile fill after recording;
- Prepare a preservation plan for historic buildings and structures to ensure that construction is compatible with historic resources and that alterations are consistent with the appropriate Secretary of Interior standard;
- Coordinate all actions involving historic bridges or in the vicinity of historic bridges with the City's ongoing Bridge Program, which ensures that new construction, modification, and seismic retrofits are consistent with the historic status of these structures;
- Encourage adaptive reuse through zoning and reinvestment incentives;
- If preservation in place is not possible or if major modifications are needed, undertake documentation according to the requirements of the Historic American Building Survey or the Historic American Engineering Record and ensure that copies are made available locally; and
- Require that local preservation organizations and historical societies have access to record the resource and remove significant historic elements for archives.

Regarding Paleontological Resources

- Conduct additional archival and field research to determine site-specific sensitivity for impacting paleontological resources;
- If appropriate, conduct limited exploratory sampling to determine resource potential;
- Revise the proposed project to avoid excavating or grading in areas with known or potential surface exposures of fossils, or within rock units with a high potential for paleontological resources;
- Retain a qualified paleontologist to monitor for scientifically important fossil remains;
- Divert grading efforts in the area of exposed paleontological resources to allow evaluation and, if necessary, salvage;
- Ensure that scientific specimens are curated at a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History;
- If found, provide erosion protection (e.g., retaining walls, drainage channels) to protect surface resources and restrict or prevent access to sensitive resource areas; and
- Protect subsurface fossils in place by covering them with appropriate soil materials.

Finding and Rationale

Implementation of these mitigation measures and/or best management practices is expected to avoid or substantially lessen these potentially significant effects. These mitigation measures are feasible and their implementation would substantially lessen the adverse impacts resulting from LARRMP.

Unavoidable Significant Adverse Impacts

The City of Los Angeles finds that even with the imposition of all feasible mitigation measures, the LARRMP, at a programmatic-level, has the potential to cause significant adverse impacts on the following environmental resource area:

- Cumulative Impacts

Without project-specific information available, definitive analyses regarding the unavoidable, significant, adverse impacts of the LARRMP program for specific environmental resource areas are not feasible. However, because of the massive geographic scale covered by the conceptual plan document and the numerous public and private sector projects ongoing within the River Corridor, it is reasonable to assume that LARRMP implementation may result in unavoidable, significant, adverse, cumulative impacts in some cases—such as by influencing regional growth pressures in regard to land uses (e.g., exacerbating pressures on regionally-scarce industrial land along the River). These impacts are discussed in the following section.

Cumulative Impacts

Section 15355 of the CEQA Guidelines defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”

The City of Los Angeles finds that implementation of the LARRMP could result in significant, unavoidable cumulative impacts on the following environmental resource areas: agricultural resources; air quality; geology, soils, climate, and seismic hazards; hydrology, floodplain, and water quality; biological resources; land use; recreation; noise; public health and safety; transportation; utilities and infrastructure; socioeconomics, environmental justice; cultural resources; aesthetic resources. Regarding mineral resources, LARRMP implementation is expected to result in negligible impacts on sand and gravel deposits and underground oil and gas fields, so no cumulative impacts on mineral resources are expected. In some cases cumulative impacts may be short-term in nature or altogether avoidable; future project-level analyses will determine these outcomes.

Following is a discussion of the resources areas that could result in significant, cumulative impacts.

Agricultural Resources

There are two designated agricultural resource sites in the River Corridor; they are both upstream of Sepulveda Basin. Because of the scarcity of agricultural resources in the River Corridor, any cumulative adverse impacts to these two sites would be considered high and potentially significant. No potential impacts on agricultural resources in the Canoga Park Opportunity Area were identified from implementing either of the two LARRMP alternative revitalization configurations. Therefore, the LARRMP is not expected to contribute to any potential cumulative impacts to agricultural resources in the River Corridor.

Air Quality

Typically, cumulative air quality impacts can occur when multiple emission sources affect the same geographic area simultaneously or when sequential projects extend the duration of air quality impacts on a given area over a long period. Potential sources of fugitive dust (contributing to local PM₁₀ levels) include construction, vehicle traffic on unpaved roads or off-road areas, and wind erosion from areas with exposed soils. Vehicles associated with short-term construction and potential increased traffic in the long term would contribute to NO_x, ROG, CO, and PM₁₀ emissions. ROG form ozone gas (O₃) when they react with

nitrogen oxides. Potential health risks with NO_x and ROG include chronic pulmonary fibrosis, breathing difficulties, and lung tissue damage. CO could cause health problems and reduced mental alertness.

There could be other construction projects occurring concurrently with or in proximity to future LARRMP revitalization projects as they are implemented over the LARRMP near-term and long-term planning periods. Short-term high and potentially significant cumulative air quality impacts from construction-related fugitive dust are possible if LARRMP projects were to occur simultaneously with other construction projects or with ongoing emission sources in proximity. Because the South Coast Air Basin is classified as nonattainment for federal and state PM₁₀ standards, emissions from cumulative projects would affect the local project area and vicinity. Cumulative impacts would likely be reduced to less than significant levels because project proponents would be expected to use best management practices (such as dust abatement) and ensure that their projects comply with air quality standards. Anticipated long-term cumulative increases in vehicular traffic that may accompany implementation of some revitalization measures, such as new parks, would have an overall low incremental adverse effect on air quality in the study area.

Geology, Soils, Climate, and Seismic Hazards

Moderate to high cumulative impacts related to geology, soils, and seismic hazards are possible. Most of the study area is within a liquefaction zone. Measures should be taken to mitigate potential geologic/seismic hazards and to control erosion. Soil erosion and subsequent impacts to air and water quality could occur due to the extensive amount of ground clearing and earthwork involved with construction of the project. This could potentially have cumulative effects to water quality parameters downstream. There would be an increase in pedestrian bridges, underpasses, and pedestrian/bike trails. Therefore, design and construction of facilities should adhere to local building codes to ensure public safety. Construction work would also occur near several freeway bridges, and appropriate measures should be taken to ensure that the integrity of the existing roads and bridge structures is maintained.

Hydrology, Floodplain, and Water Quality

Potential cumulative impacts ranging from low to high are possible. There is a high potential for extensive soil erosion from wind and stormwater runoff. Eroded soils could have potentially significant cumulative effects to water quality. Trash entering the River could also increase as people have more access to the River and area streams. This trash adversely affects wildlife as well as public health and aesthetics. Vegetation within the River channel could be uprooted during high water events, becoming entangled on bridge pilings and inhibiting water flow. On the beneficial side, the increase in parks and open space and the greening of streets and biofiltration areas inherent in the LARRMP would help reduce the amount of impermeable surface area in the River Corridor, and vegetation features would help improve water quality.

Biological Resources

Overall, potential net cumulative long-term impacts on biological resources associated with the LARRMP are expected to be beneficial. Implementing the LARRMP measures would increase the amount of fish and wildlife habitat; provide greater ecological/biological benefits; aid in linking isolated habitats; help increase the amount of open space; help expand species diversity; and reduce the amount of impermeable surface area in the River Corridor. However, construction involved in implementing some of the LARRMP measures would require large amounts of excavation and the subsequent disposal of the materials. If these projects were developed at the same time that other planned or foreseeable projects were under construction in the same area, short-term cumulative impacts to existing biological resources could be high and potentially significant. With proper planning and coordination with resource agencies and land managers, potential impacts could be reduced to less than significant levels. Adverse impacts on wetlands and higher value habitat in the stream channel would be offset by creating and enhancing these habitats. Temporary adverse cumulative impacts on wetlands and higher value habitat in the stream channel would be offset by creating and enhancing such habitats at the site.

Land Use

As more sections of the channel are modified over time, there is a potential for high and potentially significant cumulative land use impacts throughout the River Corridor from expansion of the River ROW. Many of the open space development measures proposed at the five opportunity areas involve conversion of existing land uses to uses for parks and open space. The LARRMP revitalization measures within the Canoga Park Opportunity Area could result in high and potentially significant impacts in the study area from converting Industrial, Public Service, Commercial, and Multifamily Residential land uses. Implementing the LARRMP revitalization measures within the River Glen Opportunity Area could result in high to significant impacts from converting Industrial and Public Service land uses. The LARRMP revitalization measures at the Taylor Yard Opportunity Area could result in high to significant impacts in the study area from converting Industrial, Public Service, Commercial, and Residential land uses. The LARRMP revitalization measures within the Chinatown-Cornfields Opportunity Area could result in high and potentially significant impacts in the study area from converting Industrial, Public Service, Commercial, and Multifamily Residential land uses. The LARRMP revitalization measures within the Downtown Industrial Opportunity Area could result in high and potentially significant impacts in the study area from converting Industrial, Public Service, Commercial, and Multifamily Residential land uses.

Collectively and cumulatively, these land uses changes may result in high and potentially significant cumulative land use impacts. Impacts on Industrial land use are a focused issue within the City of Los Angeles and many of the communities within the River Corridor. Encroachment of other uses poses the greatest challenge to the continued viability of industry in this area. As the River's value as a recreational resource increases, the area is expected to become an increasingly desirable place to live and work. The opportunity area may experience growing pressure for coveted live/work space, a trend seen in other industrial areas of the city. This interest must be balanced with City of Los Angeles policy to maintain industrial land for industrial use. As revitalization measures are considered for implementation, cumulative land use impacts in the opportunity areas, the community plan areas, and the River Corridor should be analyzed.

Recreation

Implementation of future LARRMP River channel and open space modification projects in the River Corridor could contribute to moderate to high cumulative impacts on recreation demand at existing parks and recreation facilities in their vicinity. Site-specific analyses will be required to assess the significance of any impacts on demand for recreation and park services, evaluate the capacity of available resources, identify appropriate mitigation to reduce impacts to less than significant levels, and identify any other effects related to access to or use of recreational facilities in the River Corridor. The revitalization measures would partially offset potentially adverse impacts by providing additional recreational resources, capacity, and opportunities throughout the River Corridor as generally identified as a need in Community Plans throughout the corridor.

The LARRMP revitalization measures are expected to be implemented over an extended time frame and at various locations along the 32-mile-long River Corridor. Continued implementation of measures over time could result in significant cumulative beneficial recreation impacts for the River Corridor and the Cities of Los Angeles, Burbank, and Glendale. All communities in the River Corridor have documented the need for more parks and open space. The LARRMP could provide the implementation framework for the Los Angeles River bikeway network approved in the City of Los Angeles Transportation Element of the General Plan.

Noise

Cumulative noise impacts typically occur when multiple projects affect the same geographic areas simultaneously or when sequential projects extend the duration of noise impacts on a given area over a longer period. Noise impacts are primarily localized because sound levels decrease relatively quickly with increasing distance from the source. Cumulative noise impacts from implementing the proposed LARRMP revitalization measures, together with other foreseeable projects in the River Corridor, would result primarily from

temporary construction activities. The potentially highest levels of cumulative noise impacts would take place if several development projects were to take place at the same time and be in fairly close proximity. However, these increases would be due to construction and would be temporary and intermittent.

Public Health and Safety

There would be minimal to low potential cumulative impacts involving HTRW, school safety, airport operations safety, wildfire, methane zones, and infectious diseases associated with implementation of LARRMP future projects. However, because implementation of the LARRMP revitalization measures and other similar projects in the foreseeable future would increase the opportunities for the public to interact with the River, the cumulative risk of accidental drowning or water-related injury would increase. This risk would be greatest during and following flooding. On this basis, high and potentially significant adverse cumulative impacts would be associated with Los Angeles River Water Safety.

Transportation

Specific traffic volume projections should be developed for those future LARRMP projects in locations where other planned projects could cause substantial increases in traffic. In such cases, the potential net increase in traffic from future LARRMP projects should be determined "with project" and "without project" to determine if the cumulative impacts from the proposed project would be significant. Future plans in the LARRMP project areas include a TEA-21 project to upgrade the southern terminus of SR-2 and Glendale Boulevard, and the \$898 million Metro Gold Line Eastside Extension project.

Utilities and Infrastructure

The continued population and economic growth of Los Angeles will require commensurate growth in infrastructure and utility capacity. The River Corridor will continue to be used as a utility corridor and as a conduit for stormwater. The increase in demand for power and telecommunications will likely result in replacing, upgrading, and installing new transmission lines. Some of these replacements, upgrades, and installations will take place in the River Corridor and will be in addition to, or parallel with, the movement of any lines required by expanding the River channel.

Socioeconomics

The LARRMP revitalization measures are expected to be implemented over an extended time frame and at various locations along the 32-mile-long River Corridor. Continued implementation of measures over time could result in high and potentially significant cumulative socioeconomic impacts for the River Corridor and the Cities of Los Angeles, Burbank, and Glendale. Future socioeconomic impact analysis should be conducted in association with site-specific implementation studies to evaluate to what level of significance proposed measures contribute to cumulative socioeconomic impacts in the community area, the River Corridor, and the Los Angeles metropolitan area. Based on these analyses, if significant levels of impacts are anticipated, suitable mitigation actions should be identified to reduce impacts to below significant levels.

Implementation of LARRMP revitalization measures could result in increased residential and economic development adjacent to existing communities. The development encouraged in the LARRMP is intended to promote the River as an economic asset to the adjacent established communities. The development is expected to be relatively small in scale and is not expected to result in large increases in employment or population growth in excess of existing official local projections. Prior to implementation, future site-specific impact analyses should consider the cumulative socioeconomic impacts of proposed revitalization measures together with other planned actions, programs, and policies that would affect the River Corridor. Cumulative impact analysis should address any planned projects through the Greater Los Angeles County Integrated Water Resources Management Plan and any other ongoing efforts that are focused on restoration and development associated with the River Corridor and vicinity.

Future impact analyses at the project level should also address any potential socioeconomic impacts and cumulative impacts associated with effects on affordable housing in the River Corridor. There are

approximately 40 affordable housing developments within the five opportunity areas alone that provide over 2,000 affordable housing units. Any potential displacement of affordable housing units would require socioeconomic impact analysis and identification of mitigation measures to reduce the impact to less than significant levels.

Implementing either of the two alternatives within the Canoga Park Opportunity Area could result in cumulative impacts in the study area from displacing Industrial, Public Service, Commercial, and Multifamily Residential land uses.

Either of the two alternatives within the River Glen Opportunity Area could result in cumulative socioeconomic impacts from displacing industry and public services. Future impact analyses should also address cumulative impacts of the effects on affordable housing in the opportunity area. Currently there are four affordable housing developments in the opportunity area, providing 24 affordable housing units.

The LARRMP revitalization measures within the Taylor Yard Opportunity Area could result in cumulative impacts by displacing Industrial, Public Service, Commercial, and Residential land uses.

Either of the alternatives within the Chinatown-Cornfields Opportunity Area could result in cumulative impacts in the study area from displacing Industrial, Public Service, Commercial, and Multifamily Residential lands.

Implementing either of the two alternatives within the Downtown Industrial Opportunity Area could result in cumulative impacts from displacing Industrial lands.

Environmental Justice

Potential cumulative environmental justice impacts on minority and low-income populations and children's health and safety could be high and potentially significant. The influence of developing foreseeable future projects in the River Corridor, combined with implementing future LARRMP revitalization measures and the configurations of measures at each opportunity area, could result in air quality and noise impacts and the displacement of affordable housing units. However, consideration of environmental justice issues and children's safety should occur during proponents' review of cumulative projects. It would be most likely that projects' reviews would identify best management practices and mitigation actions to reduce impacts on minority and low-income population and children health and safety.

Cultural Resources

Cumulative impacts occur when impacts from proposed actions combine with similar impacts from other past, present, or reasonably foreseeable actions in a similar geographic area. The cumulative planning area for the proposed LARRMP revitalization measures is the 32-mile River Corridor and the five opportunity areas. The measures would be implemented over a very long period, and further site-specific identification and impact analyses would be conducted. Five to 20 years is considered the near-term planning period and 50 to 100 years the long-term period. Implementing the proposed LARRMP revitalization measures would result in the potential for both beneficial and adverse impacts on cultural and paleontological resources in the planning area, but many adverse impacts would be mitigated and would not be significant. In some cases, mitigation measures may not be adequate to avoid significant negative impacts.

Past actions in the planning area have resulted in the loss or destruction of the spatial integrity of prehistoric and historic archaeological resources through ground-disturbing activities. Paleontological resources may have been lost through excavation, as well. Historic buildings and structures have been lost or impacted due to demolition, substantial alteration, neglect, or incompatible construction.

The impacts of current and future actions in the planning area that are not subject to extensive cultural or historic resource review or result from neglect or vandalism would continue whether the proposed LARRMP

revitalization measures were implemented or not. Revitalization may stimulate the adaptive reuse, rehabilitation, or restoration of adjacent historic buildings and structures, but associated economic development may encourage removal of historic buildings and structures or incompatible construction. However, much of the current and future development would be subject to federal, state, and local reviews that include some level of consideration and protection for cultural and paleontological resources.

The planning area is overlain by over 15 current plans and agency proposals that are subject to NEPA and CEQA review. Over the near- and long-term planning horizon, it is reasonably foreseeable that many future projects and planning processes would address potential impacts on cultural and paleontological resources through mitigation. While mitigations would be developed after further identification and effects analysis, significant impacts may not be avoided in all cases.

All specific LARRMP revitalization measures would be conducted in the context of additional environmental and cultural resource compliance review designed to identify cultural and paleontological resources, assess impacts, and avoid adverse effects. Significant negative impacts on cultural and paleontological resources resulting from LARRMP revitalization measures are possible but in many cases are expected to be mitigated to less than significant. Positive impacts on these resources are anticipated. When combined with other past, present, or future impacts, the cumulative impacts resulting from the proposed LARRMP revitalization measures are expected to be less than significant, but significant impacts that cannot be reduced through mitigation are possible.

Aesthetic Resources

The alternatives would result in both beneficial and adverse impacts on visual resources. Cumulative projects are assumed to involve projects similar to those anticipated under the alternatives. Consequently, there would be both beneficial and adverse cumulative impacts on visual resources. An example of a beneficial impact is replacing developed areas with natural areas and open space, and an example of an adverse impact is erecting new sources of nighttime light or glare.

Statement of Overriding Considerations

The City of Los Angeles hereby concludes that the project's benefits outweigh its unavoidable and potentially unavoidable adverse impacts and therefore, overrides those impacts. The City reached this decision after having done all of the following: (1) adopted all feasible mitigation measures, (2) recongnized all significant and potentially significant impacts associated with LARRMP, and (3) balanced the benefits of the project against its significant and potentially significant impacts after mitigation.

The City designates the Department of Public Works Bureau of Engineering as the custodian of all materials that constitute the administrative record for this project per CEQA Guidelines Section 15091(c).

The City of Los Angeles finds that, since portions of the Los Angeles River channel fall within the jurisdiction of other public agencies, including the LARRMP partnering agencies—the County of Los Angeles and the U.S. Army Corps of Engineers—that such agencies should also make future findings pursuant to LARRMP implementation and mitigation regarding potential environmental impacts within their jurisdictions.

The City of Los Angeles finds that, at the programmatic level, unavoidable significant adverse effects would not be expected to result for the sixteen (16) environmental resource areas analyzed in the LARRMP FPEIR/PEIS; however, unavoidable cumulative adverse environmental effects of the LARRMP may result. The Council finds that these effects are acceptable when balanced against the LARRMP's social, economic, and other benefits, as described below:

- The LARRMP can assist in addressing region-wide disparities, such as the lack of parks and recreational opportunities for urban youth, by providing such opportunities throughout the 32-mile River Corridor.
- The LARRMP can assist in addressing region-wide problems, such as poor air quality from automobile traffic, by providing more opportunities for walking and bicycling and encouraging more transit-oriented development within the River Corridor.
- The LARRMP will help strengthen the Los Angeles River's and the City's role as the center of an important regional ecosystem and watershed with a coordinated strategy to address a wide variety of critical issues, including biodiversity loss, increasing urban temperatures, greenhouse gas emissions, water scarcity, polluted urban runoff, coastal water degradation, and poor air quality.
- The LARRMP offers an opportunity for the City to revisit and restore respect to the Los Angeles River as a unique cultural and historic resource—one that can become a heritage landmark, educational monument, and cherished destination for Angelenos and visitors.
- The LARRMP can assist in addressing illicit activities that currently take place in the River Corridor by encouraging the development of social capital, including civic participation in revitalization efforts and civic vigilance in support of River improvements.
- The LARRMP enhances the City's effectiveness in competing for state and federal funding to create regional open space and greening opportunities, including ecological restoration, recreation, water quality improvement, and water conservation.
- The LARRMP can strengthen the City's economic base by providing multiple-benefit quality-of-life improvements in the River Corridor that will catalyze additional regionally-significant investment.

- The LARRMP includes measures to streamline the City's oversight and management of the River Corridor, thus making it easier for the City to deliver important public safety and maintenance services.
- The LARRMP policies, along with the FPEIR/PEIS mitigation measures, where appropriate and feasible, will reduce potential significant impacts to levels of insignificance or will substantially lessen or avoid those impacts; in addition, the City will continue to require project-level environmental reviews of individual LARRMP projects pursuant to the City's California Environmental Quality Act Guidelines and to enforce zoning and building code compliance as conditions of building permit issuance.

ⁱ According to the California Environmental Quality Act (CEQA) Guidelines 2007, Section 15091(a) The possible findings are:

- (1) *Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects as identified in the final EIR.*
 - (2) *Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.*
 - (3) *Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, makes infeasible the mitigation measures or project alternatives identified in the final EIR.*
- (b) *The findings required by subdivision (a) shall be supported by substantial evidence in the record.*
 - (c) *The finding in subdivision (a) (2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a) (3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.*
 - (d) *When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.*
 - (e) *The public agency shall specify the location and custodian of the documents or other materials which constitute the record of the proceedings upon which its decision is based.*
 - (f) *A statement made pursuant to Section 15093 does not substitute for the findings required by this section.*

[Amended effective November 1, 2005]

ⁱⁱ According to CEQA Guidelines Section 15097 (c), "The public agency may choose whether its program will monitor mitigation, report on mitigation, or both." As presented in Section 15097 (c)(1), "Reporting is suited to projects which have readily measurable or quantitative mitigation measures or which already involve regular review" and in (c)(2), "Monitoring is suited to projects with complex mitigation measures, such as wetlands restoration or archeological protection, which may exceed the expertise of the local agency to oversee, are expected to be implemented over a period of time, or require careful implementation to assure compliance."

ⁱⁱⁱ According to CEQA Guidelines Section 15097 (e),

...Standardized policies and requirements may describe, but are not limited to:

- (1) *The relative responsibilities of various departments within the agency for various aspects of monitoring or reporting, including lead responsibility for administering typical programs and support responsibilities.*
- (2) *The responsibilities of the project proponent.*
- (3) *Agency guidelines for preparing monitoring or reporting programs.*

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- (4) *General standards for determining project compliance with the mitigation measures or revisions and related conditions of approval.*
 - (5) *Enforcement procedures for noncompliance, including provisions for administrative appeal.*
 - (6) *Process for informing staff and decision makers of the relative success of mitigation measures and using those results to improve future mitigation measures.*

[Amended effective September 7, 2004]

^{iv} According to CEQA Guidelines Section 15093, "Statement of Overriding Considerations":

- (a) *CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a... [proposed]... project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."*
- (b) *When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.*
- (c) *If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination.*

^v Details of the project description are provided in the subsequent description of Project Alternatives and in the references included in endnote no. vi, below.

^{vi} The three (3) types of velocity-reducing channel modification measures differ from one another primarily in the way velocity is reduced, as follows:

- (1) Type V-R 1 reduces velocity by developing off-corridor attenuation measures to reduce flows into the main Los Angeles River channel to below 12 feet per second. These attenuation measures are being undertaken in the Los Angeles River Basin as part of regional watershed study efforts that are underway. These efforts are outside the River Corridor Study Area identified in this PEIR/PEIS and therefore are not addressed in this PEIR/PEIS. Separate CEQA (and possibly NEPA) evaluations of potential impacts associated with these regional attenuation measures are being conducted as needed to comply with state and federal regulations.
- (2) Type V-R 2 reduces velocity by constructing underground linear culverts parallel to and adjacent to the River. This also allows for development of linear open space on top of the culverts.
- (3) Type V-R 3 reduces velocity by widening the channel through land acquisition.

^{vii} Locations of the opportunity areas are as follows:

- *Canoga Park Opportunity Area:* This opportunity area is bounded on the north by Sherman Way, on the east by De Soto Avenue, on the south by Victory Boulevard, and on the west by Topanga Canyon.
- *River Glen Opportunity Area:* This opportunity area is bounded on the north by Verdugo Wash, on the east by San Fernando Road, on the south by the Colorado Street Freeway exit, and on the west by Griffith Park. It shows the setting of this opportunity area, first under Alternative RG-A, then under Alternative RG-B. Another concepts is the RG-A concept.
- *Taylor Yard Opportunity Area:* This opportunity area is bounded on the north by Fletcher Drive, on the east by Metrolink, on the south by the Pasadena Freeway, and on the west by Blake Ave. Another option shows open space measures for the proposed concept.
- *Chinatown-Cornfields Opportunity Area:* This opportunity area is bounded on the north by the Metrolink Gold Line, on the east by Avenue 18, on the south by the Union Station Rail Line, and on the west by Spring Street/Alameda Street Alternative CC-A figures are presented, followed by Alternative CC-B. For CC-A, It shows open space measures for the CC-A concept. For CC-B, another concept shows open space measures for the CC-B concept.
- *Downtown Industrial Opportunity Area:* The Downtown Industrial Opportunity Area is bounded on the north and east by the Santa Ana Freeway, on the south by the Santa Monica Freeway, and on the west by Alameda Street. Alternative DI-A figures are presented, followed by Alternative DI-B. For DI-A, Another concept shows open space measures for the DI-A concept. For DI-B, Figure 2-25 shows open space measures for the DI-B concept.