SECTION 5.0
DISCUSSION OF ENVIRONMENTAL ISSUES/ENVIRONMENTAL ANALYSIS

The following discussion provides an explanation of each answer indicated in Section 4.0, *Environmental Checklist Form*. The environmental documentation completed to date has incorporated a description of the existing conditions within the proposed *Los Angeles River Master Plan* study area and an analysis of the potential for the proposed site-specific project recommendations to result in significant impacts on the environment. Key documents used in the preparation of the environmental checklist and discussion of environmental issues/environmental analysis follow:

- *The Biota of the Los Angeles River: An Overview of the Historical and Present Plant and Animal Life of the Los Angeles River Drainage* (California Department of Fish and Game 1993)

- *Cultural Resource Overview and Survey for the Los Angeles County Drainage Area Review Study* (Cottrell, Van Wormer, and Cooper 1985)

- Meeting Minutes of the Los Angeles River Advisory Committee (Los Angeles County Department of Public Works, Parks and Recreation, Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1995a; 1994b,c; 1993a,c,d; and 1992a)

- Progress Reports of the Los Angeles River Advisory Committee (Los Angeles County Department of Public Works, Parks and Recreation, Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1995c; 1994e; 1993a,b; and 1992b).

- *Los Angeles River Master Plan* (Los Angeles County Department of Public Works, Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996b)

- *Master Environmental Impact Report: Los Angeles County Drainage Area Project* (County of Los Angeles Department of Public Works 1994a)

- *Traffic Volumes* (Los Angeles County Department of Public Works 1994)

- *Cultural Resource Investigation: Los Angeles County Drainage Area* (Romani, Sturm 1994)

- *An Archeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River, and the Whittier Narrows Flood Control Basin* (Stickel 1976)

- *Los Angeles County Drainage Area Review: Final Feasibility Report and Environmental Impact Statement* and supporting Technical Studies for Recreation, Geotechnical Investigation, Real Estate and Design (1991a,b, and c)

- *Planning Aid Letter on the Los Angeles County Drainage Area Water Control Study* (U.S. Fish and Wildlife Service 1987)

The proposed *Los Angeles River Master Plan* (1996) and technical studies that were used in the preparation of this negative declaration/environmental assessment are available for review by appointment at:

Los Angeles County Department of Public Works
Planning Division, 11th Floor
900 S. Fremont Avenue
Alhambra, CA 91803
Mr. Chris Stone
Project Manager/Supervising Civil Engineer II
(818) 458-4309

5.1 LAND USE AND PLANNING

This portion of the environmental analysis describes existing land use designations for site-specific project recommendations identified in the *Los Angeles River Master Plan* (Los Angeles County Departments of Public Works, Parks and Recreation, Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996); the regulatory framework for land use and planning; thresholds for determining significance related to impacts on land use and planning; and the ability of the Master Plan to avoid significant impacts on land use.

5.1.1 Regulatory Framework

The site-specific project recommendations addressed in the proposed *Los Angeles River Master Plan* are located in and adjacent to the Los Angeles County Drainage Area. Development of resources and facilities within the vicinity of the 51 mile long Los Angeles River (River) and 9 mile long reach of the Tujunga Wash tributary to the River is governed by the goals and policies set forth by the Corps, Los Angeles County Department of Public Works, and 13 local jurisdictions through which the River passes. The Corps has regulatory authority for lands within the Sepulveda Basin and that portion of the Los Angeles River right of way between 700 feet downstream of Lankershim Boulevard and Southern Avenue in the City of South Gate. The Southern California Association of Governments ([SCAG] 1995) *Regional Comprehensive Plan* provides non-binding recommendations for the use of land use designations of open space and conservation to accommodate anticipated land use through the Year 2015. The County of Los Angeles Department of Regional Planning *General Plan* (1983) and *Streamlined General Plan* (1990) provide land use designation guidelines for the development of the proposed project elements within the Tujunga Wash right of way and remaining portions of the Los

Angeles River right of way within the study area. Land use designations are also described in the general plans of the 13 local jurisdictions, that have authority over land directly adjacent to the River.

In addition to the above mentioned jurisdictions, there are several agencies or private entities that also have an interest in the River including:

U.S. Environmental Protection Agency (EPA)
Federal Emergency Management Agency (FEMA)
U.S. Fish & Wildlife Service
State Lands Commission
Los Angeles County Board of Supervisors
Los Angeles County Mosquito Abatement District
Los Angeles County Metropolitan Transportation Authority (MTA)
California Department of Transportation (Caltrans)
California Department of Fish & Game
California Coastal Commission
California Department of Water Resources
California Regional Water Quality Control Board (RWQCB)
Southern California Regional Rail Authority

The following railroad, public utility districts and companies have an interest in the River as well since a large amount of the continuous open space adjacent to the River, occurs on their land held in fee or as easements: Southern California Edison, Metropolitan Water District, Southern Pacific Transportation Company, Union Pacific Railroad, Santa Fe Railroad, the City of Los Angeles Department Water and Power, and the City of Los Angeles, Department of Recreation and Parks (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Federal

Congress defined flood protection as the primary purpose for the Los Angeles River pursuant to the *Flood Control Act of 1936*. In 1941, Congress authorized the U.S. Army Corps of Engineers to construct and operate major flood control facilities in the Los Angeles County Drainage Area (LACDA). In 1992, the U.S. Army Corps of Engineers published the *LACDA Feasibility Report and Environmental Impact Statement* in response to a 1969 authorization from Congress to evaluate the need for flood control improvements. The Corps' primary mission in operating LACDA is to provide flood protection to the more than 9 million inhabitants of the Los Angeles Basin. The Corps has prepared several additional technical documents to assist their evaluating compatibility of proposed multi-use projects within LACDA: *Los Angeles County Drainage Area Review Final Feasibility Report: Recreation Inventory Report* (1991); *The LACDA System Recreation Study, Los Angeles County Drainage Area* (1980); and *Final Design Memorandum: LARIO San Gabriel River Trail System* (1979). The proposed *Los Angeles River Master Plan* will provide the Corps with an additional tool for evaluating site-specific multi-use projects at Sepulveda Basin and in the Los Angeles River right of way just downstream of Lankershim Boulevard to Southern Avenue in the City of South Gate.

The National Park Service is responsible for governing the Juan Bautista de Anza National Historic Trail, which crosses Los Angeles County in a west-northwest course from Jurupa Hills in Riverside County to Ventura County. The National Historic Trail traverses the Cities of Ontario and San Gabriel, crosses the River near downtown Los Angeles, and continues northwest to San Fernando Valley. Near the City of El Monte, the LARIO Trail crosses the National Historic Trail. As indicated in the proposed *Los Angeles River Master Plan,* the LARIO Trail would be extended to meet up with the National Historic Trail near downtown Los Angeles (Los Angeles County Department of Public Works 1994).

The proposed project is also subject to the *Americans with Disabilities Act.* The *Americans with Disabilities Act* of 1991 is a federal civil rights act which prohibits discrimination against those with disabilities. The act covers employment, housing, and physical access to all public places whether they are privately or publicly owned or operated.

Regional

The Open Space and Conservation Element of the *Regional Comprehensive Plan and Guide* (SCAG 1995) states that urban-type land uses and facilities need to support future additional population growth which will consume a large portion of the remaining privately-held land in the region. The plan emphasizes the conservation of open space areas that provide opportunities for outdoor recreation which is considered important for providing a good quality of life for residents who live in highly urbanized areas of the region.

County

There are four maps contained in the County *General Plan* that provide information related to land use and planning guidelines for the proposed project elements. These maps include: (1) General Development Policy; (2) Conservation/Open Space Policy; (3) Special Management Areas; and (4) Land Use Policy. The General Development Policy Map distinguishes between urban and non-urban areas principally to identify those areas where it is believed that urban services can be provided. The properties immediately adjacent to the River are designated on the General Development Policy Map (Los Angeles County Department of Regional Planning 1991b) of the *General Plan* as areas of "urban open space", "revitalization", "conservation/maintenance", and "in filling". The *General Plan* describes urban open space as "...typically more intensively used than non-urban open space (i.e. public beaches, golf courses, cemeteries, etc.). They may contain structures and facilities compatible with, and appurtenant to, open space and recreation uses and the character of the surrounding area" (Los Angeles County Department of Regional Planning 1991b).

The "revitalization" designation is described in the *General Plan* as "areas where existing urban uses are being rehabilitated and/or recycled or where such action is desirable to restore and protect the area's physical, economic, and social health" (Los Angeles County Department of Regional Planning 1991b). "Areas that are basically sound and should be protected or enhanced" is the description of the "conservation/maintenance" designation on the General Development Policy Map of the *General Plan* (Los Angeles County Department of Regional Planning 1991b). The map designation for "infilling" is described as "parcels of vacant or agricultural land within developed urban areas which are appropriate for urban development..." (Los Angeles County Department of Regional Planning 1991b).

The Conservation/Open Space Policy Map depicts existing open space of regional significance and areas recommended for public acquisition. The proposed project is designated as an existing open space and a special management area on the Conservation/Open Space Policy Map (Los Angeles County Department of Regional Planning 1991a) of the *General Plan*. According to the *General Plan*, an existing open space is depicted as "public or private areas currently devoted to uses such as parks, golf courses, beaches, nature preserves, and trails. Structural improvements may be consistent with this intent if supportive of the primary open space uses" (Los Angeles County Department of Regional Planning 1991a).

The Special Management Area Map (Los Angeles County Department of Regional Planning 1991f), of the *General Plan*, depicts areas in which adherence to special criteria for development is necessary to prevent loss of, or severe damage to life, property, and the natural environment. The Special Management Area Map depicts Reach No. 1 as passing through a designated "major fault zone". A designated "Significant Ecological Area" (SEA); and a "major fault zone" is depicted as being adjacent to the River within Reach No. 4.

The proposed project location is designated as "open space" on the Land Use Policy Map (Los Angeles County Department of Regional Planning 1991d) of the *General Plan*. This land use designation "includes both public and privately owned lands committed to long term open space use, and lands intended to be used in a manner compatible with open space objectives" (Los Angeles County Department of Regional Planning 1991d).

In addition to the Corps' responsibility for operation and maintenance of flood control facilities within LACDA, the County is also responsible for providing local flood protection and operates and maintains numerous flood control facilities. These facilities include: 15 dams, approximately 280 sediment entrapment basins, and 27 ground water recharge facilities (spreading grounds). Local storm drains and pump stations are generally maintained by the Los Angeles County Department of Public Works (LACDPW), but cities, Caltrans, and certain homeowner associations also have operation and maintenance responsibilities of these local facilities (Los Angeles County Departments of Public Works, Parks and Recreation, National Park Service Rivers, Trails, and Conservation Assistance Program, and Los Angeles River Advisory Committee 1996).

Local

The Los Angeles River and the Tujunga Wash pass through 13 local jurisdictions between the upstream portion of the study area and the Pacific Ocean. Implementation of site-specific project recommendations identified on the proposed *Los Angeles River Master Plan* have been designed for consistency with the land use designations defined in local jurisdiction general plans where they are located, including: City of Bell (1986); City of Bell Gardens (1995); City of Burbank (1992); City of Compton (1991); City of Cudahy (1992); City of Glendale (1986); City of Long Beach (1986); City of Los Angeles (1988, 1985, 1984a, 1984b, 1979a, 1979b, 1979c, 1976 and 1974); City of Lynwood (1990); City of Maywood (1989); City of Paramount (1990); City of South Gate (1990); and City of Vernon (1989).

5.1.2 Existing Conditions

The Los Angeles River is a major flood control facility in and of itself. The River is formed at the confluence of Bell Creek and Calabasas Creek in the foothills of the Santa Monica Mountains. Projects included in the proposed *Los Angeles River Master Plan* are associated with the enhancement of the River and Tujunga Wash aesthetically, economically, recreationally, and environmentally. These projects are located on properties immediately adjacent to the River or within a short distance of it. The properties either are existing park/recreational facilities, are in an undeveloped state, are in use as major utility corridors, or are blighted properties designated for redevelopment. The *Los Angeles River Master Plan* divides the River by reach beginning in Long Beach, at the mouth of the River, then continues upstream through the Mid-cities, Downtown Los Angeles, Glendale Narrows, San Fernando Valley and Tujunga Wash areas. Existing conditions as described by the *Los Angeles River Master Plan* (1996) are provided for the properties adjacent to the River and are organized by Study Reaches as follow:

Reach Number 1 - Southern Cities

Land use in this reach varies from residential to light industrial. The strip of vacant land between the freeway and the River is used as commercial nurseries and storage facilities. The County Department of Public Works, Caltrans, and local cities operate numerous pump stations that collect and pump local urban runoff into the River. Some runoff is collected in the Dominguez Gap Spreading Grounds, located on the east bank south of Del Amo Boulevard (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Reach Number 2 - Mid-Cities

Adjacent land uses in the Cities of Vernon, Bell and Commerce are predominantly industrial. This historic use has possibly left many sites with varying levels of contamination. The remaining cities have high density residential and mixed uses directly adjacent to the River. There are several moderate to large sized (5 to 20 acres), unused parcels adjacent to the River in this reach (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Reach Number 3 - Downtown Los Angeles

Although railroads dominate the adjacent land use, there are areas of 10 to 50-foot-wide linear clearings among the tracks. Outside of the railroad lines, land uses include housing, industrial and commercial areas, city and county facilities, and historic sites. Most residential use is concentrated on the east side of the River with industrial, commercial, financial, and civic activities located on the west side.

The River constitutes the boundary between the North East Los Angeles Plan and the Hollywood and Silverlake-Echo Park District Plans, the boundary between the Central City North Community Plan and the Boyle Heights Community Plan and River adjacent properties are predominantly designated "low

density residential industrial" and "open space" (Griffith and Elysian Parks). Land adjacent to the River through Boyle Heights is mostly designated "light and heavy industry". The River is designated "publicly-owned open space" within the downtown area, while adjacent properties are designated exclusively for "light and heavy industry" (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Reach Number 4 - Glendale Narrows

Adjacent commercial land uses, beginning at Barham Boulevard in Burbank, include developments by Warner Brothers, Disney and NBC Studios. The Los Angeles Equestrian Center and picnic grounds are situated between the cities of Burbank and Glendale. Major urban open space, including Griffith Park (4,217 acres) and Elysian Park (585 acres), can be found adjoining the River. The land between these two parks supports a variety of uses including light industry, manufacturing, single-family residential, rail facilities and vacant land.

North of the Arroyo Seco confluence, Taylor Yard, a 174-acre rail yard owned by Southern Pacific Transportation Company can be located. About 67 of the original 271 acres of this riverfront property has already been developed by the County's Metropolitan Transportation Authority as a Metrolink maintenance facility. Use of vacant land area at this site might include development of this site as a multi-use project.

Within this reach the Los Angeles River is designated "open space" in the various community plans. The River also constitutes the boundary between the North East Los Angeles Plan and the Hollywood and Silverlake-Echo Park District Plans. Adjacent properties are predominantly designated "low density residential", "industrial" and "open space" (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Reach Number 5 - San Fernando Valley

In the western San Fernando Valley, the River bisects low density residential neighborhoods and continues through Reseda Park and Sepulveda Basin, a regional recreational facility with parks, golf courses, a lake, sports center and wildlife area.

In the eastern San Fernando Valley, land uses adjacent to the Los Angeles River are predominately single-family residential and limited commercial. The Studio City Golf Course, Weddington Park, the Lakeside Country Club and Universal City (including the Studios Tour, Amphitheater, and City Walk) are all located in the vicinity of the Los Angeles River.

The Los Angeles River has been designated as "publicly-owned open space" by various Los Angeles City Community Plans in the San Fernando Valley. The Sepulveda Basin Recreational Area is also designated "publicly-owned open space" in the Encino-Tarzana Community Plan. The area behind Sepulveda Dam is designated as a flood control basin, though it also supports recreation, water treatment, agricultural and wildlife uses in this area because of its soft bottom, the river supports thick riparian vegetation (Los Angeles County Departments of Public Works, Parks and Recreation, and

Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

Reach Number 6 - Tujunga Wash

The Arleta-Pacoima, Sun Valley and Van Nuys-Sherman Oaks Community Plans designate the Tujunga Wash as "open space", and recommend a continuous bicycle trail on the west side of the concrete tributary. The Hansen Dam Recreation Area is also depicted as "open space" with equestrian and bicycle trails. The Corps of Engineers' Hansen Dam represents a significant regional recreational facility with a golf course, equestrian and bicycle trails maintained by the City of Los Angeles (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and Los Angeles River Advisory Committee 1996).

5.1.3 Significance Threshold

The threshold for determining if significant impacts on land use would occur is based on Appendix G of the *California Environmental Quality Act Statutes and Guidelines*. The likelihood for significant impacts on land use to occur was evaluated based on the potential for the proposed *Los Angeles River Master Plan* to result in:

- Conflict with flood control improvements as defined in *The Los Angeles County Drainage Area Review Final Feasibility Report and Environmental Impact Statement* and the *Master Environmental Impact Report for the Los Angeles County Drainage Area Project*
- Conflict with land use designations or policies contained in the County of Los Angeles *General Plan* or *Streamlined General Plan*
- Conflict between a site-specific project recommendation and the adopted City general plan where it is proposed
- Affect agricultural resources or operations
- Disrupt or divide the physical arrangement of an established community

5.1.4 Impact Analysis

The proposed project elements are consistent with the primary purpose of flood control and the approved flood control improvements identified in the *Master Environmental Impact Report for the Los Angeles County Drainage Area Project* and the *Los Angeles County Drainage Area Review Final Feasibility Report and Environmental Impact Statement.*

The proposed project complies with the applicable elements of the Los Angeles County's *General Plan* and *Streamlined General Plan*. The proposed project elements will provide structures and facilities that are compatible with and appurtenant to, open space and recreation uses and the character of the surrounding area as required by the General Development Policy Map of the County's *General Plan*. The proposed project elements would dedicate the designated open space areas for passive recreation which is consistent with the O-S (Open Space) designation on the Conservation/Open Space Policy

Map of the County's *General Plan*. The proposed *Los Angeles River Master Plan's* project elements will be consistent with the land use designations of the Special Management Area Map and Land Use Policy Map of the Los Angeles County *General Plan* as well.

The site-specific project recommendations identified in the proposed *Los Angeles River Master Plan* are consistent with land use designations in adopted general plans for the 13 adjacent municipal jurisdictions including the cities of: Bell; Bell Gardens; Burbank; Compton; Cudahy; Glendale; Long Beach; Los Angeles; Lynwood; Maywood; Paramount; South Gate; and Vernon. These designations include: a mix of open space, industrial, residential and commercial land use designations. The proposed project elements provide for passive recreation opportunities including picnicking, bicycle staging, and interpretation of the natural and cultural resources. The proposed project elements have been designed in accordance with the Corps' standards for flood control management, since the proposed project area lies within the Los Angeles County Drainage Area.

Based on coordination undertaken with the Natural Resources Conservation Agency, there are no designated prime or unique farmlands or farmlands of statewide or local importance in the proposed project area; therefore development of the proposed project will not result in significant impacts on agriculture.

The proposed project elements are located on properties immediately adjacent to the River or within a short distance of it. Since these properties either are existing park/recreational facilities, are in an undeveloped state, are in use as major utility corridors, or are blighted properties designated for redevelopment, the project will not disrupt or divide the physical arrangement of an established community.

5.1.5 Mitigation Measures

There are no anticipated impacts on land use and planning; therefore no recommended mitigation measures are needed.

5.2 POPULATION AND HOUSING

This portion of the environmental analysis documents the potential impacts on population and housing. The explanation includes: description of the regulatory framework; existing conditions; thresholds for significant impacts; impact analysis, and if necessary, mitigation measures.

5.2.1 Regulatory Framework

Regional

The *Regional Comprehensive Plan and Guide* (SCAG 1995) speaks of growth management goals, which include supporting local land use actions and urban forms that avoid economic and social polarization and accommodate a diversity of life styles. Patterns of urban development and land use which make better use of existing infrastructure and facilities are encouraged.

County

The County's *General Plan* (Los Angeles County Department of Regional Planning 1993 and 1988) provides guidelines related to population and housing on the Housing Development and Neighborhood Conservation Policy Map (Los Angeles County Department of Regional Planning 1988) and on the Urban Form Policy Map (Los Angeles County Department of Regional Planning 1984c). The Housing Development and Neighborhood Conservation Policy Map (1988) expresses housing development and conservation policy within locations designated as Urban Residential Areas, Rural Communities and Non-Urban Residential Areas. The Urban Form Policy Map (Los Angeles County Department of Regional Planning 1984c) describes regional focal points and areas, major transportation corridors and facilities, major urban and non-urban areas, and other form features.

5.2.2 Existing Conditions

The following urban residential area designations in accordance with the Housing and Development and Neighborhood Conservation Policy Map (Los Angeles County Department of Regional Planning 1988) of the *General Plan*: "heavy maintenance" (Reach Numbers 1, 2, 3, 4, and 6); light maintenance" (Reach Numbers 1, 2, 4, 5, and 6); "selective revitalization" (Reach Numbers 1, 2, 4, 5, and 6); "comprehensive revitalization" (Reach Numbers 3 and 4); "major infilling" (Reach Number 5); and "other non-urban and non-residential areas" (Reach Numbers 1, 2, 3, 4, 5, and 6). The proposed project lies within a designated "urban area" on the Urban Form Policy Map (Los Angeles County Department of Regional Planning 1984c) of the County *General Plan*.

As mapped in the County of Los Angeles *Streamlined General Plan*, the proposed project lies within five designated planning areas: South, East Central, Central, Burbank/Glendale, and San Fernando. The following Table 5.2-1 presents the 1987 populations and the 2010 projected populations for these designated planning areas.

TABLE 5.2-1
POPULATION PROJECTIONS: 1987-2010

Planning Area	1987	2010	Change in No. of Persons	1987-2010 Percent Change
South	711,000	860,000	149,000	21.0%
East Central	755,000	855,000	100,000	13.2%
Central	1,582,000	1,800,000	217,700	13.8%
Burbank/Glendale	616,000	705,000	89,000	14.4%
San Fernando	867,000	1,035,000	168,000	19.4%
Source: County of Los Angeles Streamlined General Plan 1993				

The projected increase for the East Central, Central, Burbank/Glendale, and San Fernando Planning Areas are below the average projected County increase of 20.6%. The projected increase for the South Planning Area (0.4%)is slightly above the average projected County increase.

The following Table 5.2-2 presents the 1987 recorded housing units and the Year 2010 projections for housing units within the five planning areas of the proposed project.

TABLE 5.2-2
HOUSING UNIT PROJECTIONS: 1987-2010

Planning Area	1987	2010	Change in No. of Units	1987-2010 Percent Change
South	274.300	337,300	63,000	23.0%
East Central	217,600	249,300	31,700	14.6%
Central	592,200	684,400	92,200	15.6%
Burbank/Glendale	257,800	300,000	42,200	16.4%
San Fernando	334,500	409,100	74,600	22.3%
Source: County of Los Angeles Streamlined General Plan 1993				

Besides the South Planning Area, which is 0.5% higher, the projected increase for the planning areas is lower than the average projected County increase of 22.5%. These figures are consistent with SCAG projections (SCAG 1995) for annual population growth between 1990 and 2010 of +1.0% per year for the South, East Central, Central, Burbank/Glendale, and San Fernando Planning Areas.

The following table 5.2-3 shows the current employment figures (1987) and the projected employment figures for the Year 2010 of the five planning areas.

TABLE 5.2-3
EMPLOYMENT PROJECTIONS: 1987-2010

Planning Area	1987	2010	Change in No. of Jobs	1987-2010 Percent Change
South	357,000	507,000	150,000	42.0%
East Central	454,000	573,000	119,000	26.2%
Central	1,074,000	1,152,000	78,000	7.3%
Burbank/Glendale	309,000	395,000	86,000	27.8%
San Fernando	361,000	559,000	198,000	54.8%
Source: County of Los Angeles Streamlined General Plan 1993				

The projected increase for the East Central Planning Area, Central Planning Area, and Burbank/Glendale Planning Area is lower than the average projected County increase of 34.1%. The projected increase figures for the South Planning Area (7.9%) and for the San Fernando Planning Area (20.7%) are higher than the average 34.1% projected County increase.

5.2.3 Significance Threshold

The threshold for determining if significant impacts on population and housing would occur is based on Appendix G of the *California Environmental Quality Act Statutes and Guidelines*. The likelihood for significant impacts on population and housing to occur was evaluated based on the potential for the proposed project to result in:

- Induce substantial growth or concentration of population
- Displace a large number of people
- Disrupt or divide the physical arrangement of an established community

5.2.4 Impact Analysis

The proposed action will not result in significant impacts on population, housing, or employment in the proposed project area. The proposed project will add no new housing. The proposed action would not displace any existing housing stock or generate demand for additional housing stock. The proposed economic development of the project encompasses opportunities for such activities as bike/skate rentals, food concessions, and open-air markets. The objective of this project element is to promote the River as an economic asset to the adjacent communities. This project element will be implemented on a small-scale level and therefore a large increase in jobs or people will not be a result.

The proposed project elements are not expected to result in cumulative impacts on population, housing, or employment. All appropriate governmental agencies in the region were contacted to facilitate input related to the proposed project elements, including the Cities of Bell, Bell Gardens, Burbank, Compton, Cudahy, Glendale, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon. The proposed project elements are located on properties immediately adjacent to the River or within a short distance of it. Since these properties are in use as major utility corridors, or are blighted properties designated for redevelopment, the project will not disrupt or divide the physical arrangement of an established community.

5.2.5 Mitigation Measures

There are no anticipated impacts on population and housing; therefore, there are no recommended mitigation measures.

5.3 GEOLOGICAL ISSUES

This portion of the environmental analysis describes: the regulatory framework that guides the project design and decision-making process related to geological issues; the existing conditions for geology, seismicity, and soil stability; thresholds for determining significance; impact analysis; and, if necessary, documentation of the feasibility of avoiding significant impacts related to geological issues. The focus is to describe the constraints to the general, and some specific, elements of the project imposed by the underlying geologic, seismic and soils conditions based on the anticipated grading and surface disturbance. The analysis is based primarily on information contained in the *Los Angeles County Drainage Area Final Feasibility Interim Report: Geotechnical Report, Real Estate Report, Design Report* (U.S. Army Corps of Engineers 1991b), the *Master Environmental Impact Report: Los Angeles County Drainage Area Project* (Los Angeles County Department of Public Works 1994a), and the *Los Angeles River Master Plan Final Report* (Los Angeles County Departments of Public Works, Parks and Recreation, and Regional Planning, National Park Service Rivers, Trails, and Conservation Assistance Program, and the Los Angeles River Advisory Committee 1996).

5.3.1 Regulatory Framework

State

The California State Geologist has delineated Earthquake Fault Zones (formerly Special Study Zones) along known active and potentially active faults in California pursuant to the Alquist-Priolo Special Studies Zones (APSSZ) Act of 1972. The Act was revised in 1994 including a change in the title to the Alquist-Priolo Earthquake Fault Zoning (APEFZ) Act. The State designates the authority to local government to regulate development within an APEFZ. Construction of habitable structures is not permitted across the trace of active faults. The project must be cognizant of the APEFZs, but does not fall within the jurisdiction of the Act.

The State of California Division of Mines and Geology (CDMG) (Note 46 1986) identifies geologic/seismic considerations that should be accounted for pursuant to the *California Environmental Quality Act* (CEQA) in determining whether proposed projects are likely to be subject to geologic/seismic hazards. Such determinations include both the potential for existing conditions to pose a risk to the project, and for the project to result in an impact on the existing conditions for geology and soils. These CDMG guidelines (Note 46) are not regulations, but serve to assist reviewers and preparers of environmental documents in preparing a comprehensive document. For example earthquake problems addressed by the guidelines relate to fault movement, liquefaction, landslides, differential compaction/seismic settlement, ground rupture, ground shaking, tsunami, seiche, and seismically-induced flooding. Design and mitigation measures to resolve geologic, seismic and soil issues must be undertaken in compliance with the state-mandated Uniform Building Code.

Los Angeles County General Plan

The Board of Supervisors adopted the first Safety and Seismic Safety Elements as components of the Los Angeles County General Plan in 1980. The provisions of those elements were updated, revised and combined in 1993 (Los Angeles County Department of Regional Planning 1993). The Safety Element

addresses seismic hazards related to surface rupture, ground shaking, and geologic hazards associated with slope instability, landslides, and unstable ground. Safety element goals and policies related to seismic hazards include the goal to minimize injury and loss of life, property damage, and the social, cultural, and economic impacts caused by earthquake hazards. The most applicable policy encourages continued enforcement of stringent site investigations (such as seismic, geologic, and soils investigations) and implementation of adequate hazard mitigation measures for development projects in areas of high earthquake hazard. The goal of the safety element related to geologic hazards is to protect public safety and minimize the social and economic impacts from geologic hazards. There are two relevant policies for the proposed project: (1) approval of projects in areas that are susceptible to geologic hazards is contingent upon the ability to mitigate these problems to the satisfaction of the County of Los Angeles Department of Public Works; and (2) enforcement of stringent slope investigation and adherence to design standards to apply innovative hazard mitigation. Map information presented on Plates 1-6 of the *Technical Appendix to the Safety Element* (Los Angeles County Department of Regional Planning 1990) must be taken into consideration in the project planning process.

Uniform Building Code (UBC)

As mentioned above, numerous geologic, seismic and soils hazards must be considered for development in the County of Los Angeles and within the 13 affected jurisdictions. The *Uniform Building Code* (ICBO, 1994 or latest revision) is the minimum standard implemented by the State and the County to insure that a building is located, designed and constructed to perform in a manner that it will be no particular threat to the occupants or the general public. The UBC, as revised for use by the County of Los Angeles, establishes project design, project review and performance standards, site specific investigation requirements and County department review responsibilities. Compliance with the UBC will be mandatory for project construction activities.

5.3.2 Existing Conditions

Topography

Along the project alignment, the topography in the areas surrounding the river consists of mountains (San Gabriel, Verdugo, Santa Monica), hills (Elysian, Repetto, Monterey), valleys (San Fernando, San Gabriel) and the Los Angeles County coastal plain. The highest elevation along the project alignment river is at Hansen Dam, and the lowest at the Long Beach Harbor.

Within the narrow corridor of consideration along the Los Angeles River there are two basic geomorphologic conditions, an entrenched concrete river drainage and a drainage contained by concrete-lined earthen levees; this latter condition is present south of the City of Vernon. Topography immediately adjacent to the entrenched section is the relatively flat floodplain of the aforementioned valleys, and the steep slopes of the hills. The levees form man-made topographic features rising 15-30 feet above the surrounding relatively featureless coastal plain. The exception is the Dominguez Gap area in the City of Long Beach.

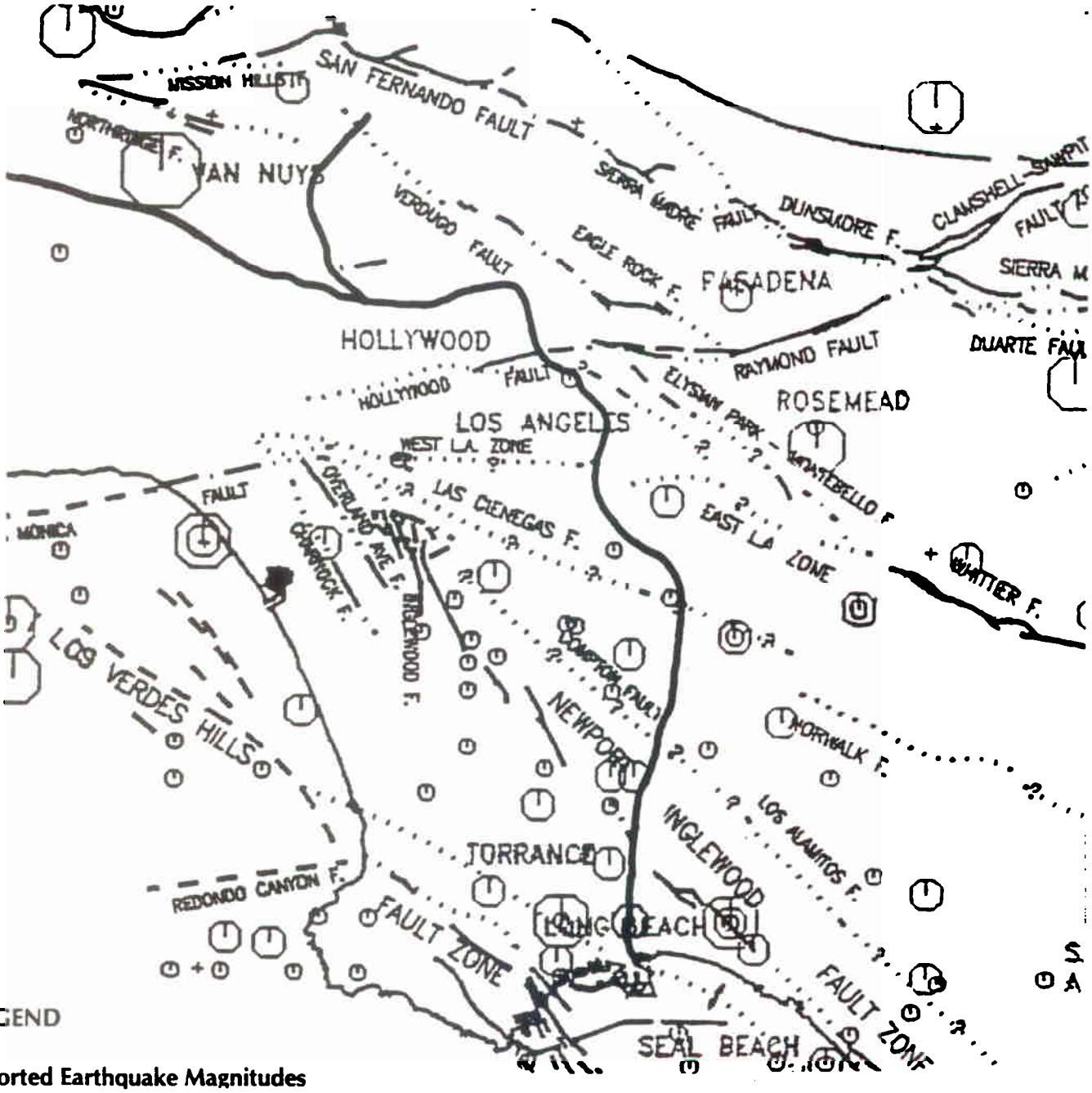
Geologic Formations

There are numerous bedrock geologic formations adjacent to, or lying deeply beneath, the project corridor of interest (Los Angeles County Department of Regional Planning 1990; Plate 2; U. S. Army Corps of Engineers 1994), however virtually none of these natural deposits will impact, nor will be impacted by the project. The exception may be in the Glendale-Los Angeles area between the 134/101 and the 110 freeways where Tertiary sandstone, shale and conglomerate, or Mesozoic slate and schist, may be encountered in deeper foundations. Otherwise Holocene alluvium forms the natural foundation material underlying the River throughout the San Fernando Valley and the coastal plain. The alluvium is typically loose, well drained, moderately sorted, highly permeable sand, gravel and silt which may be up to 15 feet thick where it overlies bedrock and Pleistocene alluvium (Los Angeles County Department of Public Works 1994a). This alluvium is generally fine- to medium- or coarse-grained sand and silty sand with local gravels and clays. Generally, engineering properties range from poor to good; general design values have been developed for the various classes of materials (U. S. Army Corps of Engineers 1991b). In the area of Dominguez Gap (near the 405 freeway) construction may encounter Pleistocene alluvium and marine terrace deposits which also consist of fine- to medium-grained sand and have engineering properties ranging from fair to good.

The primary material to be encountered in project construction will be artificial fill placed adjacent to structures (bridges, roadways, under-crossings) and over the alluvium as levees to the southern terminus of the project. Artificial fill will usually have a character similar to the local alluvium generally composed of sand and silt with some clay and fine gravel. Fill consistency will be variable depending on the degree of care (foundation preparation, compaction, inspection) involved in its placement. The U. S. Army Corps of Engineers (1991b) indicates that all levees were compacted to between 90 and 95 percent dry density for a given material type. Ranges of design values are presented by the Corps for the levee fill materials.

Faults/Seismicity

Seismic activity in southern California is well-documented in the historic record (felt and recorded earthquakes) and in the geologic record (multiple offsets of Holocene-Pleistocene alluvium). The project extends between the approximate locations of greatest historic ground shaking by the L.A. Basin, the Northridge (1994) and San Fernando (1971) earthquakes on the north, and the Long Beach (1933) earthquake on the south. The Los Angeles County Department of Public Works (1994a) provides a summary of the location, type and significance of the potential major earthquake faults affecting the project area. Figure 5.3-1, which depicts fault and recorded earthquake epicenter locations, and Table 5.3-1 are from the Los Angeles County Department of Public Works' *Master Environmental Impact Report: Los Angeles County Drainage Area Project.*



LEGEND

Reported Earthquake Magnitudes

- 3.5 to 3.9
- 4.0 to 4.9
- 5.0 to 5.9
- 6.0 to 6.9
- 7.0 and greater
- Los Angeles River/Tujunga Wash

N

Scale: 1" = 3 miles

FIGURE 5.3-1
REGIONAL FAULT CHARACTERISTICS