

6.9 Parks and Open Space



PARKS AND OPEN SPACE

INTRODUCTION

This section evaluates the potential effects of implementation of the proposed 2030 General Plan (proposed project) on parks and open space. This section describes the city's existing parkland, urban forest, recreational facilities, and recreational services, and outlines applicable plans and policies related to parks and recreation.

The 2030 General Plan includes policies in the Education, Recreation, and Culture Element and the Natural Resources Element that reflect the importance of parks and open space to the health of its citizenry and economy. The policies also address the need to establish small public spaces, such as plazas and pocket parks, in high density areas while preserving the city's unique physical characteristics - two major rivers, a creek system, watersheds, and agricultural history.

One comment letter was received in response to the NOP (see Appendices A and B) concerning parks and open space. The comment was in regards to increasing recreational facilities in the underserved areas of South Sacramento and East Broadway.

Information for this section is based on the City of Sacramento Department of Parks and Recreation Master Plan 2005-2010, the City of Sacramento Department of Parks and Recreation Annual Report 2005, personal communication with the City of Sacramento Department of Parks and Recreation (Parks Department) staff, and the Parks Department website.

The Technical Background Report (TBR) is also used as a resource. The TBR provides the physical, social, and economic conditions for the baseline date of December 2004. It describes background data regarding parks and recreation resources. The TBR is available electronically on the City's website (<http://www.sacgp.org/documents.html#tbr>) and on CD at the back of this document.

ENVIRONMENTAL SETTING

Parklands are important in an urban environment, providing both visual relief from the built environment and contributing to residents' quality of life through recreation and aesthetic value. As the city grows and the density of housing and commercial use increases, parks and open space become even more important because they serve as an escape from the congestion of urban life. Open space is important in preserving a sense of the city of Sacramento's own

historical development and unique physical characteristics which encompass two major rivers, a creek system, watersheds, and agricultural history.¹

Moreover, urban parks and green space are important in developing the city's urban form and community identity. For example, parks can be designed as a community gateway to establish an "entrance" into the city or to create distinct neighborhoods such as Tahoe Park, McKinley Park, or Fremont Park.² Parks and recreation facilities and programs within the Policy Area are described in detail below.

City Wide

■ Parks

The Parks Department maintains more than 2,400 acres of developed parkland, and manages more than 212 parks, 79 miles of road bikeways and trails, 17 lakes, ponds or beaches, over 20 aquatic facilities and provides park and recreation services at City-owned facilities within the city of Sacramento (see Figure 6.9-1).³ Several facilities within the city of Sacramento are owned or operated by other jurisdictions, such as the County of Sacramento and the State of California. The City of Sacramento Parks and Recreation Master Plan (PRMP) guides park development in the city.

Parks are generally categorized into five distinct park types by the Parks Department: 1) neighborhood, 2) community, 3) regional, and 4) Open Space/Parkways.⁴

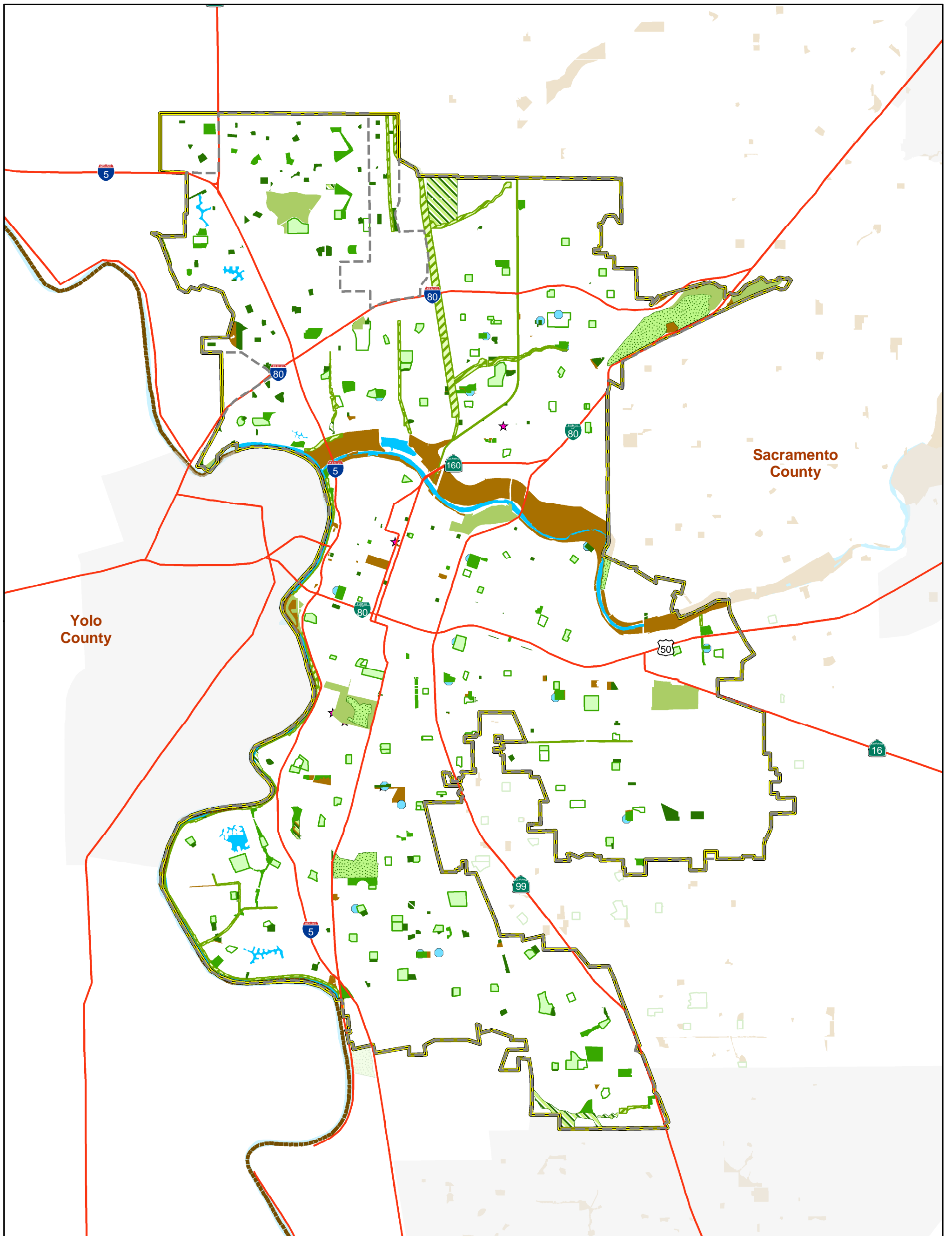
Neighborhood Parks are generally five to ten acres in size and are intended to be used primarily by residents within a half-mile radius. Neighborhood parks contribute to a sense of community by providing gathering places for recreation, entertainment, sports, or quiet relaxation. Some neighborhood parks are situated adjacent to elementary schools, and improvements are generally oriented toward the recreation needs of children. In addition to landscaping, improvements might include a tot lot, or unlighted sport fields or tennis courts. Urban Plazas/Pocket Parks generally fall under the category of neighborhood-serving parks and tend to be less than five acres in size. These parks are more appropriate for areas of denser urban and mixed use development.

1 City of Sacramento, *Parks and Recreation Master Plan*, December 2004, Services Chapter, p. 13.

2 Ibid.

3 Ibid, p. 8.

4 City of Sacramento, Department of Parks and Recreation, Park Category Descriptions <www.cityofsacramento.org/parksandrecreation/ppdd/park_category.htm>, accessed October 10, 2007.

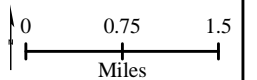


Legend

- | | | |
|-----------------------|--------------|------------------------|
| City Limit | Neighborhood | Parkway |
| County Boundary | Community | Golf Course |
| Policy Area | Regional | Non City |
| Water | School Park | Open Space/Nature Area |
| Aquatic Facilities | | |
| Recreation Facilities | | |
| Public School Grounds | | |

**Figure 6.9-1
Public Parks
and Recreation
Facilities**

Source: City of Sacramento
Parks and Facility data
consistent with Parks
Master Plan 2005



Community Parks are generally 10 to 60 acres in size and have a service area of approximately two to three miles, which encompasses several neighborhoods and meets the requirements of a large portion of the city. As with neighborhood parks, community parks are important in establishing a community identity. In addition to neighborhood park elements, a community park might also have restrooms, on-site parking, a community center, a swimming pool, lighted sports fields or courts, and other specialized facilities not found in a neighborhood park. Some of the smaller community parks may be dedicated to one use, and some elements of the park might be leased to community groups.

City wide/Regional Parks are larger sites developed with a wide range of improvements usually not found in local neighborhood or community facilities to meet the needs of the entire city population. In addition to neighborhood and community park type improvements, regional parks may include softball fields, tennis courts, a golf course, marina, amusement area, zoo, nature area, and other amenities. Some elements in the park may be under lease to community groups.

Open Space/Parkways have limited uses, but serve an important function of recreating in a natural setting and providing connections within the city. Open space areas are natural areas that are set aside primarily to enhance the city's environmental amenities. Recreational use of these sites is generally limited to natural features of the sites, such as native plant communities or wildlife habitat. Parkways are similar to open space areas because they also have limited recreational uses and are primarily used as corridors for pedestrians and bicyclists, linking residential uses to schools, parks, and commercial developments. Parkways are typically linear and narrow, may be situated along an existing corridor such as an abandoned railroad line, roadway, waterway, or other common corridors.

When these parks are designed, the local character, history, and preferences of the community are taken into account to reflect a neighborhood's identity.⁵ Table 6.9-1 shows the distribution of parks and trails, as well as their associated acreages that are found throughout the city's ten adopted Community Plan Areas.

■ City wide/Regionally Serving Parks and Trails

Generally, the City wide/Regionally serving category is comprised of regional parks, linear parks/parkways, and open space. However, it should be noted that some portions of these sites/acreages are also considered Community/Neighborhood Serving due to their location near existing communities. Table 6.9-2 lists the city wide and regionally serving park acreages within Sacramento.

5 City of Sacramento, *Parks and Recreation Master Plan*, December 2004, Services Chapter, p. 13.

TABLE 6.9-1		
CITY PARKS INVENTORY		
Location and Number		Acreage
Community Plan Area	Number of Parks	Total
1. Central City	22	281
2. Land Park	13	377
3. Pocket	19	291
4. South Area	39	401 ¹
5. Fruitridge/Broadway	13	211
6. East Sacramento	9	55
7. Arden-Arcade	3	194 ¹
8. North Sacramento	21	469
9. South Natomas	25	361
10. North Natomas	48	663
Total	212	3,303

Notes:
 1. Golf course acreages in Areas 4 and 7 are not considered park sites, although they are counted as meeting either Neighborhood/Community serving or City wide/Regionally serving acres. These courses are maintained by the City Convention, Culture and Leisure Department. Some acreage for parkland is located in multiple Community Planning Areas.
 Source: City of Sacramento, Department of Parks and Recreation, May 2, 2008.

TABLE 6.9-2	
2007 EXISTING CITY WIDE/REGIONALLY SERVING PARK ACREAGE ¹	
Park Type	2007 Existing Acreage
Regional Parks	1,408
Linear Parks/Parkways	1,896
Open Space	577
Total Acres	3,881

Note:
 1. Includes City public golf courses and State/County park lands within city limits; does not include lands that provide buffers between habitat areas and development (i.e., agricultural buffers) or lands required for environmental mitigation.
 Source: City of Sacramento, Department of Parks and Recreation, May 2, 2008.

Using the total park acreage displayed in Table 6.9-2, the City maintains a service level of approximately 8.7 acres per 1,000 residents.⁶ As identified in the City’s PRMP, the City wide/Regionally serving park service goal is to provide 8.0 acres per 1,000 persons by 2010.⁷

In addition to parks, Table 6.9-3 shows the city’s existing trails and bikeways. With the existing trails and bikeways located throughout the city, the current service level is 0.2 miles per 1,000 residents. The current service level goal is to provide 0.5 linear miles per 1,000 residents by 2010 as identified in the City’s PRMP.

6 Based on 2005 City of Sacramento population of 446,000 persons and 3,881 acres of park land.

7 City of Sacramento, *Parks and Recreation Master Plan*, December 2004, Assessment Chapter, Table 8.

TABLE 6.9-3

2007 EXISTING TRAILS/BIKEWAYS (OFF STREET)

Type	2007 Existing Miles
Walking/Jogging (in City parks)	13
Bicycle (throughout City)	60
Total Linear Miles	73

Note:
1. According to the PRMP is currently being updated and anticipate a completed plan in late 2008.
Source: City of Sacramento, Department of Parks and Recreation, May 2, 2008.

■ Neighborhood/Community Serving Parks

As indicated in the Parks Department PRMP, the service goal of five acres per 1,000 persons includes neighborhood and community park acreage.⁸ As of 2005, approximately five acres per 1,000 persons is provided.⁹

■ Recreational Facilities

Sacramento's parks contain a variety of recreational facilities, with areas available for active organized sports, including soccer fields, baseball diamonds, tennis courts, volleyball courts, and basketball courts. Additionally, benches, picnic tables, and barbecues are available for informal recreation activities. Tot lots and adventure play areas exist for children in many of the play areas in the city's parks. Biking and walking trails are also popular recreational amenities. In addition, swimming pools and wading/play pool facilities are available to the public. Additional recreational resources within the city include community centers; bocce ball courts; dog parks; equestrian trails; four 18-hole golf courses; and two 9-hole golf courses.¹⁰ Specialized recreation facilities include the Sheperd Garden & Art Center, the Southside Jogging Center, and the Mangan Rifle and Pistol Range.¹¹ Private recreation facilities such as country clubs also provide recreational opportunities in the city. Table 6.9-4 lists community and recreation facilities in Sacramento as of 2007.

■ Community Centers

Community Centers offer programs for people of all ages. Examples of programs offered include sports, aerobics, tai chi, martial arts, yoga, fitness rooms, and organized walking clubs. The Parks Department owns and operates 12 community centers and four clubhouses, ranging from a single room to a 35,000-square foot facility with a gymnasium. Flea markets, family nights, craft fairs, kid's camps, and holiday and multicultural celebrations are among the

8 Ibid.

9 Calculated using 2,176 Neighborhood/Community park land acres and a 2005 population of 446,552.

10 City of Sacramento, *Parks and Recreation Master Plan*, December 2004, Services Chapter, pp. 5 and 13.

11 City of Sacramento, <www.cityofsacramento.org/parksandrecreation>, accessed October 8, 2007.

many events held throughout the year at these centers. Table 6.9-4 shows the community centers located throughout the city.

Community Center	Location
Belle Cooledge Community Center	5699 South Land Park Drive
Clunie Community Center	601 Alhambra Boulevard
Coloma Community Center	4623 T Street
East Portal Park Clubhouse	M Street & Rodeo Way
Elmo Allen Slider Clubhouse at Max Baer Park	7815 35 th Avenue
Ethel MacLeod Hart Multipurpose Senior Center	915 27 th Street
Evelyn Moore Community Center	1402 Dickson Street
George Sim Community Center	6207 Logan Street
Joe Mims, Jr. Hagginwood Community Center at Hagginwood Park	3271 Marysville Boulevard
Johnston Community Center	231 Eleanor Avenue
Samuel C. Pannell Meadowview Community Center	2450 Meadowview Road
South Natomas Community Center	2901 Truxel Road
Oak Park Community Center	3425 Martin Luther King, Jr. Blvd
Robertson Community Center	3525 Norwood Avenue
Woodlake Clubhouse and Annex	500 Arden Way

Source: Department of Parks and Recreation, City of Sacramento, About Our Recreation Centers, <www.cityofsacramento.org/parksandrecreation/recreation/comcent.htm>, accessed August 26, 2007.

■ Recreation and Community Services

In addition to being responsible for the planning and development of the city's parks and recreational facilities, the Parks Department also provides for community services as well as recreational and leisure time opportunities. Specifically, the Department offers adult and youth sports classes; special events; after-school, summer, and aquatic programs; community classes and enrichment programs; and reservations for baseball and softball fields, picnics, and facilities. The City also offers many important services to senior citizens, such as the Ethel MacLeod Hart Multipurpose Senior Center and various city wide recreation programs. The Parks Department also provides for the maintenance of city parks, parkways, waterways, and off-street bikeways.

For additional information on recreation and community services offered by the Parks Department, please reference section 5.3, Parks and Recreation, page 5.3-9, of the TBR.

■ Urban Forest¹²

The urban forest in Sacramento contains over one-million trees. Of this number, approximately 165,000 are located on city property along streets, in parks, and other public places. These trees provide many environmental benefits such as reduced energy use,

12 City of Sacramento, Department of Parks and Recreation, 2005 Annual Report, p. 5.

cleaner air, and animal habitat. Further discussion of trees and the urban forest are included in section 6.3, Biological Resources of this MEIR.

In 2005 the Parks Department created a new Urban Forests Division, separating urban forestry from park maintenance operations. The Urban Forestry Division maintains all public trees and continually plants new trees which increase the tree canopy cover throughout the city. Urban Forest Services staff provided almost 7,000 individual services in 2005, including structural pruning, tree plantings and replacements, removal of damaged or otherwise unsafe trees, and emergency responses and other requests. In 2007, the Urban Forest Services division was moved into the Department of Transportation.

■ Partnerships

Sacramento's innovative Community-School Partnership program¹³ has funded 17 projects to enhance or upgrade facilities at school sites for recreation and community use. Funding for the projects came from the City, the participating schools, and the community.

For additional information on the existing partnerships of the Parks Department please reference section 5.3, Parks and Recreation, page 5.3-11 of the TBR.

Regulatory Context

More detailed information pertaining to the existing regulatory context is provided in section 5.3, Parks and Recreation of the TBR.

■ Federal

There are no federal regulations associated with parks and open space that apply to this project.

■ State

State Public Park Preservation Act

The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act. Under the Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

13 City of Sacramento, *Parks and Recreation Master Plan*, December 2004, Services Chapter, p. 7.

Quimby Act

California Government Code section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

Government Code 65560

Government Code section 65560 defines open space as:

- (b) "Open space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open space use as defined in this section, and which is designated on a local, regional or state open space plan as any of the following:
 - (1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lake shores, banks of rivers and streams, and watershed lands.
 - (2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
 - (3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lake shores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
 - (4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of parks and recreation facilities. For parks and recreation, some of the policies relevant to this issue include encouraging joint-use and privately developed parks, applying smart growth principles to siting and developing parks and recreation facilities, constructing and improving parks and recreation facilities in areas where these uses are deficient, locating community and regional parks and linear recreational areas on or adjacent to major thoroughfares, ensuring the safety of parks and recreation facilities users, updating the Parks and Recreation Master Plan, and ensuring adequate public access to the American and Sacramento rivers in developing areas. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

City of Sacramento Municipal Code

Chapter 12.72 Park Buildings and Recreational Facilities

The City's Municipal Code includes regulations associated with building and park use, fund raising, permit procedures, and various miscellaneous provisions related to parks. Park use regulations include a list of activities that require permits for organized activities that include groups of 50 or more people for longer than 30 minutes; amplified sound; commercial and business activities; and fund raising activities. This code also includes a list of prohibited uses within parks such as unleashed pets; firearms of any type; and drinking alcoholic beverages, or smoking near children's playground areas. Activities such as golfing, swimming, and horseback riding are only permitted within the appropriate designated areas.

Chapter 16.64 Parks and Recreational Facilities

Chapter 16.64 of the Municipal Code provides standards and formulas for the dedication of parkland and in-lieu fees. These policies help the City acquire new parkland. This chapter sets forth the standard that five acres of property for each 1,000 persons residing within the city be devoted to local recreation and park purposes. Where a recreational or park facility has been designated in the general plan or a specific plan, and is to be located in whole or in part within a proposed subdivision to serve the immediate and future needs of the residents of the subdivision, the subdivider shall dedicate land for a local recreation or park facility sufficient in size and topography to serve the residents of the subdivision. The amount of land to be provided shall be determined pursuant to the appropriate standards and formula contained within the chapter. Under the appropriate circumstances, the subdivider shall, in lieu of dedication of land, pay a fee equal to the value of the land prescribed for dedication to be used for recreational and park facilities which will serve the residents of the area being subdivided.

Chapter 18.44 Park Development Impact Fee

Chapter 18.44 of the City’s Code imposes a park development fee on residential and non-residential development within the city. Fees collected pursuant to Chapter 18.44 are primarily used to finance the construction of park facilities. The park fees are assessed upon landowners developing property in order to provide all or a portion of the funds which will be necessary to provide neighborhood or community parks required to meet the needs of and address the impacts caused by the additional persons residing or employed on the property as a result of the development.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The City of Sacramento has park acreage Service Level Goals for the three categories of parks identified in the PRMP Meeting these goals would provide the public with opportunities to access parks within reasonable walking or driving distance of all residences. Therefore, for the purposes of the analysis the following city goals are used:

- Neighborhood Serving: 2.5 acres per 1,000 population with a service area guideline of 0.5 mile.
- Community Serving: 2.5 acres per 1,000 population with a service area guideline of 3 miles.
- City wide/Regionally serving and Open Space: 8.0 acres per 1,000 population.

Table 6.9-5 shows the park acres required to serve development proposed in the 2030 General Plan. Impacts on bike and pedestrian facilities are discussed in section 6.11, Transportation and Circulation.

Type of Park	City Goals	Project Population Growth ¹	Required New Park Acres/ Mileage
Neighborhood Serving Parks	2.5 acres per 1,000 population	195,000	488 ac
Community Serving Parks	2.5 acres per 1,000 population	195,000	488 ac
City Wide/Regionally Serving Parks and Open Space	8.0 acres per 1,000 population	195,000	1,560 ac
Trails/Bikeways	0.5 miles per 1,000 population	195,000	97.5 mi

Note:
 1. The population growth attributed to the 2030 General Plan is approximately 195,000 new residents.
 Source: City of Sacramento, Department of Parks and Recreation, *Parks and Recreation Master Plan 2005-2010*, December 7, 2004, page 5; PBS&J, 2007.

Development associated with buildout of the 2030 General Plan would result in approximately 195,000 new residents. For the purposes of this analysis, a significant impact would occur if park acreage Service Level Goals are not reached and the use of existing park facilities causes a substantial physical deterioration or construction of additional park facilities is required which could cause adverse environmental impacts. Land that can legally be dedicated to the City is considered to contribute toward meeting the Service Level Goals for parks. Land that would be developed for parks and recreation uses, but not under the City's jurisdiction, would not be considered a contribution towards meeting the Service Level Goal established in the PRMP.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to parks and open space within the entire Policy Area. The proposed General Plan does not include any policies regarding parks or open space that are unique to any of the City's Community Plans or Focused Opportunity Areas. Applicable policies from the South Area Community Plan are listed below.

EDUCATION, RECREATION, AND CULTURE (ERC)

Goal ERC 2.1 Integrated Parks and Recreation System. Provide an integrated system of parks, open space areas, and recreational facilities that are safe and connect the diverse communities of Sacramento.

Policies

ERC 2.1.1 **Complete System.** The City shall develop and maintain a complete system of parks and open space areas throughout Sacramento that provide opportunities for both passive and active recreation.

ERC 2.1.2 **Connected Network.** The City shall connect all parts of Sacramento through integration of recreation and community facilities with other public spaces and rights-of-way (e.g., buffers, medians, bikeways, sidewalks, trails, bridges, and transit routes) that are easily accessible by alternative modes of transportation.

Goal ERC 2.2 Parks, Community and Recreation Facilities and Services. Plan and develop parks, community and recreation facilities and services that enhance community livability; improve public health and safety; are equitably distributed throughout the city; and are responsive to the needs and interests of residents, employees, and visitors.

Policies

ERC 2.2.1 **Parks and Recreation Master Plan.** The City shall maintain and implement a Parks and Recreation Master Plan to carry out the goals and policies of this General Plan. All new development will be consistent with the applicable provisions of the Parks and Recreation Master Plan.

ERC 2.2.2 **Timing of Services.** The City shall ensure that the development of parks and community and recreation facilities and services keeps pace with development and growth within the city.

ERC 2.2.3 **Service Level Goals.** The City shall develop and maintain parks and recreational facilities in accordance with the goals in Table ERC 1.

ERC 2.2.4 **Meeting Service Level Goals.** The City shall require new residential development to dedicate land, pay in-lieu fees, or otherwise contribute a fair share to the acquisition and development of parks or recreation facilities to meet the service level goals in Table ERC 1. For development in urban infill areas where land dedication is not feasible, the City shall explore creative solutions in providing park and recreation facilities that reflect the unique character of the area it serves.

TABLE ERC 1	
PARKS, COMMUNITY FACILITY, AND RECREATION FACILITY SERVICE LEVEL GOALS	
Park Type	Acres per 1,000 Residents
Neighborhood Serving: urban plazas, pocket parks, and/or Neighborhood Parks	2.5 acres
Community Serving: Community Parks	2.5 acres
Citywide/Regionally Serving: Regional Parks, Parkways, and/or Open Space	8.0 acres
Linear Parks/Parkways and Trails/Bikeways	0.5 linear miles
Community Facilities	# of Units
Multi-Use Recreation Complexes (must include a building over 10,000 sq. ft.)	1 per 50,000 residents
Recreation Facilities	# of Units per Residents
Aquatic Facilities	
Play Pool/Water Spray Feature	1 per 15,000
Outdoor Complex: Swimming and Wading Pool	1 per 30,000
Off Leash Dog Parks (Neighborhood/Community)	1 per 60,000
Picnic Areas (Large Group/Class I)	1 per 30,000
Playgrounds: Tot Lots, Adventure Play Areas	1 per 2,500
Skateboard Parks (Neighborhood/Community)	1 per 35,000
Community Gardens	1 per 50,000
Nature Interpretation Centers	2 total ¹
Fields	
Softball, including: Adult, Youth	1 per 7,500 (total)
Lighted	1 per 45,000
Baseball, including: Adult, Youth (Little League)	1 per 7,500 (total)
Lighted	1 per 45,000
Soccer, including: Bantam, Full Size	1 per 7,500 (total)
Lighted	1 per 30,000
Courts	
Volleyball	1 per 10,000
Basketball, including Youth, High School	1 per 5,000
Tennis	1 per 10,000
Notes:	
1. One north and one south of the American River.	
Source: City of Sacramento Parks and Recreation Department, 2008.	

ERC 2.2.5 **Facilities of Other Public Agencies.** The City shall consider the use of other public agencies' parks and recreation facilities within and near the city to help meet community recreation needs.

ERC 2.2.6 **Public Parkland Preservation.** The City shall ensure that any public parkland converted to non-recreational uses is replaced to serve the same community, consistent with California's *Public Park Preservation Act of 1971* (Public Resources Code Section 5401).

ERC 2.2.7 **Capital Investment Priorities.** The City shall give priority to the following parks and recreation capital investments:

- Acquiring land for or constructing parks and recreation facilities where adopted Service Level Goals are not being met.

- Acquiring, restoring and preserving large natural areas for habitat protection and passive recreation use such as walking, hiking, and nature study.
 - Acquiring and developing areas for recreation use and public access along the banks of the American and Sacramento Rivers.
 - Building and improving parks and facilities to ensure safety for users and adjacent properties.
- ERC 2.2.8 **High-Density High-Rise.** The City shall require all large, high-density, high-rise residential projects (e.g., land use designations that include Central Business District, Urban Centers, Urban Corridors, and Urban Neighborhoods) to mitigate for the lack of private yards and access to nature through land dedication or payment of in-lieu fees for parkland and/or recreational facilities.
- ERC 2.2.9 **Small Public Places for New Development.** The City shall allow new development to provide small plazas, pocket parks, civic spaces and other gathering places that are available to the public, particularly in infill areas, to help meet recreational demands.
- ERC 2.2.10 **Range of Experience.** The City shall provide a range of small to large parks and recreational facilities. Larger parks and complexes should be provided at the city's edges and along the rivers as a complement to smaller sites provided in areas of denser development.
- ERC 2.2.11 **On-Site Facilities.** The City shall promote and provide incentives such as density bonuses or increases in building height for large-scale development projects to provide on-site recreational amenities and gathering places that are available to the public.
- ERC 2.2.12 **Compatibility with Adjoining Uses.** The City shall ensure that the location and design of all parks, recreation, and community centers are compatible with existing adjoining uses.
- ERC 2.2.13 **Surplus or Underutilized Land.** The City shall consider acquiring or using surplus, remnant, vacant, or underutilized parcels or abandoned buildings for public recreational use.
- ERC 2.2.14 **Youth "Friendliness."** The City shall provide parks and facilities for youth between the ages of 10 and 18 to ensure safe gathering places for their recreation.
- ERC 2.2.15 **Ageing Friendly Community.** The City shall develop facilities that support continuing engagement, foster the personal enrichment and independence of older residents, and reflect the needs of Sacramento's aging population within the community.
- ERC 2.2.16 **Organized Sports Facilities.** The City shall develop facilities (e.g., multi-field complexes) for a variety of organized sports.
- ERC 2.2.17 **Joint Use Facilities Co-Located.** The City shall support the development of parks and recreation facilities co-located with public and private facilities (e.g., schools, libraries, and detention basins).
- ERC 2.2.18 **Private Commercial Recreational Facilities.** The City shall encourage the development of private commercial recreational facilities to help meet recreational interests of Sacramento's residents, workforce, and visitors.
- ERC 2.2.19 **Municipal Golf Courses.** The City shall maintain and reinvest in municipal golf courses, to foster a sense of community pride, ensure the City's courses remain competitive in the marketplace, and encourage play.

ERC 2.2.20 **Responsiveness to Community.** The City shall work with affected neighborhoods in the design of parks and recreational facilities to meet the unique needs and interests of residents (e.g., providing for cultural heritage gardens and teen centers).

Goal ERC 2.3 Recreational Programs. Support recreation and community service programs that promote wellness, fun, lifelong learning, skill development, personal enrichment, and positive relationships.

Policies

ERC 2.3.1 **Full Inclusion.** The City shall provide for full inclusion in programs at City facilities for people of diverse cultures, backgrounds, ages, gender, interests, languages, lifestyles, abilities, and socioeconomic status.

ERC 2.3.2 **Interpretation and Celebration.** The City shall provide recreation programming, special events and venues, and educational opportunities that honor, interpret, and celebrate the diversity, history, cultural heritage, and traditions of Sacramento.

Goal ERC 2.4 Rivers, Creeks, and Natural Resource Areas. Provide positive recreational experiences and enjoyment of nature through the development, maintenance, patrol, and preservation of the rivers, creeks, and natural resource areas, while maximizing the use of these areas through partnerships with other agencies.

Policies

ERC 2.4.1 **Service Levels.** The City shall provide 0.5 linear mile of parks/parkways and trails/bikeways per 1,000 population.

ERC 2.4.2 **River Recreation.** The City shall work with regional partners, state agencies, private land owners, and developers to manage, preserve, and enhance the Sacramento and American River Parkways to increase public access for active and passive recreational.

ERC 2.4.3 **Connections to Other Trails.** The City shall maintain existing and pursue new connections to local, regional, and state trails.

ERC 2.4.4 **Setbacks from Rivers and Creeks.** The City shall ensure adequate building setbacks from rivers and creeks, increasing them where possible to protect natural resources.

Funding

Goal ERC 2.5 Funding. Secure adequate and reliable funding for the acquisition, development, rehabilitation, programming, and maintenance of parks, community facilities, recreation facilities, trails, parkways, and open space areas.

Policies

ERC 2.5.1 **Multiple Tools.** The City shall use a broad range of funding and economic development tools to ensure high-quality development, maintenance, and programming of the City parks and recreation system.

- ERC 2.5.2 **River Parkways.** The City shall coordinate with Sacramento County and other agencies and organizations to secure funding to patrol, maintain, and enhance the American River and Sacramento River Parkways.
- ERC 2.5.3 **Property Acquisition.** The City shall secure funding for property acquisitions that can be accessed quickly to respond to opportunities.
- ERC 2.5.4 **Capital Funding.** The City shall fund the costs of acquisition and development of City neighborhood and community parks and community and recreation facilities through land dedication, in lieu fees, and/or development impact fees.

Open space, parks, and recreation from the Land Use and Urban Design section are also applicable.

LAND USE AND URBAN DESIGN (LU)

Goal LU 9.1 Open Space, Parks, and Recreation. Protect open space for its recreational, agricultural, safety, and environmental value and provide adequate parks and open space areas throughout the city.

Policies

- LU 9.1.1 **Open Space Preservation.** The City shall limit, to the extent feasible, the wasteful and inefficient conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, public safety, water and agricultural resources protection, and overall community benefit.
- LU 9.1.2 **New Parks and Open Spaces.** The City shall ensure that sufficient parks, open space, water corridor parkways, and trails planned throughout the city, to ensure adequate facilities are available to existing and future residents.
- LU 9.1.3 **Connected Open Space System.** The City shall ensure that new development does not create barriers to the connections among the various parts of the city's parks and open space systems.
- LU 9.1.4 **Open Space Buffers.** The City shall use traditional, developed parks and employ innovative uses of open space to "soften" the edges between urban areas and the natural environment.
- LU 9.1.5 **Private Boat Docks and Marinas.** The City shall discourage development along the rivers of privately-owned boat docks and marinas that are not available to the general public.
- LU 9.1.6 **American River Parkway Plan.** The City recognizes the American River Parkway Plan as an important state approved land use and policy document.

Proposed South Area Community Plan Policies

The following policies from the South Area Community Plan apply to the proposed project:

- SA.ERC 1.2 **Park and Recreation Facility Deficiencies.** The City shall develop park and recreation facilities to remedy the deficiencies in the South Area identified by the Parks and Recreation Master Plan such as: neighborhood parks, community parks,

baseball fields, dog parks, basketball courts, playgrounds, and play pools/waterspray features.

- SA.ERC 1.3 **Regional Park.** The City shall provide for development of a new regional park in Delta Shores that is designed to take advantage of the existing environmental features. The City shall work with the Sacramento Regional Sanitation District in connecting it with the Regional Sanitation bufferlands.
- SA.ERC 1.4 **Connecting Trail System.** The City shall create a trail system that connects the regional park in Delta Shores with other neighborhood, community, and regional parks in the South Area and in the region as well as existing bicycle and pedestrian trails.
- SA.ERC 1.5 **Parkway System to Sacramento River.** The City shall create an expanded bikeway/trail recreational area that links the Laguna and Jacinto Creek parkways to the Sacramento River Parkway system.
- SA.ERC 1.6 **Town of Freeport Open Space and Greenway Buffers.** The City shall create an open space and greenway buffer to connect the Town of Freeport with the Sacramento river and to provide an appropriate transition between development to the north and east of the Town of Freeport and along the Sacramento river.
- SA.ER 1.1 **Delta Shores Regional Park.** The City shall integrate wildlife habitat protection into features of the new regional park in Delta Shores.
- SA.ER 1.2 **Laguna Creek Enhancement.** The City shall preserve open space, maintain recreational facilities, and enhance the natural features of Laguna Creek (e.g., riparian habitat).

Standards of Significance

For the purposes of this EIR, impacts on parks, recreation and open space resources are considered significant if the proposed General Plan would:

- cause or accelerate a substantial physical deterioration of existing area parks or recreational facilities; or
- create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans.

Impacts and Mitigation Measures

A summary of all Parks and Open Space impacts and their levels of significance is located at the end of this technical section.

Impact 6.9-1	Implementation of the 2030 General Plan could result in increased use of existing parks or recreational facilities such that substantial physical deterioration of these facilities could occur.
Applicable Regulations	<i>City of Sacramento Municipal Code Chapter 18.44 Park Development Impact Fee</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>ERC 2.1.1, ERC 2.2.1 through ERC 2.2.8, ERC 2.2.11, ERC 2.2.17, ERC 2.2.18, ERC 2.4.1, ERC 2.4.2, ERC 2.5.1, ERC 2.5.4</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

An increase in population resulting from implementation of the 2030 General Plan may place a higher demand on area parks or recreational facilities such that deterioration of these facilities could occur or be accelerated. An additional 195,000 people are anticipated associated with buildout of the 2030 General Plan. General plan policies have been proposed to ensure adequate parks and recreational facilities are provided to accommodate the increase in new residents. For example, Policy ERC 2.1.1 requires the City to develop and maintain a complete system of public parks and open space areas throughout Sacramento that provide opportunities for both passive and active recreation. Policy ERC 2.4.2 also requires the City to work with regional partners, private land owners, and developers to manage, maintain, preserve, and enhance the Sacramento and American River Parkways. Policy ERC 2.5.4 requires the City to fund the costs of acquisition and development of neighborhood and community parks and community and recreation facilities through land dedication, in lieu fees, and/or development impact fees.

Implementation of the policies proposed in the General Plan would ensure that increased demand associated with an increase in population would not significantly accelerate the deterioration of existing park areas or recreational facilities. Therefore, this impact would be ***less than significant***.

Mitigation Measure

None required.

Impact 6.9-2	Implementation of the 2030 General Plan could create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans.	
Applicable Regulations	<i>State Public Park Preservation Act, Quimby Act, City of Sacramento Municipal Code Chapter 12.72, 16.64, and 18.44</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>ERC 2.1.1, ERC 2.2.1 through 2.2.8, ERC 2.2.11, ERC 2.2.17, ERC 2.2.18, ERC 2.4.1, ERC 2.4.2, ERC 2.5.1, ERC 2.5.4</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

Future development assumed under the 2030 General Plan would result in an increase of approximately 195,000 residents. However, these new residents are anticipated as part of the general plan and policies have been created to accommodate this increase in population. Based on service level goals set as part of the PRMP, the proposed General Plan would require approximately 2,536 additional acres of parkland and 97 miles of additional trails/bikeways, as shown in Table 6.9-5 under Methods of Analysis. These needs would be met through implementation of the proposed general plan policies. For instance, Policy ERC 2.2.3 identifies service level goals and Policy ERC 2.2.4 requires new residential development to dedicate land or payment of in-lieu fees for parks or recreation facilities. Therefore, new residential development would be required to ensure that adequate parkland is provided or applicable fees paid to the City to purchase additional park facilities. Policy ERC 2.4.1 also requires the City to maintain service levels to provide linear parks/parkways and trails/bikeways in accordance with PRMP adopted policies such 0.5 linear miles per 1,000 residents, as shown in Table 6.9-5. The expansion, planning, development, and use of joint facilities are additional means to achieve required service levels and to offset needs of park and recreational facilities. The policies set forth in the 2030 General Plan are designed to ensure that future development within the Policy Area would not create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans. Therefore, this impact would be ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together are considerable. For the 2030 General Plan the effects of buildout of the general plan and the increase in population is considered the “project.” In

terms of the provision of parks and recreation services the effects of buildout of the plan on existing park facilities are already evaluated in Impacts 6.9-1 and 6.9-2. There are no other projects that, when combined together (within the Policy Area), along with the project, would compound or increase environmental effects on park facilities. Therefore, the cumulative impacts of the project are addressed in Impacts 6.9-1 and 6.9-2.

South Area Community Plan

Policies outlined in the South Area Community Plan help to provide additional assurance that adequate parkland and open space would be provided to all residents in the South Area (SACP Policy SA.ERC 1.2). SACP Policy SA.ERC 1.3 requires the development of a new regional park in the Delta Shores area that would be connected to the Sacramento Regional County Sanitation District (SRCSD) bufferlands and to other neighborhood, community, and regional parks in the area via a trail system (SACP Policy SA.ERC 1.4). Included in the South Area is the proposed Delta Shores project that would develop approximately 800 acres of land in the South Area, with approximately 106 acres devoted to parks, open space, and a community center. In addition, SACP Policy SA.ERC 1.5 requires that the City expand Meadowview Park and change the park status from a neighborhood park to a community park. These policies would ensure that the South Area would have adequate parkland to serve its residents.

Furthermore, as additional development continues to occur in the South Area, all eligible projects would be required to abide by existing City/Community Plan policies regarding parks and open space.

Focused Opportunity Areas

The policies set-forth in the 2030 General Plan would adequately supply parkland and open space for the entire Policy Area, including the six Focused Opportunity Areas. For example, integrated into Policy ERC 2.2.3 are service level goals designed to ensure all residents have access to parkland and open space. Any new development in the Focused Opportunity Areas would be subject to all City and/or Community Plan policies and thus making certain residents of these areas would have an acceptable amount of parkland and open space.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, specifically in the South Area Community Plan and future development within the Policy Area could include potential effects associated with the provision of adequate parklands and open

space. At this time specific project information is not available (i.e., site-specific location, number of units, types of uses, etc.) to evaluate potential impacts associated with the provision of parks and open space. The City has identified specific goals and policies that address concerns associated with new development to ensure that, as new development occurs, developed adequate parks are provided as well. Once specific development proposals are prepared and submitted to the city, a project-specific environmental analysis would be prepared to analyze potential impacts on existing park facilities as well as to evaluate proposed new park facilities.

SUMMARY OF PARKS AND OPEN SPACE IMPACTS		
LEVEL OF SIGNIFICANCE		
	6.9-1 Implementation of the 2030 General Plan could result in increased use of existing parks or recreational facilities such that substantial physical deterioration of these facilities could occur.	6.9-2 Implementation of the 2030 General Plan could create a need for construction or expansion of recreational facilities beyond what was anticipated in the General and/or Community Plans.
Community Plan Areas		
Arden-Arcade	○	○
Central City	○	○
East Broadway	○	○
East Sacramento	○	○
Land Park	○	○
North Natomas	○	○
North Sacramento	○	○
Pocket	○	○
South Area	○	○
South Natomas	○	○
Focused Opportunity Areas		
65 th Street/University Village	○	○
Arden Fair/Point West	○	○
Florin LRT/Subregional Center	○	○
Meadowview LRT	○	○
River District	○	○
Robla	○	○
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable		

6.10 Public Services



INTRODUCTION

This section of the EIR describes the existing public services associated with implementation of the 2030 General Plan (proposed project) and evaluates the effects of implementation of the proposed 2030 General Plan on those services. The services evaluated in this section include:

- Police Protection,
- Fire Protection,
- Schools,
- Libraries, and
- Emergency Services.

Public Services are addressed in the Education, Recreation and Culture Element and the Public Services Element of the 2030 General Plan. Services such as police and fire protection, emergency response, schools, and libraries, are important in establishing safe neighborhoods and work places, and contribute to a positive perception of the City's effectiveness in being responsive to the needs of its citizenry.

No comments regarding police protection, fire protection, schools, libraries, or emergency services were received in response to the NOP.

Information for this section is based on the Sacramento General Plan Technical Background Report (TBR), the City of Sacramento Police Department Annual Report, Sacramento County Multi-Hazard Mitigation Plan, City of Sacramento Police Master Plan, State education data, schools facilities master plans for several school districts, the Sacramento Public Library Authority Facilities Management Plan, the City of Sacramento 2002 Multi-Hazard Emergency Plan, the 2004 Sacramento County Multi-Hazard Mitigation Plan, personal and written communication with service providers, and websites from the service agencies.

The TBR prepared for the project is available electronically on the City's website (<http://www.sacgp.org/documents.html#tbr>) and on CD at the back of this document.

POLICE PROTECTION

INTRODUCTION

This section identifies the police protection providers for the Policy Area and describes staffing levels and equipment, staffing standards, number and types of calls received, and crime prevention programs.

ENVIRONMENTAL SETTING

The Sacramento Police Department (SPD) is principally responsible for providing police protection services for areas within the city and Policy Area. In addition to the SPD, the Sacramento County Sheriff's Department, California Highway Patrol (CHP), University of California, Davis (UC Davis) Medical Center Police Department, and the Regional Transit Police Department support the SPD to provide police protection within the Policy Area.

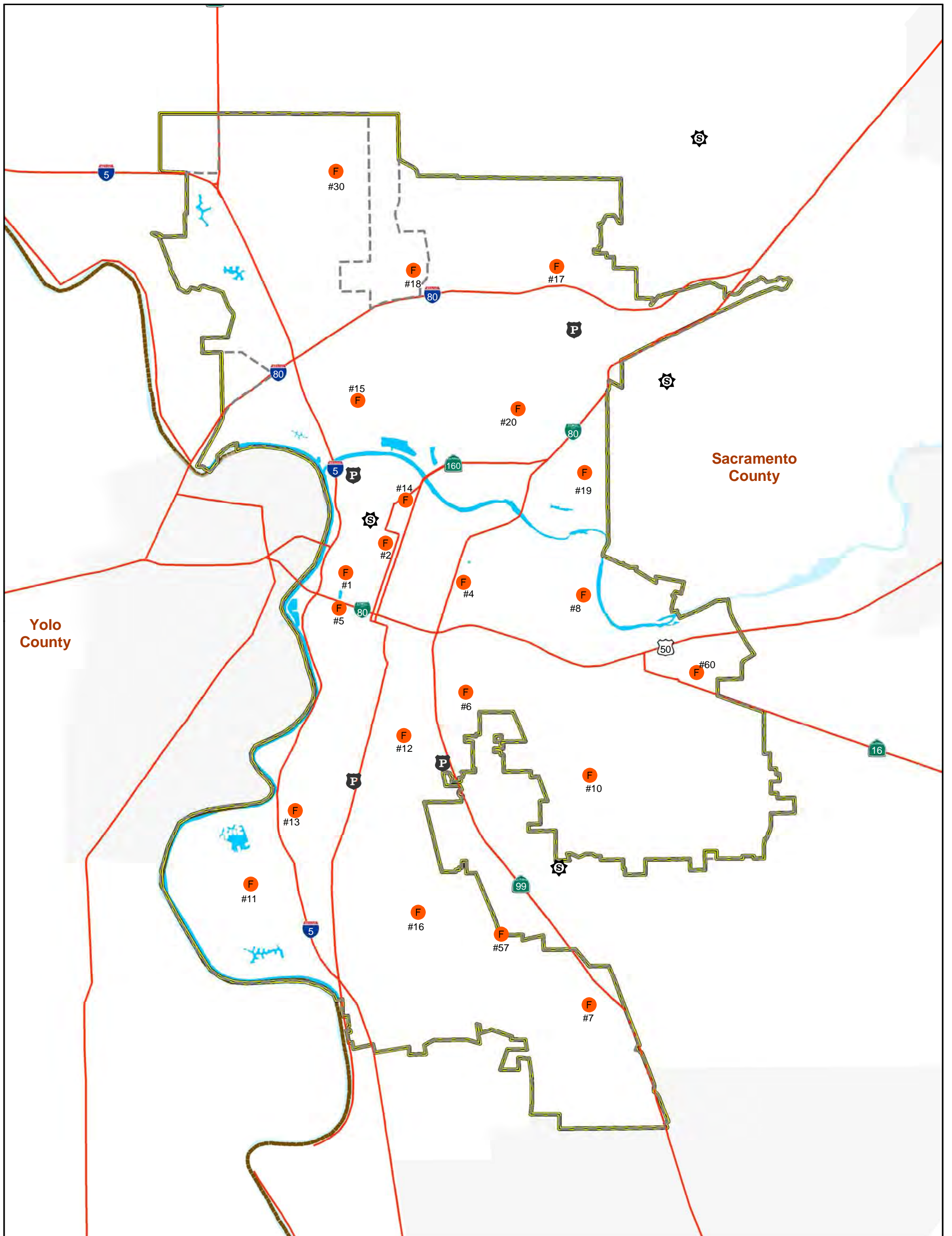
City Wide

The SPD operates four stations, all within the Policy Area (see Figure 6.10-1).








- Police Headquarters: Public Safety Center, Chief John P. Kearns Administration Facility (5770 Freeport Boulevard)
- North Area Substation: William J. Kinney Police Facility (3550 Marysville Boulevard)
- South Area Substation: Joseph E. Rooney Police Facility (5303 Franklin Boulevard)
- Central Command (300 Richards Boulevard)

The North Area Substation provides police services to the northern portion of the city, from the American River on the south to the city limits on the west, north, and east. The South Area Substation provides police protection services to the southern portion of the city, from Highway 50 on the north to the city limits on the west, south, and east. The Headquarters supports the North Area Substation, Central Command, and South Area Substation by providing administrative support, crime prevention education, and other law enforcement duties.

Central Command is currently housed within the North Area Substation. Central Command provides police response to three main beats in the central portion of the city bounded by the American River to the north, Highway 50 on the south, the Sacramento River on the west, and Watt Avenue on the east. In early 2008, the Central Command moved into a new facility located at 300 Richards Boulevard. However, this new facility is an interim facility for the SPD and is not dedicated solely for the Central Command. This facility is shared by other divisions within the Police Department and with other Departments within the city. Consequently, this facility is able to serve the existing needs within the downtown but will not be able to support the

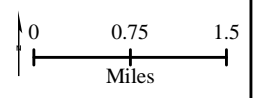


Legend

-  Sheriff Department
-  Fire Station
-  Police Station
-  City Limit
-  County Boundary
-  Policy Area
-  Water

**Figure 6.10-1
Fire and Police
Station
Locations**

Source: City of Sacramento
Facilities current as of
September 2007



projected growth that will result from the development projected for the downtown area. A new police facility will be required to service this new growth area.¹

SPD is staffed by 767 sworn full time police officers, 45 sworn part time police officers (Reserves), 370 civilian full time staff, and 141 civilian part time employees. Additionally, there are 44 cadets in the Police Academy, 11 recruits awaiting academy training, and 50 civilian volunteers.² Table 6.10-1 lists the Department's sworn staff.

Personnel	Number of Authorized Positions	Number of Filled Positions
Chief	1	1
Deputy Chief	4	4
Captain	12	12
Lieutenant	23	24
Sergeant	102	92
Officer	662	588
Total Sworn	804	721
Source: Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communications, October 5, 2007 and February 29, 2008.		

The SPD does not have an adopted officer-to-resident ratio. The Department uses a variety of data that includes GIS based data, call and crime frequency information, and available personnel to rebalance its deployment on an annual basis to meet the changing demands of the City. The SPD maintains an unofficial goal of 2.0 to 2.5 sworn police officers per 1,000 residents and 1 civilian support staff per 2 sworn officers. The Department is currently funded for 1.7 officers per 1,000 residents.³ Based on a 2005 population of 446,552 people and a current (2007) staffing level of 721 full time sworn officers, the ratio is 1.61 officers per 1,000 residents.⁴ Based on 721 full time sworn officers and 370 civilian employees, the ratio of sworn officers to civilian employees is 1.95, which is just below the SPD's goal.

■ Crime Statistics

In 2006 there were 320,025 citizen initiated patrol calls for service with officer responses and 27,902 arrests. Of the 27,902 arrests there were 24,208 adult arrests and 3,594 juvenile arrests.⁵ Table 6.10-2 shows the average response times for Priority 2 through 6 calls for 2006. response time and would therefore skew the data. Response time data will always be subject to change as classifications of the priorities change due to periodic review and analysis as well as

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- 1 Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communication, June 8, 2007.
 - 2 Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communication, October 5, 2007.
 - 3 Ibid.
 - 4 This ratio is slightly inaccurate due to using 2005 citywide population numbers, which are presumably lower than they are in 2007, and 2007 police staffing numbers, which are presumably higher than they were in 2005. City of Sacramento Police Department, 2006 Annual Report. 2006 Statistics, p. 19.
 - 5
-

TABLE 6.10-2					
2006 AVERAGE RESPONSE TIMES					
	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6
Average Response Time (hours:minutes:seconds)	0:08:37	0:11:43	0:22:37	0:29:25	3:04:59
Source: Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communication, October 5, 2007.					

response time and would therefore skew the data. Response time data will always be subject to change as classifications of the priorities change due to periodic review and analysis as well as variances in the filters that may be applied. In general, the highest priority calls begin with Priority 1 and progress up – the higher the value of a number, the lower the call's priority. For instance, Priority 2 calls currently include in-progress homicides, rapes, and robberies, whereas Priority 6 calls include errand calls, business checks, and some report calls.⁶

Table 6.10-3 provides SPD's crime statistics for the first six months of both 2006 and 2007 and shows an overall reduction in crime rates of 4.22 percent. All crime categories except for rape and larceny saw a decrease in the number of incidents. Reductions in homicides are attributed to a reallocation of law enforcement resources, community involvement, and a restructuring of Problem Oriented Policing (POP) strategies and goals. Also, work on the part of patrol officers, detectives, and specialty units have helped in this overall reduction. An increasing number of reported rapes involve circumstances where the victim knew the suspect to some degree which is evidence that these victims are becoming more willing and confident in reporting these attacks to SPD. It is also suspected that some of the increase in larceny statistics can be attributed to SPD's new online reporting system, making it easier to report thefts.⁷

■ Mutual Aid Agreements

The SPD maintains mutual aid agreements as part of a statewide emergency response system. Locally, the SPD has memorandums of understanding (MOUs), contracts to provide services, with Regional Transit and school districts within the City, with the exception of Grant Joint Union School District, which employs their own police force. SPD has specialized staff to work with Regional Transit (RT) and in public schools.⁸

The RT Police Department is responsible for a variety of police related services including: monitoring light rail stations, light rail trains, bus stops, buses, bus routes, regional transit riders and other associated transit needs with regards to safety. RT Police Department also responds to crimes in progress, conducts criminal investigations, conducts Crime Prevention through

6 Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communication, October 5, 2007.

7 City of Sacramento Police Department, News Release No. 081407-143, *City Crime Rates Drop for First 6 Months of 2007*, August 14, 2007.

8 Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written notes, October 5, 2007.

Type of Crime	Number of Crimes			
	2006	2007	Number Change	Percent Change
Murder	35	22	-13	-37.14%
Rape	98	117	19	19.39%
Aggravated Assault	1,647	1,428	-219	-13.30%
Robbery	1,076	1,014	-62	-5.76%
Burglary	2,858	2,666	-192	-6.72%
Larceny	6,423	6,796	373	5.81%
Motor Vehicle Theft	3,584	3,015	-569	-15.88%
Total	15,721	15,058	-663	-4.22%

Notes:
1. Table shows information for the first six months of each year.
2. Crime statistics are derived from specific categorical guidelines and may differ from other crime statistics kept by the Police Department.
Source: City of Sacramento Police Department, News Release No. 081407-143, *City Crime Rates Drop for First 6 Months of 2007*, August 14, 2007.

Environmental Design (CPTED) reviews, drafts policies, and provides security. RT police services are comprised of officers from SPD and deputies from the Sacramento Sheriff's Department. A lieutenant with the SPD is in command of RT police services including the following police and security resources:⁹

- Sacramento Police Department
 - 1 Lieutenant
 - 2 Sergeants
 - 20 Police Officers
- Sacramento Sheriff's Department
 - 1 Sergeant
 - 10 Deputies
- Other
 - 20 R.T. Transit Officers
 - 78 Private Security Guards
 - 2 Administrative Staff
 - 1 Video Technician

The SPD has 19 police officers dedicated to 15 Sacramento City schools. The police officers working in the city schools are first responders to calls for service at the school and to areas in the community surrounding the schools for calls involving students. Officers are responsible for crimes in progress, criminal investigations, truancy, and gang suppression. They are deployed

9 *ibid.*

during normal school hours and are also deployed at school events that occur during nights and weekends.¹⁰

■ Homeland Security

The SPD's Office of Emergency Services and Homeland Security¹¹ is a multi-agency, multi-jurisdictional office that is responsible for coordinating Homeland Security and Urban Area Security Initiative grants, conducting regional threat and vulnerability assessments, developing regional and agency terrorism response plans, coordinating and conducting regional interdisciplinary terrorism response training, designing and coordinating training exercises, and organizing volunteers to assist with disaster situations. The Office also coordinates with the Regional Terrorist Threat Assessment Center (RTTAC), the intelligence and analysis Fusion Center, and the Terrorism Liaison Officer Program. The Regional Community Policing Institute (RCPI) is also an integral part of the Office of Emergency Services and Homeland Security facilitating the instruction of core community-based Homeland Security programs including the Community Emergency Response Teams (CERT), Neighborhood Emergency Training (NET), terrorist awareness presentations, and the Cultural Community Academies. One deputy chief and one lieutenant manage this office.

■ Incarceration Facilities

The City currently uses jail facilities operated by the Sacramento County Sheriff's Department. The Sacramento County Main Jail (651 I Street), which provides custodial and security services for incarcerated and detained individuals for the Sheriff's Department and other outside agencies, is the only incarceration facility located within the Policy Area. Because the SPD does not have its own booking or jail facilities, all arrestees must be taken to the Main Jail for booking. The SPD has indicated they will need their own booking facilities for increased efficiency as Sacramento continues to grow, and is currently looking into the feasibility of constructing a Pre-Arrestment facility in the future.¹²

■ Projected Needs

The SPD does not have any currently funded projects for the remodeling or construction of facilities, although there is a need to both remodel existing facilities and construct new facilities. The SPD is currently preparing a Master Plan (expected in summer 2008) that will address current deficiencies and future needs for both staffing and facilities. Upon completion, the Master Plan will be presented to the City Council for approval.¹³

10 Ibid.

11 City of Sacramento Police Department, 2006 Annual Report, Office of Emergency Services and Homeland Security, p. 3.

12 Eric Poerio, Lieutenant, Sacramento Police Department, Crime Prevention through Environmental Design, written communication, October 5, 2007.

13 Ibid.

Regulatory Context

■ Federal

There are no federal policies that are directly applicable to police services within the Policy Area.

■ State

There are no state policies that are directly applicable to police services within the Policy Area.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of police services. For law enforcement resources, some of the policies relevant to this issue include provision of high quality facilities and services, Police Department review of all subdivision proposals and assisting with traffic matters, and maintaining communication with businesses and residents regarding crime prevention. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This impact analysis determines whether future development proposed under the 2030 General Plan would require new or expanded facilities in order to house officers required to respond to emergencies, the construction of which would result in physical environmental effects. Reductions in service levels can be indicative of significant project impacts and the need for additional staff and/or police facilities. Proper staffing levels ensure appropriate service levels and response times for police protection. Future development associated with the 2030 General Plan would result in an increase in population of approximately 195,000 people. These new residents would require police protection services, which would be provided by the SPD.

This analysis evaluates the impact of the 2030 General Plan on police protection services. Service levels used to determine impacts assume a ratio of 2 sworn officers per 1,000 residents and a ratio of 1 civilian support staff per 2 sworn officers to determine staffing needs to serve future development.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to the provision of police protection within the entire Policy Area. The proposed General Plan does not include any policies regarding police protection that are unique to any of the City's Focused Opportunity Areas or Community Plans, with the exception of the South Area Community Plan listed below.

PUBLIC HEALTH AND SAFETY (PHS)

Goal PHS 1.1 Crime and Law Enforcement. Work cooperatively with the community, regional law enforcement agencies, local government and other entities to provide quality police service that protects the long-term health, safety and well-being of our city, reduce current and future criminal activity, and incorporate design strategies into new development.

Policies

- PHS 1.1.1 **Police Master Plan.** The City shall maintain and implement a Police Master Plan to address staffing and facility needs, service goals, and deployment strategies.
- PHS 1.1.2 **Response Time Goals.** The City shall strive to maintain appropriate and acceptable response times for all call priority levels in order to provide adequate police protection services for the safety of all city residents and visitors.
- PHS 1.1.3 **Staffing Standards.** The City shall maintain optimum staffing levels for both sworn police officers and civilian support staff in order to provide quality police services to the community.
- PHS 1.1.4 **Timing of Services.** The City shall ensure that police facilities and services will keep pace with all development and growth in the city.
- PHS 1.1.5 **Distribution of Facilities.** The City shall expand the distribution of police substation type facilities to allow deployment from several smaller facilities located strategically throughout the city, and provide facilities in underserved and new growth areas in order to provide appropriate response to all city residents.
- PHS 1.1.6 **Co-Location of Facilities.** The City shall seek to co-locate police facilities with other City facilities, such as fire stations to promote efficient use of space and provision of police protection services within dense, urban portions of the city.
- PHS 1.1.7 **Development Review.** The City shall continue to include the Police Department in the review of development projects to adequately address crime and safety, and promote the implementation of *Crime Prevention through Environmental Design* principles.
- PHS 1.1.8 **Development Fees for Facilities and Services.** The City shall require development projects to contribute fees for police protection services and facilities.
- PHS 1.1.9 **Technology to Improve Safety.** The City shall work in partnership with appropriate agencies to incorporate technology in public and private development to increase public and personal safety.
- PHS 1.1.10 **Crime in Neighborhoods.** The City shall work with appropriate agencies and the community to reduce crime in all neighborhoods.

- PHS 1.1.11 **Communication with the Community.** The City shall maintain open communication with the community to improve relationships and customer satisfaction, while continually exploring new innovative means of communication.
- PHS 1.1.12 **Cooperative Delivery of Services.** The City shall work with local, State, and Federal criminal justice agencies to promote regional cooperation in the delivery of services.

Proposed South Area Community Plan Policies

The following policies from the South Area Community Plan apply to the proposed project:

- SA.PHS 1.1 **Emergency Service Coverage.** The City shall improve City police, fire, and ambulance service in the Valley Hi/North Laguna area.
- SA.PHS 1.2 **Public Service Coordination.** The City shall coordinate among the various agencies in the South Area in order to better provide public services across Sacramento County and city borders.

Thresholds of Significance

For the purposes of this EIR, impacts on police protection resources are considered significant if the proposed 2030 General Plan would:

- require, or result in, the construction of new, or the expansion of existing, facilities related to the provision of police protection.

Impacts and Mitigation Measures

A summary of all Police Protection impacts and their levels of significance is located at the end of this technical section.

Impact 6.10-1	Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing, facilities related to the provision of police protection.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies PHS 1.1.1 through PHS 1.1.7, PHS 1.1.12</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As discussed under the Methods of Analysis, in order to maintain service levels additional staff and/or police facilities would be needed to ensure adequate police protection is provided. An increase in population of approximately 195,000 persons would create an additional demand for law enforcement/police services. Based on the SPD’s goal of 2 officers per 1,000 residents,

approximately 390 new officers would be required. Additionally, to maintain SPD's 1:2 ratio of support staff to sworn officers, an additional 195 civilian support staff would be required.

As proposed, development anticipated under the 2030 General Plan would require the addition of approximately 585 new police staff, including both sworn officers and civilian support staff. The SPD has stated that there is a need for both the remodeling of existing facilities and a need to construct new facilities in order to maintain appropriate service levels.

The proposed 2030 General Plan policies include measures to accommodate for growth and increased service demands. Specifically Policy PHS 1.1.1 calls for the city to prepare a Police Master Plan to address staffing needs, facility needs, deployment strategies, and service goals. The Master Plan would be the guiding document for police services in the city. Policy PHS 1.1.4 mandates that the City keep pace with all development and growth within the city and adequate facilities and staffing are available to serve residents prior to occupation of new development. Policies PHS 1.1.2 and PHS 1.1.3 require that the City maintain optimum staffing levels and response times in order to provide quality police services to the community. Policies PHS 1.1.5 and PHS 1.1.12 also deal with the distribution and cooperative delivery of services to residents within the city to ensure optimal police response to all city residents. Policy PHS 1.1.6 seeks to co-locate police facilities with other city facilities, such as fire stations, when appropriate, to promote efficient use of space and efficient provision of police protection services within dense, urban portions of the city. Policy PHS 1.1.7 seeks to prevent crime by implementing Crime Prevention through Environmental Design (CPTED) strategies.

Therefore, because future development anticipated under the 2030 General Plan would be required to comply with the general plan policies, adequate police services would be provided to serve the anticipated increase in demand. Through the implementation of these policies the proposed project would result in a ***less-than-significant impact***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together are considerable. For the 2030 General Plan the effects of buildout of the general plan and the increase in population is considered as the "project." In terms of the provision of police services the effects of buildout of the plan on existing police services is already evaluated in Impact 6.10-1. There are no other projects within the Policy Area that when combined together along with the project would compound or increase environmental effects on police services or facilities. Therefore, the cumulative impacts are addressed in Impact 6.10-1.

South Area Community Plan

The analysis of police protection is primarily based on the population of each individual site coupled with the overall population of the service area. The SPD serves all areas within the Policy Area, but there are no police stations in the South Area Community Plan (SACP) area. Due to the existing and planned locations of the police stations in the city and the SPD's current response times, there are no areas within the Policy Area that are substantially underserved. The SACP area is located in a portion of the City that is served as well as the remainder of the Policy Area. Specific impacts for individual development projects would be determined by analyzing police impacts during subsequent environmental reviews. No additional mitigation would be necessary.

Focused Opportunity Areas

Although there are no police stations located in any of the Focused Opportunity Areas, all of the Focused Opportunity Areas and the remainder of the Policy Area are equally served by the SPD. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional police officers or police facilities.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the SACP and future development within the Policy Area could include potential impacts related to police protection. At this time specific project information is not available (i.e., individual building design, site-specific location, number of housing units, etc.) to evaluate potential impacts associated with the provision of police protection services. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze any potential impacts on police protection resources.

FIRE PROTECTION

INTRODUCTION

This section provides information on existing fire and emergency services within the Policy Area. Current staffing, equipment, response times, and adopted standards for these services are described along with their ability to meet the needs of Sacramento. This section also addresses urban fire prevention and wildland fire hazards.

ENVIRONMENTAL SETTING

The Sacramento Fire Department (SFD) provides fire protection services to the entire city, which includes approximately 98 square miles within the existing city limits as well as three contract areas that include 47 square miles immediately adjacent to the city boundaries within the unincorporated county.¹⁴

City Wide

■ Sacramento Fire Department

Fire Stations and Response Times

Fire stations are strategically located throughout the city to provide assistance to area residents (see Figure 6.10-1). Each fire station operates within a specific district that covers an approximately 1.5 mile geographical radius area around the station.¹⁵ A list of SFD fire stations and their respective equipment is provided in Table 6.10-4. Fire stations in Table 6.10-4 are labeled accordingly by their number shown in Figure 6.10-1.

Two major factors are considered when defining response times for fire and emergency medical services (EMS): 1) the critical timeframe that responders have to successfully assist victims of cardiac arrest (i.e., chances of surviving a cardiac arrest deteriorate approximately 10 percent for each minute that passes before cardio-pulmonary resuscitation (CPR) and/or defibrillation is initiated.), and 2) the critical timeframe that responders have to gain control of a fire, minimizing the impact on the structure and nearby structures. Based on these two critical issues, the SFD has a goal to have its first responding company, which provides for fire suppression and paramedic services, arrive within a 4 minute response time 90 percent of the time and medic units within 8 minutes, 90 percent of the time. In the case of a fire, the goal is to have its first responding company arrive within a 4 minute response time 90 percent of the time, and an additional 10 responders arrive within 8 minutes, 90 percent of the time. Locating fire stations according to 1.5-mile radius service areas typically allows responders to arrive on a call within

14 Michelle Basurto, Program Specialist, Sacramento Fire Department, written communication, October 11, 2007.

15 Ibid.

TABLE 6.10-4

FIRE STATION FACILITIES AND EQUIPMENT

Station No.	Address	Battalion	Equipment
1	624 Q Street	1	Engine, Medic
2	1229 I Street	1	Engine, Truck, Medic,
4	3145 Granada Way	1	Engine, Medic
5	731 Broadway	1	Engine, Truck
14	1341 N. C Street	1	Engine
19	1700 Challenge Way	1	Engine
6	3301 M.L.King Blvd	2	Engine, Truck, Medic
8	5990 H Street	2	Engine
10	5642 66th Street	2	Engine, Truck, Medic,
56 ¹	3720 47th Avenue	2	Engine, Medic
60	3301 Julliard Drive	2	Engine
3 ¹	7208 W. Elkhorn Blvd	3	Engine
15	1591 Newborough Dr	3	Engine
17	1311 Bell Ave	3	Engine, Truck, Medic,
18 ¹	746 N. Market St	3	Engine
20	2512 Rio Linda Blvd	3	Engine, Truck, Medic,
30	1901 Club Center Dr	3	Engine, Truck, Medic,
7	6500 Wyndham Dr	4	Engine, Truck, Medic,
11	785 Florin Road	4	Engine
12	4500 24th Street	4	Engine
13	1100 43rd Avenue	4	Engine, Medic
16	7363 24th Street	4	Engine, Truck
57 ¹	7927 East Parkway	4	Engine

Note:

1. Stations located in contracted areas, not within city limits.

Source: Michelle Basurto, Program Specialist, Sacramento Fire Department, written communication, October 11, 2007.

these response time goals. In more densely populated areas and where call volumes are higher and occur simultaneously, a shorter radius is necessary. The average response time for the SFD in 2005 was 5.2 minutes.¹⁶

Planning for New and Remodeled Facilities

The City's General Services Department hired a consultant to conduct a study to assess the SFD's fire station facilities. The study indicates that the Department should plan for the relocation of Stations 4, 18, and 60, and the rebuilding of Stations 10, 15, and 57. In addition, the SFD has preliminary plans to construct additional fire station facilities including two additional stations that will service North and South Natomas, two additional stations that will service the southern locations of the city, an additional station in the downtown area, and the relocation of Stations 3 and 14. In addition, the department is planning for additional administrative, logistics and training facilities.¹⁷ At this time, no funding has been identified. The SFD is preparing a Master Plan (anticipated by summer 2008) that will address staffing levels, response times, station construction, relocation, and remodeling, and administrative needs.

16 Ibid.

17 Ibid.

Staffing Levels

The SFD is authorized for 586 full time sworn personnel, 28 full time fire prevention officers, and 37 full time civilian employees. Each fire station should accommodate, at a minimum, an engine, truck, and medic. An engine and truck require a 4-person company and Medic-2, for a total of 10 personnel per shift.¹⁸ With three shifts per station this equates to 30 personnel per fire station.

Fire and Medical Incidents

During 2005, the SFD responded to 64,749 incidents. Of the 3,273 fire calls, there were 1,027 confirmed structural fires. Fires represent approximately five percent of all calls received by the Department, with structure fires representing roughly two percent of all calls.¹⁹

Divisions within the Department

The SFD is divided into three offices: 1) Office of the Fire Chief, 2) Office of Operations, and 3) Office of Administrative Services.

Office of the Fire Chief

The Office of the Fire Chief is authorized for 12 employees²⁰ and is organized into divisions of fiscal management, special projects, and public information. Under the public information division, the Public Information Officer (PIO) is SFD's spokesperson for the media, both on and off the scene, and serves as the SFD's interagency and neighborhood liaison.

Office of Operations

The Office of Operations constitutes the majority of SFD employees with authorization for 585 staff members.²¹ The office is further divided into Emergency Medical Services (EMS), Shift Operations, and Special Operations.

Shift operations is staffed by three shifts of rotating fire personnel who are responsible for responding to fires and medical emergencies.

The major focus of the EMS Division is the Advanced Life Support and Transportation Program which deploys eleven 24-hour ambulances along with two 8-hour flex ambulances during peak hours throughout the city and contracted areas. The EMS Division develops partnerships with local hospitals and community organizations in the prevention and review of infant, child, and elderly deaths, sexual assaults, domestic violence, and child and adult abuse. Partnerships have also included educational programs, research projects, and publications. The Special

18 Ibid.

19 Ibid.

20 Ibid.

21 Ibid.

Operations Division focuses on five major disciplines: hazardous materials, urban search and rescue, heavy rescue, technical rescue, and swift water rescue.

For a more detailed report on the programs managed by the Office of Operations, please reference section 5.2 Fire Protection, pages 5.2-2 and 5.2-3 of the TBR.

Office of Administrative Services

Administrative Services includes Emergency Planning, Technical Services, Fire Prevention, Training, and Human Resources. Fifty four positions are authorized within this office.²² The Emergency Services Officer coordinates with the City's Office of Emergency Services (OES), which is responsible for disaster planning.

The Fire Prevention Division provides the community with a fire-safe environment through a variety of ongoing activities and operations and is responsible for fire investigations, new development review, weed abatement, and code enforcement. In 2005, the Fire Prevention Division oversaw approximately 558 fire investigations, 91 disposition investigations (arrests and clear-ups), and 7 casualty investigations.²³

For more information on the Office of Administrative Services, please reference section 5.2 Fire Protection, pages 5.2-3 through 5.2-6 of the TBR.

Fire Threats

Major fires are generally classified either as an urban fire or a wildland fire. Generally, the fire season extends from early spring to late fall. Hazards arise from a combination of hot weather, an accumulation of vegetation, and low moisture content of the air. These conditions, if coupled with high winds and years of drought, can compound the potential impact of a fire.

Due to the growth of development into rural areas adjacent to and within Sacramento communities, these trends have increased the number of people living in heavily vegetated areas where wildlands meet urban development, also referred to as the wildland/urban interface. This trend is spawning a third classification of fires: the urban wildfire. The 1991 "Tunnel Fire" in the East Bay hills above Berkeley and Oakland is an example of an urban wildfire. A fire along the wildland/urban interface can result in major losses of property and structures.

Generally, there are three major factors that sustain wildfires and allow for predictions of a given area's potential to burn. These factors include fuel, topography, and weather. Certain areas in and surrounding Sacramento County are extremely vulnerable to fires as a result of dense grassy vegetation combined with a growing number of structures being built near and within rural lands.

22 ibid.

23 ibid.

As with most wildfire vulnerability, it is the result of increased development encroaching into forested and dry grassland areas. In Sacramento County, grass and peat (partially carbonized vegetable matter, usually mosses, found in bogs and used as fertilizer and fuel) fires are the two main types of wildland fires. Grass fires are an annual threat in the unincorporated areas of the county, especially within recreational areas such as the American River Parkway.

Urban Fire Hazard

Although structural fires can occur in any developed areas within the city, there are two areas in particular that the City's Fire Department has identified that are especially susceptible to this hazard. In particular, the non-sprinklered commercial buildings in the downtown area and dwelling units in lower socio-economic areas appear to be more susceptible to fires. Due to the age of the structures, older building standards and fire codes were applied, non-fire-resistive construction materials were used, and no current internal sprinklers or other fire safety systems are in place.

Wildland Fire Hazard

Generally, Sacramento is a developed city and has relatively few remaining wildland areas. However, some areas of the city have been identified as susceptible to an urban wildfire. The areas are generally located along the American River Parkway from Watt Avenue to the Sacramento River and along the Garden Highway in the Natomas area.

The American River Parkway is a stretch of dense trees and brush on both sides of the American River. The property is owned by the County and City of Sacramento, the State of California, and private parties, maintained by the Sacramento County Parks Department, and protected from fire by the SFD. The area consists of natural habitat with natural and man-made fire break areas. Access for fire equipment is provided by paved stretches of the bicycle path and service/emergency roads. Some of the potential fire areas are not accessible to vehicular traffic. The following locations appear particularly vulnerable:

- Watt Avenue West to Business 80 (Capital City Freeway). This area has been the scene of a number of fires. The University Avenue section of Sacramento is heavily populated and could be affected by a similar fire along this stretch of the American River Parkway.
- The section of River Park on the south side of the river across from Bushy Lake. This area is densely populated and could become an exposure risk should a fire occur in the area of Paradise Beach or along the bicycle path. The roof coverage in this area consists primarily of untreated wood shake and could contribute to the spread of a fast moving fire.
- Northgate Boulevard along the American River Parkway. In 1992, a wildland fire occurred in this area, and extended into a commercial building. This fire could have resulted in a major urban wildfire condition.

Regulatory Context

■ Federal

There are no federal regulations regarding fire protection services that pertain to the proposed project.

■ State

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment”, the California Occupational Safety and Health Administration (Cal OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all fire fighting and emergency medical equipment.

Uniform Fire Code

The Uniform Fire Code (UFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The UFC contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

■ Local

City of Sacramento 1988 General Plan

The City’s 1988 General Plan contains policies and implementation measures relevant to the provision of fire protection services. For fire protection resources, some of the policies relevant to this issue include providing the best fire protection services for the best cost, ensuring that

there is an adequate water supply in newly developing areas, working with other fire protection districts, ensuring coordination between the City and the Fire Department regarding land use proposals, and promoting greater use of sprinkler systems in commercial and residential uses. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Sacramento City Code

The following City ordinances from the Sacramento City Code are applicable to the proposed project:

Section 8.100.540 - All buildings or portions thereof shall be provided with the degree of fire resistive construction as required by the California Building Code for the appropriate occupancy, type of construction and location on property or in fire zone; and shall be provided with the appropriate fire-extinguishing systems or equipment required by the California Building Code.

Chapter 15.36 includes numerous codes relating to the inspection and general enforcement of the City of Sacramento fire code, control of emergency scenes, permits, general provisions for safety, fire department access, equipment, and protection systems, and many standards for fire alarm systems, fire extinguisher systems, commercial cooking operations, combustible materials, heat producing appliances, exit illumination, emergency plans and procedures, and so on.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This impact analysis determines whether implementation of the proposed 2030 General Plan would require new or expanded facilities in order to respond to emergencies, the construction of which would result in physical environmental effects. Reductions in service levels can be indicative of significant project impacts and the need for additional fire protection facilities.

The SFD is currently preparing a Fire Department Master Plan which would include specific triggers for new fire stations in the City of Sacramento. These triggers would include factors such as number of residents, density, call volume, response times, and proximity to existing stations. However, the Master Plan is not yet completed, so demands for fire service have been developed in consultation with SFD staff. SFD does not have an official staffing ratio goal. The department uses a number of measures to determine need for fire protection services. In the future, the SFD would measure specific conditions that need to be monitored in order to prevent compromising emergency response and ensure optimum service to the community. They include providing for one station for every 1.5 mile service radius, per every 16,000 population, and where a company experiences call volumes exceeding 3,500 in a year.²⁴ For purposes of

24 *ibid.*

this analysis, 1 station per 16,000 city residents threshold will be used to determine impacts on fire protection services. This analysis is based on the expected population increase of 195,000 new residents.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to the provision of fire protection within the entire Policy Area. The proposed General Plan does not include any policies regarding fire protection that are unique to any of the City's Focused Opportunity Areas or Community Plans, with the exception of the South Area Community Plan listed below.

PUBLIC HEALTH AND SAFETY (PHS)

Goal PHS 2.1 Fire Protection and Emergency Medical Services. Provide coordinated fire protection and emergency medical services that support the needs of Sacramento residents and businesses and maintains a safe and healthy community.

Policies

- PHS 2.1.1 **Fire Master Plan.** The City shall maintain and implement a Fire Master Plan to address staffing and facility needs and service goals.
- PHS 2.1.2 **Response Time Standards.** The City shall strive to maintain appropriate emergency response times to provide optimum fire protection and emergency medical services to the community.
- PHS 2.1.3 **Staffing Standards.** The City shall maintain optimum staffing levels for sworn, civilian, and support staff, in order to provide quality fire protection and emergency medical services to the community.
- PHS 2.1.4 **Response Units and Facilities.** The City shall provide additional response units, staffing, and related capital improvements, including constructing new fire stations, as necessary, in areas where a company experiences call volumes exceeding 3,500 in a year to prevent compromising emergency response and ensure optimum service to the community.
- PHS 2.1.5 **Timing of Services.** The City shall ensure that the development of fire facilities and delivery of services keeps pace with development and growth of the city.
- PHS 2.1.6 **Strategic Locations of New Stations.** The City shall ensure that new fire station facilities are located strategically throughout the city to provide optimal response times to all areas.
- PHS 2.1.7 **Future Station Locations.** The City shall require developers to set aside land with adequate space for future fire station locations in areas of new development.
- PHS 2.1.8 **Co-Location of Facilities.** The City shall co-locate fire facilities with other City facilities to promote efficient use of space and provision of fire protection and emergency medical services within dense, urban portions of the city.
- PHS 2.1.9 **Advances in Technology.** The City shall invest in, and incorporate, future technological advances that enhance the City's ability to deliver emergency, fire-rescue and fire prevention services more efficiently and cost-effectively.

PHS 2.1.10. **Regional Cooperative Delivery.** The City shall work with the various fire protection districts and other agencies in establishing inter-operability and to promote regional cooperative delivery of fire protection and emergency medical services.

PHS 2.1.11 **Development Fees for Facilities and Services.** The City shall require development projects to contribute fees for fire protection services and facilities.

Goal PHS 2.2 Fire Prevention Programs and Suppression. The City shall deliver fire prevention programs that protect the public through education, adequate inspection of existing development, and incorporation of fire safety features in new development.

Policies

PHS 2.2.1 **Education.** The City shall promote educational programs for the public related to safety issues, fire prevention, and emergency preparedness.

PHS 2.2.2 **Development Review for New Development.** The City shall continue to include the Fire Department in the review of development proposals to ensure projects adequately address safe design and on-site fire protection and comply with applicable fire and building codes.

PHS 2.2.3 **Fire Sprinkler Systems.** The City shall promote installation of fire sprinkler systems for both commercial and residential use and in structures where sprinkler systems are not currently required by the City Municipal Code or Uniform Fire Code.

PHS 2.2.4 **Water Supplied for Fire Suppression.** The City shall ensure that adequate water supplies are available for fire-suppression throughout the city, and shall require development to construct all necessary fire suppression infrastructure and equipment.

PHS 2.2.5 **High-Rise Development.** The City shall require that high rise structures include sprinkler systems and on-site fire suppression equipment and materials, and be served by fire stations containing truck companies with specialized equipment for high-rise fire and/or emergency incidents.

PHS 2.2.6 **Fire Safety Inspections.** The City shall continue to maintain a program consistent with requirements of State law to inspect buildings not under authority of the Office of the State Fire Marshall.

PHS 2.2.7 **Wildland Hazards on City-Owned Spaces.** The City shall continue to remove excessive/overgrown vegetation (e.g., trees, shrubs, weeds) and rubbish from City-owned property to prevent and minimize fire risks to surrounding properties.

PHS 2.2.8 **Wildland Hazards on Private Properties.** The City shall continue to require private property owners to remove excessive/overgrown vegetation (e.g., trees, shrubs, weeds) and rubbish to the satisfaction of the Fire Department to prevent and minimize fire risks to surrounding properties.

Proposed South Area Community Plan Policies

The following policies from the South Area Community Plan apply to the proposed project:

SA.PHS 1.1 **Emergency Service Coverage.** The City shall improve City police, fire, and ambulance service in the Valley Hi/North Laguna area.

SA.PHS 1.2 **Public Service Coordination.** The City shall coordinate among the various agencies in the South Area in order to better provide public services across Sacramento County and city borders.

Thresholds of Significance

For the purposes of this EIR, impacts on fire protection resources are considered significant if the proposed General Plan would:

- require, or result in, the construction of new, or the expansion of existing, facilities related to the provision of fire protection.

Impacts and Mitigation Measures

A summary of all Fire Protection impacts and their levels of significance is located at the end of this technical section.

Impact 6.10-2	Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of fire protection.	
Applicable Regulations	<i>Sacramento City Code Section 8.100.540</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>Policies PHS 2.1.1 through PHS 2.1.7, PHS 2.1.10, PHS 2.2.4, PHS 2.2.7, PHS 2.2.8</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

As discussed under the Methods of Analysis, in order to maintain service levels additional staff and/or fire facilities would be needed to ensure adequate fire protection is provided. An increase in population of approximately 195,000 persons would create an additional demand for fire services. Based on the SFD's goal of 1 fire station per 16,000 residents, approximately 12 new fire stations and additional fire personnel would be required.

The SFD has stated that the existing fire facilities within the city are already staffed at or beyond capacity, and could not accommodate the additional staff needed to serve future development under the General Plan. Additionally, some existing fire stations are not adequately located to properly serve all the land designated for development within the Policy Area. Therefore, new fire facilities would be needed to maintain public safety within and throughout the Policy Area.²⁵

The proposed General Plan policies include measures to accommodate for growth and increased service demands. Specifically, Policy PHS 2.1.1 calls for the City to prepare a Fire

25 *ibid.*

Master Plan to address staffing needs, facility needs, and service goals. The Master Plan would be the guiding document for the provision of fire services in the city. Policies PHS 2.1.2 and PHS 2.1.3 require that the City maintain appropriate emergency response times and staffing levels to ensure optimum fire protection in the community. Policy PHS 2.1.4 further requires additional fire protection resources be supplied when a fire station/company experiences call volumes exceeding 3,500 in a year and Policy PHS 2.1.6 requires that new fire stations are located strategically throughout the city to provide optimal response times to all areas. Policies PHS 2.1.5 and PHS 2.1.7 require new development to set aside land for future fire stations and ensure that adequate fire protection and emergency medical response facilities, equipment, and staffing are available prior to occupation of new development and redevelopment areas. PHS 2.2.4 ensures that adequate water supplies, pressure, and infrastructure are available in infill and newly developing areas.

Policies PHS 2.2.7 and PHS 2.2.8 require that the City work to inform the SFD of potential wildland risks and impose a method to increase fire prevention. In addition, Policy PHS 2.1.10 requires that the City work with other agencies to provide regional cooperative delivery of fire protection and emergency medical services.

Therefore, because future development anticipated under the 2030 General Plan would be required to comply with the general plan policies, adequate fire protection services would be provided to serve the anticipated increase in demand. Through the implementation of these policies the proposed project would result in a ***less-than-significant impact***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together, are considerable. For the 2030 General Plan the effects of buildout of the general plan and the increase in population is considered the “project.” In terms of the provision of fire protection services the effects of buildout of the plan on existing fire facilities is already evaluated in Impact 6.10-2. There are no other projects that when combined together (within the Policy Area) along with the project would compound or increase environmental effects on fire facilities. Therefore, the cumulative impacts of the project are addressed in Impact 6.10-2.

South Area Community Plan

the analysis of fire protection is primarily based on the population of each individual site coupled with the overall population of the service area and service response times. The SFD serves all areas within the Policy Area. There are three fire stations located within the South Area

Community Plan (SACP) area: Station #7, Station #16, and Station #57. Due to the existing and planned locations of the fire stations in the city and the SFD's current response times, there are no areas within the Policy Area that are substantially underserved. The SACP area is located in a portion of the city that is served as well as the remainder of the Policy Area. Specific impacts for individual development projects would be determined by analyzing fire protection impacts during subsequent environmental reviews. No additional mitigation would be necessary.

Focused Opportunity Areas

SFD Station #17 is within the Robla Focused Opportunity Area, Station #19 is within the Arden Fair/Point West Focused Opportunity Area, and Station #14 is within the River District Focused Opportunity Area. Although there are three fire stations located within three separate Focused Opportunity Areas, all of the Focused Opportunity Areas and the remainder of the Policy Area are equally served by the SFD. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional fire fighters or fire facilities.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts related to fire protection. At this time specific project information is not available (i.e., individual building design, site-specific location, number of housing units, etc.) to evaluate potential impacts associated with the provision of fire protection services. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze any potential impacts on fire protection resources.

SCHOOLS

INTRODUCTION

This section describes existing school facilities, services, and enrollment capacities for schools within the Policy Area. Nine school districts provide elementary, middle, and high school education to residents of the Policy Area. Several local and regional colleges and universities provide higher education for residents.

City Wide

The Sacramento City Unified School District (SCUSD) is the primary provider of primary and secondary education within the Policy Area. Other districts serving residents within the Policy Area include the North Sacramento School District (NSSD), Robla School District (RSD), Del Paso Heights School District (DPHSD), Grant Joint Union High School District (GJUHSD), Natomas Unified School District (NUSD), San Juan Unified School District (SJUSD), Rio Linda Union School District (RLUSD), and the Elk Grove Unified School District (EGUSD). Some of these districts have schools outside the city limits but within the Policy Area. School district boundaries serving the Policy Area are shown in Figure 6.10-2. It should be noted that on November 6, 2007, north area residents approved Measure B, a proposal to reorganize four north area school districts (North Sacramento, Del Paso Heights, Grant, and Rio Linda) into one unified preschool through adult education district, newly called the Twin Rivers Unified School District (TRUSD). The TRUSD will begin providing educational services on July 1, 2008. For this analysis, enrollment and capacity information are described for the NSSD, DPHSD, GJUHSD, and RLUSD, but not summarized for the TRUSD.

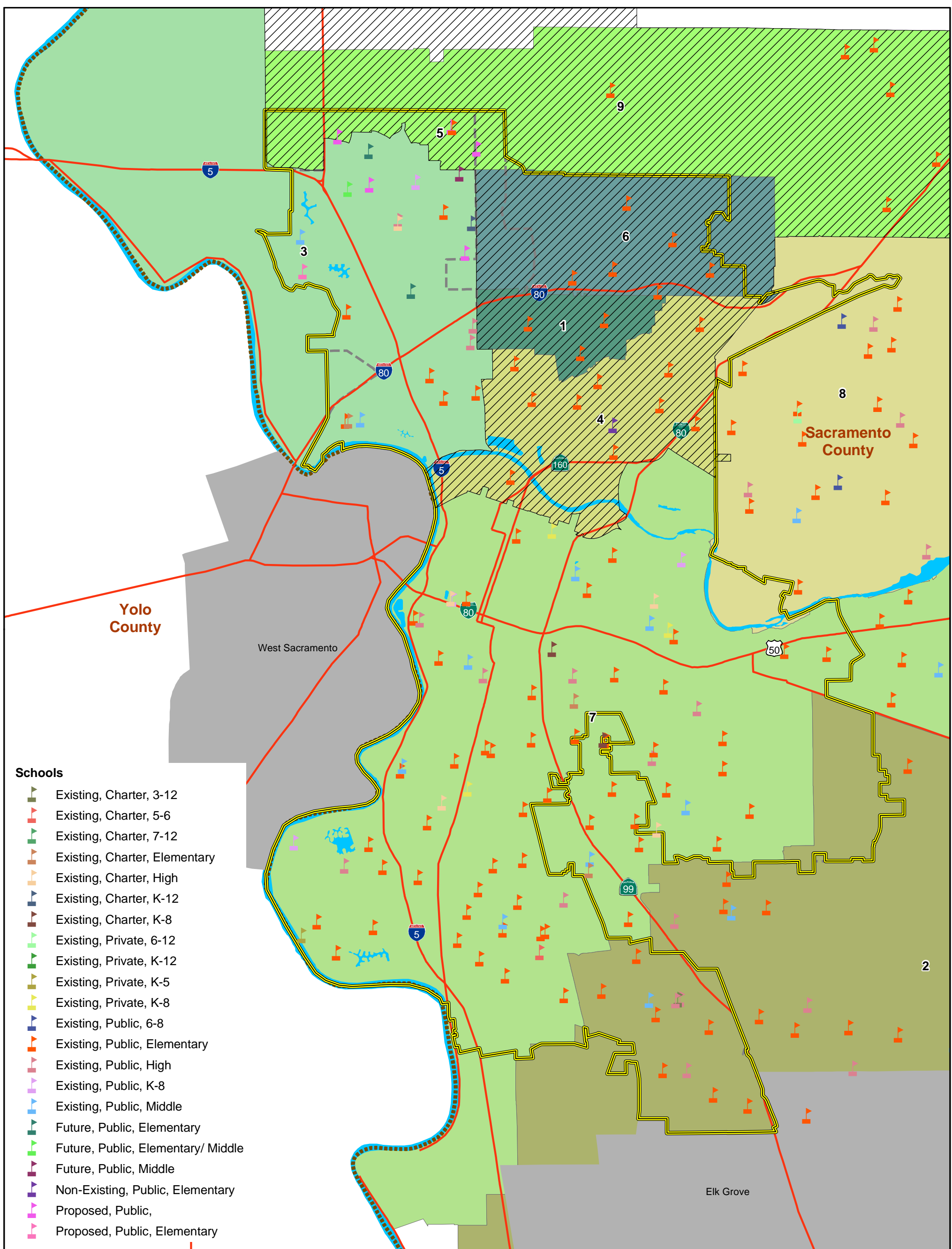
The SCUSD area covers the Central City, east to the city limits. The SCUSD is bordered on the north by the GJUHSD and the NSSD. Del Paso Heights, Natomas Unified, and Robla school districts are located further north, extending to the county border. The EGUSD covers the southern portion of the Policy Area.

Among the City's 283,176 residents aged 25 or over, 79.8 percent hold a high school diploma or higher and 28.1 percent hold a bachelor's degree or higher.²⁶

Public Schools Facilities

Tables 6.10-5 through 6.10-13 list the more than 140 public schools serving the Policy Area, as well as their enrollment (as of summer/fall 2007), capacity, and location for each school within the nine school districts. Specifically, the SCUSD operates more than seventy schools throughout the Policy Area; the District includes traditional elementary, middle, and high

26 U.S. Census Bureau, American Fact Finder, Sacramento City, California, <<http://factfinder.census.gov>>, accessed August 26, 2007.



- Schools**
- Existing, Charter, 3-12
 - Existing, Charter, 5-6
 - Existing, Charter, 7-12
 - Existing, Charter, Elementary
 - Existing, Charter, High
 - Existing, Charter, K-12
 - Existing, Charter, K-8
 - Existing, Private, 6-12
 - Existing, Private, K-12
 - Existing, Private, K-5
 - Existing, Private, K-8
 - Existing, Public, 6-8
 - Existing, Public, Elementary
 - Existing, Public, High
 - Existing, Public, K-8
 - Existing, Public, Middle
 - Future, Public, Elementary
 - Future, Public, Elementary/ Middle
 - Future, Public, Middle
 - Non-Existing, Public, Elementary
 - Proposed, Public,
 - Proposed, Public, Elementary



Legend

- School Districts**
- 1 - Del Paso Heights (Twin Rivers USD)
 - 2 - Elk Grove Unified
 - 3 - Natomas Unified
 - 4 - North Sacramento (Twin Rivers USD)
 - 5 - Rio Linda Union (Twin Rivers USD)
 - 6 - Robla
 - 7 - Sacramento City Unified
 - 8 - San Juan Unified
- Grant Joint Union High (Twin Rivers USD)
 - City Limit
 - County Boundary
 - Policy Area
 - Water

Figure 6.10-2
School Facilities

City of Sacramento Schools data current as of November 2004

0 0.75 1.5
Miles

School Name	School Type	Enrollment	Capacity	Address
Alice Birney	Elementary	274	478	6251 13th St
American Legion Continuation	High School	257	446	3801 Broadway
America's Choice ¹	High School	125	N/A	5421 J St
Bowling Green	Elementary - Charter	719	886	4211 Turnbridge Dr
Bret Harte	Elementary	535	707	2751 9th St
C. K. McClatchy	High School	2,362	2,799	3066 Freeport Bl
Caleb Greenwood	Elementary (K-8)	575	761	5457 Carlson Dr
California	Middle	639	1,280	1600 Vallejo Dr
Camellia Basic	Elementary	432	605	6600 Cougar Dr
Caroline Wenzel	Elementary	359	531	6870 Greenhaven Dr
Cesar E. Chavez	Elementary	375	504	7500 32 nd St
Clayton B. Wire	Elementary	600	756	5100 El Paraiso Ave
Collis P. Huntington	Elementary	271	578	5921 26th St
Crocker/Riverside	Elementary	479	533	2970 Riverside Bl
David Lubin	Elementary	511	718	3535 M St
Earl Warren	Elementary	481	643	5420 Lowell St
Edward Kemble	Elementary	525	666	7425 29th St
Elder Creek	Elementary	727	792	7934 Lemon Hill Rd
Ethel I. Baker	Elementary	573	756	5717 Laurine Wy
Ethel Phillips	Elementary	466	714	2930 21st Av
Father Keith B. Kenny	Elementary - Charter	382	448	3525 Martin Luther King Jr Blvd
Fern Bacon	Middle	980	1345	4140 Cuny Ave
Freeport	Elementary	389	574	2118 Meadowview Rd
Fruit Ridge	Elementary	470	596	4625 44 St.
Genesis H.S. (inc. Success Academy)	High School	283	534	5601 47 th Ave
Genevieve Didion	Elementary (K-8)	575	603	6490 Harmon Dr
H. W. Harkness	Elementary	293	616	2147 54th Ave
Hiram Johnson	High School	1,925	3,817	6879 14th Ave
Hiram Johnson West	High School	812	1,219	5022 58th St
Hollywood Park	Elementary	361	371	4915 Harte Wy
Hubert H. Bancroft	Elementary	360	538	2929 Belmar St
Jedediah Smith	Elementary	297	641	401 McClatchy Wy
John Bidwell	Elementary	390	520	1730 65th Ave
John Cabrillo	Elementary	371	523	1141 Seamas Ave
John D. Sloat	Elementary	337	468	7525 Candlewood Wy
John F. Kennedy	High School	2,230	3,120	6715 Gloria Dr
John H. Still	Elementary (K-8)	683	1,184	2200 John Still Dr
John Morse Waldorf	K-8 School	315	289	1901 60 th Ave
Joseph Bonnheim	Elementary	421	711	7300 Marin Ave
Kit Carson	Middle	468	988	5301 N St
Leonardo Da Vinci	Elementary (K-8)	575	816	4701 Joaquin Way
Lisbon	Elementary	360	632	7555 S Land Park Dr
Luther Burbank	High School	2,047	3,060	3500 Florin Rd
Maple	Elementary	275	405	3301 37th Ave
Mark Hopkins	Elementary	393	671	2221 Matson Dr
Mark Twain	Elementary	435	652	4914 54th St
Martin Luther King Jr.	Elementary (K-8)	531	754	480 Little River Wy
Matsuyama	Elementary	554	640	7680 Windbridge Dr
MET	High School - Charter	143	145	810 V Street
Nicholas	Elementary	636	723	6601 Steiner Dr
Oak Ridge	Elementary	478	712	4501 Martin Luther King Jr Blvd

TABLE 6.10-5

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

School Name	School Type	Enrollment	Capacity	Address
Pacific	Elementary	543	789	6201 41 St
Parkway	Elementary	532	860	4720 Forest Pk
Peter Burnett	Elementary	594	856	6032 36th Ave
Phoebe Apperson Hearst	Elementary	468	468	1410 60th St
Pony Express	Elementary	390	414	1250 56th Ave
Rosa Parks (formerly C. M. Goethe)	Middle	827	1,199	2250 68th Ave
Rosemont	High School	1,866	1,795	9594 Kiefer Blvd
Sam Brannan	Middle	930	1,284	5301 Elmer Wy
School of Engineering and Sciences ²	Middle/High School	N/A	N/A	6620 Gloria Dr
Sequoia	Elementary	488	528	3333 Rosemonte Dr
Susan B. Anthony	Elementary	315	580	7864 Detroit Blvd
Sutter	Middle	1,342	1,292	3150 I St
Sutterville	Elementary	521	518	4967 Monterey
Tahoe	Elementary	394	598	3110 60th St
Theodore Judah	Elementary	260	528	3919 Mckinley Blvd
Thomas Jefferson	Elementary	254	349	2635 Chestnut Hill Dr
New Technology	High School	359	422	1400 Dickson St
Washington	Elementary	284	417	520 18th St
Will Wood	Middle School	788	1,422	6201 Lemon Hill Ave
William Land	Elementary	301	453	2120 12th St
Woodbine	Elementary	428	583	2500 52nd Ave

Notes:

1. School is at interim campus; new permanent location will be at 10101 Systems Parkway.

2. School is at interim campus; new permanent facility is planned.

Source: Enrollment data was obtained from California Department of Education, School Level Enrollment Reports, 2006-07,

<<http://data1.cde.ca.gov/dataquest>>, accessed November 5, 2007. Capacity information provided by Jim Dobson, Operations Support Services, Sacramento City Unified School District, written communication, October 9, 2007. New school information provided by Diane Hedrick, Sacramento Unified School District, personal communication, August 23, 2007.

TABLE 6.10-6

NORTH SACRAMENTO SCHOOL DISTRICT

School Name	School Type	Enrollment	Capacity	Address
Harmon Johnson	Elementary	442	493	2591 Edgewater Rd
Norauto	Elementary	691	691 ⁵	477 Las Palmas Ave
Michael J. Castori ^{1,2}	Elementary	433	451	1801 South Ave
Northwood ⁹	Elementary	421	492	2630 Taft St
Woodlake ⁸	Elementary	401	430	700 Southgate Rd
Hagginwood ⁴	Elementary	421	442	1418 Palo Verde Ave
Smythe Academy of Arts and Sciences ⁶	Elementary	640	680	2781 Northgate Bl (K-6 th) 700 Dos Rios St (7 th -8 th)
D. W. Babcock ³	Elementary	472	500	2400 Cormorant Wy
Hazel Strauch ⁷	Elementary	700	700	3141 Northstead Dr

Notes:

1. School is temporarily located at 2625 Plover St.

2. Betty Vonwurlhoff, Principal, Babcock Elementary School, personal communication, October 8, 2007.

3. Julie Wilson, Secretary, Michael J. Castori Elementary School, personal communication, October 8, 2007.

4. Lena Moore, Hagginwood Elementary School, personal communication, October 8, 2007.

5. Jeanne Haddad, Norauto Elementary School, personal communication, October 5, 2007.

6. Kirk Fujikawa, Smythe Elementary School, personal communication, October 8, 2007.

7. Denise Dowden, Hazel Strauch Elementary School, personal communication, November 13, 2007.

8. Robin Ewing, Woodlake Elementary School, personal communication, November 13, 2007.

9. Diana Flores, School Clerk, Northwood Elementary School, personal communication, November 14, 2007.

Source: California Department of Education, School Level Enrollment, 2006-07, <<http://data1.cde.ca.gov/dataquest>>, accessed November 5, 2007.

TABLE 6.10-7**ROBLA SCHOOL DISTRICT**

School Name	School Type	Enrollment ¹	Capacity	Address
Robla	Elementary	415	N/A	5200 Marysville Bl
Taylor Street	Elementary	451	N/A	4350 Taylor St
Bell Avenue	Elementary	400	N/A	1900 Bell Ave
Glenwood	Elementary	431	N/A	201 Jessie Ave
Main Avenue	Elementary	270	N/A	1400 Main Ave

Source: Susan Baltimarco, Executive Assistant to the Superintendent, Robla School District, personal communication, December 3, 2007.

TABLE 6.10-8**DEL PASO HEIGHTS SCHOOL DISTRICT**

School Name	School Type	Enrollment	Capacity	Address
North Avenue ¹	Elementary	341	410	1281 North Ave
Del Paso Heights ²	Elementary	500	600	590 Morey Ave
Fairbanks ³	Elementary	407	410	227 Fairbanks Ave
Garden Valley ⁴	Elementary	430	430	3601 Larchwood Dr
Morey Avenue Early Childhood Development ⁵	Elementary (kindergarten only)	78	80	155 Morey Ave

Sources:
1. Natalie Smalls, Secretary, North Avenue Elementary, personal communication, October 10, 2007.
2. Leo Alvarez, Principal, Del Paso Heights Elementary School, personal communication, November 6, 2007.
3. Ken Kolser, Principal, Fairbanks Elementary, personal communication, October 9, 2007.
4. Joanne Garcia, Garden Valley Elementary School, personal communication, November 6, 2007.
5. Dee Videau, Secretary, Morey Avenue Elementary, personal communication, October 9, 2007.

TABLE 6.10-9**GRANT JOINT UNION HIGH SCHOOL DISTRICT**

School Name	School Type	Enrollment	Capacity	Address
Martin Luther King Jr.	Middle	641	989	3051 Fairfield St
Vista Nueva	High School	156	180	2025 North Ave
Keema	High School	754	N/A	5201 Arnold Ave
Grant Union	High School	2,154	2,300	1400 Grand Ave
Rio Tierra Fundamental	Middle	515	759	3201 Northstead Dr

Source: Betty J. Quigley, Coordinator II, Facilities Operations, Grant Joint Union High School District, written communication, October 30, 2007; Amy Lee, Registrar, Vista Nueva High School, personal communication, November 13, 2007. Rikk Keomanivong, Clerk III, Grant Joint Union High School District, personal communication, January 15, 2008.

TABLE 6.10-10

NATOMAS UNIFIED SCHOOL DISTRICT

School Name	School Type	Enrollment	Capacity	Address
Bannon Creek	Elementary	605	700	2775 Millcreek Dr
Natomas	High School	1,514	2,175	3301 Rosin Bl
American Lakes	Elementary	494	740	2800 Stonecreek Dr
Jefferson	Elementary	651	820	2001 Pebblewood Dr
Charter School ¹	High School	1,150	N/A	4601 Blackrock Dr.
Natomas	Middle	830	995	3700 Del Paso Rd
Leroy Greene	Middle	847	1,083	3710 Del Paso Rd
Inderkum High School	High School	1,607	1,850	2500 New Market Dr
Natomas Park	Elementary	925	1,160	4700 Crest Dr
Two Rivers	Elementary	584	880	3201 W. River Dr
Discovery	High School	148	260	3401 Rosin Bl
Witter Ranch	Elementary	856	1,008	3790 Poppy Hill Wy
Heron	Elementary	972	970	5151 Banfield Dr
Westlake	Elementary	233	N/A	3700 Del Paso Rd
Natomas Pacific Pathways Prep	High School	161	N/A	4400 East Commerce

Notes:

1. Allen Hight Elementary is expected to open in Fall 2008 and will have a capacity of 900 students. H. Allen Hight Middle School is expected to open in Fall 2009 and will maintain a capacity of 1,100 students.

Sources: Christine Hobart, Natomas Charter School, personal communication, November 29, 2007; Linda Griffith, Facilities and Planning, Natomas Unified School District, personal communication, October, 9, 2007.

TABLE 6.10-11

SAN JUAN UNIFIED SCHOOL DISTRICT

School Name	School Type	Enrollment	Capacity	Address
Pasadena ¹	Elementary	371	390	4330 Pasadena Ave
Sierra Oaks ²	Elementary/Middle	500	580	171 Mills Road

Sources: Laura Williams, Pasadena Elementary School, personal communication, December 3, 2007; Marguerite Crown, Sierra Oaks Elementary School, personal communication, November 6, 2007.

TABLE 6.10-12

RIO LINDA UNION SCHOOL DISTRICT

School Name	School Type	Enrollment	Capacity	Address
Regency Park	Elementary	728	769	5901 Bridgecross Dr

Source: Tim Hammond, Rio Linda School District, personal communication, November 13, 2007.

ELK GROVE UNIFIED SCHOOL DISTRICT				
School Name	School Type	2007/08 Enrollment¹	State Capacity	Address
Barbara Comstock Morse	Elementary	909	950	7000 Cranleigh Ave
Charles Mack	Elementary	946	863	4701 Brookfield Dr
Edward Harris ²	Middle	1,335	1,415	8691 Power Inn Rd
Herman Leimbach	Elementary	857	863	8101 Grandstaff Dr
Irene B. West	Elementary	1,086	915	8625 Serio Way
John Reith	Elementary	819	863	8401 Valley Lark Dr
Las Flores Independent Study	High School	264	260	5900 Bamford Dr
Monterey Trail ²	High School	2,176	2,219	8661 Power Inn Road
Prairie	Elementary	1,046	1,088	5251 Valley Hi Dr
Rio Cazadero	High School	324	243	7825 Grandstaff Dr
Samuel Jackman	Middle	1,078	1,376	7925 Kentwal Dr
Union House	Elementary	901	1,013	7850 Deer Creek Dr
Valley	High School	1,771	2,580 ³	6300 Ehrhardt Ave
Notes:				
1. Enrollment based on early, non-finalized 2007/08 California Basic Educational System Data (CBESD).				
2. School is located in the City of Elk Grove but has portions of its attendance boundary in the City of Sacramento.				
3. State Capacity will be additionally reduced at this site in the next year as portable classrooms are removed.				
Source: Linda Griffith, Facilities and Planning, Natomas Unified School District, personal communication, October, 9, 2007.				

schools, as well as alternative education and charter school facilities. The NSSD includes only elementary schools; all 10 of their schools are located within the city limits. The RSD includes only elementary schools, and all five of their schools are located within the city limits. The DPHSD contains five elementary schools within the Policy Area. Three high schools and two middle schools in the GJUHS are in the Policy Area. The NUSD operates four high schools, two middle schools, and eight elementary schools serving residents of the Natomas area. The SJUSD has one elementary school and one K-8 school that serve the Policy Area. The RLUSD has one elementary school within the Policy Area. The EGUSD has three high schools, two middle schools, and seven elementary schools that serve students in the Policy Area. The school locations are shown on Figure 6.10-2.

Private School Facilities

Private elementary, middle, and high schools serve residents throughout the Policy Area. Specifically, there are 28 private elementary schools, 1 private middle/high school, and 6 private high schools. See Table 6.10-14 for a list of private school facilities and Figure 6.10-2 for their locations.

Capacity

Based on the information presented in Tables 6.10-5 through 6.10-13, as of late 2007 all of the school districts have some remaining capacity, although individual schools within the districts may be operating at or above capacity. Certain schools within the following districts are at or above capacity: Sacramento City, North Sacramento, Del Paso Heights, Natomas, and Elk Grove. Capacity information was not available for schools in the Robla School District.

School Name	School Type	Address
All Hallows	Elementary	5500 13th Ave
Brookfield	Elementary	3600 Riverside Blvd
Calvary Christian	Elementary	5041 47th Ave
Camellia Waldorf	Elementary/Middle	5701 Freeport Blvd
Capital Christian	Elementary	7558 Stockton Blvd
Capital Christian	Elementary	9470 Micron Ave
Citadel Baptist	Elementary	5490 Ehrhardt Ave
Courtyard	Elementary	2324 L St
Dei Gloria Lutheran	Elementary	4910 Lemon Hill Ave
Holy Spirit	Elementary	3920 W Land Park Dr
Immaculate Conception	Elementary	3263 1st Ave
Mercy General	Elementary	711 T St
Merryhill Country	Elementary	7276 French Rd
Merryhill Country	Elementary	7446 Pocket Rd
Merryhill Country	Elementary	2401 Northview Dr
Northern California Preparatory	Middle/High School	6046 Lemon Hill Ave
Our Savior Lutheran	Elementary	5461 44th St
Sacramento Country Day	Elementary	2636 Latham Dr
Sacred Heart	Elementary	3933 I St
Saint Annes	Elementary	7724 24th St
Saint Charles Borromeo	Elementary	7584 Center Pkwy
Saint Francis Of Assisi	Elementary	2501 L St
Saint Joseph Parish	Elementary	1812 El Monte Ave
Saint Mary's	Elementary	5800 M St
Saint Patrick	Elementary	5945 Franklin Blvd
Saint Peters	Elementary	6200 McMahan Dr
Saint Robert	Elementary	2243 Irvin Wy
South Land Park Montessori	Elementary	6500 Freeport Blvd
Wiggin's Saint Luke Christian	Elementary	7595 Center Pkwy
Calvary Christian	High School	5041 47th Ave
Capital Christian	High School	9470 Micron Ave
Christian Brothers	High School	4315 Martin Luther King Jr Blvd
Citadel Baptist	High School	5636 Ehrhardt Ave
Sacramento Country Day	High School	2636 Latham Dr
Saint Francis Girls	High School	6051 M St

Source: Sacramento Unified School District, Facilities Master Plan 2006-2015, September 2006.

Planned Improvements

Grant Union School District is planning to construct a new junior high/high school complex – the East Natomas Education Complex – near Elkhorn Boulevard and East Levee Road. The new facility would have room for 1,800 high school students and 1,000 middle school students. The property would be developed as a joint use facility.²⁷

27 City of Sacramento, Panhandle Annexation and PUD Draft EIR, November 2006, p. 4.13-43.

Elk Grove Unified School District has no plans at this time to construct any schools within the City of Sacramento.²⁸

Natomas Unified School District is currently proposing two new schools on one 20+ acre site. The H. Allen Hight Learning Center will consist of one 900 student elementary school and one 1,100 student middle school. The campus will serve Natomas students in the Creekside area on a year-round multi-track calendar, and relieve overcrowding through class size reduction at existing campuses. This project has Board approval and is currently under construction with an anticipated completion date of July 2008.²⁹

Robla School District has tentative plans to construct a new elementary school in the Panhandle Area, but due to housing market demands, the project is currently on hold.³⁰

SCUSD is currently working on a couple of new facilities for the district's smaller, alternative-curriculum high schools. Students of America's Choice High School are presently at an interim campus located at 5421 J Street until the permanent campus at 10101 Systems Parkway is scheduled to open in December 2008. Also students of the School of Engineering and Sciences are waiting for a permanent combined school/library facility and are temporarily housed at 5241 J Street. Two additional facilities, The MET (810 V Street) and the Waldorf/Social Justice (5735 47th Avenue) schools are currently in the design phase. John H. Still Middle School located in south Sacramento has completed its permanent facility and will be open starting the 2007-2008 school year. However, the additional elementary and middle schools originally planned in the south area under Measure I were cancelled in March 2006 due to the slow pace of development.³¹

Higher Education

Opportunities for higher education in the Policy Area are provided by both public and private colleges and universities including Cosumnes River College, American River College, Sacramento City College, California State University, Sacramento (Sacramento State), and McGeorge School of Law.

The Los Rios Community College District operates the Cosumnes River College (8401 Center Parkway), American River College (4700 College Oak Drive), and the Sacramento City College (3835 Freeport Boulevard) within the Policy Area, which provide transfer, general, and career

28 Marcia Grambusch, Planner, Facilities and Planning, Elk Grove Unified School District, personal communication, October 11, 2007.

29 Natomas Unified School District, *Current Project Updates*, <www.natomas.k12.ca.us/nusd_facilities/fp-updates.htm>, accessed August 23, 2007.

30 Susan Baltimarco, Executive Assistant to the Superintendent, Robla School District, personal communication, August 23, 2007.

31 Sacramento City Unified School District, Facilities Master Plan 2006-2015.

education at the lower division level. The Los Rios Community College District enrolls nearly 80,000 students.³²

The University of the Pacific operates McGeorge School of Law. The private campus is located in Sacramento, at 3200 Fifth Avenue.

The Sacramento State campus provides undergraduate and graduate education to approximately 28,000 students and graduates about 6,000 students each year. The public university is located at 6000 J Street and encompasses approximately 300 acres. Destination 2010 is Sacramento State's major campus initiative and is designed to change and improve academic programs, student services, and facilities. Included in the initiative are plans to construct a new science and space center, a large student recreation center, an arena, and stadium upgrades within the Alex G. Spanos Sports Complex.³³

Regulatory Setting

■ Federal

There are no specific federal regulations related to school facilities.

■ State

Developer Fees

Prior to the passage of Proposition 1A/Senate Bill 50 (Chapter 407, Statutes of 1998), which is summarized below, it was possible for school districts to collect developer fees in accordance with Government Code Section 65995 (often called "statutory fees" or "Stirling fees" after the author of the enabling legislation, AB 2926). The School Facilities Legislation, as it is also referred to, was enacted to generate revenue for school districts for capital acquisitions and improvements.

California State Assembly Bill 2926 – School Facilities Act of 1986

In 1986, AB 2926 was enacted by the state of California authorizing entities to levy statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926, entitled the "*School Facilities Act of 1986*," was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 *et seq.* of the Government Code.

32 Los Rios Community College District, *About Us*, <www.losrios.edu/lrc/lrc_about.html>, August 26, 2007.
 33 Sacramento State University, *About Sacramento State*, <www.csus.edu/webpages/about.stm>, October 1, 2007.

Proposition 1A/Senate Bill 50

Proposition 1A/Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) is a school construction funding measure that was approved by the voters on the November 3, 1998 ballot. SB 50 created the School Facility Program where eligible school districts may obtain state bond funds. State funding requires matching local funds that generally come from developer fees. The passage of SB 50 eliminated the ability of cities and counties to require full mitigation of school impacts and replaced it with the ability for school districts to assess fees directly to offset the costs associated with increasing school capacity as a result of new development. The old "Stirling" fees were incorporated into SB 50 and are referred to as Level 1 fees. These fees are currently capped at \$2.97 per square foot for new residential development and \$0.47 per square foot for commercial and industrial (non-residential) development and age-restricted senior housing. Districts meeting certain criteria may collect Level 2 fees as an alternative to Level 1 fees. Level 2 fees are calculated under a formula in SB 50. Level 3 fees are approximately double Level 2 fees and are implemented only when the State Allocation Board is not apportioning state bond funds. The passage of Proposition 1D on November 7, 2006 precludes the implementation of Level 3 fees for the foreseeable future. Although SB 50 states that payment of developer fees are "deemed to be complete and full mitigation" of the impacts of new development, fees and state funding do not fully fund new school facilities. EJUSD and NUSD collect Level 2 fees. SCUSD, RSD and SJUSD collect Level 1 fees. All other districts are part of the new Twin Rivers USD (effective 7/1/08) and the fee level has not been determined.

California Code of Regulations

The California Code of Regulations (CCR), Title 5, Education Code governs all aspects of education within the state.

California Education Code

The California Education Code authorizes the California Department of Education ("Department") to develop site selection standards for school districts. These standards are found in the California Code of Regulations and require that districts select a site that conforms to certain net acreage requirements established in the Department's 2000 "School Site Analysis and Development" guidebook. The Guide includes the assumption that the land purchased for school sites will be in a ratio of approximately 2 to 1 between the developed grounds and the building area. For example, a school that houses kindergarten through sixth grade and has an enrollment of 600 children, the recommended acreage is 9.2 acres.

The Department's 2000 Guide includes exceptions to its recommended site size that allow smaller school sites. Additionally, the Department has the policy that if the "availability of land is scarce and real estate prices are exorbitant" the site size may be reduced. It is the Department's policy that if a school site is less than the recommended acreage required, the

district shall demonstrate how the students will be provided an adequate educational program including physical education as described in the district's adopted course of study. Through careful planning, a reduced project area school site could follow the recent trend of school downsizing and meet the Department's criteria.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of school services. For school resources, some of the policies relevant to this issue include assisting the school districts with school financing plans, engaging with school districts during land use planning processes and designating school sites, exploring ways to use existing school facilities for non-school related and child care activities, and helping realign district boundaries to coincide with neighborhood and community boundaries. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Sacramento Unified School District Facilities Master Plan 2006-2015

The SCUSD Facilities Master Plan (Plan) explains changes in the District since the previous Master Plan was prepared (1991), provides an inventory of existing District facilities, evaluates the condition of each school campus, provides a demographic and economic analysis of the District, describes future facilities needs in response to a growing student population and aging buildings, and outlines a Capital Improvement Plan. The Plan describes how the District should grow, what modifications to make to existing school sites, and outlines planning principles for the development of new school sites. The District will use this Plan as a tool to implement changes to existing campuses and to construct new ones through the year 2015.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Impacts on schools are determined by analyzing the projected increase in demand for schools as a result of future development allowed under the proposed 2030 General Plan, and comparing the projected increase with the schools' remaining capacities to determine whether new or altered facilities would be required. Impacts on schools are considered to be less than significant with payment of the State Department of Education Development Fee, which was enacted to provide for school facilities construction, improvements, and expansion.

■ Student Generation Calculations

For the school impact analysis, expected student yields were derived using current single-family and multi-family student generation rates for the elementary, middle, and high school levels (see Table 6.10-15). For the purposes of the analysis the SCUSD single-family and multi-family generation rates were used because this is the largest school district within the Policy Area. Single-family generation rates are 0.42 grades K-6 students and 0.3 grades 7-12 students per unit. Multi-family generation rates are 0.1 grades K-6, 0.02 grades 7-8, and 0.03 grades 9-12 students per unit. The development of new residential units anticipated under the 2030 General Plan would occur over many years, so the growth in students would be spread across approximately 20 years.

Type of School	Single-Family Generation Rate	Number of Single-Family Dwelling Units	Multi-Family Generation Rate	Number of Multi-Family Dwelling Units	Number of Students Generated
Elementary	0.42	22,000	0.1	75,000	16,740
Middle	0.3	22,000	0.02	75,000	8,100
High	0.3	22,000	0.03	75,000	8,850
Total					33,690
<small>Source: Diane Heidrich, Sacramento City Unified School District, personal communication, November 7, 2007; PBS&J, 2007.</small>					

The General Plan is anticipating growth of approximately 97,000 new residences, of which approximately 75,000 units would be multi-family and 22,000 would be single-family. In accordance with the estimated number of residences, approximately 16,740 elementary, 8,100 middle, and 8,850 high school students – a total of 33,690 students – would be generated, as shown in Table 6.10-15.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to the provision of schools within the entire Policy Area. The proposed General Plan does not include any policies regarding schools that are unique to any of the City's Focused Opportunity Areas or Community Plans, with the exception of the South Area Community Plan listed below.

EDUCATION, RECREATION, AND CULTURE (ERC)

Goal ERC 1.1 Efficient and Equitable Distribution of Facilities. Provide efficient and equitable distribution of quality educational facilities for life-long learning and development of a highly-skilled workforce that will strengthen Sacramento's economic prosperity.

Policies

- ERC 1.1.1 **School Locations.** The City shall work with school districts at the earliest possible opportunity to provide school sites and facilities that are located in the neighborhoods they serve.
- ERC 1.1.2 **Locational Criteria.** The city shall continue to assist in reserving school sites based on each school district's criteria, the school siting guidelines of the California Department of Education, and on the City's following location criteria:
- Locate elementary schools on sites that are safely and conveniently accessible, and away from heavy traffic, excessive noise, and incompatible land uses.
 - Locate school sites centrally with respect to their planned attendance areas.
 - Locate school sites in areas where established and/or planned walkways, bicycle paths, or greenways link school sites with surrounding uses.
 - Locate, plan, and design new schools to be compatible with adjoining uses.
- ERC 1.1.3 **Realignment of District Boundaries.** The City shall work with school districts to realign district boundaries to coincide with neighborhood and community boundaries.
- ERC 1.1.4 **Schools in Urban Areas.** The City shall work with school districts in urban areas to explore the use of existing smaller sites to accommodate lower enrollments, and/or higher intensity facilities (e.g., multi-story buildings, underground parking, and playgrounds on roofs, or parking areas).
- ERC 1.1.5 **Joint-Use Development.** The City shall work with school districts and institutions of higher education to explore opportunities for joint-use development that integrates uses for recreation, cultural, and non-school related activities at new and existing facilities.
- ERC 1.1.6 **School Transit Plans.** The City shall continue to work with school districts to prepare and adopt school transit plans to reduce automobile trips and increase the use of other transportation modes to schools.
- ERC 1.1.7 **Higher Education.** The City shall encourage the development, expansion, and upgrade of higher educational facilities such as community colleges, California State University, and private universities.
- ERC 1.1.8 **Higher Education and K-12 School Districts.** The City shall encourage higher education institutions to strengthen their links with local K-12 school districts to facilitate the transfer of students into these institutions.
- ERC 1.1.9 **Multi-University Campus.** The City shall cooperate with systems of higher education to explore the future possibility of a multi-university campus.
- ERC 1.1.10 **Research and Development Parks with Universities.** The City shall support the growth of research and development businesses and organizations associated with universities, which enhance the education and diversity of the Sacramento population.
- ERC 1.1.11 **School Financing Plans.** The City shall assist school districts with school financing plans and methods to provide permanent schools in existing and newly developing areas in the City.

Proposed South Area Community Plan Policies

The following policy from the South Area Community Plan applies to the proposed project:

SA.ERC 1.1 **School District Coordination.** The City shall work with the Sacramento City Unified School District and Elk Grove Unified School District to ensure that adequate school facilities are available in the South Area.

Thresholds of Significance

For the purposes of this EIR, impacts on existing schools are considered significant if the proposed General Plan would:

- generate students that would exceed the design capacity of existing or planned schools that would result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts.

IMPACTS AND MITIGATION MEASURES

A summary of all School impacts and their levels of significance is located at the end of this technical section.

Impact 6.10-3	Implementation of the 2030 General Plan would generate additional elementary, middle, and high school students in the Policy Area.
Applicable Regulations	<i>AB 2926, Proposition 1A/SB 50, CCR Title 5, California Education Code</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies ERC 1.1.1 through ERC 1.1.5</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As shown in Table 6.10-15, approximately 16,740 elementary, 8,100 middle, and 8,850 high school students – a total of 33,690 students – would be generated within the Policy Area through buildout of the 2030 General Plan associated with the anticipated addition of approximately 97,000 new single and multi-family units.

Based on the current student enrollment and school capacity numbers shown in Tables 6.10-5 through 6.10-13, there are approximately 81,228 students enrolled, with a total capacity of 99,126. Actual numbers may be slightly different due to the unavailability of some enrollment and capacity information. Based on these figures, schools that serve the Policy Area could accommodate an additional 17,898 students. Because the Sacramento 2030 General Plan would generate 15,792 students more than there is capacity for, new elementary, middle, and high schools would need to be constructed to meet the demands of the proposed project.

The proposed General Plan policies include measures to accommodate growth and increased service demands. Policies ERC 1.1.1 and ERC 1.1.2 encourages the City to work with school districts to ensure that schools are provided to serve all existing and future residents and constructed in the neighborhoods that they serve, in safe locations, and connected to surrounding uses by walkways, bicycle paths, and greenways. Policy ERC 1.1.5 suggests that schools be developed with joint uses to integrate recreational, cultural, and non-school related activities. Policy ERC 1.1.4 looks for alternative ways to deliver school facilities to urban areas including using smaller sites or higher intensity facilities to deliver services. Policy ERC 1.1.3 would realign school district boundaries to coincide with neighborhood and community boundaries.

Implementation of Sacramento 2030 General Plan Policies ERC 1.1.1 through ERC 1.1.5 would ensure that adequate school facilities are provided to serve the anticipated student growth in the city. Those policies, coupled with the payment of statutory fees by developers under SB 50 would serve as complete CEQA mitigation to satisfy the impact of development on school facilities. Therefore, the impact would be ***less than significant***.

Mitigation Measure

None required.

Impact 6.10-4	Implementation of the 2030 General Plan would generate additional higher education students in the Policy Area.
Applicable Regulations	<i>Not Applicable</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies ERC 1.1.7, ERC 1.1.9</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Implementation of the Sacramento 2030 General Plan would generate higher education students in the Policy Area. Several factors contribute to the number of higher education students within the Policy Area such as high school graduates generated within the Policy Area not continuing on to college, high school graduates generated within the Policy Area attending college outside of the Policy Area, and high school students generated within the Policy Area pursuing technical training, it would be impossible to determine how many higher education students would be generated within the Policy Area as a result of the Sacramento 2030 General Plan.

However, the Sacramento 2030 General Plan includes policies to help ensure that higher education needs are addressed. Policy ERC 1.1.7 encourages the development, expansion, and upgrade of higher education facilities. Policy ERC 1.1.9 requires the City to cooperate with higher education systems to explore the possibility of a multi-university campus. These two

policies encourage the City to work with higher education institutions to provide higher education facilities and programs within the Policy Area to serve students generated within and outside of the Policy Area. Therefore, the impact on higher education facilities would be ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context for this analysis considers the buildout of the 2030 General Plan as well as existing development. By 2030, the number of housing units in the City of Sacramento is expected to be approximately 141,000 single-family and 135,000 multi-family units. This analysis evaluates the impact of the 2030 General Plan on public schools that serve students within the Policy Area. However, the district boundaries, and in some cases the individual school attendance boundaries, extend beyond the Policy Area. School districts that extend beyond the Policy Area include the Elk Grove Unified School District, the Sacramento City Unified School District, the San Juan Unified School District, the Robla School District, the Natomas Unified School District, the Rio Linda Union School District (Twin Rivers Unified School District), and the Grant Joint Union High School District (Twin Rivers Unified School District). These seven school districts could be affected by a variety of factors, one of which is growth proposed under the Sacramento 2030 General Plan. Other factors that could impact enrollment in these districts include growth in other areas of the district, individual enrollment numbers at schools beyond the Policy Area, school closures within these districts, or construction of new schools in these districts that could cause redistribution of students among district schools. Due to the fact that a portion, and in some cases a majority of these districts are beyond the Policy Area, factors that are beyond the influence of the Sacramento 2030 General Plan may impact these seven districts.

Impact 6.10-5	Implementation of the 2030 General Plan combined with other development within the seven school districts that extend outside the Policy Area would generate additional elementary, middle, and high school students.
Applicable Regulations	<i>AB 2926, Proposition 1A/SB 50, CCR Title 5, California Education Code</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies ERC1.1.1 through ERC 1.1.5</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As shown in Table 6.10-16, approximately 72,720 elementary, 45,000 middle, and 46,350 high school students – a total of 164,070 students – would be present within the Policy Area by 2030 based on a total of approximately 276,000 single and multi-family units.

Type of School	Single-Family Generation Rate	Number of Single-Family Dwelling Units	Multi-Family Generation Rate	Number of Multi-Family Dwelling Units	Number of Students Generated
Elementary	0.42	141,000	0.1	135,000	72,720
Middle	0.3	141,000	0.02	135,000	45,000
High	0.3	141,000	0.03	135,000	46,350
Total					164,070
<small>Source: Diane Heidrich, Sacramento City Unified School District, personal communication, November 7, 2007; PBS&J, 2007.</small>					

Based on the current student enrollment and school capacity numbers shown in Tables 6.10-5 through 6.10-13, there are approximately 81,228 students enrolled, with a total capacity of 99,126. Actual numbers may be slightly different due to the unavailability of some enrollment and capacity information. Based on these figures, schools that serve the Policy Area could accommodate an additional 17,898 students. Because the Sacramento 2030 General Plan would generate 15,792 students more than there is capacity for, new elementary, middle, and high schools would need to be constructed to meet the demands of the proposed project.

Of the seven school districts that have some portion of their service area outside the Policy Area, three of them encompass areas that are mostly built out: SCUSD, SJUSD, and RSD. The remaining four school districts that have boundaries beyond the Policy Area – EGUSD, RLUSD, GJUHS, and NUSD – have a greater potential for new growth as they encompass areas that include large tracts of undeveloped land. These four school districts are likely to have significant growth beyond the Policy Area and would likely be impacted more by development outside of the Policy Area than by development within the Policy Area. Due to the significant amount of growth that is still possible within these school districts, the cumulative impact to schools would be *significant*.

The proposed general plan policies include measures to accommodate for growth and increased service demands. Schools would be provided for all existing and future residents and constructed in the neighborhoods that they serve, in safe locations, and connected to surrounding uses by walkways, bicycle paths, and greenways (Policies ERC 1.1.1 and ERC 1.1.2). Schools would be developed with joint uses to integrate recreational, cultural, and non-school related activities (Policy ERC 1.1.5). School facilities in urban areas would be developed using alternative methods including using smaller sites or higher intensity facilities to deliver services (Policy ERC 1.1.4).

Implementation of Sacramento 2030 General Plan Policies ERC 1.1.1 through ERC 1.1.5 would ensure that adequate school facilities are provided to serve the total anticipated student enrollment in the city. Those policies, coupled with the payment of statutory fees by developers under AB 50 would serve as complete CEQA mitigation to satisfy the impact of development on school facilities. Therefore, the Sacramento 2030 General Plan's contribution to the cumulative impact on schools would be **less than considerable**.

Mitigation Measure

None required.

Impact 6.10-6	Implementation of the 2030 General Plan combined with other development outside of the Policy Area would generate additional higher education students.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies ERC 1.1.7 and ERC 1.1.9</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Implementation of the Sacramento 2030 General Plan combined with other proposed development outside of the Policy Area would generate additional higher education students. Several factors contribute to the number of higher education students within the Policy Area such as high school graduates generated within the Policy Area not continuing on to college, high school graduates generated within the Policy Area attending college outside of the Policy Area, and high school students generated within the Policy Area pursuing technical training, it would be impossible to determine how many higher education students would be generated within the Policy Area as a result of existing development and implementation of the Sacramento 2030 General Plan.

However, the Sacramento 2030 General Plan includes policies to help ensure that higher education needs are addressed. Higher education facilities would be developed, expanded, and upgraded (Policy ERC 1.1.7). The City would also cooperate with higher education systems to explore the possibility of a multi-university campus (Policy ERC 1.1.9). These two policies encourage the City to work with higher education institutions to provide higher education facilities and programs within the Policy Area to serve students generated within and outside of the Policy Area. Therefore, the cumulative impact on higher education facilities would be **less than significant**.

Mitigation Measure

None required.

South Area Community Plan

As stated above under the Cumulative Context, the analysis of school services is primarily based on the population of each individual site coupled with the overall population of the service area. The SCUSD and EGUSD serve the South Area Community Plan (SACP) area, and there are existing elementary, middle, and high schools in the SACP area. There are no higher education facilities in the SACP area. Due to the existing and planned locations of schools in the city, there are no areas within the Policy Area that are substantially underserved. Specific impacts associated with individual development projects would be determined by analyzing school impacts during subsequent environmental reviews.

Focused Opportunity Areas

There are existing schools within or adjacent to all of the Focused Opportunity Areas except the 65th Street/University Village Focused Opportunity Area. Sacramento State is located adjacent to the 65th Street/University Village Focused Opportunity Area. Although there are schools located within the Focused Opportunity Areas, all of the Focused Opportunity Areas and the remainder of the Policy Area are equally served by the nine relevant school districts and higher education facilities. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional school facilities.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts related to schools. At this time specific project information is not available (i.e., school sites, number of housing units, student generation, etc.) to evaluate potential impacts associated with the provision of schools. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze any potential impacts on schools.

LIBRARIES

INTRODUCTION

This section summarizes the library services provided in the Policy Area. Existing facilities are listed and any needs for expansion are discussed.

ENVIRONMENTAL SETTING

City Wide

The Sacramento Public Library (SPL) is a joint powers agency between the cities of Sacramento, Citrus Heights, Elk Grove, Galt, Isleton, Rancho Cordova, and the County of Sacramento.³⁴ The SPL serves residents of each of these cities and county.

The SPL operates 11 branches within the Policy Area and 16 branches outside the Policy Area. However, all residents of Sacramento County have access to all library branches and bookmobiles, inside or outside the Policy Area. Figure 6.10-3 shows the current locations of libraries located in the Policy Area. The location and number of items in each library collection for libraries within the Policy Area are provided in Table 6.10-17.

POLICY AREA PUBLIC LIBRARY LOCATIONS AND COLLECTIONS		
Branch	Location	Collection
Central Library	828 I Street	300,000 volumes
Colonial Heights Library	4799 Stockton Boulevard	60,000 volumes
Belle Cooleedge Library	5600 South Land Park Drive	90,000 items
Del Paso Heights Library	920 Grande Avenue	32,000 items
Martin Luther King Jr. Library	7340 24 th Street Bypass	110,000 volumes
C.K. McClatchy Library	2112 22 nd Street	23,000 volumes
McKinley Library	601 Alhambra Boulevard	45,000 volumes
North Natomas Library	2500 New Market Drive	n/a
North Sacramento/Hagginwood Library	2109 Del Paso Boulevard	42,000 items
Pocket-Greenhaven Library	Gloria Drive and Swale River Way	n/a
South Natomas Library	2901 Truxel Road	60,000 items
Valley Hi-North Laguna Library	6351 Mack Road	30,000 items

Source: Sacramento Public Library, <www.saclibrary.org>, accessed November 12, 2007; Sacramento Public Library Authority, *Sacramento Public Library Authority Facility Master Plan 2007-2025*, March 2007.

The main branch of the SPL, also known as the Central Library, is located in downtown Sacramento at 8th and I streets. The Central Library contains nearly 300,000 volumes and more than 1,000 periodical subscriptions.³⁵ The Sacramento Room at the Central Library includes

34 Sacramento Public Library Authority, *Joint Exercise of Powers Agreement*, February 22, 2007, p. 4.
 35 Sacramento Public Library website, <www.saclibrary.org/about_lib/branches/brn_cen.html>, November 12, 2007.

special collections on California and Sacramento history, local authors, and the history of the Central Library. The Tsakopoulos Library Galleria, another resource at the Central Library, provides a 5,400 square foot space available for a variety of events, including weddings, meetings, seminars, parties, receptions, fund raisers, or trade shows.

Libraries operated by other entities are also located in the city. One such facility is the California State Library in Sacramento, which is operated by the state. The State Library operates two locations, the Stanley Mosk Library and Courts Building at 9th and Capitol Streets, and the Library and Courts II Building at 9th and N Streets, both in downtown Sacramento. The State Library provides reference services, on-site use of collections, California history information, genealogy resources, Braille and recorded books, a directory of libraries, and internet access. The State Library's circulating materials are loaned out to the public through local libraries. The State Library also provides services to the state government, local governments, and local libraries.³⁶

■ Planned Improvements

The SPL is planning major improvements throughout the system to expand and renovate existing branches and construct new library branches through 2025. The Sacramento Public Library Facility Master Plan 2007-2025 outlines the SPL's current deficiencies and projected needs through 2025. Within the city of Sacramento, two new libraries – North Natomas and Pocket-Greenhaven – are currently being constructed and the Valley Hi-North Laguna branch is being relocated. There are several projects planned for 2005-2015 including the renovation of the Central Library, the relocation of the North Sacramento-Hagginwood Library, the renovation of the McClatchy and McKinley libraries, and the construction of the new 65th and Folsom Library. Projects expected to occur between 2015 and 2025 include the expansion of the Colonial Heights, Belle Cooleedge, Martin Luther King, Jr., and South Natomas libraries as well as the relocation of the Del Paso Heights Library.³⁷

As shown in Table 6.10-18, the SPL currently has 257,549 square feet (sf) of library space within the city of Sacramento. With a service area population of 459,525, the library currently maintains a service ratio of 0.56 sf of library space per capita.

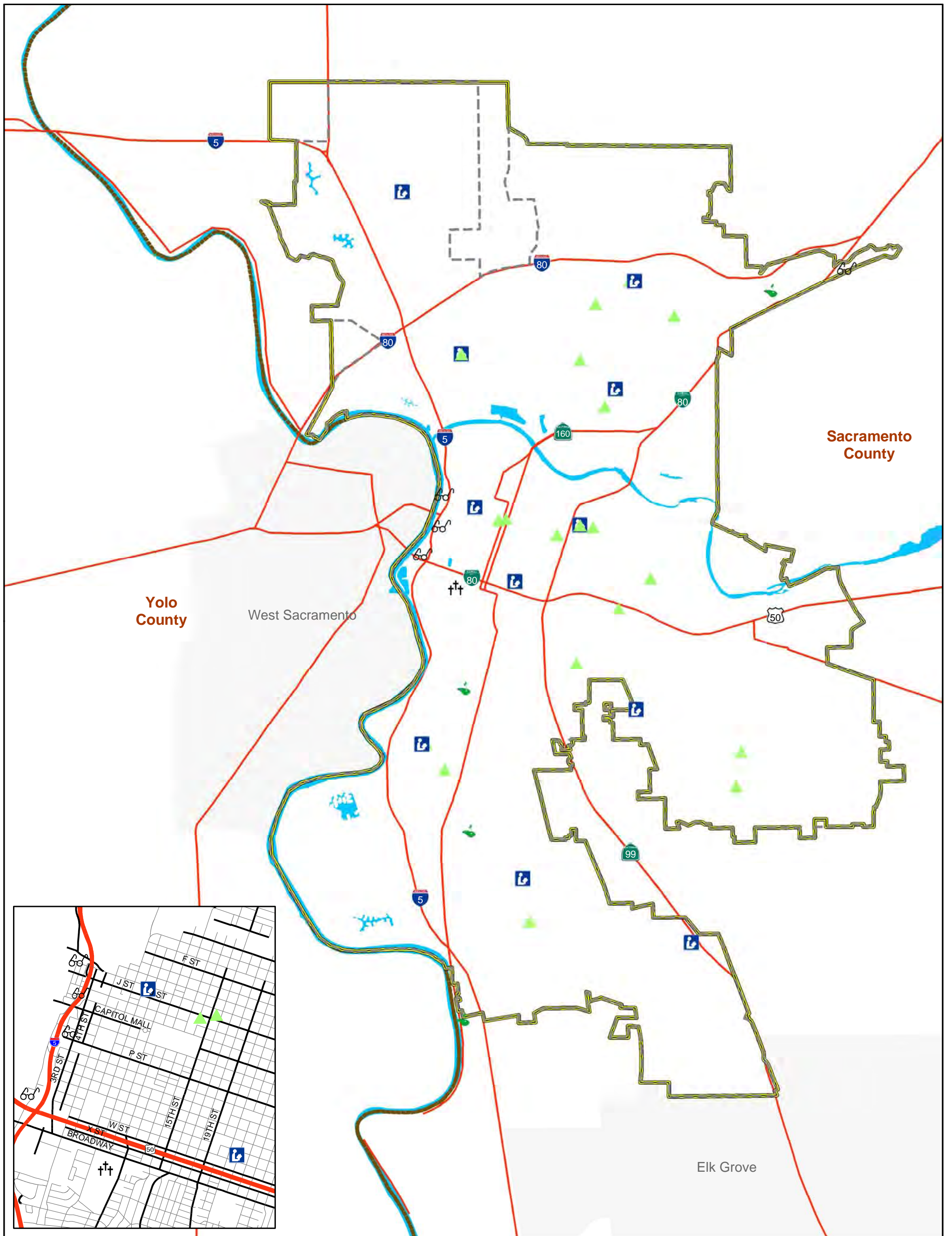
Regulatory Context

■ Federal

There are no federal regulations pertaining to the provision of libraries.

36 California State Library, <www.library.ca.gov/services/borrowing.html>, accessed November 12, 2007.

37 Sacramento Public Library Authority, *Facility Master Plan 2007-2025*, March 2007, p. 10.

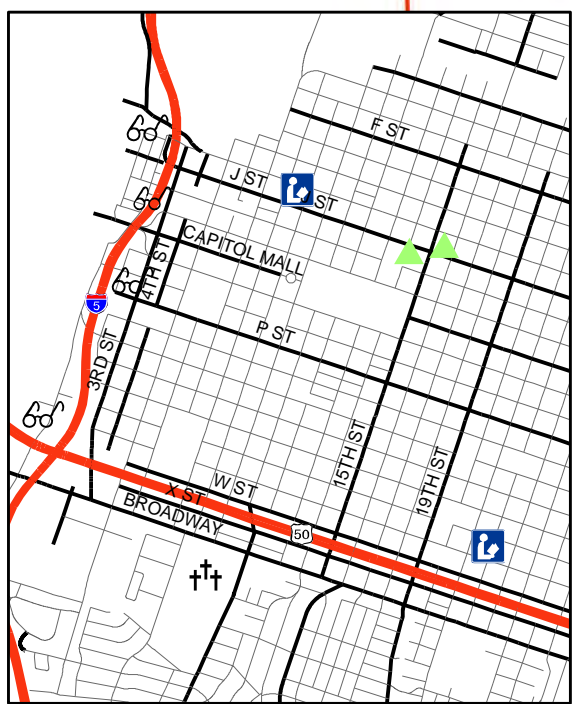


Yolo County

Sacramento County

West Sacramento

Elk Grove



Legend

- †† City Cemetery
- ▲ Community Center
- 🌿 Golf Course
- 📖 Library
- 🌐 Museum
- City Limit
- ▭ Other City Boundaries
- ⋯ County Boundary
- ▭ Policy Area
- 🟦 Water

Figure 6.10-3
Civic and Cultural Facilities

City of Sacramento
Facilities data
current as of
September 2004

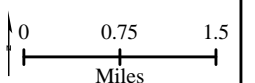


TABLE 6.10-18

SACRAMENTO PUBLIC LIBRARY SERVICE RATIOS TO 2025

Library	Current Square Footage	Square Footage by 2025	Current Service Area Population (Neighborhood)	Service Area Population by 2025	Current Service Ratio (sf per capita)	Service Ratio by 2025 (sf per capita)
65th and Folsom	n/a	30,000	n/a	52,000	n/a	0.58
Belle Coolegge	12,000	25,000	79,544	46,648	0.15	0.54
Central Library	160,000	160,000	25,367	36,937	6.31	4.33
Colonial Heights	12,000	20,000	98,798	67,827	0.12	0.29
Del Paso Heights	5,425	20,000	32,325	38,693	0.17	0.52
Martin Luther King, Jr.	15,078	30,000	49,411	64,175	0.31	0.47
McClatchy	1,900	1,900	13,398	15,880	0.14	0.12
McKinley	4,681	4,681	31,710	32,082	0.15	0.15
N. Sacramento-Hagginwood	4,000	15,000	27,585	28,686	0.15	0.52
North Natomas	23,000	23,000	24,637	66,294	0.93	0.35
Pocket Library	n/a	15,000	n/a	30,000	n/a	0.50
South Natomas	13,615	20,000	40,206	41,470	0.34	0.48
Valley Hi-North Laguna	5,850	20,000	36,544	41,265	0.16	0.48
Total	257,549	384,581	459,525	561,957	0.56	0.68

Source: Sacramento Public Library Authority, *Sacramento Public Library Authority Facility Master Plan 2007-2025*, March 2007; PBS&J, 2007.

■ State

There are no state regulations pertaining to the provision of libraries.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of library services. For library resources, some of the policies relevant to this issue include evaluating proposed library facilities for consistency with the Libraries Master Plan and exploring methods for financing new or expanding and upgrading existing library facilities. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Sacramento Public Library Authority Facilities Master Plan

The Sacramento Public Library Authority Facility Master Plan (FMP) contains the following Guiding Principles designed to support SPL customers.

Guiding Principles

1. Libraries recognize the needs of different communities.
2. Libraries recognize the needs of a diverse population.

3. Libraries add value to the community.
4. Libraries are prime real estate.
5. Libraries are easy for customers to use.
6. Library space is flexible.
7. Libraries recognize the value of community partners.
8. Library design promotes staff efficiency and effectiveness.

The Sacramento Public Library Authority FMP also contains service standards in a tiered three-level approach. The three levels are Threshold, Target, and Prime. The Threshold standard would be used to evaluate current library services available to residents of the specific service area. As individual communities move forward in planning their specific service goals and the facilities required to provide those services, they would select from Threshold, Target, or Prime to tailor their building program. Please refer to the Methods of Analysis discussion below for a detailed description of the SPL service goals.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The provision of adequate library services is based on the Sacramento resident population as compared to the square footage-per-capita ratio provided in the Sacramento Public Library Authority Planning Standards in the FMP.³⁸

- Threshold Level: 0.40 sf library facilities per capita
- Target Level: 0.50 sf library facilities per capita
- Prime Level: 0.60 sf library facilities per capita

For the purposes of this analysis, a significant impact would occur if the threshold level of 0.40 sf of library facilities per capita is not reached.

The library impact analysis determines whether future development associated with the 2030 General Plan would require new or expanded facilities in order to provide acceptable library services. It is expected that over the next 25 years the City will experience an increase of approximately 195,000 new residents.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to the provision of library services within the entire Policy Area. The proposed General Plan does not include any

38 ibid., p. 44.

policies regarding library services that are unique to any of the City's Community Plans or Focused Opportunity Areas.

EDUCATION, RECREATION, AND CULTURE (ERC)

Goal ERC 3.1 Adequate Library Facilities. Provide adequate library facilities that enhance Sacramento's quality of life and create a civic environment with vast opportunities for self-learning and cultural and academic enrichment.

Policies

- ERC 3.1.1 **Adequate Services and Facilities.** The City shall ensure adequate library services and facilities are maintained for all residents.
- ERC 3.1.2 **Library Siting.** The City shall target the siting of libraries in higher-density and infill areas along major arterials and transit service routes to provide convenient access to Sacramento residents.
- ERC 3.1.3 **Under-Served Areas.** The City shall give priority to the construction of new libraries in communities that are experiencing library service deficiencies including the Pocket area, East Sacramento near 65th Street and Folsom Boulevard, North Highlands, and the South Area Community Plan area.
- ERC 3.1.4 **Joint Use.** The City shall encourage joint use of library facilities with public and private agencies at locations such as schools and community centers.
- ERC 3.1.5 **Facility Usage.** The City shall encourage the use of library facilities as additional venues for arts-related events and programs (e.g., book readings, music, art exhibitions, and others).
- ERC 3.1.6 **Multi-Functional Facilities.** The City shall support the evolution of libraries to transition as multi-functional facilities, cultural centers, and gathering places.
- ERC 3.1.7 **Computer Technology and Access.** The City shall encourage use of computers and the Internet to access library resources and other information.
- ERC 3.1.8 **Educational Awareness.** The City shall promote awareness of library facilities and services.
- ERC 3.1.9 **Funding.** The City, in conjunction with the Sacramento Library Authority, shall explore methods of financing new library facilities and expanding and upgrading existing facilities.

Thresholds of Significance

For the purposes of this EIR, impacts on library resources are considered significant if the proposed General Plan would:

- require, or result in, the construction of new, or the expansion of existing, facilities related to the provision of library services.

As discussed above under Methods of Analysis, the Sacramento Public Library Authority provides guidance for determining the provision of library facilities. For purposes of this

analysis, a significant impact would occur if the threshold level of 0.40 sf of library facilities per capita is not reached. This threshold is the lowest of the three guidelines that the SPL provides.

Impacts and Mitigation Measures

A summary of all Libraries impacts and their levels of significance is located at the end of this technical section.

Impact 6.10-7	Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	
Applicable Regulations	<i>Sacramento Public Library Authority FMP</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>Policies ERC 3.1.1 through ERC 3.1.4, ERC 3.1.9</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

As discussed under the Methods of Analysis, the proposed 2030 General Plan would result in a total population increase of approximately 195,000 new residents. Using a service ratio of 0.40 sf per person, 78,000 sf of library space would be needed to provide adequate library services to this new population. The Sacramento Public Library Authority is currently pursuing plans to construct two new libraries: North Natomas (23,000 sf) and Pocket-Greenhaven (15,000 sf). However, the construction of these two library branches would only provide 38,000 sf of library space compared to the need for 78,000 sf to provide adequate facilities to accommodate the population generated by the Sacramento 2030 General Plan.

The proposed general plan policies include measures to accommodate for growth and increased service demands. Policy ERC 3.1.1 requires that adequate library services and facilities are maintained for all residents. Policies ERC 3.1.2 and ERC 3.1.4 address siting including locating libraries in higher density and infill areas, near arterials and transit routes, and in joint-operation with public and private agencies at locations such as school sites or community centers. These policies ensure that libraries are accessible to a wide range of people and are near major community gathering locations. Policy ERC 3.1.3 gives library construction priority to areas in the city that are underserved. Policy ERC 3.1.9 ensures that funding methods are explored jointly between the City and Sacramento Public Library Authority.

Therefore, because future development anticipated under the 2030 General Plan would be required to comply with the general plan policies, adequate library services would be provided to serve the anticipated increase in demand. Through the implementation of these policies the proposed project would result in a ***less-than-significant impact***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context for this analysis considers the buildout of the 2030 General Plan as well as existing development. By 2030, the population of the City of Sacramento is expected to be approximately 641,000. This analysis evaluates the impact of the 2030 General Plan on library services. Service levels used to determine impacts assume a ratio of 0.40 sf per person to address facility needs to serve future development.

As discussed in the Sacramento Public Library Authority Facility Master Plan, the SPL expects to expand and relocate several branches in the City of Sacramento. The Colonial Heights branch is expected to expand from 12,000 sf to 20,000 sf; the Belle Coolidge branch is expected to expand from 12,000 sf to 25,000 sf; the Del Paso Heights branch is expected to be relocated and expanded from 5,400 sf to 20,000; the Martin Luther King, Jr. branch is expected to expand from 15,000 sf to 30,000 sf; and the South Natomas branch is expected to expand from 13,000 sf to 20,000 sf. In addition, several new branches are expected to be constructed by 2025, increasing the Sacramento Public Library Authority's total square footage (for existing, renovated, and new branches) to 1,007,274 sf.³⁹

The Sacramento Public Library Authority serves all residents of Sacramento County, including areas outside of the Policy Area. Growth beyond the Policy Area, the closing of existing library branches, or the opening of new library branches could affect library services available within the Sacramento Public Library system. Due to the fact that a large portion of the area that the Sacramento Public Library Authority serves is outside of the Policy Area, factors that are beyond the influence of the Sacramento 2030 General Plan may impact the Sacramento Public Library Authority.

Impact 6.10-8	Implementation of the 2030 General Plan combined with other development within the Sacramento Public Library Authority service area could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	
Applicable Regulations	<i>Sacramento Public Library Authority FMP</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>Policies ERC 3.1.1 through ERC 3.1.4, ERC 3.1.9</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

³⁹ Ibid., p. 67.

There are approximately 446,000 residents in the City of Sacramento. Assuming that implementation of the 2030 General Plan would add approximately 195,000 additional residents, there would be a 2030 population of approximately 641,000. Using a service ratio of 0.40 sf per resident, cumulative conditions would require 256,400 sf of library space throughout the city. Sacramento County, the Sacramento Public Library Authority's service area, is projected to have a population of 1,803,872 in 2030.⁴⁰ Using a service ratio of 0.40 sf per resident, cumulative or buildout conditions would require 721,549 sf of library space within the Sacramento Public Library Authority's service area (Sacramento County).

Based on plans set forth in the Sacramento Public Library Authority Facility Master Plan, the SPL expects to provide 1,007,274 sf of library space throughout the Sacramento Public Library Authority's service area (Sacramento County) by 2025.⁴¹ This would result in a ratio of 0.56 sf of library space per person, exceeding the Threshold Level of library services.

Therefore, because future development projected within the Sacramento Public Library Authority's service area would be accommodated by anticipated improvements within the service area, adequate library services would be provided to serve the anticipated increase in demand. Therefore, the cumulative impact on library services would be ***less than significant***.

Mitigation Measure

None required.

South Area Community Plan

The Martin Luther King, Jr. Library is currently within the South Area Community Plan (SACP) area. The new Valley Hi-North Laguna Library would also be within the SACP area. Proposed general plan Policy ERC 3.1.3 specifically mentions that underserved areas, such as the SACP area be given priority for the construction of new library facilities. Therefore, implementation of this proposed general plan policy would ensure impacts regarding library services to the SACP area are also less than significant.

Focused Opportunity Areas

The Arcade Learning Library is within the Arden Fair/Point West Focused Opportunity Area. The Martin Luther King, Jr. Library is within the Florin LRT/Subregional Center Focused Opportunity Area. Although there are libraries located within the Focused Opportunity Areas, all of the Focused Opportunity Areas and the remainder of the Policy Area are equally served by the SPL because residents can use any library branch within the SPL. Site-specific analysis for

40 California Department of Finance, *Population Projections for California and Its Counties 2000-2050, by Age, Gender and Race/Ethnicity*, Sacramento, California, July 2007, <www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Projections/P3/P3.php>, accessed May 21, 2008.

41 Sacramento Public Library Authority, *Facility Master Plan 2007-2025*, March 2007, p. 67.

individual development projects within each Opportunity Area would determine whether individual project sites would require additional library facilities.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts related to libraries. At this time specific project information is not available (i.e., library sites, number of residents, etc.) to evaluate potential impacts associated with the provision of libraries. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze any potential impacts on libraries.

EMERGENCY SERVICES

INTRODUCTION

This section provides information on emergency preparedness, the existing emergency response services, and disaster response services in the Policy Area that are provided by the City's Fire Department, the Sacramento Metro Fire Department, and other public and private entities.

ENVIRONMENTAL SETTING

City Wide

The City of Sacramento and County of Sacramento both implement programs to facilitate emergency preparedness. Specifically, the City of Sacramento Multi-Hazard Emergency Plan addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations for areas within the city's jurisdictional boundaries. It provides operational concepts related to various emergency situations, identifies components of the local emergency management organization, and describes the City's overall responsibilities for protecting life and property during an emergency. The plan also identifies possible sources of outside support (through mutual aid and specific statutory authorities) from other jurisdictions, and the private sector. The County of Sacramento has a Multi-Hazard Mitigation Plan, which is a multi-jurisdictional plan that aims to reduce or eliminate long-term risk to people or property from natural disasters and their effects that is applicable to the City and areas outside of the city, but within the Policy Area. Both plans provide an overview of operational concepts, identify components of the County's and City's Emergency Management Organization within the Standardized Emergency Management System, and describe the overall responsibilities of the federal, state, and local agencies for protecting life and property and assuring the overall well-being of the population.

■ City of Sacramento Multi-Hazard Emergency Plan⁴²

The City's emergency plan is applicable to the city's jurisdictional boundaries and describes how City departments will respond to a full spectrum of peace time emergencies (natural disasters) and national defense emergencies, from a minor to a catastrophic emergency. Some emergencies may be preceded by a build-up period which would allow for increased readiness and advance warning to affected areas. Other emergencies will occur with little or no advance warning and require immediate mobilization of city resources. Some emergencies may cause destruction and others may create an exposure hazard. All City departments are prepared to respond promptly and effectively to any foreseeable emergency or request for mutual aid. In all

42 City of Sacramento, *Multi-Hazard Emergency Plan*, Revised May 2002.

disaster situations, this emergency plan will be implemented in three periods, with related phases as time and circumstances permit.

The Pre-Emergency Periods, Emergency Periods, and Post-Emergency Periods are all designed to deal with the events leading up to and following an extraordinary emergency situation. In addition, guidelines are set out for peacetime emergencies, wartime emergencies, and a standardized emergency management system. Further details on these phases and other emergencies are described in section 7.3 Emergency Response on pages 7.6-2 through 7.6-5 of the TBR.

■ Regional Emergency Operations Center

Day-to-day operations are conducted from departments and offices that are widely dispersed throughout the City of Sacramento. When a major emergency or disaster strikes, centralized emergency management is needed. This facilitates a coordinated response by staff, and representatives from departments which are assigned emergency management responsibilities in the City.

An Emergency Operations Center (EOC) provides a county-wide central location of authority and information, and allows for face-to-face coordination among personnel who must make policy level emergency decisions. The following functions are performed in the EOC, as necessary:

- Receiving and disseminating warning.
- Managing emergency operations.
- Developing emergency response and recovery policies.
- Collecting intelligence from, and disseminating information to the various EOC representatives, and assuring coordination between the Field Operations Center locations, building managers and departmental safety representatives throughout the regional system. In addition, as appropriate, coordinate information with the Governor's Office of Emergency Services, the Federal Emergency Management Agency and other appropriate outside agencies.
- Preparing intelligence/information summaries, situation reports, operation progress reports and other reports as required; preparing the incident action plan.
- Maintaining general and specific maps, information display boards and other data pertaining to emergency operations, the status of regional building and sites.
- Continuing analysis and evaluation of all data pertaining to emergency operations.
- Controlling and coordinating, within established policy, the operations and logistical support of resources committed to City/County Departments.

The Emergency Services Officer is responsible for the readiness state of the primary and alternate EOC locations. Readiness includes adequate communications, staff and team training, EOC support such as logistics, displays, and proper documentation procedures. Generally, the EOC will be activated under any of the following conditions:

- An earthquake causing widespread damage;
- A Hazardous Material Incident affecting a portion of the City of Sacramento;
- A major flood affecting the City of Sacramento and surrounding areas; or
- An emergency situation that has occurred or might occur that is of such a magnitude it will require a large commitment of City of Sacramento or Sacramento County resources over an extended period of time to control or mitigate.

The EOC can be activated and staffed to the extent deemed necessary to deal with the existing or impending emergency. The level of activation necessary, based on the situation, is determined by the Director of Emergency Services or his/her designated alternate. This activation takes place upon consideration of initial damage assessment reports and demand for services. Three levels of activation are described below.

- **Level I Disaster** - Normal operations: Normal day-to-day emergency operations for which Sacramento resources, as well as mutual aid resources, are adequate to handle the incident. The EOC is not activated.
- **Level II Disaster** - Partial EOC activation: An incident which involves more than two major City departments and the Incident Commander feels has the potential to escalate into a Level III incident. The Director of Emergency Services selects members of the EOC team to be called. The EOC is activated on a limited basis. Example: Large Hazardous Material Incident or partial/predicted flooding.
- **Level III Disaster** - Full EOC Activation: A disaster which requires activation of the Emergency Management Team in the City's EOC. A disaster requiring policy and coordination to mitigate further loss of life and property. The EOC would be fully activated and all of the EOC positions filled. Example: A major flood causing substantial damage in the community.

■ Mutual Aid Agreements

Locally, the City of Sacramento maintains an Automatic Mutual Aid agreement with Sacramento County and the City of West Sacramento. Under the automatic aid agreement, all emergency calls are routed through a central dispatch center and the nearest resource responds to the call.

Statewide, California's mutual aid system is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation. Each jurisdiction retains control of its own personnel and facilities, but can give and receive help whenever it is needed. State

government, on the other hand, is obligated to provide available resources to assist local jurisdictions in emergencies.

To facilitate the coordination and flow of mutual aid, the state has been divided into six OES Mutual Aid Regions (and three administrative regions). The City of Sacramento is in Mutual Aid Region IV. Through this mutual aid system, State OES can receive a constant flow of information from every geographic and organizational area of the state. This includes direct notification for a state agency or department or from a local government official that a disaster exists or is imminent. In some cases, it also includes information that makes it possible to anticipate an emergency and mitigate its effects by accelerated preparations, or perhaps prevent a situation from developing to disaster proportions.

To further facilitate the mutual aid process, particularly during day-to-day emergencies involving public safety agencies, Fire and Rescue Law Enforcement Coordinators have been selected and function at the Operational Area (county wide), Mutual Aid Region (two or more counties), and at the State (OES) level.

■ Acute Care Facilities

There are seven private hospitals within the City of Sacramento that serve the region:

- Kaiser Permanente South Sacramento Medical Center (6600 Bruceville Road);
- Mercy General Hospital (4001 J Street);
- Methodist Hospital of Sacramento (7500 Hospital Drive);
- Shriners Hospital for Children – Northern California (2425 Stockton Boulevard);
- Sutter General Hospital (2801 L Street);
- Sutter Memorial Hospital (5151 F Street); and
- UC Davis Medical Center (2315 Stockton Boulevard).

All of these facilities are designed and equipped to handle multiple, simultaneous patients during everyday activities and emergency situations. Kaiser South is currently undergoing an expansion that would increase the size of the medical center by approximately one third.⁴³ The expansion, expected to be complete by 2010, would allow the hospital to serve as a Level II Trauma Center.⁴⁴ Mercy General Hospital has plans to expand beginning in 2008; construction is scheduled for completion in 2012.⁴⁵ Sutter General is currently expanding its midtown

43 Kaiser Permanente, South Sacramento Medical Center, <http://kpsouthsacramento.org/gr_breaking.php>, accessed November 16, 2007.

44 Ibid.

45 City of Sacramento, *Mercy General Hospital and Sacred Heart Parish School's Mixed-Use Project Draft Environmental Impact Report*, July 2007.

campus to include a Women's and Children's Center and medical offices.⁴⁶ Construction is expected to be completed by late 2010.⁴⁷ Sutter Memorial services are being consolidated onto the Sutter General campus. As a result, Sutter Memorial will be demolished or sold and used for other uses once expansion construction at Sutter General is complete. The UC Davis Medical Center is the only Level I trauma center in the region.⁴⁸

South Area Community Plan Area

The Kaiser Permanente South Sacramento Medical Center and Methodist Hospital of Sacramento are both located within the South Area Community Plan (SACP) area. As discussed above, Kaiser South is currently undergoing an expansion that would increase the size of the medical center and would allow the hospital to serve as a Level II Trauma Center.⁴⁹

Regulatory Context

■ Federal

Federal Emergency Management Agency

In March 2003, the Federal Emergency Management Agency (FEMA) became part of the U.S. Department of Homeland Security. FEMA's continuing mission within the new department is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

Disaster Mitigation Act of 2000

In 2000, the Disaster Mitigation Act was signed into law to amend the Robert T. Stafford Disaster Relief Act of 1988. Among other things, this new legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide, and is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of the Disaster Mitigation Act of 2000 include:

- Funding for pre-disaster mitigation activities.
- Developing experimental multi-hazard maps to better understand risk.
- Establishing state and local government infrastructure mitigation planning requirements.

46 City of Sacramento, *Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project Draft Environmental Impact Report*, July 2005.

47 Ibid.

48 UC Davis Health System, <www.ucdmc.ucdavis.edu/aboutus/>, accessed December 3, 2007.

49 Kaiser Permanente, South Sacramento Medical Center, <http://kpsouthsacramento.org/gr_breaking.php>, accessed November 16, 2007.

- Defining how states can assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP).
- Adjusting ways in which management costs for projects are funded.

The mitigation planning provisions outlined in Section 322 of the Act establish performance-based standards for mitigation plans and requires states to have a public assistance program (Advance Infrastructure Mitigation—AIM) to develop county government plans. The consequence for counties of failure to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding ten-year periods by the same type of event.

State

■ Office of Emergency Services

The OES serves as the lead state agency for emergency management in the state. OES coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the State through the Statewide Mutual Aid System. In California, the Standardized Emergency Management System (SEMS) provides the mechanism by which local government requests assistance. OES serves as the lead agency for mobilizing the State's resources and obtaining federal resources; it also maintains oversight of the State's mutual aid system.

During an emergency, OES coordinates the state's response efforts. It is also responsible for collecting, verifying, and evaluating information about the emergency, facilitating communication with local government and providing affected jurisdictions with additional resources when necessary. If necessary, OES may task state agencies to perform work outside their day-to-day and statutory responsibilities.

■ California Code of Regulations, Title 19

Title 19, Chapters 1 through 6, of the California Code of Regulations (CCR) establishes regulations related to emergency response and preparedness under the OES.

Local

■ City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of emergency services. For emergency services, some of the policies relevant to this

issue include coordinating with other agencies that are responsible for planning medical facilities to meet the health care needs of Sacramento, retaining hospitals, evaluating medical facility proposals while considering the consumer, providing emergency response service and participating in mutual aid agreements. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

■ City of Sacramento Multi-Hazard Emergency Plan

The Emergency Plan addresses the City of Sacramento's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. It provides operational concepts related to various emergency situations, identifies components of the local emergency management organization, and describes the City's overall responsibilities for protecting life and property during an emergency. The plan also identified possible sources of outside support (through mutual aid and specific statutory authorities) from other jurisdictions, and the private sector.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

There are no standards or ratios for the provision of emergency service personnel and equipment per a specific population. Therefore, the impact analysis qualitatively determines whether implementation of the 2030 General Plan would require new or expanded emergency response facilities in order to provide emergency services, the construction of which could result in physical environmental effects.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to the provision of emergency services within the entire Policy Area. The proposed General Plan does not include any policies regarding emergency services that are unique to any of the City's Community Plans or Focused Opportunity Areas.

PUBLIC HEALTH AND SAFETY (PHS)

Goal PHS 4.1 Response to Natural and Human-Made Disasters. Promote public safety through planning, preparedness, and emergency response to natural and human-made disasters.

Policies

PHS 4.1.1 Multi-Hazard Emergency Plan. The City shall maintain and implement the Multi-Hazard Emergency Plan to address disasters such as earthquakes, flooding, dam or levee failure, hazardous material spills, epidemics, fires, extreme weather, major transportation accidents, and terrorism.

- PHS 4.1.2 **Post-Disaster Response.** The City shall plan for the continued function of critical facilities following a major seismic or geologic disaster to help prevent major problems during post-disaster response such as evacuations, rescues, large numbers of injuries, and major clean up operations.
- PHS 4.1.3 **Emergency Operations Center.** The City, in conjunction with other local, State, and Federal agencies, shall ensure operational readiness of the Emergency Operations Center (EOC), conduct annual training for staff, and maintain, test, and update equipment to meet current standards.
- PHS 4.1.4 **Emergency and Disaster Preparedness Exercises.** The City shall coordinate with local and regional jurisdictions to perform emergency and disaster preparedness exercises to test operational and emergency plans.
- PHS 4.1.5 **Mutual Aid Agreements.** The City shall continue to participate in mutual aid agreements to ensure adequate resources, facilities, and other support for emergency response.
- PHS 4.1.6 **Education Programs.** The City shall sponsor and support education programs pertaining to emergency response, disaster preparedness protocols and procedures, and disaster risk reduction.
- PHS 5.1.1 **Facilities Location.** The City shall work with the County on identifying adequate sites for health and human services facilities within the city to ensure that such facilities are easily accessible, distributed equitably throughout the city in a manner that makes the best use of existing facilities, and are compatible with adjoining uses.

Thresholds of Significance

For the purposes of this EIR, impacts on emergency services are considered significant if the proposed General Plan would:

- require, result in, the construction of new, or the expansion of existing emergency service facilities related to the provision of emergency services.

Impacts and Mitigation Measures

A summary of all Emergency Services impacts and their levels of significance is located at the end of this technical section.

Impact 6.10-9	Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.
Applicable Regulations	<i>City of Sacramento Multi-Hazard Emergency Plan, California Code of Regulations, Title 19,</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>PHS 4.1.1 through PHS 4.1.5, PHS 5.1.1</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Development under the 2030 General Plan would increase the number of residents in the Policy Area by approximately 195,000 new residents, and as a result, would create an increased demand for emergency-related services. The addition of these new residents would place additional demand on acute care facilities and other medical facilities. However, most hospitals are private or non-profit organizations that are provided independent of city subsidies. Hospitals receive funds from private sources, the state, and/or the federal government. Individual hospital organizations are responsible for the sizing and siting of hospital facilities in compliance with federal and state requirements, which may or may not occur in coordination with local jurisdictions. As a result, individual hospital organizations assess a community's needs for acute care facilities and make decisions on where to locate hospitals. Although there may be additional demand placed on local hospitals due to an increased city population, private hospital organizations would be responsible for assessing the medical needs of the city and responding accordingly. Policy PHS 5.1.1 requires that the City coordinate with the County for the siting of health and human services facilities and to ensure that such facilities are located throughout the city. Implementation of these policies would ensure that appropriate human services and medical facilities would be distributed throughout the city.

In the event of a disaster such as a flood, more city residents would need to be evacuated and/or treated. In that case, disaster preparedness and response would need to be optimized. Policies PHS 4.1.1 through PHS 4.1.4 are aimed at ensuring that there is adequate disaster preparedness in the city. The City must maintain the Multi-Hazard Emergency Plan that includes information on disaster preparedness, ensure the operational readiness of the Emergency Operations Center (EOC), train staff and conduct emergency and disaster preparedness exercises to test operational and emergency plans, and sponsor and support educational programs pertaining to emergency response, disaster preparedness protocols and procedures, and disaster risk reduction. Policy PHS 4.1.5 ensures that the City participate in mutual aid agreements to ensure that adequate resources, facilities, and other support is provided in the event of a disaster.

Policy PHS 5.1.1 would help ensure that adequate human services and medical facilities are established in the city to serve the city population. However, as explained above, private hospital organizations would be responsible for assessing the medical needs of the city and responding accordingly. Policies PHS 4.1.1 through PHS 4.1.5 ensure that disaster preparedness and response would be adequate to serve the city population. Therefore, because future development anticipated under the 2030 General Plan would be required to comply with the general plan policies, adequate emergency services and response would be provided to serve the anticipated increase in demand. Through the implementation of these policies the proposed project would result in a ***less-than-significant impact***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context for this analysis considers buildout of the 2030 General Plan as well as existing development. By 2030, the number of housing units in the City of Sacramento is expected to be approximately 141,000 single-family and 135,000 multi-family units, with a total city population of approximately 641,000 residents. This analysis evaluates the impact of the 2030 General Plan on emergency services and response.

Emergency service providers including hospitals and trauma centers that serve residents within the Policy Area also serve areas that are outside of the Policy Area, including other parts of Sacramento County, surrounding counties, and, in some cases, other parts of the state. Growth and emergency service needs beyond the Policy Area, the closing of existing hospitals, or the opening of new hospitals could affect emergency services available within the Policy Area. Due to the fact that existing hospitals serve an area that is larger than the Policy Area, factors that are beyond the influence of the Sacramento 2030 General Plan may impact the provision of emergency services.

Impact 6.10-10	Implementation of the 2030 General Plan combined with other development served by emergency services in the region could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.	
Applicable Regulations	<i>City of Sacramento Multi-Hazard Emergency Plan, California Code of Regulations, Title 19,</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>PHS 4.1.1 through PHS 4.1.5, PHS 5.1.1</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

There are currently approximately 446,000 residents in the City of Sacramento. Assuming that implementation of the 2030 General Plan would add approximately 195,000 residents, there would be a 2030 population of approximately 641,000. As a result, there would be an increased demand for emergency related services including acute care facilities and other medical facilities and disaster preparedness and response.

Area hospitals serve entire regions, and in some cases, patients from well beyond the immediate vicinity. In Sacramento County, there are ten hospitals, seven of which are within the Policy Area; the other three are outside the Policy Area:⁵⁰

- Kaiser Permanente Medical Center – Sacramento (2025 Morse Avenue, Sacramento);
- Mercy Folsom Hospital (1650 Creekside Drive, Folsom); and
- Mercy San Juan Medical Center (6501 Coyle Avenue, Carmichael).

These facilities serve areas with large growth potential, and therefore may experience additional demand due to increased growth in the future. As discussed under Impact 6.10-11, although there may be additional demand placed on local hospitals due to an increased city population, private hospital organizations would be responsible for assessing the medical needs of the city and responding accordingly. The City shall coordinate with the County for the siting of health and human services facilities and to ensure that such facilities are located throughout the city (Policy PHS 5.1.1). Implementation of these policies would ensure that appropriate human services and medical facilities would be distributed throughout the city to assist with providing regional emergency services.

The Sacramento 2030 General Plan provides several policies that ensure that the City is prepared to respond to a disaster. Policies PHS 4.1.1 through 4.1.5 make sure that proper disaster preparedness and response is in place to ensure the safety of the city's population, including maintaining the Multi-Hazard Emergency Plan. Proper disaster response and coordination would be sufficient by maintaining resources that could adequately respond to an emergency situation and participating in mutual aid agreements to ensure that adequate resources, facilities, and other support is provided in the event of a disaster.

Policy PHS 5.1.1 would help ensure that adequate human services and medical facilities are established in the city to serve the city population. However, as explained above, private hospital organizations would be responsible for assessing the needs of the city and responding accordingly. Policies PHS 4.1.1 through PHS 4.1.5 ensure that disaster preparedness and response would be adequate to serve the city population. Therefore, because future development anticipated under the 2030 General Plan would be required to comply with the general plan policies, adequate emergency services and response would be provided to serve the anticipated increase in demand. Through the implementation of these policies the proposed project would result in a ***less-than-significant impact***.

Mitigation Measure

None required.

50 County of Sacramento, Department of Health and Human Services, Office of the Director, Local Acute Care Hospitals, <www.sacdhhs.com/article.asp?ContentID=1136>, accessed May 22, 2008.

South Area Community Plan

As discussed above, Kaiser Permanente South Sacramento Medical Center and Methodist Hospital of Sacramento are both located within the South Area Community Plan (SACP) area. Policy PHS 5.1.1 would ensure that these facilities are evaluated and expanded as necessary to serve the city's population.

Disaster preparedness and response for this area would be the same as discussed under Impacts 6.10-11 and 6.10-12. The SACP area is no more susceptible to disasters than the remainder of the Policy Area. Therefore, it is assumed that impacts resulting from projects in the SACP area would be the same as they would be in the rest of the Policy Area.

Focused Opportunity Areas

All of the six Focused Opportunity Areas are located in areas of the city that would not be any different with regards to emergency services and disaster preparedness and response than the remainder of the Policy Area. None of the Focused Opportunity Areas contain an acute care facility. Site-specific analysis for individual development projects within each Focused Opportunity Area would determine whether individual project sites would require additional mitigation beyond compliance with mandated federal, state, and City requirements.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the SACP and future development within the Policy Area could include potential impacts associated with emergency services and disaster preparedness and response. At this time specific project information is not available (i.e., individual project site characteristics, site-specific location) and standards differ based on the type of development (i.e., commercial, industrial, residential) to evaluate potential impacts associated with disaster response. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze potential impacts related to the provision of emergency services and disaster response.

SUMMARY OF PUBLIC SERVICES IMPACTS

LEVEL OF SIGNIFICANCE

	6.10-10 Implementation of the 2030 General Plan combined with other development served by emergency services in the region could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.	6.10-9 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.	6.10-8 Implementation of the 2030 General Plan combined with other development within the Sacramento Public Library Authority service area could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	6.10-10 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	6.10-6 Implementation of the 2030 General Plan combined with other development outside of the Policy Area would generate additional higher education students.	6.10-5 Implementation of the 2030 General Plan combined with other development within the seven school districts that extend outside the Policy Area would generate additional elementary, middle, and high school students.	6.10-4 Implementation of the 2030 General Plan would generate additional higher education students in the Policy Area.	6.10-3 Implementation of the 2030 General Plan would generate additional elementary, middle, and high school students in the Policy Area.	6.10-2 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of fire protection.	6.10-1 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of police protection.
Community Plan Areas										
Arden-Arcade	○	○	○	○	○	○	○	○	○	○
Central City	○	○	○	○	○	○	○	○	○	○
East Broadway	○	○	○	○	○	○	○	○	○	○
East Sacramento	○	○	○	○	○	○	○	○	○	○
Land Park	○	○	○	○	○	○	○	○	○	○
North Natomas	○	○	○	○	○	○	○	○	○	○
North Sacramento	○	○	○	○	○	○	○	○	○	○
Pocket	○	○	○	○	○	○	○	○	○	○
South Area	○	○	○	○	○	○	○	○	○	○
South Natomas	○	○	○	○	○	○	○	○	○	○
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable										

SUMMARY OF PUBLIC SERVICES IMPACTS

LEVEL OF SIGNIFICANCE

6.10-1 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing, facilities related to the provision of police protection.	6.10-2 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of fire protection.	6.10-3 Implementation of the 2030 General Plan would generate additional elementary, middle, and high school students in the Policy Area.	6.10-4 Implementation of the 2030 General Plan would generate additional higher education students in the Policy Area.	6.10-5 Implementation of the 2030 General Plan combined with other development within the seven school districts that extend outside the Policy Area would generate additional elementary, middle, and high school students.	6.10-6 Implementation of the 2030 General Plan combined with other development outside of the Policy Area would generate additional higher education students.	6.10-7 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	6.10-8 Implementation of the 2030 General Plan combined with other development within the Sacramento Public Library Authority service area could result in the construction of new, or the expansion of existing facilities related to the provision of library services.	6.10-9 Implementation of the 2030 General Plan could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.	6.10-10 Implementation of the 2030 General Plan combined with other development served by emergency services in the region could result in the construction of new, or the expansion of existing emergency response facilities related to the provision of emergency services.
Focused Opportunity Areas									
65 th Street/University Village	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arden Fair/Point West	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Florin LRT/Subregional Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meadowview LRT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
River District	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> = less than significant <input checked="" type="radio"/> = less than significant with mitigation incorporated <input checked="" type="radio"/> = significant and unavoidable									

6.11 Public Utilities



INTRODUCTION

This section of the EIR describes the existing public utilities in the Policy Area, and evaluates the effects of implementation of the Sacramento 2030 General Plan (proposed project) on those utilities. The public utilities evaluated in this section include Water Supply, Sewer and Storm Drainage, Solid Waste, Electricity and Natural Gas, and Telecommunications (Telephone and Cable television).

The goals and policies of the Utilities Element of the 2030 General Plan are designed to minimize negative impacts from development to utilities. These goals and policies provide direction to require expansion of water, wastewater, stormwater drainage, solid waste, energy, and telecommunications systems concurrent with new development, population, and employment growth. These policies also establish a level of service for all utilities in order to provide for high-quality and efficient utility services throughout the city.

Comments received in response to the NOP (see Appendix B) included concerns with increased energy demands, specifically electricity associated with future development. This issue is addressed in the Electricity and Natural Gas section below.

Information for this section is based on the City's General Plan Technical Background Report (TBR); the City's Urban Water Management Plan, adopted November 14, 2006; the City of Sacramento Water Distribution Master Plan; *Sacramento River Water Reliability Study Initial Alternatives Report*, March 2005; *Draft Sacramento River Water Reliability Study Water Intake and Treatment Plant Facility EIR/EIS*, March 2008; *City of Sacramento General Plan Update 2030 Focus Opportunity Areas Utility Analysis Technical Memorandum*, Nolte Engineering, November 2007; Water Supply Assessment prepared for the project (see Appendix M); Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plant, 2020 Master Plan Executive Summary; data from the California Integrated Waste Management Board; personal communication with the City of Sacramento Department of Utilities Solid Waste Division staff, and other service providers.

The TBR prepared for the project is available electronically on the City's website (<http://www.sacgp.org/documents.html#tbr>) and on CD at the back of this document.

WATER SUPPLY

The water supply section discusses the existing condition of the city's water supply and treatment and distribution systems. The section estimates the water demand resulting from buildout of the 2030 General Plan.

ENVIRONMENTAL SETTING

Municipal water services within the Policy Area are provided by the City of Sacramento and other water purveyors. The City of Sacramento provides municipal water service to the area within the city limits and to several small areas within the county of Sacramento.

The City's water facilities also include water storage reservoirs, pumping facilities, and a system of transmission and distribution mains. These facilities are shown on Figure 6.11-1.

A small area in the northeastern portion of the city (Swanston Estates) is served by the Sacramento Suburban Water District, although City and District staff have held discussions about the City taking this service area over at some point in the future. Areas outside of the city limits are served by the California American Water Company, the Tokay Park Water District, the Fruitridge Vista Water Company and the Florin County Water District, among others.

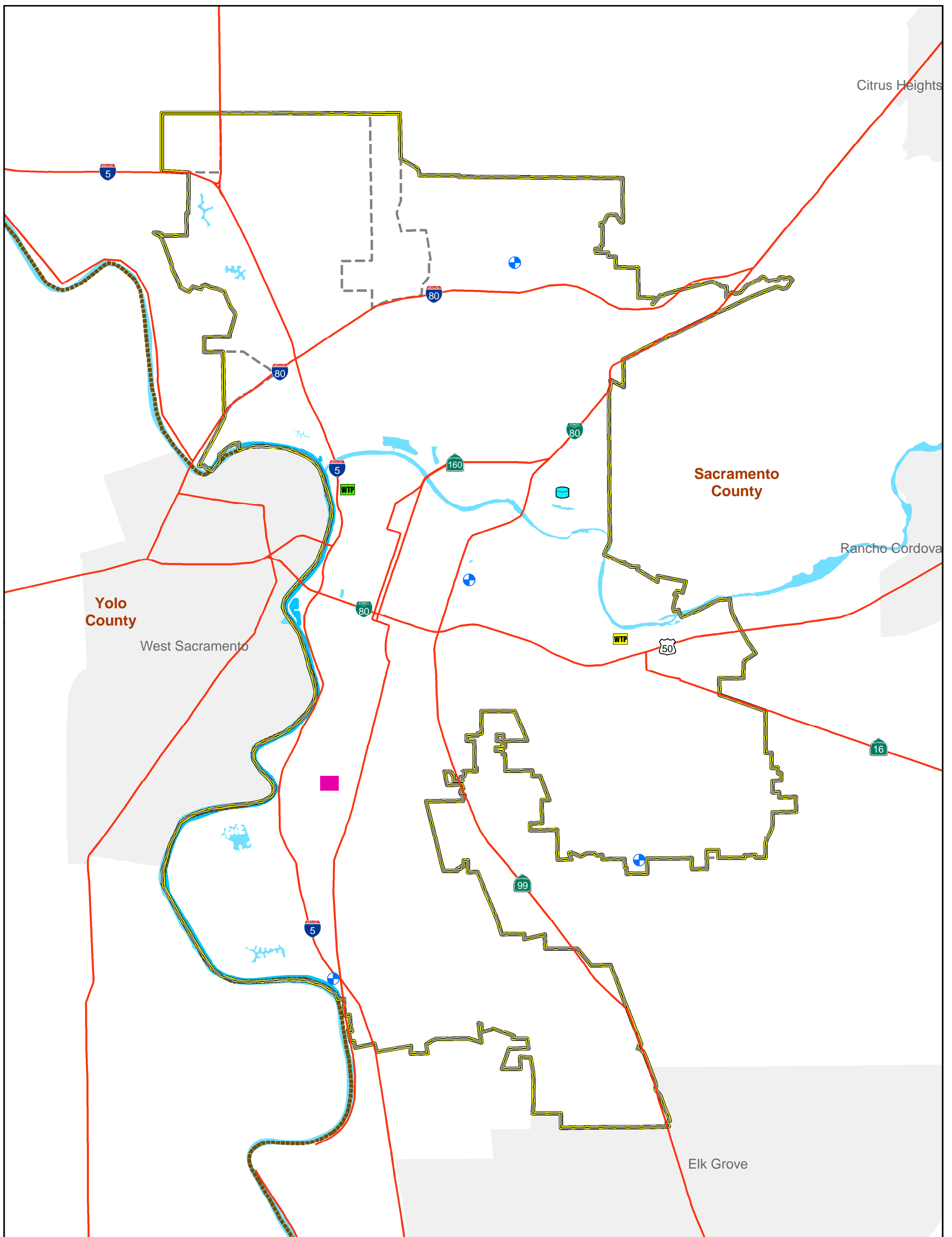
Infrastructure

Potable water infrastructure is discussed for both the distribution and treatment systems. Water system upgrades consisting of water treatment plants, transmission mains, and reservoirs have been analyzed in the City's 2005 Distribution Master Plan.










■ Distribution System

The City owns and operates the potable water distribution system that supplies potable water throughout the city. There are 18 high lift service pumps at the Sacramento River Water Treatment Plant (SRWTP) and the E.A. Fairbairn Water Treatment Plant (FWTP). The City also maintains pumping facilities at nine of the city's storage reservoirs. These pump stations are of varying sizes and capacities.

The City separates water mains into two distinct categories: distribution mains and transmission mains. Water distribution mains are typically four inches to 12 inches in diameter and used to supply water for domestic and commercial use, fire suppression, and for fire hydrants. As a policy, the City requires new commercial areas to install 12 inch mains in order to maintain fire flow capacity. Transmission mains are 18 inches and larger and are used to convey large volumes of water from the treatment plants to selected points throughout the distribution system. They are also used to transfer water to and from the storage reservoirs to meet



Legend

-  Reservoir
-  Water Tank
-  Sac. River Water Treatment Plant
-  Fairbairn Water Treatment Plant
-  Combined Wastewater Treatment Plant
-  City Limit and Sacramento River Place of Use
-  County Boundary
-  Policy Area
-  Water

**Figure 6.11-1
Water
Infrastructure
and Places
of Use**

Source: City of Sacramento 2008 

fluctuating daily and seasonal demands. The City determines placement of new water distribution facilities as development plans are formulated.

There are areas of the city where the transmission mains have been identified with specific deficiencies, outlined in the City's Distribution Masterplan.¹ Projects to overcome the deficiencies include the construction of reservoirs and pipelines throughout the city. Portions of the Central City system are deficient due to the poor condition of the aging water mains. The City is systematically replacing these old sections of pipe to alleviate the problem. In the North Sacramento area, there is a general lack of facilities in the area due to limited development. The City has stated that new transmission mains will need to be constructed to upgrade the system. In South Sacramento, pressure problems are a result of the distance that water needs to be transmitted from the treatment plants and a lack of storage reservoirs in the area.

■ Treatment System

The FWTP and the SRWTP divert water from the American and Sacramento rivers, respectively. The location of the treatment plants is identified in Figure 6.11-1. In 2003, the City finished an expansion of the SRWTP increasing its maximum capacity from 110 million gallons per day (mgd) to 160 mgd. The expansion also included the construction of a new intake structure on the Sacramento River to comply with current fish screen requirements. Expansion of the FWTP completed in 2005 increased the maximum capacity of the FWTP from 90 mgd to 200 mgd.

In 2002-2003, the FWTP treated an average of 59.2 mgd of water, while the SRWTP treated an average of approximately 56.8 mgd.

During low flows in the American River, diversions at the FWTP can be limited. The city of Sacramento along with the Placer County Water Agency (PCWA), the Sacramento Suburban Water Agency, and the City of Roseville have joined together to address the need for future water supply facilities to serve the region. The Sacramento River Water Reliability Study (SRWRS) was prepared which included a feasibility study to construct a new Sacramento River diversion and treatment plant along the Sacramento River located in Sacramento County which would provide additional water supply reliability and assist in meeting the future water demand of the Cities of Sacramento and Roseville as well as PCWA and Sacramento Suburban.² Public Law 106 – 554 authorized the SRWRS in 2002. The United States Bureau of Reclamation (USBR) is the federal lead agency and PCWA is the local lead agency for the SWRSR project. The Draft EIR for the SRWRS project is scheduled to be publicly released in fall 2008.

1 City of Sacramento, 2005. Distribution Masterplan prepared by West Yost Associates, p. 10-5, Table 10-3.
 2 Sacramento River Water Reliability Study. Final Version March 2005. Appendix C, Table C-6.

Water Supply

The City's water supply comes from the American and Sacramento rivers and groundwater pumped from the North and South American Subbasins. On average, groundwater use has consisted of 15 to 20 percent of the city's supply between 1999 and 2006. Historical deliveries are shown in Table 6.11-1, below.

Year	Surface Water and Groundwater Supplies			Total Water Delivered				
	Population	Annual Surface Water Delivered (acre-ft/year)	Annual Groundwater Delivered (acre-ft/year)	Maximum Day Water Delivered (mgd)	Maximum Day to Average Day Ratio	Total Annual Water Delivery (acre-ft/year)	Average (mgd)	Percent change
1998	392,800	93,131	22,692	212.7	2.06	115,822	107.5	
1999	396,200	109,695	23,694	219.7	1.85	133,389	112.3	15.2%
2000	405,963	110,150	24,130	213.0	1.78	134,280	103.4	0.7%
2001	418,711	115,984	24,156	214.5	1.71	140,140	119.1	4.4%
2002	426,013	115,628	23,236	226.8	1.83	138,864	119.9	-0.9%
2003	433,400	114,674	25,607	223.2	1.78	140,281	125.2	1.0%
2004	441,000	128,903	17,924	N/A	N/A	146,827	131.1	4.7%
2005	452,959	116,452	22,521	N/A	N/A	138,974	124.1	-5.3
2006	N/A	120,150	18,522	239.9	1.21	138,671	123.5	-0.2%

Notes:
N/A = Not available.
Source: Adapted from City of Sacramento, Department of Utilities, Operational Statistics Reports, PBS&J, 2007.

■ Surface Water

The City possesses surface water rights to divert both Sacramento and American river water. In addition, the City entered into a water rights settlement contract with the USBR in 1957. The essence of the City/USBR settlement contract is that the City agreed (1) to limit its combined rate of diversion under its American River water rights permits to a maximum of 675 cubic feet per second (cfs), up to a maximum amount of 245,000 acre-feet per year (AFA) in the year 2030, and (2) to limit its rate of diversion under its Sacramento River water rights permit to a maximum of 225 cubic cfs and a maximum amount of 81,800 AFA. This limits the city's total diversions of Sacramento and American river water under its water right permits to 326,800 AFA in the year 2030, as shown in Table 6.11-2.

Source	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL	205,000	227,500	252,000	248,000	304,000	326,800

Source: PBS&J, 2007 adapted from the City of Sacramento USBR Contract.

In return, the contract requires USBR to make available at all times enough water in the rivers to enable the agreed-upon diversions by the City. The City agreed to make an annual payment to USBR for Folsom Reservoir storage capacity used to meet the USBR's obligations under the contract, beginning with payment for 8,000 acre-feet of storage capacity in 1963 and building up, more or less linearly, to payment for the use of 90,000 acre-feet of storage capacity in 2030. The settlement contract is permanent and generally not subject to deficiencies. The City's water rights, in conjunction with the USBR contract, provide the city with a very reliable and secure water supply.

Water Forum Agreement

The City's diversions at the FWTP currently are subject to limitations specified in the Water Forum Agreement (WFA). The Water Forum was started in 1993 by a group of water managers, local governments, business leaders, agricultural leaders, environmentalists, and citizen groups with two "co-equal" goals: to provide a reliable and safe water supply through the year 2030, and to preserve the wildlife, fishery, recreational, and aesthetic values of the Lower American River. After six years of intense interest-based negotiations, the Water Forum participants approved the 2000 WFA.

As part of the WFA, each water purveyor signed a purveyor specific agreement that specified that purveyor's Water Forum commitments. The City's purveyor specific agreement limits the quantity and rate of water diverted from the American River at the FWTP during two hydrologic conditions: extremely dry years (i.e., "Conference Years") and periods when river flows are below the so-called "Hodge Flow Criteria" issued by Judge Richard Hodge in the *Environmental Defense Fund v. East Bay Municipal Utility District* litigation. Hodge flow conditions exist when the American River flows are below 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and, 1,750 cfs from July through October 14.

At the time that the City's purveyor specific agreement was developed, there was a common understanding among the Water Forum participants that the existing flow standard applicable to the operation of USBR's water storage facilities above the Lower American River was outdated, and the parties agreed to use the Hodge Flow Criteria as a surrogate for the minimum flows necessary to preserve and protect instream resources. At that time, the Hodge flows provided the most fully developed instream flow criteria available for the Lower American River, even though these criteria were developed in connection with another entity's proposed diversions upstream at the Folsom South Canal, did not apply to Sacramento or the FWTP, and, in view of the updated instream flow management plan currently being developed by the Water Forum and USBR, are now outdated. Implementation of the flow management plan currently being developed may render these limitations at the FWTP unnecessary, and may provide a basis for

removing or modifying these limitations.³ Without these limitations, the City would require a lesser increment of additional capacity in water supply facilities to meet future demands. However, to ensure full compliance with CEQA, this EIR evaluates the City's future water supply capacity needs based on the assumption that the existing Hodge limitations at FWTP will remain in place, so that water supply capacity duplicative of capacity already existing at FWTP will be needed to provide water supply reliability when the city cannot use such FWTP capacity due to the applicability of the Hodge flow limitations.

A "Conference Year" exists when the California Department of Water Resources (DWR) projects an annual unimpaired flow into Folsom Reservoir of 550,000 AFA or less, or the projected March through November unimpaired flow into Folsom Reservoir is less than 400,000 AFA. During Conference Years, the City's purveyor specific agreement limits diversions of water treated at the FWTP to 155 cfs and 50,000 AFA. Conference Years have occurred on the American River only twice during the 72 year period of record historical hydrology.

The Hodge Flow conditions and the Conference Year conditions are collectively referred to as the City's "purveyor specific agreement limitations."

The City's purveyor specific agreement limits the diversion rate at the FWTP when American River flows bypassing the FWTP are less than the Hodge Flow Criteria. Based on the CALSIM II model analysis of the 1922 to 1994 climate data, 59 percent of years will experience flows that are less than Hodge flow conditions at some time during the peak months of June through August. In comparison, when flow passing the FWTP is greater than the Hodge Flow Criteria and Conference Year conditions do not exist, the purveyor specific agreement allows diversions of American River water up to the FWTP's current maximum rate of 310 cfs (or 200 mgd). The Hodge Flow limitations result in peak day limitations but, unlike the Conference Year limitation, do not directly limit the city's annual diversion amount.

When the City's use of the FWTP is limited by the City's purveyor specific agreement limitations (as well as when these limitations are not in effect), the city can use available capacity in the SRWTP to divert water under its American River entitlements. During a Conference Year (drought) condition, assuming a maximum diversion and treatment of 50,000 AFA at the FWTP and a maximum diversion and treatment capacity of 179,400 AFA at the Sacramento WTP, the current drought limiting scenario (Conference Year) using existing facilities allows a surface water production of 229,400 AFA.

3 The City's purveyor specific agreement includes provisions recognizing that the City may seek modification to the FWTP limitations if justified by analysis showing that increased diversions will not have significant adverse effects on the American River below the FWTP, such as might be the case if an updated flow management plan is adopted. This would be subject to separate environmental review and is not part of this project.

■ Groundwater

The City currently operates 33 permitted municipal groundwater supply wells within the city limits that pump from the North American and South American Groundwater basins, as shown in Figure 6.11-2. The city wells supply the city with about 22,500 AFA (20 mgd) of municipal water supply, based on the city's average groundwater deliveries from 1998 to 2006 (see Table 6.11-1). The City also operates 18 wells for the irrigation of parks.

Groundwater Basin

The wells pump primarily from the DWR North American Subbasin (5-21.64), with two active drinking water wells pumping from the South American Subbasin (5-21.65).

The North and South American Subbasins are described in the 2003 update to the DWR Bulletin 118-3. The underlying geology or hydrostratigraphy of both basins consists of a variety of geologic formations that make up the water bearing units. There are two aquifer systems: an upper unconfined system consisting of the Victor, Fair Oaks, Laguna, Modesto Formations, and a lower, semi-confined system in the Mehrten Formation. These geologic formations are composed of lenses and layers of inter-bedded sand, silt, and clay with coarse-grained stream channel deposits. The groundwater contained in the upper aquifer system of the Victor, Fair Oaks, Laguna, Modesto, Riverbank, and Turlock Lake Formations along with Arroyo Seco and South Fork Gravels is of superior quality compared to that in the lower semi-confined system, mainly because the water in the Mehrten Formation is higher in iron and manganese, and requires more treatment. The upper unconfined system only requires chlorination treatment to be potable.⁴ Please see also the discussion in section 6.5, Geology, Soils and Mineral Resources in this Draft EIR.

In the South American Subbasin, the DWR Bulletin estimates groundwater withdrawals are in balance with recharge for the Subbasin. The conclusion is supported by groundwater levels which have stabilized after recorded declines since the 1960s. As a result of the Water Forum Successor Effort, the Sacramento County Groundwater Forum (SCGF) has developed the Sacramento County Groundwater Management Plan (SCGMP).

The North American Subbasin includes the Policy Area; DWR Bulletin 118 references a 1990 land-use based water balance for the subbasin which estimated groundwater withdrawals in excess of 285,000 AFA above annual recharge. The Sacramento Groundwater Authority (SGA) prepared a groundwater management plan (GMP) in 2003 for that portion of the Subbasin north of the American River and up to the Sacramento County line. PCWA prepared a groundwater storage study for the northern half of the North American Subbasin. The groundwater reports

4 California Department of Water Resources, California's Groundwater, Bulletin 118, 2003.

by PCWA and SGA document declining groundwater levels prior to 1992. Since 1992 a reduction of groundwater pumping has resulted in stabilized groundwater levels.^{5,6}

The SCGF and the SGA were developed in a consensus-based process, and these included stakeholders throughout both basins. GMPs are adaptive management tools and represent a critical step in establishing a framework for maintaining a sustainable groundwater resource for the various users overlying the basins. The GMPs are consistent with the provisions of California Water Code sections 10750 et seq. Within these programs the SGA and the SCGF will continually assess the status of the groundwater basin and make appropriate management decisions.

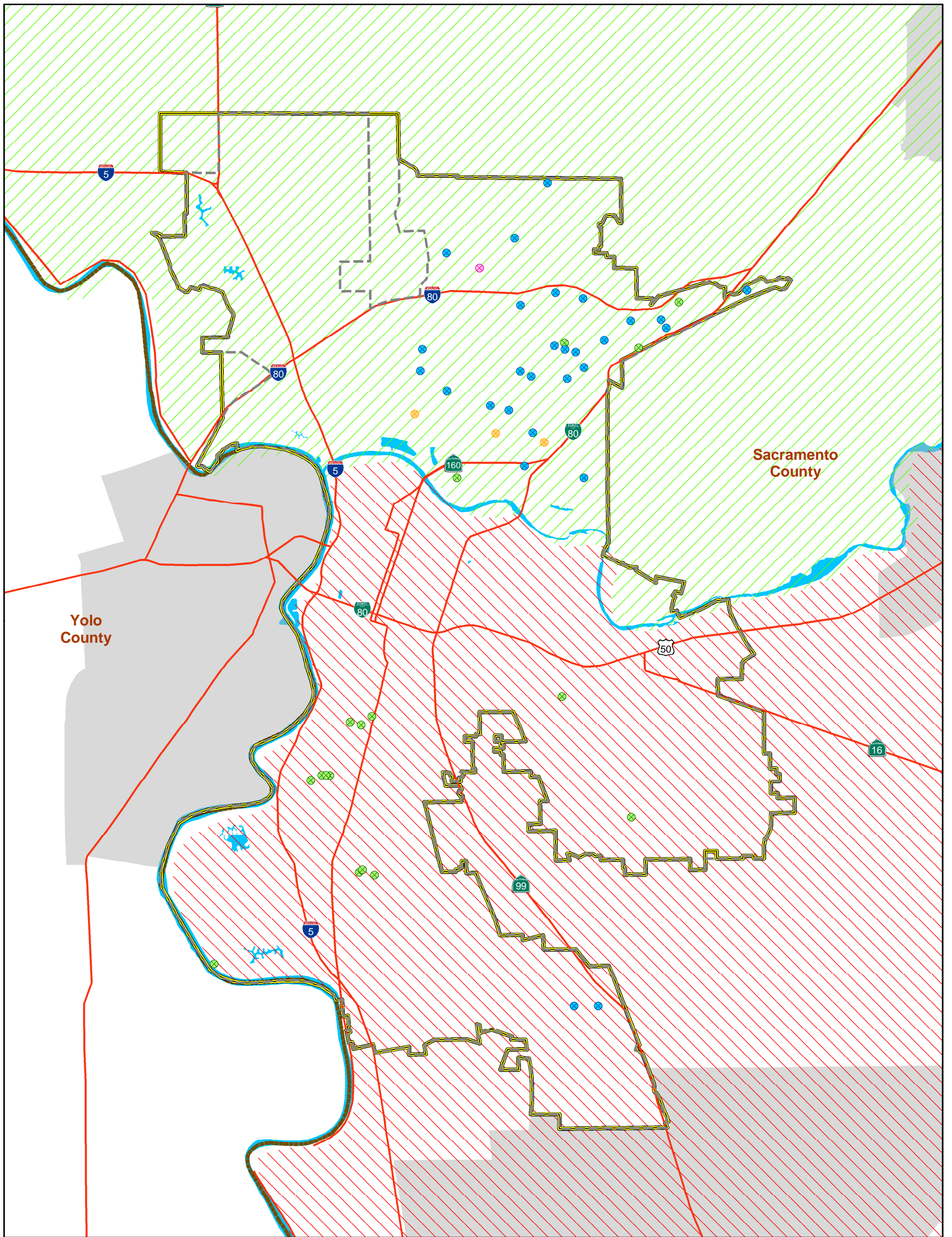
The City is a member of both the SGA and SCGF. The SGA and SCGF share a common goal of the responsible management of the groundwater basin through a commitment to not exceed the long-term sustainable yield of the Subbasins. The SGA sustainable yield is estimated to be approximately 131,000 AFA and the SCGF sustainable yield is estimated to be approximately 273,000 AFA according to the WFA and GMPs. The sustainable yields determined through the WFA provide for sufficient groundwater pumping to meet the projected level of groundwater demand through 2030. The process to determine the sustainable yield took into account future pumping by the various groundwater users within the applicable subbasin, water quality, dewatering of wells, groundwater pumping costs, and ground subsidence.

SGA and SCGF members, in accordance with the WFA, are proceeding with a long-term conjunctive use program to responsibly manage and use the groundwater systems. A conjunctive use program accounts for the annual climatic variability of the region, whereby in normal or wet years of precipitation the water providers will divert more surface water and reduce or eliminate groundwater use, allowing the groundwater systems to recharge. This requires facilities for diversion and treatment of surface water with capacity that is sufficient to meet peak day demands with surface water during normal and wet years. In dry years when surface water diversions are reduced to maintain in-stream flows, groundwater pumping would be increased as needed to supplement the reduced diversions from the river systems.

As part of this groundwater management strategy, the SGA released a Basin Management Report (BMR) for 2004-2005 that updates the current SGA uses of the North American Subbasin. The BMR calculated groundwater pumping by SGA signatories at 91,096 AFA; this is below the agreed-upon sustainable yield of 131,000 AFA. Notably, the BMR shows that between 1997 and 2004 a cone of depression near the central part of the SGA area has rebounded by approximately five feet as a result of less groundwater pumping and utilizing more surface water by the members of the SGA.

5 Western Placer County Groundwater Storage Study. Final Report. December 2005, p. 3-9.

6 Sacramento Groundwater Authority, Groundwater Management Plan, 2003, p. 17.



Legend

- | | | |
|-------------------|----------------------------------|-----------------|
| Wells | Groundwater Basin | City Limit |
| Active Irrigation | South American Groundwater Basin | County Boundary |
| Active Potable | North American Groundwater Basin | Policy Area |
| Standby | | Water |
| Distribution | | |

**Figure 6.11-2
City of Sacramento
Well Locations and
Groundwater
Management Areas**

Source: City of Sacramento 2007

■ Recycled Water

The City is participating in an advisory committee to develop a Water Recycling Master plan with the Sacramento Regional Sanitation District (SRCSD). The advisory committee had its first meeting in December 2005. Recycled water, if used within the city, would likely be used for irrigation purposes only. Recycled water is considered safe when appropriately used and meets state and federal regulations for its intended purposes, which, in this case, is for non-potable uses such as landscape irrigation. Financial incentives, such as subsidized water pricing, may encourage recycled water use within the city. Target areas for subsidized recycled water may include the Bartley Cavanaugh Golf Course, and public green spaces near the Regional Wastewater Treatment Plant, or other scalping plants/recycled water facilities in the future. At this time the City is working with the SRCSD to explore potential future usage. No recycled water is currently included in the City of Sacramento supply projections.

■ Water Conservation

Even though the City possesses a reliable long-term water supply, the City is committed to reducing the demand for potable water through conservation. This is done through implementation of Demand Management Measures (DMMs); participation in the Sacramento Water Forum, which includes conformance with the WFA and implementation of Best Management Practices (BMPs); and, participation in the Regional Water Authority (RWA), which includes participation in the Water Efficiency Program. The majority of the following information is provided in the City's Urban Water Management Plan (UWMP).

In 1991, the City became a signatory to the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California. The purpose of the MOU was to expedite implementation of reasonable water conservation measures in urban areas and to establish appropriate assumptions for use in calculating estimates of reliable future water conservation savings. The 1991 MOU originally listed sixteen BMPs for water conservation. In 1999, the MOU was revised to include fourteen BMPs. These fourteen BMPs are substantially similar to the fourteen DMMs listed in the Urban Water Management Planning Act.

The City is also a member of the Sacramento Water Forum, described previously in this section. The WFA contains seven elements which all signatories to the WFA agreed to endorse and, where appropriate, participate in. One of the elements in the WFA is related to water conservation. The Water Conservation Element of the WFA was negotiated among all stakeholders and published in August 1997. The Water Conservation Element requires the development and implementation of a water conservation plan which includes fourteen BMPs.

The City is also a member of the RWA, which is a joint powers authority that serves and represents the interests of over twenty water providers and associated agencies in the greater Sacramento area. The RWA has a Water Efficiency Program, which is a large-scale effort

designed to help participating agencies fulfill commitments to implement their Water Forum water conservation plans. The program provides services with oversight via an advisory committee. Through this regional effort, purveyors are better able to manage BMP implementation projects through coordination and training of staff, regional marketing of services to customers and leveraging resources. Program components include regional public outreach and school education programs, large landscape irrigation efficiency and leak detection programs, and partnerships with other agencies and organizations for toilet replacement rebates and distribution of water-efficiency products targeting the restaurant and food service industry.

Water conservation in the City is accomplished through implementation of DMMs, the CUWCC's BMPs, and the WFA BMPs. The CUWCC MOU includes fourteen BMPs that are substantially similar to the DMMs. The WFA includes fourteen BMPs, which are similar to the DMMs and CUWCC BMPs. The primary difference between the DMMs/CUWCC's BMPs and the WFA BMPs is that the WFA BMPs do not include high efficiency washing machine rebate programs or wholesale agency programs.

A brief description of the City's activities with respect to each DMM is provided below. Specific data was obtained from the City's Water Conservation Coordinator, the City's CUWCC Annual Reports for 2001 through 2004, and the Water Forum Annual Reports. Additional information is included in Chapter 8 of the City's UWMP.

DMM 1: Water Survey Programs for Single Family and Multi-Family Residential Customers

Corresponding BMPs:

- CUWCC BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers; and
- Water Forum BMP 1: Interior and Exterior Water Audits and Incentive Programs for Single Family and Multi-Family Residential and Institutional Customers.

The City began offering single-family and multi-family residential customers water surveys in 2002. Water survey programs typically involve residential interior and exterior water use reviews, whereby staff assists homeowners in identifying potential leaks and areas for water savings. Interior fixtures are checked and leak tested, and irrigation systems and timers are evaluated. Residents are generally provided with recommendations for improvements, plumbing retrofit kits and water conservation literature. The program is ongoing; offers are made annually to customers and advertised using bill inserts and a water conservation newsletter.

DMM 2: Residential Plumbing Retrofit

Corresponding BMPs:

- CUWCC BMP 02: Residential Plumbing Retrofit; and
- Water Forum BMP 2: Plumbing Retrofit of Existing Residential Accounts.

Under this program, water-conserving devices such as high-quality low-flow showerheads, toilet-displacement devices, toilet flappers and faucet aerators are distributed to customers. Although the City's residential plumbing retrofit program is offered to all customers, the city's program targets neighborhoods built before 1991 and low or moderately low income areas. The program is ongoing.

DMM 3: System Water Audits, Leak Detection and Repair

Corresponding BMPs:

- CUWCC BMP 03: System Water Audits, Leak Detection and Repair
- Water Forum BMP 3: Distribution System Water Audits, Leak Detection and Repair

The City's approach for implementation of this DMM is different for the City's unmetered connections and metered connections. The City's infrastructure that delivers water to retail customers is the same as the infrastructure that delivers water to wholesale customers.

For unmetered connections, the City's program includes the following:

- An annually updated system map of type, size and age of pipes, pressures and leak history;
- Installation of devices or use of other methods designed to identify areas with greater than 10 percent losses;
- An on-going meter calibration and replacement program for all production and distribution meters;
- An on-going leak detection and repair program focused on high probability leak areas identified by the system map (based on pipe age and material type); and
- A complete system-wide leak detection program, repeated no less often than every ten years, unless there are special circumstances, such as age of system or planned main replacement.

For metered connections, the City's program includes the following:

- An annual system water audit, determining the difference between production and sales (to determine quantity of unaccounted-for water);

- An annually updated system map of type, size and age of pipes, pressures and record of leaks and other historic data;
- An on-going meter calibration and replacement program;
- An on-going leak detection/repair program focused on high probability leak areas identified by the system map (based on pipe age and material type); and
- A complete system-wide leak detection program, repeated when the system water audit determines losses to be greater than 10 percent, or when the losses are less than 10 percent if the program is determined to be cost effective.

Water system audits are conducted annually for areas with metered connections, the leak detection and repair program is on-going for both unmetered and metered connections, and the system-wide leak detection/repair program is implemented when water system audits determine losses to be greater than 10 percent, or when determined to be cost effective.

DMM 4: Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections

Corresponding BMPs:

- CUWCC BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections; and
- Water Forum BMP 4: Non-Residential Meter Retrofit & Residential Meter Retrofit.

Most of the city's residential water service accounts are unmetered and are billed at a graduated flat rate based on the number of rooms in the residence receiving the water service. Approximately 90 percent of the City's commercial water service connections are metered, and the City has an ongoing commercial meter retrofit program.

Historically, Section 11 of the Sacramento City Charter prohibited the installation of water meters on residential water service pipes, and did not allow the City to require residential meter retrofits. However, Section 11 of the City Charter has now been completely superseded by State law, specifically the passage of SB 229 and AB 2572. Under SB 229 (Water Code Section 525), all new residential connections installed after January 1, 1992 have been provided with a meter.

In 2004, AB 2572 enacted Water Code Section 527, that now requires an urban water supplier to: (1) install water meters on all service connections located within its service area on or before January 1, 2025; and (2) charge metered rates to customers that have water service connections for which meters have been installed, beginning no later than January 1, 2010 (provided that metered billing may be delayed for one annual seasonal cycle of water use for services being converted from flat rate to metered billing). AB 2572 became effective January 1, 2005. To meet this requirement, the City has initiated a program to retrofit approximately 98,000 residential water service connections with water meters. The estimated

cost of the residential meter retrofit program is approximately \$214 million, which has been and will be funded on an ongoing basis by increases in the City's water service rates.

Wholesale water deliveries are metered and wholesale customers pay for water based on the amount they receive.

Programs for retrofitting and billing on a commodity basis are ongoing. The meter installation program will be completed by 2025, in compliance with AB 2572. The metered billing rate program will be implemented by 2010, in compliance with AB 2572.

DMM 5: Large Landscape Conservation Programs and Incentives

Corresponding BMPs:

- CUWCC BMP 05: Large Landscape Conservation Programs and Incentives;
- Water Forum BMP 5: Large landscape water audits and incentives for commercial, industrial, and institutional (CII) and irrigation accounts;
- Water Forum BMP 6: Landscape water conservation requirements for new and existing commercial, industrial, institutional and multi-family developments; and
- Water Forum BMP 12: Landscape water conservation for new/existing single family homes.

In 2003, the City started a large landscape conservation program. The City's program for large landscape conservation includes: conducting landscape surveys for customers with large landscapes (primarily parks, schools and golf courses), including irrigation system checks and review and development of irrigation schedules; providing landscape irrigation training; offering financial incentives to improve landscape water use efficiency; and providing information to customers regarding watering guidelines and regulations, and tips on landscape design, plant selection and other free programs.

The City has adopted water conserving landscape requirements which are specified in the City Municipal Code (Title 15 Building and Construction, Chapter 15.92 Landscaping Requirements for Water Conservation). These requirements define standards and procedures for the design, installation and management of landscapes in order to utilize available plant, water, land and human resources to the greatest benefit of the people of the city.

DMM 6: High-Efficiency Washing Machine Rebate Programs

Corresponding BMPs:

- CUWCC BMP 06: High-Efficiency Washing Machine Rebate Programs; and
- WFA: No corresponding BMP.

High-efficiency washing machines use about 50 percent less water than conventional machines, using only 20 to 30 gallons of water per load, compared to 40 to 45 gallons for conventional top-loading washers. The estimated annual savings for a typical household is about 5,000 gallons per year. The City does not currently have its own residential rebate program; however, customers in the city's water service area may be eligible for rebates from either the area's electric utility, SMUD, or gas utility, Pacific Gas & Electric (PG&E). The City is planning to participate in CUWCC's LightWash Program, which offers washing machine rebates of up to \$400 for qualifying washing machines for multi-family or institutional common area laundry facilities, businesses with on-premise laundries or coin laundry stores. California energy utility ratepayers under the auspices of the California Public Utilities Commission primarily fund the program.

DMM 7: Public Information Programs

Corresponding BMPs:

- CUWCC BMP 07: Public Information Programs; and
- Water Forum BMP 7: Public Information.

The City coordinates and participates with the California Water Awareness Campaign, Water Education Foundation and the RWA in developing and conducting its public information programs. Water conservation messages are conveyed to customers using utility bill inserts, displays at City Hall, employee classroom presentations, distribution of a semi-annual newsletter called "Water Spots", messages occurring on the July through September customer billing statements, radio advertisements, television appearances, presentations at community meetings and booths at various community events. In addition to these public information events, there are a number of water conserving demonstration gardens in and around the city's service area. These gardens, sponsored by the City and other local water suppliers, demonstrate the use of water conserving plants and landscaping practices. The schedules for implementation of all events related to public information programs are ongoing.

DMM 8: School Education Programs

Corresponding BMPs:

- CUWCC BMP 08: School Education Programs; and
- Water Forum BMP 8: School Education.

In 2002, the City's Water Conservation staff launched a school outreach program designed to teach children in second through sixth grades about the importance of water conservation. The hour-long program includes a water conservation video, various interactive activities and free materials such as activity booklets, stickers, pencils and water bottles.

Since 1995, the City has supported two school education programs. One is the Newspaper in Education (NIE) program which involves the Sacramento Bee newspaper and local teachers. The goal of the NIE program is to provide teachers, students and parents with innovative tools to teach and motivate students to learn while having fun with real life activities. Students have the opportunity to learn about the stock market, consumer math, advertising, environmental issues (including water conservation) and much more while discovering the connection between the classroom and the real world. The second program involves the Sacramento Theater Company, which performs skits at school assemblies regarding water conservation and stormwater issues.

Implementation of all programs is ongoing. DMM 9: Conservation Programs for Commercial, Industrial and Institutional Accounts.

Corresponding BMPs:

- CUWCC BMP 09: Conservation Programs for Commercial, Industrial and Institutional Accounts; and
- Water Forum BMP 9: Commercial, Industrial and Institutional (CII) Water Conservation.

Since 2003, the City has offered and performed water use surveys for its commercial, industrial and institutional customers. The surveys include a site visit, evaluation of all water-using apparatus and processes and a report identifying recommended efficiency measures. The City has also participated in RWA's "Rinse and Save" program. Under this program, high velocity, high-performance pre-rinse nozzles are installed free of charge in restaurants. Use of these nozzles reduces the amount of hot water needed to pre-rinse dishes for the dishwasher. Implementation of all programs is ongoing.

DMM 9: Commercial, Industrial and Institutional Ultra-Low Flow Toilet Replacement Program

Corresponding BMPs:

- CUWCC BMP 09a: Commercial, Industrial and Institutional (CII) Ultra-Low Flow Toilet Replacement Program; and
- Water Forum BMP 16: Ultra-Low Flush Toilet Replacement Program for Non-Residential Customers.

In 2003, the City began a CII ultra-low flow toilet (ULFT) replacement program which involved rebates from both the City and the County Sanitation District. In 2004, 90 toilets were replaced and 570 toilets were replaced in 2005. Implementation is ongoing.

DMM 10: Wholesale Agency Programs

Corresponding BMPs:

- CUWCC BMP 10: Wholesale Agency Programs.

The City's water system serves primarily retail customers, with only 1.9 percent of current water demand attributable to wholesale customers, although this percentage is anticipated to significantly increase in future years as more wholesale water supply agreements are approved. The City's wholesale customers that currently receive water from the City are California American (as successor to Citizens Utilities), Sacramento Suburban Water District, and the Sacramento County Water Agency (serving Zone 50 and the Sacramento International Airport). All of these entities are members of the Water Forum, and have recently implemented their own water conservation programs, which are being regionally coordinated through the RWA Regional Water Efficiency Program Advisory Committee, of which the City is a member.

The City's wholesale water service agreements have a built-in conservation incentive since the wholesale water charges are determined based on the amount of water delivered at a metered rate. In addition, all of the City's wholesale customers administer their own retail water conservation programs as noted above. The City provides conservation assistance to its wholesale customers via participation in the RWA's Regional Water Efficiency Program (Program). The City pays annual dues to the RWA; a portion of the dues goes to funding the Program.

DMM 11: Conservation Pricing

Corresponding BMPs:

- CUWCC BMP 11: Conservation Pricing; and
- Water Forum BMP 11: Conservation Pricing for Metered Accounts.

Only about seven percent of the City's total customer accounts are metered and billed based on usage. This is primarily because the City Charter has, until recently superseded by State law (as discussed above), prohibited the metering of residential accounts. For the City's unmetered customers (primarily single-family and multi-family residential), the City currently bills a graduated flat monthly water rate based on the number of rooms in the residence. Non-residential unmetered customers are currently billed a flat monthly water rate depending on the type and size of establishment, although 90 percent of the City's nonresidential accounts currently receive metered service. For the City's metered customers (including commercial, industrial, institutional and irrigation), the City has a uniform water rate structure which includes a monthly basic service charge based on water meter size and a monthly water use charge based on actual monthly water use.

Sewer service rates also have a similar structure. Unmetered residential and other customers are billed based on a flat monthly sewer rate based on the number of rooms in the residence or type and size of establishment. Metered customers are billed based on a uniform sewer rate structure based on water meter size and actual monthly water use.

As described in DMM 4, State law requires installation of water meters on all new connections (Water Code Section 525), as well as the retrofit of all existing unmetered connections not later than January 1, 2025 (Water Code Section 527). Section 527 also requires that urban water suppliers charge metered rates to customers that have water service connections for which meters have been installed, beginning not later than January 1, 2010 (provided that metered billing may be delayed for one annual seasonal cycle of water use for services being converted from flat rate to metered billing).

Metered billing rate structure for all service connections with meters is being developed for implementation not later than January 1, 2010, in compliance with AB 2572.

DMM 12: Water Conservation Coordinator

Corresponding BMPs:

- CUWCC BMP 12: Water Conservation Coordinator; and
- Water Forum BMP 12: Water Conservation Coordinator.

The Department of Utilities Water Conservation Administrator manages the City's water conservation program and supervises a water conservation program staff of seven people, including the Utility Services Inspector, as well as clerical and field personnel. The City provides conservation assistance to its wholesale customers via participation in the RWA Regional Water Efficiency Program (Program) Advisory Committee. Implementation of this program is ongoing.

DMM 13: Water Waste Prohibitions

Corresponding BMPs:

- CUWCC BMP 13: Water Waste Prohibition; and
- Water Forum BMP 13: Water Waste Prohibition.

The Sacramento City Code (Title 13 Public Services, Chapter 13.04 Water Service System, Article XI Water Conservation) prohibits the waste or runoff of water, establishes various limits on outdoor water use, and specifies applicable penalties. The City originally adopted this ordinance in 1990 (Ordinance No. 90-017) and later revised it in 2001 (Ordinance No. 2001-033). The City also has a Water Waste hotline and responded to 1,009 water waste calls in 2004 and 879 calls in 2005. Water waste prohibitions are ongoing. Additional drought

restrictions would be enacted by the City if water supply conditions required additional conservation measures.

DMM 14: Residential Ultra-Low Flush Toilet Replacement Programs

Corresponding BMPs:

- CUWCC BMP 14: Residential Ultra-Low-Flush Toilet Replacement Program; and
- Water Forum BMP 13: Ultra-Low Flush Toilet Replacement Program For Residential Customers.

In 2003, the City started a residential ultra-low-flush toilet replacement program in coordination with RWA. This program encourages the installation of ultra-low-flush toilets in older homes by offering a rebate for each replaced toilet. Up to a \$125 rebate is available, \$75 from the City and \$50 from the Sanitation District. The program requires a pre-inspection and a post-inspection. In single family homes, there were 103 replacements done in 2003, 197 in 2004, and 573 in 2005. Implementation of the program is ongoing.

Regulatory Context

■ Federal

U.S. Environmental Protection Agency (EPA)

The EPA established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may add additional constituents in the future.

■ State

Water Management Planning Act

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFA, must prepare an Urban Water Management Plan (UWMP). DWR provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. The City adopted its most recent UWMP on November 14, 2006.

Senate Bill 610 - Water Supply Assessments

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code section 10910 et seq.

A water supply assessment (WSA) is required for projects of a certain size and must include a discussion with regard to whether the total projected water supplies are available during normal, single dry and multiple dry water years during a 20-year projection.

The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well the water supply assessment. A WSA for the General Plan has been prepared and is included in Appendix M.

Senate Bill 221- Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply prior to approval of a tentative map for projects meeting a certain size threshold. This verification, like the SB610 water supply assessment, must include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region.

Drinking Water Quality

The California Department of Public Health (DPH) is responsible for implementing the federal Safe Drinking Water Act of 1974 and its updates, as well as California statutes and regulations related to drinking water. As part of their efforts, the DPH inspects and provides regulatory oversight for public water systems within California. In addition, in the Sacramento area the Central Valley Regional Water Quality Control Board (CVRWQCB) has the responsibility for protecting the beneficial uses of the state's waters, including groundwater, and these include municipal drinking water supply, as well as various other uses.

Public water system operators are required to regularly monitor their drinking water sources for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic

contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of water service. For water resources, some of the policies relevant to this issue include adopting a water policy for the city consistent with a long range adopted plan, developing and implementing financing strategies and arrangements, prioritizing funding infrastructure in depressed or infill areas, and providing water service that meets or exceeds state and federal standards. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

City of Sacramento Design Standards

Section 13 of the City's Design Standards sets forth requirements regarding the design and operation of water distribution facilities. Those requirements include standards for pipe design, fire hydrants, and specific requirements for residential, commercial and industrial water service.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

To determine potential impacts associated with an increase in demand for potable water associated with implementation of the 2030 General Plan, water demands were estimated for the developed area covered by the 2030 General Plan, including an adjustment for the increase in water demand associated with the development projected under the 2030 General Plan compared to previous General Plan projections.

■ Water Demand Factors

Water demand factors were developed using a historical water duty factor that applies a quantity of water per quantity of area, followed by an adjustment to reflect the WFA's water conservation goal projected for the year 2030. Further adjustments were made to reflect the increased population density projected under the proposed 2030 General Plan, as well as water demand in two areas not included within the 1988 General Plan boundaries. More specifically, the demands were calculated as follows:

1. A water duty factor of 3.32 acre feet per acre per year (with no allowance for water conservation) was used as the base line factor for water demand, consistent with the WFA methodology for calculating water demands.⁷ This water duty factor was approximately the City's average water demand in 1990, and represents the water demand (with no allowance for water conservation) associated with continuation of the pattern and type of development projected under the 1988 General Plan.
2. Consistent with the WFA methodology, this water duty factor was then reduced to account for the City's goal of achieving the Water Forum's projected 2030 conservation rate of 25.6 percent. The resulting water duty factor is 2.47 acre feet per acre per year.
3. The water duty factor of 2.47 acre feet per acre per year was then applied to the city's retail water service area covered in the existing 1988 General Plan (as amended through December 2004), resulting in a 2030 retail water demand, based on the existing General Plan, of 159,373 acre feet per year (including the existing city limits and Panhandle area).
4. The proposed 2030 General Plan provides for a significant increase in population density above the development forecast in the existing General Plan, due to increased jobs and housing units. This increased density reflects a significant change from the existing General Plan, and will result in higher density development that is not reflected in the water duty factor used above. The existing (1988) General Plan provided for an estimated population of 527,990 within the General Plan boundary at buildout, whereas the proposed 2030 General Plan provides for an estimated 2030 population of 645,000 (631,200 inside the existing General Plan boundary). This represents an approximately 19.5 percent population increase above the 1988 General Plan projections. To estimate the additional increment of water demand associated with this increase in population density, this 19.5 percent factor was applied to the 2030 water demand determined for the existing General Plan area, resulting in an additional increment of water demand for the increased population density projected under the proposed 2030 General Plan of 31,154 acre feet per year ($0.195 \times 159,373$ acre feet per year). However, an additional adjustment of this water demand was made, to reflect the fact that most of the additional

⁷ Water Forum, *Water Forum Agreement*. January 2000. Appendix B, p. 344 et seq.

housing projected for the increased population density in the proposed 2030 General Plan will be multi-family housing. Multi-family housing tends to have less irrigation demands, and in many cases, no irrigation demand, relative to single-family housing. To determine the correct adjustment factor, the city's typical January water consumption levels were used as an indicator of the degree of reduction in water use when irrigation uses are minimal (e.g., primarily indoor water use consumption). Historically, the city's January water consumption level is approximately 60 percent of the city's monthly water consumption level averaged on an annual basis. Therefore, the foregoing increment of water demand was multiplied by an adjustment factor of 0.60, resulting in an additional increment of retail water demand for the increased population density projected under the proposed 2030 General Plan of 18,692 acre feet per year ($0.60 \times 31,154$ acre feet per year).

5. For the Greenbriar⁸ and Camino Norte areas, included as Planned Development areas that may be annexed to the city in the proposed 2030 General Plan, but not included within the 1988 General Plan boundaries, the 2030 water demand was determined by applying the water duty factor of 2.47 acre feet per acre per year, resulting in a 2030 retail water demand for these two areas of 2,230 acre feet per year.
6. The 2030 level of demand for wholesale water service provided by the City outside the city limits, estimated based on the report titled "Revised Assessment of Water Supply Needs" for the Sacramento River Water Reliability Study, dated August 2007, is 78,943 AFA (see <http://www.usbr.gov/mp/srwr/docs/index.html>).

Table 6.11-3 presents the projected 2030 water demands for the proposed 2030 General Plan, based on the above methodology.

■ General Plan Net Increase

As noted in Table 6.11-3, the 2030 water demand for future development under the 1988 General Plan is 159,567 AFY, while the 2030 water demand for future development under the proposed 2030 General Plan is 180,705 AFY, a net increase in water demand from the proposed 2030 General Plan compared to the 1988 General Plan of 21,138 AFY, which correlates to a net increase in average day demand of approximately 19 mgd, and a net increase in maximum day demand of approximately 34 mgd.

8 The Greenbriar project was recently approved by the City and LAFCO is anticipated to approve annexation of the project site into the city limits.

TABLE 6.11-3

ESTIMATED 2030 GENERAL PLAN WATER DEMAND

Water Demand Population Growth	Unit (acres)	Unit Demand Factor	Average Annual Demand (AFY)	Maximum Day Demand (mgd)
1988 General Plan Projected Water Demand	63,182 acres¹	2.47 AFY/acre³	159,567	256
2030 General Plan Water Demand from Annexation	1,901 acres ²	2.47 AFY/acre ³	2,423	4
2030 General Plan Water Demand from Population Densification ⁴	63,182 acres ¹	0.27 AFY/acre ³	18,715	30
2030 General Plan Projected Retail Water Demand	65,083 acres		180,705	290
Wheeling and Wholesale			77,830	143
TOTAL			258,535 AFY	433 mgd

Notes:

- Existing General Plan area, see Table 3-1 in Chapter 3, Project Description.
- Difference between existing land area (Table 3-1) and proposed land area (Table 3-2): 65,083 acres – 63,182 acres = 1,901 acres.
- 2.47 AFY/year Water Duty Factor based on 25.6 % conversation savings as identified in the 2000 Water Forum Agreement.
- Population densification factor includes the percentage increase of population from the proposed General Plan within area of the existing general plan. The demand is then adjusted to account for inside water demand, because population densification will not increase landscape irrigation.
 - Population from 1988 GP/2004 Amendments = 527,990: The Sacramento City General Plan, adopted January 1988. City Council Amendments through December 2004, Table 3-3, page 3.3-4 (derived from SACOG Population and Housing Module 2001).
 - Population densification resulting from proposed plan is difference of the total population of 641,000 (see Table 5-7 in Chapter 5, Population, Employment and Housing) and the increased population from the annexation. Panhandle, Greenbriar, and Camino Del Norte would add 8,045 dwelling units (see Table 5-6) with 2 people per dwelling unit equals 16,090 people. 641,000 - 19,090 – 527,990 = 96,920.
 - City's January water consumption level is approximately 60% of average monthly water consumption, it is assumed that the average irrigation dependent demand is 60% of the average demand.
 - 2.47 AFY/acre x 18.4% x 60% = 0.27 AFY/acre.

Source: City of Sacramento Department of Utilities, 2008; WSA – see Appendix M .

■ Supply and Demand Comparison

The projected water demands of buildout through 2030 are compared to the City's normal year water supply in Table 6.11-4. During normal years groundwater is not required to meet demand, except for water delivered to areas outside the areas authorized to receive delivery of the city's surface water supply.

TABLE 6.11-4

NORMAL YEAR SUPPLY AND DEMAND COMPARISON (ACRE-FT/YEAR)

	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total Surface Water Supply	205,000	227,500	252,000	278,000	304,000	326,800
Groundwater Supplies	22,500	22,500	22,500	22,500	22,500	22,500
TOTAL WATER SUPPLY	227,500	250,000	274,500	300,500	326,500	349,300
City Demand ¹	138,671	144,927	153,146	161,830	171,007	180,705
Wholesale and Wheeling ²	7,806	11,452	18,490	29,855	48,204	77,830
TOTAL DEMAND	146,477	156,379	171,636	191,685	219,211	258,535

Notes:

- 2030 City demand calculated in Table 6.11-3. Constant growth rate assumed for intermediate years.
- 2030 City demand calculated in Table 6.11-3. Constant growth rate assumed for intermediate years

Source: Based on current groundwater rates, City of Sacramento, 2008.

The WFA purveyor specific agreement limits diversions on the American River during Hodge flow conditions and Conference Years. Hodge flow conditions limit withdrawal during low river flows. The Conference Year limitation limits annual diversions from the American River to 50,000 AFA and peak diversion to 155 cfs. A Conference Year occurs when the California DWR projects an annual unimpaired flow into Folsom Reservoir of 550,000 AFA or less, or the projected March through November unimpaired flow into Folsom Reservoir is less than 400,000 AFA.

The Conference Year limitation does not prevent the City from diverting its American River entitlement from the Sacramento River Water Treatment Plant, subject to the availability of adequate capacity at the SRWTP. Table 6.11-5 shows the supply and demand comparison under a Conference Year condition. This shows that for a Conference Year condition, unless additional capacity to divert and treat surface water under the City's Sacramento River entitlement is constructed (thereby making more capacity at the SRWTP available to divert and treat surface water under the City's American River entitlements), a capacity deficit would occur between 2025 and 2030. The City currently is planning for additional capacity to divert and treat Sacramento River water, as part of the Sacramento River Water Reliability Study project.

	2005	2010	2015	2020	2025	2030
American River	50,000	50,000	50,000	50,000	50,000	50,000
American River diverted from the Sacramento River Water Treatment Plant	73,200	95,700	97,400 ³	97,400 ³	97,400 ³	97,400 ³
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total Surface Water Supply	205,000	227,500	229,200	229,200	229,200	229,200
Groundwater Supplies	22,500	22,500	22,500	22,500	22,500	22,500
TOTAL WATER SUPPLY	227,500	250,000	251,700	251,700	251,700	251,700
City Demand ¹	138,671	144,927	153,146	161,830	171,007	180,705
Wholesale and Wheeling ²	7,806	11,452	18,490	29,855	48,204	77,830
TOTAL DEMAND	146,477	156,379	171,636	191,685	219,211	258,535
Notes:						
1. 2030 City demand calculated in Table 6.11-3. Constant growth rate assumed for intermediate years.						
2. 2030 City demand calculated in Table 6.11-3. Constant growth rate assumed for intermediate years.						
3. Total diversion at SRWTP, based on diversion capacity of 160 mgd (179,200 acre-feet/year).						
Source: PBS&J, 2007.						

Proposed General Plan Policies

The following goals and policies from the proposed 2030 General Plan are relevant to water supply within the entire Policy Area. The proposed General Plan does not include any policies regarding water supply that are unique to any of the City's Focused Opportunity Areas.

UTILITIES (U)**Citywide Utilities**

Goal U 1.1 High-Quality Infrastructure and Services. Provide and maintain efficient, high-quality public infrastructure facilities and services throughout the city.

Policies

- U 1.1.1 **Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services utility services to areas in the city currently receiving these services from the City, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of the infrastructure necessary to provide these City services.
- U 1.1.2 **Citywide Level of Service Standards.** The City shall establish and maintain service standards [Levels of Service (LOS)] for water, wastewater, stormwater drainage, and solid waste services.
- U 1.1.3 **Sustainable Facilities and Services.** The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.
- U 1.1.4 **Special Districts.** The City shall review existing adjacent and overlapping special districts and consider whether annexation, detachment, consolidation, and/or retention of existing special districts for drainage, wastewater, and solid waste is needed to increase efficiency and the quality of service and delivery.
- U 1.1.5 **Timing of Urban Expansion.** The City shall assure that new public facilities and services are phased in conjunction with the approved urban development it is intended to service.
- U 1.1.6 **Growth and Level of Service.** The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels..
- U 1.1.7 **Infrastructure Finance.** The City shall develop and implement a financing strategy and assess fees to construct needed water, wastewater, stormwater drainage, and solid waste facilities to maintain established service levels and to mitigate development impacts to these systems (e.g., pay capital costs associated with existing infrastructure that has inadequate capacity to serve new development). The City shall also assist developers in identifying funding mechanisms to cover the cost of providing utility services in infill areas.
- U 1.1.8 **Infill Areas.** The City shall identify and prioritize infill areas for infrastructure improvements.
- U 1.1.9 **Joint Use Facilities.** The City shall support the development of joint use water, drainage, and other utility facilities as appropriate in conjunction with schools, parks, golf courses, and other suitable uses to achieve economy and efficiency in the provision of services and facilities.
- U 1.1.10 **Safe, Attractive, and Compatible Utility Designs.** The City shall ensure that public utility facilities are designed to be safe, aesthetically pleasing, and compatible with adjacent uses.
- U 1.1.11 **Underground Utilities.** The City shall require undergrounding of all new publicly owned utility lines, encourage undergrounding of all privately owned utility lines in

new developments, and work with electricity and telecommunications providers to underground existing overhead lines.

- U 1.1.12 **Impacts to Environmentally Sensitive Lands.** The City shall locate and design utilities to avoid or minimize impacts to environmentally-sensitive areas and habitats.

Water Systems

- Goal U 2.1 High-Quality and Reliable Water Supply. Provide water supply facilities to meet future growth within the City's Place of Use and assure a high-quality and reliable supply of water to existing and future residents.**

Policies

- U 2.1.1 **Exercise and Protect Water Rights.** The City shall exercise and protect its water rights and entitlements into perpetuity.
- U 2.1.2 **Optimize Water System.** The City shall optimize storage, treatment, and distribution capacity of its water system.
- U 2.1.3 **Water Treatment Capacity and Infrastructure.** The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.
- U 2.1.4 **Priority for Water Infrastructure.** The City shall give high priority in capital improvement programming to funding rehabilitation or replacement of critical infrastructure that has reached the end of its useful life.
- U 2.1.5 **Comprehensive Water Supply Plans.** The City shall prepare, implement, and maintain long-term, comprehensive water supply plans.
- U 2.1.6 **High Quality Service Provision.** The City shall provide water service that meets or exceeds State and Federal drinking water standards.
- U 2.1.7 **Water Supply During Emergencies.** The City shall, to the extent feasible, maintain and adequate water supply during emergency situations.
- U 2.1.8 **Emergency Water Conservation.** The City shall reduce water use during periods of water shortages and emergencies.
- U 2.1.9 **New Development.** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.
- U 2.1.109 **Water Conservation Programs.** The City shall implement conservation programs that increase water use efficiency, including providing incentives for adoption of water efficiency measures.
- U 2.1.11 **Water Conservation Enforcement.** The City shall continue to enforce City ordinances that prohibit the waste or runoff of water, establish limits on outdoor water use, and specify applicable penalties.
- U 2.1.12 **Recycled Water.** The City shall continue to investigate the feasibility of utilizing recycled water where appropriate, cost effective, safe, and environmentally sustainable.
- U 2.1.13 **Landscaping.** The City shall continue to require the use of water-efficient landscaping in all new development.

Proposed South Area Community Plan Policies

The South Area Community Plan contains the following policies regarding utilities and infrastructure:

- SA.U 1.1 **Effective Infrastructure at TODs.** The City shall ensure that development plans provide adequate water, sewer, and drainage capacity at Florin LRT Station, Meadowview LRT Station, and proposed LRT stations to handle high-density transit-oriented development and verify that new infill projects will not overburden existing systems.
- SA.U 1.2 **Wastewater System Deficiencies.** The City shall assist developers in formulating plans to resolve wastewater collection system deficiencies within the South Area.
- SA.U 1.3 **Stormwater Drainage Deficiencies.** The City shall assist developers in formulating plans to provide facility improvements (e.g., upgrading existing pump stations and pipelines and constructing new detention basins) to areas in the Airport and Meadowview Subareas that have experienced flooding due to overburdened stormwater drainage systems.
- SA.U 1.4 **Infrastructure Improvements to Town of Freeport.** The City shall coordinate municipal water and sewer infrastructure improvements to the Town of Freeport and the Bartley Cavanaugh Golf Course in conjunction with the development of Delta Shores project and other future infrastructure improvements such as the Cosumnes River Boulevard interchange project.
- SA.U 1.5 **Town of Freeport Community Main Street Master Plan.** Upon extension of services to the Town of Freeport, the City shall develop a community main street master plan to guide the construction of infrastructure improvements, such as curbs, gutters, sidewalks, and lighting.
- SA U 1.6 **Town of Freeport Water Infrastructure.** The City shall collaborate with the Freeport Regional Water Authority regional water intake project to install water infrastructure to the Town of Freeport.

Thresholds of Significance

For the purposes of this EIR, impacts on water service and supply are considered significant if the proposed General Plan would:

- increase demand for potable water in excess of existing supplies; or
- result in inadequate capacity in the City's water supply facilities to meet the water supply demand, so as to require the construction of new water supply facilities.

Impacts and Mitigation Measures

A summary of all Water Supply impacts and their levels of significance is located at the end of this technical section.

Impact 6.11-1	Implementation of the proposed 2030 General Plan would increase demand for potable water.
Applicable Regulations	<i>Water Management Planning Act</i>
Significance Before Mitigation	<i>Potentially Significant</i>
Mitigation Included in the SGP	<i>Policies U 1.1.1, U 1.1.5, U 1.1.6, U 2.1.3, U 2.1.9, and U 2.1.10</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As shown in Tables 6.11-4 and 6.11-6, buildout of the proposed 2030 General Plan would result in an increase in retail water demand to approximately 177,943 AFA. Adding the projected wholesale demands increases this 2030 demand to approximately 256,886 AFA. This is less than the total surface water diversion amount authorized under the City's water right permits and USBR contract, of 326,800 acre feet/year.

TABLE 6.11-6						
EXISTING SURFACE WATER PRODUCTION CAPACITY V. MAXIMUM DAY DEMAND ABOVE HODGE (MGD)						
	2005	2010	2015	2020	2025	2030
American River	200	200	200	200	200	200
Sacramento River	160	160	160	160	160	160
Total Surface Water Supply	360	360	360	360	360	360
Retail Demand¹	240	249	259	269	279	290
Wholesale/Wheeling Demand ²	14	22	35	56	90	143
Total Demand	254	271	294	325	369	433
Capacity Deficit	--	--	--	--	9	73

Notes:
1. See Table 6.11-1, 2005 peak day demand.
2. See Table 6.11-4, 2006 wheeling agreement converted to daily demand with a peaking factor of 2.0.
Source: City of Sacramento, Utilities Department, 2008.

Because the City's existing water right permits and USBR contract would be sufficient to meet the total retail and wholesale water demand projected for buildout of the proposed 2030 General Plan, this impact is ***less-than-significant***.

Implementation of the 2030 General Plan would result in an increase in demand for potable water in excess of the City's existing diversion and treatment capacity. Impacts related to diversion and treatment capacity are discussed under Impact 6.11-2.

Mitigation Measure

None required.

Impact 6.11-2	Implementation of the proposed 2030 General Plan would result in an increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and could require the construction of new water supply facilities.	
Applicable Regulations	<i>Water Management Planning Act</i>	
Significance Before Mitigation	<i>Potentially Significant</i>	
Mitigation Included in the SGP	<i>Policies U 1.1.1, U 1.1.5, U 1.1.6, U 2.1.3, U 2.1.9, and U 2.1.10</i>	
Significance after Mitigation Included in the SGP	<i>Significant</i>	
Additional Mitigation	Mitigation Measure 6.11-2	
Residual Significance	Significant and Unavoidable	

As noted above, although the city's existing water right permits and USBR contract are sufficient to meet the total water demand projected for buildout of the proposed 2030 General Plan, implementation of the 2030 General Plan would result in an increase in demand for potable water in excess of the city's existing diversion and treatment capacity. More specifically, as indicated in Table 6.11-5, due to the Conference Year limitation specified in the City's purveyor specific agreement, there is insufficient existing diversion and treatment capacity to meet the projected annual demands with surface water during Conference Years, potentially beginning in 2025. Adding the City's existing groundwater production delays this capacity deficit to approximately 2028.

There also is insufficient existing diversion and treatment capacity to meet the maximum day demands projected for buildout of the proposed 2030 General Plan, with the most significant capacity deficit occurring during the below Hodge flow conditions specified in the City's purveyor specific agreement.

Table 6.11-6 shows the existing surface water diversion/treatment capacity and maximum day demand under above Hodge flow conditions. Assuming the use of surface water only during above Hodge flow conditions, a maximum day diversion/treatment capacity deficit could occur by 2025, as shown in Table 6.11-6. Assuming full use of the current groundwater production capacity of 20 mgd during such conditions, a maximum day diversion/treatment capacity deficit could occur by 2030, as shown in Table 6.11-7.

Table 6.11-8 shows a diversion capacity reduction at the Fairbairn WTP from 200 mgd to 100 mgd during the below Hodge flow conditions specified in the City's purveyor specific agreement, resulting in a total surface water diversion/treatment capacity of 260 mgd during such conditions. Assuming the use of surface water only during below Hodge flow conditions, a maximum day diversion/treatment capacity deficit could potentially occur before 2010, as shown in Table 6.11-8. Assuming full use of the current groundwater production capacity of 20 mgd during such conditions, a maximum day diversion/treatment capacity deficit could occur in approximately 2015, as shown in Table 6.11-9.

	2005	2010	2015	2020	2025	2030
American River	200	200	200	200	200	200
Sacramento River	160	160	160	160	160	160
Total Surface Water Supply	360	360	360	360	360	360
Groundwater	20	20	20	20	20	20
Total Water Supply	380	380	380	380	380	380
Retail Demand¹	240	249	259	269	279	290
Wholesale/Wheeling Demand ^{2,3}	14	22	35	56	90	143
Total Demand	254	271	294	325	369	433
Capacity Deficit	--	--	--	--	--	53

Notes:

1. See Table 6.11-1, 2005 peak day demand.
2. See Table 6.11-4, 2006 wheeling agreement delivery converted to daily demand with a peaking factor of 2.0. 20 mgd subtracted from 2030 peak demand from wheeling reductions.
3. During below Hodge flow conditions, maximum day wholesale/wheeling demands are reduced by 20 mgd, pursuant to the delivery restrictions in the City's wholesale water service agreement with the Sacramento Suburban Water District.

Source: City of Sacramento, Utilities Department, 2008.

	2005	2010	2015	2020	2025	2030
American River	100	100	100	100	100	100
Sacramento River	160	160	160	160	160	160
Total Surface Water Supply	260	260	260	260	260	260
Retail Demand¹	240	249	259	269	279	290
Wholesale/Wheeling Demand ^{2,3}	14	22	35	56	90	143
Total Demand	254	271	294	325	369	433
Capacity Deficit	--	11	34	65	109	173

Notes:

1. See Table 6.11-1, 2005 peak day demand.
2. See Table 6.11-4, 2006 wheeling agreement delivery converted to daily demand with a peaking factor of 2.0. 20 mgd subtracted from 2030 peak demand from wheeling reductions.
3. During below Hodge flow conditions, maximum day wholesale/wheeling demands are reduced by 20 mgd, pursuant to the delivery restrictions in the City's wholesale water service agreement with the Sacramento Suburban Water District.

Source: City of Sacramento, Utilities Department, 2008.

To address this issue several proposed General Plan policies call for the city to plan and provide a reliable water service to serve all city residents. Policy U 2.1.3 would ensure the City provides sufficient funding to meet the projected water demand and Policy U 2.1.9 would prevent the City from granting building permits without sufficient water supply capacity. Implementation of these policies would ensure that development does not outstrip the availability of adequate water diversion and treatment capacity to meet the water demand for such development. There also is a proposed policy in the 2030 General Plan that seeks to reduce peak day water demand. Policy U 2.1.10 would require the City to implement water conservation programs which could help reduce the peak day demand. As noted above, the projected 2030 demands used in this analysis already include a water conservation factor of

	2005	2010	2015	2020	2025	2030
American River	100	100	100	100	100	100
Sacramento River	160	160	160	160	160	160
Total Surface Water Supply	260	260	260	260	260	260
Groundwater	20	20	20	20	20	20
Total Water Supply	280	280	280	280	280	280
Retail Demand¹	240	249	259	269	279	290
Wholesale/Wheeling Demand ²	14	22	35	56	90	143
Total Demand	254	271	294	325	369	433
Capacity Deficit	--	--	14	45	89	153
Notes:						
1. During below Hodge flow conditions, maximum day wholesale/wheeling demands are reduced by 20 mgd, pursuant to the delivery restrictions in the City's wholesale water service agreement with the Sacramento Suburban Water District.						
Source: City of Sacramento, Utilities Department, 2008.						

25.6 percent, consistent with the water conservation goal established in the WFA. Accordingly, even if high levels of conservation are achieved, future water demand associated with implementation of the 2030 General Plan still would exceed the City's existing available water diversion and treatment capacity at some point in time.

The City is a partner in the Sacramento River Water Reliability Study (SRWRS), which is investigating alternatives for an additional 365 cfs (235 mgd) diversion on the Sacramento River and associated water treatment facility. The City would fund and have access to 145 mgd of the available 235 mgd. Implementation of the SRWRS would avoid future capacity deficits projected for implementation of the 2030 General Plan.

The SRWRS requires its own environmental review under NEPA and CEQA, in addition to compliance with the Endangered Species Act and other applicable regulatory requirements. USBR is the federal lead agency and the Placer County Water Agency is the local lead agency for the SRWRS project. A notice of preparation/intent (NOP/NOI) was issued in August 2003 and an initial alternatives report was completed in March 2005. Additional information and documents for the SRWRS may be found by visiting: <http://www.usbr.gov/mp/srwrs/index.html>. The EIR/EIS is currently being prepared and is scheduled to be released publicly in fall 2008.

In addition to construction of a new diversion structure and WTP the City has explored the option of increasing groundwater withdrawal to supplement surface water. As previously discussed, the City's existing groundwater wells supply the city with about 22,500 AFA of municipal water supply, which equates to an average annual aggregate capacity of approximately 20 mgd. The City's water supply infrastructure is designed to serve the entire city wide service area with new infrastructure that ties into the existing system to meet both average and maximum day demands. System-wide, the city relies primarily on surface water, and supplements the surface water capacity by pumping groundwater, if necessary to help meet maximum day demands.

One of the City's important water supply goals is to have sufficient capacity in its surface water diversion and treatment facilities to meet future maximum day demands solely with surface water, because surface water provides the most reliable and highest quality water for city residents, relying primarily on surface water minimizes water quality issues associated with groundwater contamination and pollution, providing and maintaining sufficient capacity to meet peak day demands with surface water during normal and wet years and promotes conjunctive use of surface and groundwater throughout the region. In addition, using surface water exercises and thereby protects and maintains the city's surface water rights and entitlements that are an invaluable asset to the city and city residents. These considerations are reflected in the proposed General Plan goal and policies set forth above for the City Water Systems.

For the above reasons, increasing groundwater pumping would not meet the City's future water supply goals. Moreover, even if this were not the case, supplying additional future water supply demands solely with additional groundwater pumping is not a feasible alternative. If no new surface water diversion and treatment capacity is added, and the City's purveyor specific agreement limitations remain in place, the City would need to increase groundwater pumping capacity by approximately 131 mgd to provide additional production capacity to meet the 2030 maximum day water demand projected during below Hodge flow conditions for implementation of the proposed 2030 General Plan (see Table 6.11-9). Assuming a new groundwater well could pump roughly 1,000 gpm or 1.44 mgd, the City would be required to install at least 92 new wells to meet the projected demand. This could not be achieved with the current well capacities and new wells would have to be installed.

Insufficient groundwater supplies exist in the North Sacramento Basin to supply these additional demands entirely through additional groundwater pumping. In addition, this could cause rapid drawdown of the groundwater basin, which would be counter to the SGA Groundwater Management Plan, SCGF Groundwater Management Plan and the WFA. Increasing groundwater withdrawals also could adversely affect other groundwater pumping activities in the region, or cause migration or other changes within known and unknown groundwater contamination plumes in the applicable Subbasin.

If groundwater pumping were increased, this could require an environmental analysis to assess if the construction or operation of new wells could have any adverse environmental consequences. The new wells, appurtenances, and infrastructure could result in potentially significant environmental impacts including, but not limited to, exposure of soils to erosion and loss of topsoil during construction; construction-related air emissions and increase in noise; destruction of subsurface archeological or paleontological resources; impacts to natural drainage courses and hydrology; and the conversion of existing agricultural lands.

Another consideration the City is tracking is the potential implementation of the flow management plan currently being developed for the Lower American River if adopted, this plan may render the provisions of the City's purveyor specific agreement limiting surface water diversions at the FWTP unnecessary, and may provide a basis for removing or modifying these

limitations. If the purveyor specific agreement limitations were removed or modified, the need for future additional surface water diversion and treatment capacity could be significantly reduced. This would require State Water Resources Control Board approval, supported by a separate CEQA review, presumably conducted in conjunction with the environmental analysis for the flow management plan currently being developed. As noted above, to ensure full compliance with CEQA, this EIR evaluates the City's future water supply capacity needs based on the assumption that the existing Hodge flow limitations at the FWTP would remain in place, so that water supply capacity duplicative of capacity already existing at FWTP would be needed to provide water supply reliability when the City cannot use such FWTP capacity due to the applicability of the Hodge flow limitations.

Therefore, the projected deficits in diversion and treatment capacity described above could require the construction of new water supply facilities and are therefore considered a *potentially significant impact*.

Mitigation Measure

The mitigation measures listed below identify different means that the City could use to mitigate the increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and thereby reduce this potentially significant impact to a less-than-significant level. As noted above, one of the City's important water supply goals is to have sufficient capacity in its surface water diversion and treatment facilities to meet future maximum day demands with surface water. Consistent with the proposed General Plan policies calling for the City to plan for and provide reliable water service to serve all city residents, the city historically has been diligent in planning for future water supply facility needs by constructing water supply facilities as they are needed to accommodate increasing water supply demands, and intends to continue to do so.⁹

Under CEQA, water supply facilities necessary to serve future development cannot be approved and built until a general plan that allows such development is adopted.¹⁰ Consistent with this mandate, the City is participating as a local partner in the SRWRS project (discussed above), and expects to approve and construct, as part of the SRWRS project, the City's next increment of water diversion and treatment capacity that would serve future water demand, after approval

9 The City has done so to fulfill its obligation as a water supplier to serve water demands within its service area, including planned growth. The traditional understanding of water suppliers under California law is that there is a "duty to serve" existing and new developments. As reflected in case law, this obligation has been understood to require water suppliers to find and develop new water supplies needed to reliably serve existing demands, and to meet projected growth levels in their service areas. See, e.g., *Swanson v. Marin Municipal Water District* (1976) 56 Cal.App.3d 512, 524; *Glenbrook Development Co. v. City of Brea* (1967) 253 Cal.App.2d 267, 277.

10 See *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931; see also *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412 (CEQA does not require that all facilities necessary to treat and deliver the water supply for future build-out of a long-term land use plan be approved or built when the land use plan is approved, as this would require water planning to outpace land use planning).

of the 2030 General Plan, completion of the SRWRS project's environmental review and receipt of all necessary approvals by the SRWRS partner agencies.

However, because the future water supply facilities have not yet been approved and constructed, at present it is not possible to state with certainty that these facilities would be approved and constructed. Therefore, to fulfill the disclosure requirements of CEQA, this EIR must indicate that the increase in demand for potable water in excess of the City's existing diversion and treatment capacity, that could require the construction of new water supply facilities, is considered a **significant and unavoidable impact**.

6.11-2 a) *Implement Diversion and WTP as cost-sharing partner in Sacramento River Water Reliability Study.*

The City shall agree to a cost-sharing partnership for the construction and operation of a second Sacramento River diversion and WTP to divert and treat water which could result, at a minimum, in the following potentially significant environmental impacts associated with the construction and operation. This project is currently being analyzed under a separate EIR/EIS:

- *Exposure of soils to erosion and loss of topsoil during construction;*
- *Surface water quality degradation;*
- *Destruction or disturbance of subsurface archeological or paleontological resources;*
- *Construction-related air emissions;*
- *Construction and operations-related noise impacts;*
- *Visual and/or light and glare impacts;*
- *Loss of protected species and degradation or loss of their habitats;*
- *Conversion of existing agricultural lands or resources;*
- *Degradation of fisheries habitat and other in-stream impacts above and downstream of diversion; and*
- *Exposure to pre-existing listed and unknown hazardous materials contamination.*

Mitigation measures would need to be developed to reduce any potentially significant impacts to less-than-significant levels, to the extent feasible. The following are illustrative of the types of mitigation measures that could be implemented to avoid or reduce those impacts listed above to less-than-significant levels:

- *Reduction in operational and construction air emissions as required by SMAQMD;*
- *Avoidance of surface water pollution through control of on-site stormwater flows, protection of top soils or stock piles from wind and water erosion, and implementation of related BMPs;*
- *Minimization of operational and construction noise through the use of noise attenuation measures;*
- *Avoidance and/or implementation of appropriate measures to restore, create, preserve or otherwise compensate for effects to biological resources;*
- *Avoidance of effects to buried cultural resources through investigation and pre-testing, and/or on-site archaeological monitoring and implementation of appropriate steps if cultural resources are discovered during earth moving activities;*
- *Avoidance of hazardous materials effects through appropriate investigation and remediation of any on-site hazards; and*
- *Avoidance, preservation or other appropriate compensation for loss of or adverse effects to important farmlands.*

The City, as a cost-sharing local partner participating in the Sacramento River Water Reliability Study project, would be a responsible agency required to implement all mitigation measures within its control.

OR

- b) *Implement a City of Sacramento-Only Sacramento River Diversion and WTP.*

The City shall be solely responsible for the construction and operation of a second Sacramento River diversion and WTP to divert and treat water. This would be a separate project that would require its own environmental review, in addition to compliance with all applicable regulatory requirements. The construction and operation of this facility to divert and treat water, although having a smaller capacity than the regional facility, would have the same potentially significant environmental impacts as discussed above, and would entail the same types of mitigation measures, discussed above. The City would be the lead agency if this option were selected.

Cumulative Impacts and Mitigation Measures

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together are considerable. For the 2030 General Plan the effects of buildout of the general plan and the increase in population is considered as the “project.” The provision

of adequate water supply and water infrastructure facilities to support future growth anticipated to occur within the Policy Area is already evaluated in Impacts 6.11-1 and 6.11-2. There are no other projects with the policy area that when combined together along with the project would compound or increase the demand for water. Therefore, the cumulative effects are addressed in Impacts 6.11-1 and 6.11-2 and a separate cumulative discussion is not necessary.

The City adopted an Urban Water Management Plan (UWMP) in August 2006 which reflected anticipated growth and water demand to occur in the city as well as in areas outside of the city boundaries. As required by law, UWMP's need to be updated every 5 years to ensure the analysis is reflective of any new or anticipated growth. In 2010 the UWMP will be updated to reflect the adopted General Plan land use diagram.

South Area Community Plan

The South Area Community Plan (SACP) is located in an area of the city where existing water infrastructure is available to serve development. There are small areas of undeveloped land that would be developed under the proposed 2030 General Plan. Any future development in this area, including infill development, would comply with the proposed General Plan policies described above, which would ensure that impacts on water supply and infrastructure specific to the SACP Area would be mitigated, similar to the remainder of the Policy Area. Therefore, it is assumed that impacts resulting from projects in the SACP Area would be similar to the rest of the Policy Area. At this time, no additional mitigation would be necessary.

Focused Opportunity Areas

To address specific infrastructure concerns with future development in the Focused Opportunity Areas, Nolte Engineering prepared a Technical Memorandum (see Appendix H) that assesses potential water demand as well as any infrastructure deficiencies. The analysis focuses on four out of the six Opportunity Areas: River District (Richards), Robla, Arden Fair/Point West, and 65th Street/University Village. Florin Center/Light Rail Station and Meadowview Light Rail Station Focused Opportunity Areas are not included in the analysis. The findings are discussed below.

■ River District

The River District, which includes the area north of downtown in an older part of the city, contains a backbone water distribution system with pipes that range from 8 to 42 inches in diameter. It is anticipated that some of the infrastructure may need to be upsized in some instances or new lines installed to ensure adequate fire flow pressure is available. Overall, the existing infrastructure is adequate; however, as new development occurs additional lines may need to be added to meet current City code requirements.

■ Robla

The Robla area is located in the northeast portion of the city and is more rural/suburban in character versus urban. The backbone infrastructure in this area includes pipes that range in size from 8 to 18 inches. Similar to the River District there is a concern that adequate fire flow service is not available to serve new development. Therefore, additional 8-inch or 12-inch mains would be required to meet current fire flow requirements.

■ Arden Fair/Point West

Within the Arden Fair/Point West Opportunity Area, water infrastructure is owned by the Sacramento Suburban Water District (SSWD). Adequate infrastructure exists, but similar to the other Opportunity Areas, adequate fire flow service may be lacking; therefore, some additional 6- to 12-inch mains would be required as the area continues to be developed.

■ 65th Street/University Village

Existing water infrastructure pipes in this area range from 8 to 60 inches in diameter. Within the area proposed for future development as part of the CSUS Village, 12-inch mains may be required in order to ensure adequate fire flow service is provided. Throughout the remainder of the area additional new water mains and/or upsizing of existing lines may be required to ensure adequate fire flow is provided and that new development meets current City code.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Policy Area, Focused Opportunity Areas, and South Area Community Plan area could potentially impact water supply and infrastructure. At this time, specific project information is not available (i.e., individual building design, site-specific location, types of soils, etc.) to evaluate potential impacts associated with adequate water supply and infrastructure to serve a specific development proposal. Once specific development proposals are prepared and submitted to the City a project-specific environmental analysis would be prepared, if required, to analyze any potential impacts on water supply and infrastructure.

SEWER AND STORM DRAINAGE

The sewer and storm drainage section discusses the existing condition of the City's wastewater, storm drainage, and combined sewer system. The section addresses impacts on the City's systems resulting from implementation of the 2030 General Plan. Regional flooding is addressed in section 6.7, Hydrology and Water Quality, while local drainage is addressed below. Information for this analysis is based on the Technical Background Report (2005) prepared for the 2030 General Plan and updates to the TBR, where applicable.

ENVIRONMENTAL SETTING

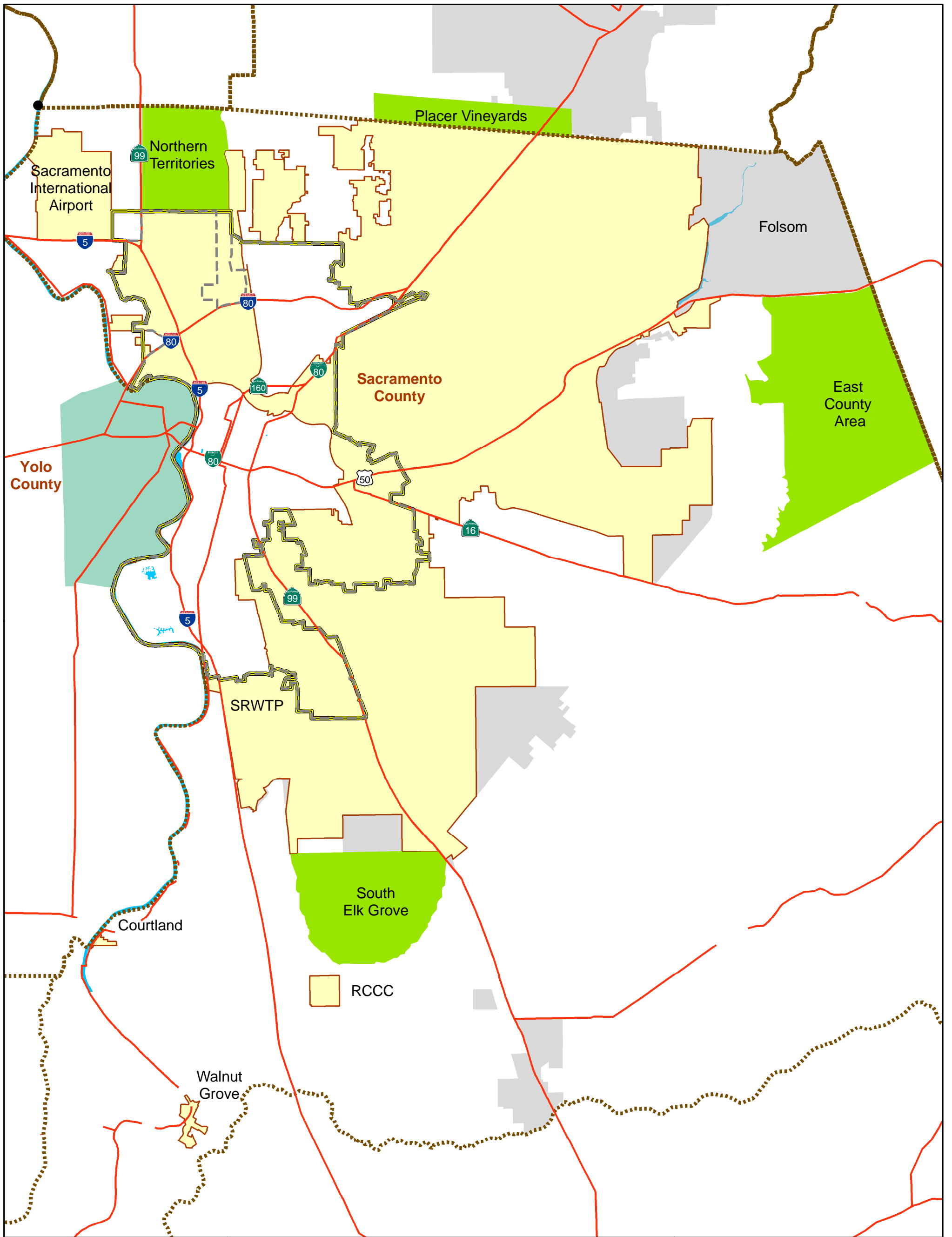
Wastewater Collection and Conveyance

Wastewater collection in the Policy Area is provided by both the City and the County, depending on location. The City provides wastewater collection to about two-thirds of the area within the city limits. Within the city, there are two distinct areas: areas served by a separate sewer system (Figure 6.11-3), and an area served by a combined sewer system (Figure 6.11-4), which is described in more detail later in this section.

Separate Sewer System

The Sacramento Regional County Sanitation District (SRCSD) and the Sacramento Area Sewer District (formerly County Services District [CSD-1]) provide both collection and treatment services within their service area for the portions of the city served by the separate sewer system. Wastewater generated in this area is collected by trunk facilities in the Sacramento Area Sewer District and then conveyed via interceptors to the Sacramento Regional Wastewater Treatment Plant. The SRCSD has prepared and is implementing its master plan related to wastewater conveyance – the Interceptor Master Plan 2000 – and the SASD is implementing its master plan – the Sewerage Facilities Master Plan Update 2006.

The community plan areas served by the city's separate sewer system include the Pocket, North Sacramento, and portions of Arden-Arcade, South Sacramento, East Sacramento, East Broadway and Airport Meadowview. The areas served by the city's separate sewer systems are divided into dozens of sewer sheds, and wastewater from the basins is pumped to the SRWTP via numerous pumping stations located throughout the city. Pumping facilities for Basins 21, 29, 55, 119, 120, 121 and 122 in the city's separate system have recently been rebuilt. There are a variety of problems affecting the separate system including infiltration/inflow, surcharged pipes, illegal taps, lack of facilities, and age.

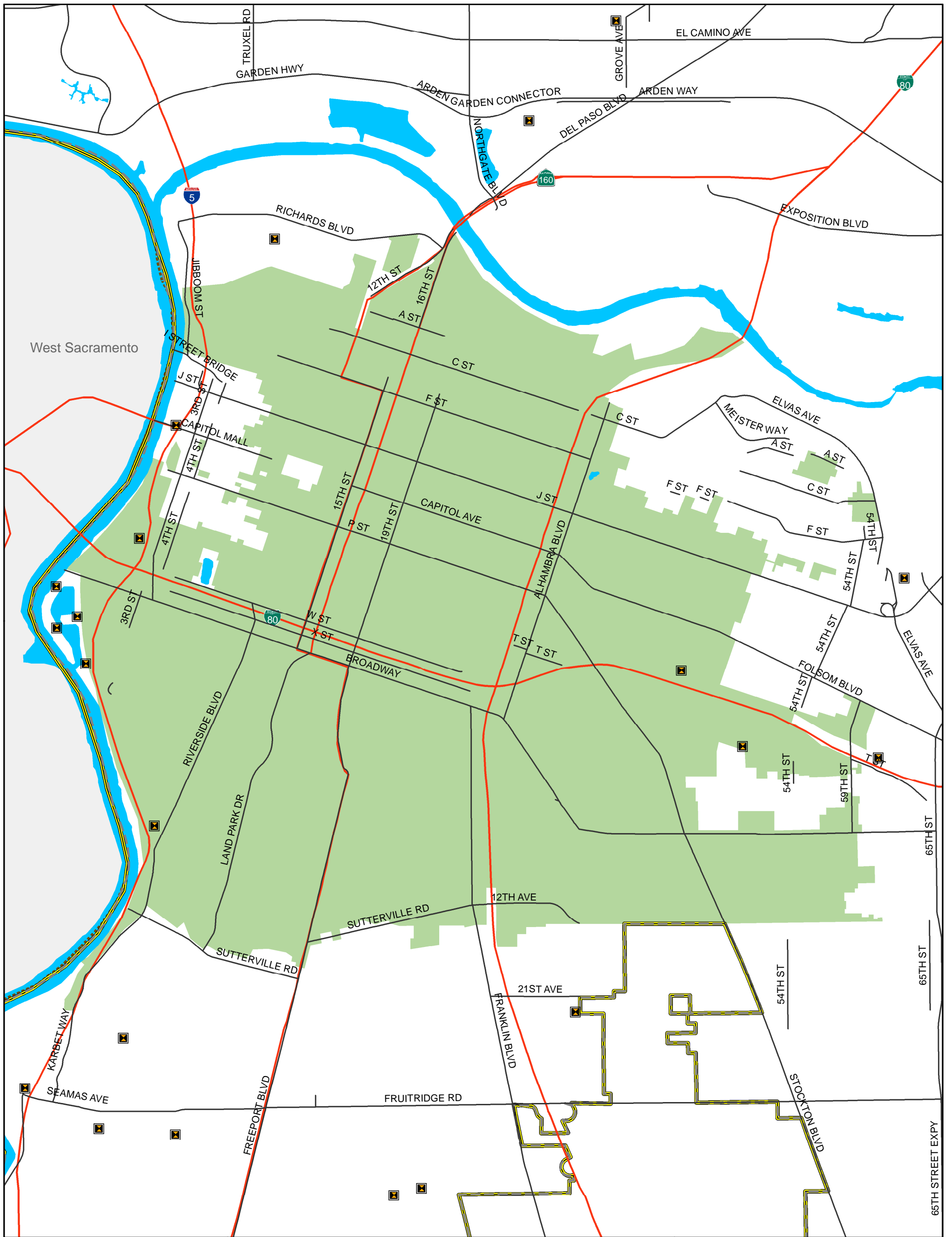


**Figure 6.11-3
Wastewater**









Legend

- CSD-1
- Recent Annexed by SRCSD
- Potential Future Annexations
- City Limit
- County Boundary
- Policy Area
- Water



Legend

-  Sewer Sump
-  Combined Sewer System
-  City Limit
-  County Boundary
-  Policy Area
-  Water

**Figure 6.11-4
Combined
Sewer System**

Source: City of Sacramento 2008 

The Sacramento Area Sewer District serves the community plan areas of South Natomas, North Natomas, and portions of Arcade-Arden, East Broadway, East Sacramento, Airport Meadowview and South Sacramento. The service area is divided into ten trunk sheds, which are based on the collection systems of the individual sewer districts from which CSD-1 was originally formed. For the most part, each trunk shed consists of a number of hydraulically independent systems, each discharging into the SRCSD interceptor system. According to the District's Sewerage Facilities Expansion Master Plan dated March 2002, there are capacity deficiencies in portions of the Southeast (Central), Natomas, Arden/North Highlands and Rio Linda trunk systems. The Southeast (Central) system serves the plan areas of South Sacramento, East Broadway and Airport Meadowview. The Natomas shed area includes portions of the North and South Natomas community plan areas. The Arden/North Highlands system serves the Arcade-Arden Community Plan area. The Rio Linda system is outside of the Policy Area, but within the Study Area. These areas are generally served by older sewer systems that are subject to substantial amounts of infiltration/inflow during wet weather.

Combined Sewer/Storm Drain Area

The older Central City area is served by a system in which sanitary sewage and storm drainage are collected and conveyed in the same system of pipelines, referred to as the Combined Sewer System (CSS). The area served by the CSS extends from the Sacramento River on the west, to the vicinity of Sutterville Road and 14th Avenue on the south, to about 65th Street on the east, and to North B Street and the American River on the north (see Figure 6.11-4) and constitutes approximately 7,510 acres or 12 percent of the total area within the current city boundaries. There are some local areas within this larger area that have separate sewer and storm drainage systems, but the bulk of the area is served by the combined system.

Currently all flows into the CSS are conveyed westerly to two pumping stations (Sump 2/2A and 1/1A) located on the Sacramento River. For secondary treatment and disinfection of the flow, the City has entered into an agreement with the Sacramento Regional Wastewater Treatment Plant (SRWTP) to convey up to 60 mgd. This treatment capacity is currently sufficient for dry weather flows. During heavy storms where the flows exceed this amount, the Combined Wastewater Treatment Plant (CWTP) at South Land Park Drive and 35th Avenue is used to provide primary treatment of an additional 130 mgd. Excess flows beyond 190 mgd are diverted to the Pioneer Reservoir storage and treatment facility that has a capacity of 350 mgd. When all three treatment facilities (SRWTP, CWTP, and Pioneer) have reached capacity, excess flows are directly discharged into the Sacramento River from Sump 2 without treatment. These are called combined sewer overflows (CSOs). In the Central City, when the pipeline system capacities are surpassed, the excess flows flood local streets through maintenance holes and catchbasins. There were no CSOs in 2006 or 2007. The last CSO occurred in 2005 during a large storm with over three inches of rain falling in a 24-hour period.

Several projects are planned to improve the operation of the combined system. Projects initiated by the City to address existing deficiencies are system improvements, while major land

development projects often include specific mitigation measures to mitigate the additional sewage and drainage flows created by the specific development. The following is a summary of proposed improvements and mitigation projects.

1. The Curtis Park Village project is a proposed 70-acre infill development project north of Sutterville Road. A system improvement consisting of an underground detention system holding approximately 300,000 cubic feet (cu ft) is planned on this site to provide regional peak-shaving storage for the 114-inch combined sewer interceptor which traverses the site. Separate sewer and storm drainage facilities would be constructed as part of the project, each of which would have peak-shaving storage facilities to mitigate project impacts.
2. The Sacramento Railyards is an approved, but not-yet-built, 240-acre infill development project adjacent to the downtown business district which would include separate sewer and storm drain systems. Storm drainage from the site would be diverted to a drainage detention structure for water quality treatment and peak attenuation, a portion of this volume would be metered into a proposed 3rd Street relief sewer and eventually into the combined system after the storm peak has passed. Extremely large storm flows are planned to be diverted to the Sacramento River. For the adjacent Richards area development it has been proposed to divert the existing separate sanitary sewage from the Richards Boulevard area to the Railyards, and convey the sewage flow south into the proposed 3rd Street relief sewer to U Street, as a joint project with the City.
3. The Capitol Area Plan is a master plan of proposed state facilities in the greater downtown area. The State Department of General Services has agreed to mitigate the additional sewage flows from state facilities by funding certain new pipeline construction in the combined system as new state facilities are constructed.
4. Major development projects within the combined sewer area are required to mitigate the additional sewage flows and the added impervious surface which increases drainage runoff or pay the new CSS Development Fee, which will fund City-directed mitigation projects.
5. Peak-shaving, underground detention facility improvements are being planned by the Department of Utilities in various locations where outflows have been a problem.

In addition, the City is required to comply with the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. The purpose of the Order is to require agencies to prepare a plan and schedule for measures to be implemented to reduce CSOs, as well as measures to effectively clean-up and report CSOs.

Wastewater Treatment

The Sacramento Regional Wastewater Treatment Plant (SRWTP), which is located just south of the city Limits, is owned and operated by SRCSD and provides sewage treatment for the entire Policy Area. Sewage is routed to the wastewater treatment plant by collections systems owned by SRCSD and the cities of Sacramento and Folsom. The SRWTP is a high purity oxygen activated sludge facility, and is permitted to treat an average dry weather flow (ADWF) of 181 mgd and a daily peak wet weather flow of 392 mgd. After secondary treatment and disinfection, a portion of the effluent from the plant is further treated in SRCSD's Water Reclamation Facility and then used for landscape irrigation within the city of Elk Grove. The majority of the treated wastewater is dechlorinated and discharged into the Sacramento River.

Currently, the facility's ADWF is approximately 165 mgd. SRCSD's long-term planning effort, the SRWTP 2020 Master Plan, projected population-based flows for 2005 of 174 mgd and 196 mgd for 2010. For year 2020, ADWF is projected to be 218 mgd.¹¹ Current flows in the SRCSD service area (which includes the contribution from the City of Sacramento) are, therefore, under the projections for both 2005 and 2010.

An EIR was prepared for the SRWTP 2020 Master Plan (SCH # 2002052004) and was certified by the SRCSD Board of Directors in June 2004.

The SRCSD maintains the regional interceptors that convey sewage to the treatment plant. Currently, improvements are being made to the system in anticipation of future growth and to help relieve the existing interceptor system. These improvements are identified in the Interceptor Master Plan (2000). The Lower Northwest Interceptor (LNWI), which conveys wastewater from West Sacramento and the newly developing areas of Natomas, was recently completed.¹² The Upper Northwest Interceptor (UNWI) is currently under construction and will convey flows from the Northeast, Gibson Ranch, Rio Linda, McClellan, Natomas, and a portion of the North Highlands drainage basins. These projects will provide relief for the existing interceptor system as well as provide capacity for future growth.

■ SCRSD Buildout Wastewater Treatment and Conveyance Assumptions

The identification of appropriate type, capacity, and scheduling of wastewater conveyance and treatment facilities required over a long-term planning period necessitates an integrated, master planning process for both the treatment and conveyance systems. The SWRTP 2020 Master Plan, Interceptor Master Plan 2000, and the CSD-1 [sewerage] Master Plan have designated

11 The population-based flows were estimated using Sacramento Area Council of Governments (SACOG) population projections. The SRWTP 2020 Master Plan Report notes that the "projections are more aggressive than the long-term trend-based flow projections... If population growth is not realized, the 2020 Master Plan implementation schedule could be extended." (Sacramento Regional County Sanitation District, Sacramento Regional Water Treatment Plant 2020 Master Plan. Table 2.2).

12 Sacramento Regional County Sanitation District website <www.srcsd.com/projects>.

planning horizons of 2020 and buildout. These planning horizons, in conjunction with the proposed land uses for areas within the SRCSD service area, are used to determine the projected wastewater flows and timing of flow increases over the planning horizon.

Existing and proposed treatment facilities were designed to be expanded gradually in incremental units as future wastewater flows and loads increase. Consequently, some existing facilities have available capacity for future flows and loads, while other facilities (capacity limiting facilities) are at their existing capacity and would need to be expanded to accommodate any increase in flows or loads. Master plan facilities would be constructed in phases as flow and load demands require. Generally, facility expansion would be phased in five- to ten-year increments over the planning period. These increments are large enough to provide reasonable economy of scale and small enough to minimize the size of potentially idle facilities. By constructing the Master Plan facilities in phases, SRCSD can control the rate of facility expansion if actual growth rates are slower or faster than projected.¹³

The SRWTP Master Plan notes “flows can be expected to continue to increase above the projected 218 mgd ADWF for year 2020. ... The treatment plant has been master planned for a “mirror image” buildout of the existing facilities of 350 mgd ADWF of conventional and advanced treatment capacity.”¹⁴ The SRWTP site is approximately 900 acres surrounded by 2,600 acres of bufferlands owned by the SRCSD. The bufferlands provide a buffer between the SRWTP process facilities and adjacent areas. The “mirror image” refers to the SRWTP secondary process facilities. Potential future advance treatment facilities would occur to the west of the existing secondary treatment facilities within the current 900-acre SRWTP site.¹⁵

Design and construction of wastewater treatment and collection facilities requires substantial capital investment that must be planned and approved by the SRCSD Board of Directors. Wastewater facilities are generally designed and constructed in phases over the planning horizon. The phased improvements usually coincide with the timing of projected flow increases, which are based on increases in population and buildout of proposed land uses. Typically, the phased improvements would accommodate flow increases for a specified time period (e.g., 5 years, 10 years).

In some cases, it is more practical to design facilities for flows projected for the entire planning horizon because construction activities and overall costs would be reduced. This is particularly true for an interceptor system, which requires substantial construction activities. When the system is initially constructed, it must be designed to accommodate projected wastewater flows for the lifetime of the system. If interceptors were constructed and expanded on an as-needed basis (e.g., like the modular expansions of the SWRTP), existing facilities would need to be

13 Sacramento Regional County Sanitation District, Sacramento Regional Water Treatment Plant 2020 Master Plan Draft Environmental Impact Report (SCH No. 2002052004), 2004, Executive Summary.

14 Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plan 2020 Master Plan Report, Final Draft, section 3.7, “Future Capacity Needs.”

15 Robert Seyfried, Senior Civil Engineer, Policy & Planning Division, Sacramento Regional County Sanitation District, personal communication, February 11, 2008.

paralleled with new facilities constructed in the same area. It is standard engineering practice to design interceptor facilities to accommodate flows for the entire planning horizon (in this case, full buildout of local general plans) to avoid unnecessary construction and capital costs.¹⁶

Table 6.11-10 shows the planning assumptions that were used by the SRCSD in the master planning documents summarized above.

Plan/Design	Planning Condition				
	Type of Facility and Planning Area	Method of Building and Sizing Facilities	Flow Condition for Sizing	Base Flow Year 2020	Buildout
SRWTP 2020 Master Plan	Wastewater treatment plant handling flows that come to it. Not focused on specific geographic areas	Built in incremental steps, as flows into plant increase. Looks at 20 years of growth (and related wastewater) in the Urban Policy Area, based on March 2001 SACOG population projections. Uses 132.4 gallons per capita per day for average flow. ¹	Population-based flow projections over a 20-year planning period. Sized primarily for average pollutant loads that will come into the plant 20 years from now (because plant can be expanded incrementally).	218 mgd	350 mgd ²
SRWTP 2020 Master Plan	Interceptor pipelines serving the entire SRCD planning area, which corresponds to the Urban Services Boundary.	Each interceptor is built once to serve build-out of entire geographic service area (Urban Services Boundary). Sized for build-out density of 6 ESDs/acre, 310 gallons of average flow per ESD per day, plus an allowance for rainfall infiltration.	Sized for highest flows in wet weather at buildout to keep flow inside pipes.	214 mgd	517 mgd
CSD-1 Master Plan	Smaller "trunk" sewers serving unincorporated Sacramento County, the cities of Citrus Heights and Elk Grove, and portions of the cities of Sacramento and Folsom.	Built once to serve CSD-1 service area within the Urban Services Boundary. Sized for buildout density of 6 EDS/acre and 310 gallons per day per ESD plus an allowance for rainfall infiltration.	Sized for highest flows in wet weather at buildout to keep flow within the pipes.	155 mgd	365 mgd
Notes:					
1. Calculated by average historical plant influent flow from 1996 through 2000.					
2. Assumes mirror image buildout of SRWTP facilities only. Additional space will most likely be available to incrementally expand beyond 350 mgd.					
Source: Sacramento Regional Sanitation District. May 2001. 2020 Master Plan. Revised Final Draft Executive Summary. Final Technical Memorandum: Relationship Between SRWTP 2020 Master Plan, Interceptor Master Plan 2000, and Sewerage Facilities Master Plan for CSD-1," October 23, 2002.					

16 Sacramento Regional County Sanitation District, Sacramento Regional Water Treatment Plant 2020 Master Plan Draft Environmental Impact Report (SCH No. 2002052004), 2004. "Final Technical Memorandum: Relationship Between SRWTP 2020 Master Plan, Interceptor Master Plan 2000, and Sewerage Facilities Master Plan for CSD-1," October 23, 2002. Included as Appendix M of the Draft EIR.

Storm Drainage

The City's separate storm drainage system includes conveyance of storm water and dry weather urban runoff to the adjacent creeks and rivers. The separate drainage system consists of street drains, conveyance systems, and usually a pump station to discharge into either the Sacramento or American River. These discharges are regulated for water quality by the Regional Water Quality Control Board NPDES permit R5-2002-0206.¹⁷ Additional discussion of impacts related to hydrology, including water quality are contained in section 6.7, Hydrology and Water Quality of this EIR.

The Sacramento design standards for project drainage include capturing the 10-year design storm without street flooding and preventing water from the 100-year storm from reaching within one foot of any building pad. The flows are generally conveyed in pipes or pipes and channels to pump stations. The channels are designed to hold the 100-year design storm. Projects that may cause the conveyance system to exceed their 100-year design capacity are required to detain their flows on-site or otherwise mitigate the potential flow exceedance.

Regulatory Context

■ Federal and State

With regard to wastewater, the Federal Clean Water Act (CWA) and regulations set forth by the California Department of Health Services (DHS) and State Water Resources Control Board (SWRCB) are aimed primarily at discharges of effluent to surface waters. Title 40 of the Code of Federal Regulations (CFR) Part 503, Title 23 California Code of Regulations, and standards established by the Central Valley Regional Water Quality Control Board regulate the disposal of biosolids generated by wastewater treatment plants.

Under the CWA, the Regional Water Quality Control Board issues both general and individual permits for discharges to surface waters, including for both point-source and non-point-source discharges. The CWA mandates permits for municipal stormwater discharges. The city of Sacramento has coverage under a MS4 General Permit. This permit requires that controls be implemented to reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and other measures as appropriate. As part of permit compliance, the City has prepared a Stormwater Quality Improvement Plan (SQIP), which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in

17 California Regional Water Quality Control Board, Waste Discharge Requirements for County of Sacramento and Cities of Citrus Heights, Elk Grove, Folsom, Galt and Sacramento Storm Water Discharges from Municipal Separate Storm Sewer Systems Sacramento County, <www.waterboards.ca.gov/stormwtr/docs/sacramento_r5_2002_0206.pdf>.

stormwater discharge. New development under the proposed project would be required to follow the guidance contained in the SQIP. See section 6.7, Hydrology and Water Quality, for additional information.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of wastewater and storm drainage service. For wastewater and storm drainage services, some of the policies relevant to this issue include providing adequately sized sewer and drainage facilities where they are needed, developing plans for sewer line extensions to developed areas where service is lacking, and developing and implementing appropriate funding mechanisms. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Sacramento City Code, Chapter 13.08

Sacramento City Code, Chapter 13.08 outlines the requirements for permitted discharges to the sewer service system. Article V of the chapter establishes charges and fees for customers receiving sewer service and storm service from the city.

Combined Sewer System Development Fee

The City of Sacramento adopted a sewer ordinance for the CSS in 2005, which requires payment of a development fee for projects that add sewer flows within the CSS service boundary. Key aspects of the CSS development fee include: a fee per equivalent single-family dwelling unit that will be subject to periodic adjustments; CSS development fees may be fully or partially offset by constructing or cost sharing in the construction of a mitigation project approved by the City Department of Utilities; the fee approximates the cost to construct local storage to mitigate downstream impacts; and fees will be collected and deposited in a fund for the City to construct larger projects to mitigate multiple developments.

Sacramento Regional County Sanitation District and Sacramento Area Sewer District

The SRCSD and the Sacramento Area Sewer District (formerly CSD-1) are both separate political subdivisions of the State of California formed under the State of California Health and Safety Code. As such, the Districts' policies must conform to the statutes of the State Health and Safety Code. Additionally, the Districts are separately funded entities that do not depend upon Sacramento County for funding capital improvements, maintenance, or operations. User

fees provide for the systems' operation and maintenance, while hookup fees provide most of the funding for new trunks and interceptors.

The SRCSD requires a regional connection fee be paid to the District for any users connecting to or expanding sewer collection systems (SRCSD Ordinance No. SRCSD-0043).

Stormwater Quality/Urban Runoff Management

The County of Sacramento and the Cities of Sacramento, Folsom, Citrus Heights, Elk Grove, Rancho Cordova, and Galt have a joint NPDES permit (No. CAS082597) that was granted in December 2002. The permittees listed under the joint permit have the authority to develop, administer, implement, and enforce storm water management programs within their own jurisdiction. The permit is intended to implement the Basin Plan through the effective implementation of BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable (MEP). Additional discussion of stormwater quality is included in section 6.7, Hydrology and Water Quality.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The evaluation of wastewater impacts is based on a review of data presented in the master planning documents for the SRWTP and SRCSD provider areas and consultation with SRCSD staff.

Proposed General Plan Policies

The following goals and policies from the proposed 2030 General Plan are relevant to Sewer and Storm Drainage within the entire Policy Area. The proposed General Plan does not include any policies regarding wastewater that are unique to any of the City's Community Plans or Focused Opportunity Areas.

UTILITIES (U)

Citywide Utilities

Goal U 1.1 High-Quality Infrastructure and Services. Provide and maintain efficient, high quality public infrastructure facilities and services in all areas of the city.

Policies

U 1.1.1 Provision of Adequate Utilities. The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services to all areas in the city currently receiving these services from the City, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of the infrastructure necessary to provide these City services.

- U 1.1.2 **Citywide Level of Service Standards.** The City shall establish and maintain service standards [Levels of Service (LOS)] for water, wastewater, stormwater drainage, and solid waste services.
- U 1.1.3 **Sustainable Facilities and Services.** The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.
- U 1.1.4 **Special Districts.** The City shall review existing adjacent and overlapping special districts and consider whether annexation, detachment, consolidation, and/or retention of existing special districts for drainage, wastewater, and solid waste is needed to increase the efficiency and quality of service and delivery.
- U 1.1.5 **Timing of Urban Expansion.** The City shall assure that new public facilities and services are phased in conjunction with the approved urban development it is intended to serve.
- U 1.1.6 **Growth and Level of Service.** The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.
- U 1.1.7 **Infrastructure Finance.** The City shall develop and implement a financing strategy and assess fees to construct needed water, wastewater, stormwater drainage, and solid waste facilities to maintain established service levels and to mitigate development impacts to these systems (e.g., pay capital costs associated with existing infrastructure that has inadequate capacity to serve new development). The City shall also assist developers in identifying funding mechanisms to cover the cost of providing utility services in infill areas.
- U 1.1.8 **Infill Areas.** The City shall identify and prioritize infill areas for infrastructure improvements.
- U 1.1.9 **Joint Use Facilities.** The City shall support the development of joint use water, drainage, and other utility facilities as appropriate in conjunction with schools, parks, golf courses, and other suitable uses to achieve economy and efficiency in the provision of services and facilities.
- U 1.1.12 **Impacts to Environmentally Sensitive Lands.** The City shall locate and design utilities to avoid or minimize impacts to environmentally-sensitive areas and habitats.

Wastewater Systems

Goal U 3.1 Adequate and Reliable Sewer and Wastewater Facilities. Provide adequate and reliable sewer and wastewater facilities that collect, treat, and safely dispose of wastewater.

Policies

- U 3.1.1 **Sufficient Service.** The City shall provide sufficient wastewater conveyance, storage, and pumping capacity for peak sanitary sewer flows and infiltration.
- U 3.1.2 **New Developing Areas.** The City shall ensure that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs to avoid the need for future upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage over-sizing of infrastructure which could contribute to growth beyond what was anticipated in the 2030 General Plan.

U 3.1.3 **Stormwater Infiltration Reduction.** The City shall develop design standards that reduce infiltration into new City-maintained sewer pipes.

U 3.1.4 **Combined Sewer System Rehabilitation.** The City shall continue to rehabilitate the Combined Sewer System (CSS) to provide adequate wastewater collection, treatment, and disposal in areas served by this system.

Stormwater Drainage

Goal U 4.1 Adequate Stormwater Drainage. Provide adequate stormwater drainage facilities and services that are environmentally-sensitive, accommodate growth, and protect residents and property.

Policies

U 4.1.1 **Adequate Drainage Facilities.** The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.

U 4.1.2 **Master Planning.** The City shall implement master planning programs to:

- Identify facilities needed to prevent 10-year event street flooding and 100-year event structure flooding,
- Ensure that public facilities and infrastructure are designed pursuant to approved basin master plans, and
- Ensure that adequate land area and any other elements are provided for facilities subject to incremental sizing (e.g., detention basins and pump stations).

U 4.1.3 **Regional Stormwater Facilities.** The City shall coordinate efforts with Sacramento County and other agencies in the development of regional stormwater facilities.

U 4.1.4 **Watershed Drainage Plans.** The City shall require developers to prepare watershed drainage plans for proposed developments that define needed drainage improvements per City standards, estimate construction costs for these improvements and comply with the City's NPDES (National Pollutant Discharge Elimination System) permit.

U 4.1.5 **New Development.** The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding.

ENVIRONMENTAL RESOURCES SECTION - WATER RESOURCES (ER)

Goal ER 1.1 Water Quality Protection. Protect local watersheds, water bodies and groundwater resources, including creeks, reservoirs, the Sacramento and American Rivers and their shorelines.

Policies

ER 1.1.3 **Stormwater Quality.** The City shall control sources of pollutants and improve and maintain urban runoff water quality through storm water protection measures consistent with the City's National Pollution Discharge Elimination System (NPDES) Permit.

ER 1.1.4 **New Development.** The City shall require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, best management practices

(BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the city's NPDES Permit.

- ER 1.1.5 **No Net Increase.** The City shall require all new development to contribute no net increase in stormwater runoff peak flows over existing conditions associated with a 100-year storm event.
- ER 1.1.6 **Post-Development Runoff.** The City shall impose requirements to control the volume, frequency, duration, and peak flow rates and velocities of runoff from development projects to prevent or reduce downstream erosion and protect stream habitat.
- ER 1.1.7 **Construction Site Impacts.** The City shall minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.

Thresholds of Significance

For the purposes of this EIR, impacts on sewer and storm drainage are considered significant if the proposed General Plan would:

- result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments; or
- require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

Impacts and Mitigation Measures

A summary of all Sewer and Storm Drainage impacts and their levels of significance is located at the end of this technical section.

Impact 6.11-3	Implementation of the proposed 2030 General Plan would generate additional wastewater and stormwater that could require the expansion of existing conveyance and treatment facilities.
Applicable Regulations	<i>SRCS D Regional Connection Fee Combined System Development Fee</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policies U 1.1.1, U 1.1.2, U 1.1.3, U 1.1.5, U 1.1.6, U 1.1.7, U.1.1.8, U 3.1.2, U 3.1.3, U 3.1.4</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

This impact evaluates the capacity of existing and proposed infrastructure to ensure it can meet additional demand in addition to *existing* commitments. For an analysis of potential impacts

related to the ability of providers' to meet future demand, the reader is referred to Impact 6.11-5. Impact 6.11-4, below, evaluates whether expansion or construction of new wastewater or storm drainage facilities would result in significant environmental effects.

Buildout of the proposed 2030 General Plan would increase wastewater flows that would require conveyance to and treatment at the SRWTP. Using the population-based flow factor identified in the SRCSD SWRTP 2020 Master Plan of 132.4 gallons per capita per day, the net population growth through 2030 (see Table 5-8 in Chapter 5, Population, Employment and Housing) would result in an increased demand of approximately 25.7 mgd ADWF. Existing ADWF treated by the SRWTP is approximately 165 mgd, which is under the flow estimates projected in the SWRTP 2020 Master Plan for both 2005 and 2010 (174 mgd ADWF and 196 mgd ADWF, respectively).

The city of Sacramento was included in the SRWTP 2020 Master Plan population-based flows as part of the total service area, along with the recent annexation of West Sacramento into the service area. The population estimates in the proposed General Plan (and their associated increases through 2020) do not vary substantially from the SACOG-based population assumptions used to develop the 2020 Master Plan. The projected population-based total flows (2005 plus future flows) are, therefore, within the planned design capacity of 218 mgd ADWF for 2020, and capacity would be available in addition to other service provider commitments. As noted in the Environmental Setting, service area-wide flows (which include a contribution from the city of Sacramento) can be expected to continue to increase above the projected 218 mgd ADWF for year 2020. This is assumed to include the remaining 10-year incremental increase attributable the 2030 General Plan. The treatment plant has been master planned for a "mirror image" buildout of the existing facilities of 350 mgd ADWF of conventional and advanced treatment capacity, which can be accommodated within the 900-acre SRWTP property.

As further described in the Environmental Setting, the conveyance systems have also been master planned to both 2020 and buildout (i.e., beyond 2020). Because the population-based flows to the SWRTP would not exceed master-planned treatment capacity, improvements planned in the interceptor and trunk systems would have capacity to convey flows once the improvements are in place.

The SRCSD has a program in place to continually evaluate demand/capacity needs, and the master planning effort provides the flexibility to respond to changes in demand that can be anticipated in advance of planned improvements so that capacity issues are addressed in a timely and cost-effective manner. Master planning efforts that would identify necessary improvement in capacity to accommodate city growth beyond the 2020 Master Plan timeframe would be initiated well in advance. To fund expansions to the both the conveyance and treatment systems, the SRCSD requires a regional connection fee be paid to the District for any users connecting to or expanding sewer collection systems (SRCSD Ordinance No. SRCSD-0043).

The General Plan also includes Policy U 4.1.1 that requires the City to ensure that all new drainage facilities are adequately sized to accommodate stormwater runoff. Policy U 4.1.2 requires the City to ensure that public facilities and infrastructure are designed pursuant to basin master plans and Policy U 4.1.3 states that the City shall coordinate with the county as well as other agencies in the development of regional stormwater facilities

Development under the 2030 General Plan would also increase the demand for conveyance capacity in the local City-maintained sewer lines that connect to major trunk lines and interceptors in the separate sewer system. For the areas in the city that are served by the CSS, there would not be a substantial increase in sewage flows to the system because it is already limited in capacity, and flows must currently be mitigated in accordance with the Combined System Development Fee.

Therefore, because there would be sufficient capacity to accommodate increases in wastewater, in addition to providers' *existing* commitments, and there are established plans and programs in place as well as policies to increase capacity in response to demand, the impact would be ***less than significant***.

Mitigation Measure

None required.

Impact 6.11-4	Implementation of the proposed 2030 General Plan would require the need for expansion of wastewater treatment facilities, which could cause significant environmental effects.	
Applicable Regulations	<i>Sacramento Metropolitan Air Quality Management District Rules and Regulations pertaining to construction emissions</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>None applicable</i>	
Significance after Mitigation Included in the SGP	<i>Significant</i>	
Additional Mitigation	None available	
Residual Significance	Significant and Unavoidable	

The SRCSD anticipates an expansion of the SRWTP from 181 mgd ADWF to 218 mgd ADWF to accommodate projected service area demand through the 2020 Master Plan timeframe. This expansion would be needed to provide additional capacity for projected wastewater flows from the Policy Area along with other areas within the SRCSD service area. The certified EIR for the SRWTP 2020 Master Plan evaluated the environmental effects of expanding plant capacity to 218 mgd ADWF. The EIR for that project concluded that construction and operation of the SRWTP 2020 Master Plan would result in one significant and unavoidable impact associated with construction-related air emissions. All other impacts were determined to be less than

significant or could be mitigated to less-than-significant levels through mitigation identified in the EIR and adopted in conjunction with approval of the project.

Therefore, because the proposed project would contribute to the need to expand the SRWTP, which could result in short-term significant and unavoidable air quality impacts during construction, this impact is considered *significant* based on the threshold of significance.

Mitigation Measure

There are no feasible mitigation measures available to the City of Sacramento to address this short-term significant impact because construction site emissions and controls would not be within the jurisdiction of the City of Sacramento to monitor and enforce. Therefore, the impact is considered ***significant and unavoidable***.

None available.

Cumulative Impacts and Mitigation Measures

The cumulative context to assess impacts on wastewater includes buildout of the 2030 General Plan in combination with the “Potential Future Annexations” shown in the SRWTP 2020 Master Plan (Placer Vineyards, Natomas Joint Vision (“Northern Territories”), East County, and South Elk Grove). The cumulative context for storm drainage effects is the American and Sacramento river watersheds, which receive storm drainage discharges from the Policy Area.

Growth in the city’s CSS area is not affected under cumulative conditions because none of the proposed cumulative growth would occur within the CSS, other than that assumed under the project. Therefore, the cumulative analysis focuses on the effects on the separate sewer and storm drainage systems outside the CSS, in combination with future growth outside the CSS.

Impact 6.11-5	Implementation of the proposed 2030 General Plan, in combination with future development in the SRCSD Service Area, would require expansion of wastewater conveyance and treatment capacity to serve the project’s sewer needs in addition to existing commitments.	
Applicable Regulations	<i>SRCS D Regional Connection Fee Combined System Development Fee</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>None applicable.</i>	
Significance after Mitigation Included in the SGP	<i>Significant</i>	
Additional Mitigation	None available	
Residual Significance	Significant and Unavoidable	

The SRWTP 2020 Master Plan projected flows for a service area shown in Figure 6.11-4, including a recent annexation of West Sacramento into the service area. The ultimate “buildout”

capacity of the SRWTP is 350 mgd ADWF, or 132 mgd ADWF more than the 2020 Master Plan flow of 218 mgd ADWF.

The flow estimates did not take into account future flows from Placer Vineyards, Natomas Joint Vision, East County, or South Elk Grove future growth areas, although the SRCSD recognizes that these areas could eventually be served by the District if agreements are established to do so and all LAFCO-required Sphere of Influence amendments and annexations are approved. However no formal feasibility, planning, or design studies have been prepared that firmly establish future conveyance and treatment demand from these growth areas, or agreements that provide for capacity. Both the SRWTP and the interceptor and trunk systems would need to be increased to provide for additional growth in the region. Expansion of the processes at the SRWTP 900-acre property to accommodate additional flows could be implemented, resulting in potential construction air emissions that could exceed established thresholds, as described in Impact 6.11-6. The RWQCB may increase effluent requirements and result in processes that require additional land areas, but it would be just as reasonable to assume that future advances in wastewater treatment may allow for advanced treatment to occur in a smaller area. An increase in treated effluent flows discharged to the Sacramento River (beyond that analyzed in the EIR for the 218-mgd ADWF 2020 Master Plan) could also result in water quality impacts not previously identified.

Conveyance systems may also need to be increased. Using Placer Vineyards as an example,¹⁸ flows from that project could be directed to the SRCSD's Northwest Interceptor. However, if all the flows projected for the Northwest Interceptor occur and that facility nears capacity, it could become necessary to construct an offline wastewater storage tank.¹⁹ This could also result in significant environmental effects (e.g., cultural resources, biological resources, aesthetics), depending on location, along with construction noise and air quality impacts. It is reasonable to assume that connection of other growth areas outside the service boundary would require installation of additional conveyance lines, which could affect similar resources. Therefore, the cumulative impact is considered significant.

Based on population-based flows, the proposed project's wastewater demand represents a little over 30 percent of the flows that would be conveyed and treated under the 2020 Master Plan, assuming the four growth areas are not served by SRCSD facilities in the future. That percentage would be commensurately smaller if the four future annexation areas are included in new flow projections. However, the project's contribution to the need for expansion of facilities would still remain because the expansions are necessary to accommodate the proposed project. Therefore, the project's contribution is cumulatively considerable, and the impact would be *significant*.

18 The EIR for the Placer Vineyards Specific Plan contemplated an option that would provide wastewater service to that project from SRCSD facilities. No detailed studies or agreements have been completed. This example is provided for informational purposes only.

19 Placer County, Placer Vineyards Specific Plan, Revised Draft EIR, March 2006, p. 4.11-40.

Mitigation Measure

Any future provision of service by the SRCSD to future growth areas contemplated in the 2020 Master Plan would not be at the discretion of the City of Sacramento. There are no mechanisms available to the City to direct future planning efforts of the SRCSD to serve locations outside the Policy Area covered by the 2030 General Plan. Therefore the impact would remain cumulatively **significant and unavoidable**.

None available.

Impact 6.11-6	Implementation of the proposed 2030 General Plan, in combination with future development in the lower Sacramento River watershed, would increase the demand for storm drainage infrastructure.	
Applicable Regulations	<i>none</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>Policies U 1.1.1, U 1.1.5, U 1.1.6, U 1.1.8, U 3.1.1, U 3.1.3, U 3.1.4, U 1.1.9, U 1.1.12, U 4.1.1, U 4.1.2 U 4.1.5, and ER 1.1.4</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

As discussed above the conversion of undeveloped or vacant land to impervious surfaces increases the rate and amounts of stormwater runoff discharged to drainage infrastructure and local waterways. Unmanaged, these flows can cause localized street flooding or increase water surface elevations in channels, which could result in overtopping and more widespread flooding. The amount of new impervious surfaces created and each individual development's location in the watershed are key factors in determining whether natural or engineered stormwater drainage systems are adequate to minimize flood hazard.

As discussed in section 6.7, Hydrology and Water Quality, Impacts 6.7-3, 6.7-4, 6.7-6, and 6.7-7, the City's drainage plans limit run-off from General Plan areas with increased impervious cover. To achieve the desired level of drainage and reduced risk of flood, new or expanded detention/retention basins, which may or may not be incorporated into the footprint of the development area for a specific project will be required. Policy U 1.1.9 encourages joint-use facilities to achieve economy and efficiency in the provision of services and facilities. Policy U 1.1.12 directs that utilities should be sited and designed to avoid or minimize impacts to environmentally sensitive areas and habitats. Policy ER 1.1.4 further directs the City to require new development to protect the quality of water bodies and natural drainage systems through site design, storm water treatment, and best management practices. These measures would also help minimize potential environmental effects of construction of new drainage facilities.

Development assumed to occur under the 2030 General plan would not produce any increase in the cumulative stormwater runoff and as a result not require any new regional facilities. Therefore, the project's contribution is not cumulatively considerable and cumulative impacts from the proposed 2030 General Plan would be ***less than cumulatively significant***.

Mitigation Measure

None required.

South Area Community Plan

The South Area Community Plan (SACP) is located in an area of the city where existing wastewater and storm drainage infrastructure exists to serve development. There are small areas of undeveloped land that it is anticipated would be developed in the future under this General Plan. Any future development in this area, including infill development, would comply with the proposed General Plan policies described above, which would ensure that impacts on wastewater capacity, storm drainage capacity, and infrastructure specific to the SACP Area would be mitigated, similar to the remainder of the Policy Area. Therefore, it is assumed that impacts resulting from projects in the SACP Area would be similar to the rest of the Policy Area. At this time, no additional mitigation would be necessary.

Focused Opportunity Areas

To address specific infrastructure concerns associated with future development in the Focused Opportunity Areas Nolte Engineering prepared a Technical Memorandum (see Appendix H) that assesses potential wastewater demand as well as any infrastructure deficiencies in the wastewater as well as storm drainage infrastructure. The analysis focuses on four out of the six Opportunity Areas; River District (Richards), Robla, Arden Fair/Point West, and 65th Street/University Village. Florin Center/Light Rail Station and Meadowview Light Rail Station Focused Opportunity Areas were not included in the Nolte analysis. The findings are discussed below.

■ River District

The River District, which includes an older area north of downtown, contains a backbone wastewater conveyance system that appears to be adequate to support additional development planned for this area. A majority of this area has been developed with limited areas of undeveloped vacant land. No significant wastewater infrastructure deficiencies were identified. However, as new development is proposed in this area the adequacy of wastewater treatment, capacity and infrastructure would be evaluated to ensure current City code requirements are met.

Storm drainage in this area is provided by a system of pipes and ditches that either convey runoff to Sump 111 which pumps runoff into the American River or flows to the SRCSD wastewater treatment plant via combined sewer and storm drain infrastructure (the CSS). It is

estimated that there is less than 80 acres of undeveloped land in this area, with the majority being east of 19th Street. No storm drain facilities exist in this area of the River District. To accommodate additional development, it is anticipated that detention facilities would be required as new growth occurs. In the primarily undeveloped area east of 19th Street it is anticipated that new storm drain infrastructure would be required to serve new development.

■ Robla

The Robla area is located in the northeast portion of the city and is more rural/suburban in character versus urban. The backbone infrastructure in this area includes wastewater pipes that range in size from 8 to 48 inches. Based on the analysis, it is anticipated that the existing wastewater infrastructure would be adequate to serve future development.

Due to the more rural quality of this area, there are limited storm drain facilities. However, in portions there is a separate system that drains directly into Magpie Creek. As the area is further developed additional storm drain infrastructure would be required in order to meet City code requirements.

■ Arden Fair/Point West

The Arden Fair/Point West Opportunity Area is a developed area with wastewater and storm drain infrastructure in place. The wastewater system consists of a series of conveyance lines that appear to all have adequate capacity to support new development. No deficiencies were specifically identified in this area.

Storm drain in the area is provided by a large detention basin, Basin 152, as well as a series of ditches and pipes. It is anticipated that future development in this area may be accommodated by the existing storm drain system without requiring any improvements. However, as development occurs the adequacy of the system would be evaluated to ensure it meets current City code.

■ 65th Street/University Village

Existing wastewater infrastructure in this area is owned by the City of Sacramento and the Sacramento Area Sewer District (formerly CSD-1). Within the area proposed for future development as part of the CSUS Village, the existing 18-inch wastewater line would be upsized to a 21-inch line to ensure adequate conveyance capacity is available to serve new development. In other areas of the 65th Street/University Village area existing wastewater infrastructure is also recommended to be upsized to accommodate new development and to ensure new development meets current City code.

The existing storm drain infrastructure consists of a series of pipes throughout the area. There are some areas that are undeveloped with no existing infrastructure in place. In order to

accommodate new development parts of the system would need to be replaced and/or new systems installed to ensure adequate capacity is available to provide storm drainage.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts related to wastewater infrastructure and storm drain infrastructure. At this time specific project information is not available (i.e., individual building design and site-specific location relative to conveyance infrastructure, etc.) to evaluate potential impacts associated with adequate wastewater conveyance and treatment plant capacity as well as storm drain infrastructure to serve a specific development proposal. Once specific development proposals are prepared and submitted to the City, a project-specific environmental analysis would be prepared, if required, to analyze any potential impacts on wastewater conveyance and treatment plant capacity as well as storm drain infrastructure.

SOLID WASTE

INTRODUCTION

This section describes current solid waste collection services in the city of Sacramento. Existing plans and policies relevant to solid waste issues associated with implementation of the project are provided. Potential effects on solid waste collection services associated with implementation of the 2030 General Plan are evaluated based on an analysis of service levels and remaining capacity in the Lockwood, Kiefer, L and D, Yolo County and Florin-Perkins landfills.

ENVIRONMENTAL SETTING

City Wide

In 2006, the City of Sacramento disposed of a total of 426,635 tons of solid waste. Of this total, 134,642 tons were diverted for recycling (including green waste) and 291,993 tons collected by the City's trucks were sent to landfills.²⁰ Approximately 129,000 tons of refuse were collected from residential sources, and 22,600 tons were collected from commercial sources. All of the residential waste and 16,000 tons of the commercial waste were transported to landfills. The remainder of the waste was diverted to alternative uses. The City also collected approximately 37,000 tons of residential curbside recycling, 2,300 tons of commercial recycling and 80,000 tons of garden refuse. Other sources of solid waste included scheduled pickups, neighborhood cleanup, and street sweeping. The total amount of solid waste collected including all waste and recyclables collected by private haulers, recyclers, and the City is over 1 million tons per year. Of this total approximately half a million tons is sent to the landfill.²¹

Solid waste in the city of Sacramento is collected by City and permitted private haulers. The City offers both commercial and residential solid waste collection services. Construction and demolition waste is collected by the City and private companies. Commercial solid waste collected by the City is transported to one of two transfer stations for processing: the Sacramento Recycling and Transfer Station owned by BLT Enterprises, which is permitted for a maximum daily disposal of 2,500 tons,²² and the North Area Transfer Station, owned by the County of Sacramento Public Works Department, which accepts a maximum of 2,400 tons per day of construction/demolition, industrial, and green materials, tires, wood waste, and mixed municipal waste.²³ City waste transported from the City's transfer stations is then transported to

20 Julie Freidman, Solid Waste Division, City of Sacramento Department of Utilities, written communication August 9, 2007.

21 Marty Strauss, City of Sacramento Department of Utilities, written communication, March 6, 2008.

22 California Integrated Waste Management Board (CIWMB), *Transfer Station Profile*, <www.ciwmb.ca.gov>, accessed September 5, 2007.

23 CIWMB, *Transfer Station Profile*, <www.ciwmb.ca.gov>, accessed September 5, 2007.

the Lockwood Regional Landfill located in Sparks, Nevada. The Lockwood Landfill is a Class I landfill that currently accepts an average of 7,700 tons of solid waste per day, 800 tons of which come from the city of Sacramento. The Lockwood Landfill does not have maximum daily disposal limits, and it has a remaining capacity of 32.5 million tons. The landfill currently operates on a 550-acre site; however, to accommodate planned future growth, the process for expansion to 1,100 acres is underway and should be completed by 2008.²⁴ Waste removed by private haulers can be disposed of at one of several landfills in the region depending upon which company hauls it and where it is processed.²⁵

If residential and municipal solid waste is taken to the North Area Recovery Station (NARS)/County Facility for processing the waste is then transported to the Sacramento County (Kiefer) Landfill, operated by the County's Solid Waste Management and Recycling Department (the primary solid waste disposal facility in Sacramento County). Kiefer Landfill, categorized as a Class III facility, also accepts waste from the general public, businesses, and private waste haulers. More specifically, wastes accepted include: construction/demolition, mixed municipal, and sludge (biosolids). The facility is on a 1,084-acre site near the intersection of Kiefer Boulevard and Grantline Road. The permitted capacity for the landfill is 117,400,000 cubic yards (10,815 tons/day) and, as of 2000, the landfill had a remaining capacity of 86,163,462 cubic yards (73 percent). The landfill has an estimated closure date of 2064.

Construction and demolition waste and commercial waste that is collected by both the City's fleet as well as private companies is disposed at a variety of facilities, including the Sacramento County Kiefer Landfill, the Yolo County Landfill, Forward Landfill, and L and D Landfill. Private haulers can deliver waste to the landfill of their choice and base the decision on market conditions and capacity.

■ Waste Stream Diversion

The Integrated Waste Management Act of 1989 (AB 939) requires each city and county in California to reduce landfilled waste by 50 percent. As of 2004, the most recent data available that has been approved by the CIWMB, the City of Sacramento maintained a 49 percent diversion rate.²⁶ The City has six recycling programs, six programs specializing in source reduction and four public education programs designed to encourage and promote recycling in the communities.

24 City of Sacramento, *Environmental Impact Report for the Township 9 Subdivision*, SCH No. 2006072007, May 2006, p. 6.10-2.

25 Marty Strauss, City of Sacramento Department of Utilities, written communication, March 6, 2008.

26 CIWMB, Jurisdictional Profile for the City of Sacramento, accessed September 21, 2007.

■ Waste Reduction/Recycling Programs

Recycling Programs

The City provides residential curb-side recycling pick-up. Following collection, recyclables are transferred to the Sacramento Transfer Station for processing. In January 2007, the City began providing this service on a weekly basis (prior to 2007 service was bi-weekly). Since switching to weekly curb-side pick-ups, residential recycling has experienced an increase of approximately 20 percent.²⁷ The City also offers a commercial recycling program in which businesses are provided containers for co-mingled recyclable materials. These materials are then collected up to six times per week.

Beverage Container Recycling

The California Department of Conservation, Division of Recycling administers the California Beverage Container Recycling and Litter Reduction Act enacted in 1986. It provides a number of services to achieve those goals, including enforcement, auditing, grant finding, technical assistance and education. Consumers pay California Refund Value (CRV) when they purchase beverages from a retailer and are reimbursed when they redeem the container at a recycling center. There are ten facilities within the city of Sacramento that operate CRV redemption centers.

Household Hazardous Waste and E-waste programs

Residents can safely dispose of materials such as paint, wood preservatives, antifreeze, batteries, household chemicals, and other hazardous substances at the North Area Recovery Station and the Sacramento Transfer Station listed above. Any electronic waste (E-waste) devices with a cathode ray tube (CRT) are banned by state Law from being landfilled since they contain lead. The Sacramento Recycling Transfer Station, as well as local privately-owned electronics recycling facilities, accepts E-waste for a fee.

Used Oil and Oil Filters

There are 44 certified used oil collection facilities within the city. As of 2007, these centers pay \$0.16 per gallon (5 gallon limit) in exchange for used motor oil. In addition, residents are given the option to call a recycling hotline to schedule a curb-side pick-up of used oil and oil filters. The hazardous waste facilities listed above will also accept used oil and oil filters for recycling.

Sacramento Regional Solid Waste Authority (SWA) Business Recycling Ordinance

A Joint Powers Authority was created consisting of the City of Sacramento, the City of Citrus Heights, and unincorporated Sacramento County to regulate commercial solid waste collection

²⁷ Marty Strauss, City of Sacramento Department of Utilities, Solid Waste Division, personal communication October 8, 2007.

through its franchised haulers. On April 8, 2007 the SWA Board adopted a business recycling ordinance. The goal of the ordinance is to require all businesses subscribing to four cubic yards or greater of weekly garbage collection service to have a recycling program. The County's Environmental Management Department is responsible for overseeing the business recycling program.

■ Additional Solid Waste Facility

The City Department of Utilities Solid Waste Division, in conjunction with BLT Enterprises, has proposed a new recycling and transfer station for the City.²⁸ As of October 2007, there are three possible locations for the new facility as well as the North Area Recovery Station, all of these locations are in either North Sacramento or the Natomas areas. The purpose of this proposed new station is to alleviate demands on the Sacramento Transfer Station on Fruitridge Road, which collects almost all city waste. The new facility would accommodate solid waste generated in the northern portion of the city including Natomas, Robla, North Sacramento and Del Paso Heights. Plans for this facility will be going to council for approval in 2008, and development should take approximately two years upon approval.²⁹

South Area Community Plan

Solid waste collection services in the South Area are provided by the City and private haulers, and are included in the city wide discussion above. In addition, the South Area Transfer Station located at 8550 Fruitridge Road accepts green material, municipal waste and tires as well as the BLT/Sacramento Recycling Transfer Station located at 84th and Fruitridge. This facility is not open to the public and accepts a daily maximum of 348 tons.³⁰ As of February 2006, this facility is no longer accepting materials from the curbside recycling program.

Focused Opportunity Areas

The city wide discussion above pertaining to solid waste services for the city also includes the Focused Opportunity Areas.

28 City of Sacramento Department of Utilities, Solid Waste Division, <<http://thehoytco.com/nats/>>, October 5, 2007.

29 Sherill Huun, Senior Engineer, City of Sacramento Department of Utilities, personal communication December 12, 2007.

30 CIWMB, *Transfer Station Profile*, <www.ciwmb.ca.gov>, accessed September 5, 2007.

Regulatory Context

■ Federal

Resource Conservation and Recovery Act

Volume 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act [RCRA, Subtitle D]) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

■ State

Integrated Waste Management Act (Assembly Bill 939)

Regulation affecting solid waste disposal in California is embodied in Public Resources Code Title 14, known as the Integrated Waste Management Act originally adopted in 1989. AB 939 was designed to increase landfill life by diverting solid waste from landfills within the state and conserving other resources through increasing recycling programs and incentives. AB 939 requires that counties prepare Integrated Waste Management Plans to implement landfill diversion goals, and requires that cities and counties prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must set forth a program for management of solid waste generated with the jurisdiction of the respective city or county.

The SRRE programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase and use of recycled products. AB 939 also requires that California cities implement plans designed to divert the total solid waste generated within each jurisdiction by 50 percent based on a base year of 2000. The diversion rate is adjusted annually for population and economic growth when calculating the percentage achieved in a particular jurisdiction.

Assembly Bill 1220

The California Integrated Waste Management Board (CIWMB) and the State Water Resources Control Board (SWRCB) completed a parallel rulemaking as a result of Assembly Bill 1220 (Chapter 656, Statutes of 1993). Assembly Bill 1220 required clarification of the roles and responsibilities of the two boards, the Regional Water Quality Control Boards and the CIWMB's local enforcement agencies in regulating solid waste disposal sites. The approved Title 27 regulations combine prior disposal site/landfill regulations of the CIWMB and SWRCB that were maintained in Title 14 CCR and Chapter 15 of Title 23 CCR (which contains requirements for disposal of hazardous waste). The regulations were adopted at a joint meeting of the CIWMB and SWRCB on January 23, 1997.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of solid waste service. For solid waste service, some of the policies relevant to this issue include providing adequate solid waste disposal facilities and services for collection, storage and reuse of refuse. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Sacramento Regional Solid Waste Authority (SWA)

The Sacramento Regional Solid Waste Authority (SWA) is a joint powers authority consisting of a board of supervisors representing Sacramento County and the cities of Sacramento and Citrus Heights. The SWA enforces its ordinances to regulate commercial solid waste collection, permit franchised haulers, and promote recycling programs.

Sacramento Regional Solid Waste Authority Ordinance No. 8

Ordinance 8 was established to regulate the transport, transfer, disposal, and recycling of commercial solid waste kept or accumulated within the SWA region. The ordinance was put into place for the purposes of ensuring the orderly operation of solid waste transport and disposal, and also to minimize adverse effects on human health and the local environment. Sections 24 and 25 of Ordinance 8 specify that commercial franchisees must divert 30 percent of their commercial solid waste for recycling, and establishes a recycling incentive fee for tonnage shortfall of waste diversion. Section 35 provides restrictions for solid waste disposal, including prohibiting the dumping of solid waste on any property, road, or highway not designated by the ordinance for solid waste disposal or dumping.

Sacramento Municipal Code

Chapter 17.72 of the City of Sacramento Municipal Code outlines the recycling and solid waste disposal regulations. These regulations are necessary in order to lengthen the lifespan of landfills, encourage recycling, and meet state mandated goals for waste reduction and recycling, specifically AB 939. These policies provide guidelines regarding the location, size and design features of recycling and trash enclosures in a manner by which adequate, convenient space for the collection, storage, and loading of recyclable and solid waste material is provided.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

To determine the amount of solid waste that could be generated by the 2030 General Plan the analysis uses information provided by both the City of Sacramento as well as the CIWMB. The residential rate was provided by the City of Sacramento³¹ while the business rate was taken from data provided by CIWMB and is a conservative estimate of all employment (retail, office, industrial) anticipated to be developed within the Policy Area.³² This would be a conservative estimate of solid waste generation. The following solid waste generation rates are used for the analysis:

- Residential = 1.1 tons/unit/year
- Employment (retail, office, industrial) = 10.8 lbs/employee/day
- Evaluation of potential impacts on solid waste facilities and services was based on consultation with staff from the City of Sacramento Department of Utilities and review of the proposed Sacramento 2030 General Plan.

Proposed General Plan Policies

The following goals and policies from the proposed 2030 General Plan are relevant to Solid Waste within the entire Policy Area. The proposed General Plan does not include any policies regarding solid waste that are unique to any of the City's Community Plans or Focused Opportunity Areas.

UTILITIES (U)

Goal U 5.1 Solid Waste Facilities. Provide adequate solid waste facilities, meet or exceed State law requirements, and utilize innovative strategies for economic and efficient collection, transfer, recycling, storage, and disposal of refuse.

Policies

- U 5.1.1 **Zero Waste.** The City shall achieve zero waste to landfills by 2040 through reusing, reducing, and recycling solid waste; and using conversion technology if appropriate.
- U 5.1.2 **Landfill Capacity.** The City shall continue to coordinate with Sacramento County in providing long-term landfill disposal capacity.
- U 5.1.3 **Transfer Stations.** The City shall provide for adequate transfer station facilities to meet the city's demand.
- U 5.1.4 **Equitably Distributed and Compatible Facilities.** The City shall ensure that solid waste and recycling facilities are distributed equitably throughout the city, avoiding

31 Marty Strauss, City of Sacramento Department of Utilities, Solid Waste Division, personal communication October 8, 2007.

32 CIWMB Jurisdiction Profile for Sacramento, conservative rate based on data as of 2004.

over-concentration in areas that are well served, and shall ensure that facility location and design are compatible with surrounding land uses (e.g., by incorporating adequate buffers, siting facilities appropriately to maintain the integrity of surrounding development).

- U 5.1.5 **Residential and Commercial Waste Disposal.** The City shall continue to provide curbside trash and recycling collection service to single-family residential dwellings and offer collection service to commercial and multi-family residential development.
- U 5.1.6 **Yard Waste and Street Sweeping.** The City shall continue to provide garden refuse yard waste collection service to single-family residential dwellings and provide street sweeping service to commercial and residential development.
- U 5.1.7 **Voluntary Containerized Yard Waste Program.** The City shall continue to expand its voluntary containerized yard waste collection program
- U 5.1.8 **Neighborhood Clean-Up Program.** The City shall continue sponsoring the Neighborhood Clean-Up Program.
- U 5.1.9 **Diversion of Waste.** The City shall encourage recycling, composting, and waste separation to reduce the volume and toxicity of solid wastes sent to landfill facilities.
- U 5.1.10 **Electronic Waste Recycling.** The City shall continue to coordinate with businesses that recycle electronic waste to provide convenient collection/drop off locations for city residents.
- U 5.1.11 **Composting and Grasscycling Programs.** The City shall sponsor solid waste educational programs on backyard waste composting and grasscycling (i.e., mulching grass clippings back into the lawn).
- U 5.1.12 **City Recycling.** The City shall serve as a role model to businesses and institutions regarding purchasing decisions that minimize the generation of solid waste in addition to encouraging all City staff to recycle at City facilities
- U 5.1.13 **Food Waste Recycling.** The City shall develop a food waste recycling program.
- U 5.1.14 **Recycled Materials for Goods Packaging.** The City shall support state legislation calling for the use of recycled materials and smaller packaging of retail goods and require that retail establishments use recycled materials for goods packaging in lieu of plastic bags.
- U 5.1.15 **Recycled Materials in New Construction.** The City shall encourage the use of recycled materials in new construction.
- U 5.1.16 **Recycling and Reuse of Construction Wastes.** The City shall require recycling and reuse of construction wastes, including recycling materials generated by the demolition and remodeling of buildings, with the objective of diverting eighty-five percent to a certified recycling processor.
- U 5.1.17 **Waste for Energy Generation.** The City shall continue to use waste (e.g., methane emissions from landfills) for energy generation.
- U 5.1.18 **Disposable, Toxic, or Non-Renewable Products.** The City shall reduce the use of disposable, toxic, or non-renewable products in City operations.
- U 5.1.19 **Sacramento Regional Recycling Market Development Zone.** The City shall support the Sacramento Regional Recycling Market Development Zone (SRRMDZ).

- U 5.1.20 **Waste Composting and Recycling for Landscapes.** The City shall sponsor educational programs regarding the use of waste composting and yard waste recycling for landscapes in lieu of fertilizer.
- U 5.1.21 **Educational Programs.** The City shall sponsor public educational programs regarding the benefits of solid waste diversion and recycling and encourage residents and businesses to redistribute reusable materials (e.g., at garage sales, materials exchanges).

Thresholds of Significance

For the purposes of this EIR, impacts on solid waste resources are considered significant if the proposed General Plan would:

- require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

Impacts and Mitigation Measures

A summary of all Solid Waste impacts and their levels of significance is located at the end of this technical section.

Impact 6.11-7	Implementation of the proposed 2030 General Plan could result in the construction of new solid waste facilities or expansion of existing facilities.
Applicable Regulations	<i>AB 939</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policies U 5.1.1 through U 5.1.13</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

New residential and commercial land uses included within the boundaries of the proposed 2030 General Plan (Policy Area) would increase the population in by approximately 200,000 new residents, create approximately 140,000 new jobs, and result in the need for approximately 100,000 new residential units in the next 25 years (see Table 5-8 in Chapter, 5.0 Population, Employment and Housing). The increase in growth and development as a result of the proposed General Plan would result in an increase of solid waste to transfer centers and landfills, and contribute to an increased demand for solid waste services throughout the city.

The 2030 General Plan estimates that at full buildout of the Plan in 2030 there would be approximately 75,000 attached residential units and 22,000 detached residential units for a total of 97,000 new units within the Policy Area. For the purposes of this analysis the total number of units is divided by 25 years to determine an annual growth rate. An analysis of buildout to year 2030 is addressed below in the cumulative discussion. Therefore, it is assumed development within the Policy Area would average approximately 3,880 units per year. Based on a

generation rate of 1.1 tons/unit/year this assumes 4,268 tons of waste per year would be generated. In addition, projected new jobs in the Policy Area are estimated to be 136,000 by 2030. Assuming a yearly rate of 5,440 new jobs that would translate into approximately 7,050 tons of solid waste per year, assuming 240 working days per year and that each employee generates 10.8 lbs of solid waste per day.

Implementation of Policies U 5.1.1 through U 5.1.4 as well as the recently adopted SWA Business Recycling Ordinance would ensure that solid waste and recycling facilities such as transfer stations are adequately provided throughout the city to help reduce the amount of waste sent to landfills. The programs provided through Policies U 5.1.5 to U 5.1.13 are designed to ensure the City continues to provide recycling and clean-up services for its residents and businesses. Many of these programs are already in place, and continue to promote waste diversion, which will help reduce waste flow to landfills.

With the remaining capacity and expected lifespan at the Lockwood and Kiefer Landfills, combined with the continued use of the existing transfer stations and development of at least one new transfer station in the north area, the increase in solid waste generated by development under the proposed General Plan would not exceed capacity of the landfills. In addition, AB 939 mandates the reduction of solid waste disposal in landfills and the City is currently achieving a 62 percent diversion rate (based on 2006 data) which is anticipated only to increase with continued awareness of the importance of recycling.³³ Consequently, this analysis assumes a worst-case scenario and does not factor in the approximately 50 percent diversion rate. Therefore, because sufficient capacity is anticipated to serve the increased development associated with the proposed General Plan, impacts would be ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative setting for solid waste includes all development in the Sacramento Regional County Solid Waste Authority (SRCSWA) service area. This includes the city of Sacramento and unincorporated areas of the County.

33 Marty Strauss, City of Sacramento Department of Utilities, written communication, March 6, 2008.

Impact 6.11-8	Implementation of the proposed 2030 General Plan, along with other future development in the SRCSWA service area could result in the need for construction of new solid waste facilities or expansion of existing facilities.
Applicable Regulations	<i>AB 939</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policies U 5.1.1 through U 5.1.21</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As previously discussed, a number of landfills operate in the Sacramento region, and landfills outside the region also serve Sacramento's solid waste needs. Lockwood Landfill, the primary destination for waste collected by the City, is undergoing an expansion that will increase its capacity enough to continue operation for at least the next 100 years. Kiefer Landfill is not expected to reach capacity for another 60 years. As growth continues in the region, in accordance with the County General Plan and city general plans, population would increase and the solid waste stream would continue to grow. Implementation of the Solid Waste Authority and Sacramento recycling requirements; however, would continue to significantly reduce potential cumulative impacts on landfill capacity resulting in a less-than-significant effect.

Development associated with the proposed 2030 General Plan would contribute to an increase in solid waste generation. Using the estimated number of dwelling units at buildout in conjunction with the given rate of 1.1 tons of solid waste/unit/year, it can be assumed that by 2030 residences in the city would be producing an additional 106,700 tons of solid waste per year. Furthermore, using employment rates at buildout (136,000 new employees x 10.8 lbs/day/employee x 240 working days per year) it can be estimated that businesses would be producing an additional 176,250 tons of solid waste per year. Thus by 2030 the city would be producing an additional 282,950 tons of solid waste per year. This does not take into account mandatory reduction and diversion programs, which include diversion of at least 50 percent of waste, thus reducing the total to a conservative estimate of 141,475 tons per year.

The General Plan includes Policies U.5.1.15 to U.5.1.21 which provides long-term objectives for minimizing the city's contribution to solid waste by providing additional encouragement and education regarding recycling and development of new techniques for solid waste disposal. Furthermore, the existence of significant capacity at the City's primary landfills, the exporting of solid waste, and aggressive recycling would ensure that the City's contribution of solid waste could be accommodated at buildout of the 2030 General Plan.

These policies, in conjunction with those discussed in Impact 6.11-7, would aid in the long-term reduction of solid waste in the city and ensure a **less-than-significant cumulative** impact related to solid waste services.

Mitigation Measures

None required.

South Area Community Plan

The analysis of impacts related to solid waste generation is primarily based on data collection pertaining to the Policy Area as a whole. However, it is possible that some areas within the Policy Area may be more or less susceptible to these impacts than the Policy Area in general. The South Area Community Plan (SACP) area is located in a portion of the city that is no more susceptible to the impacts of solid waste generation than the remainder of the Policy Area because waste collected from this area is routed to the same transfer facility and/or landfills as the rest of the Area. Specific impacts for individual development projects would be determined by the required goals and programs mandated by City policy. Therefore, it is assumed that impacts resulting from projects in the SACP Area would be the same as they would be in the rest of the Policy Area. No additional mitigation would be necessary.

Focused Opportunity Areas

All of the Focused Opportunity Areas are not located in an area of the city that would be any more or less susceptible to impacts related to solid waste generation than the remainder of the Policy Area. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional mitigation beyond compliance with mandated state and local requirements.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the SACP and future development within the Policy Area could include potential impacts associated with solid waste service. At this time specific project information is not available (i.e., individual project site characteristics, site-specific location, etc.) and waste generation differs based on the type of development (i.e., commercial, industrial, residential, etc.) to evaluate potential impacts associated with solid waste service. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze potential impacts related to solid waste service.

ELECTRICITY AND NATURAL GAS

INTRODUCTION

The Sacramento Municipal Utility District (SMUD) is responsible for the generation, transmission, and distribution of electrical power to its 900 square mile service area, which includes most of Sacramento County and a small portion of Placer County. SMUD is a publicly-owned utility governed by a board of seven directors that make policy decisions and appoint the general manager, the individual responsible for the District's operations. SMUD also has arrangements with the California Independent System Operator (ISO), Western Systems Power Pool and Northern California Power Pool to purchase and sell short-term power. SMUD buys and sells energy and capacity on a short-term basis to meet load requirements and reduce costs. Pacific Gas & Electric Company (PG&E) provides natural gas service to residents and businesses within the Policy Area. This section describes the sources and transmission methods used to provide Sacramento with electricity and natural gas.

ENVIRONMENTAL SETTING

Regional Energy Supplies

Senate Bill 1389 requires the California Energy Commission (CEC) to conduct “assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.” The CEC reports the results of these assessments and forecasts every two years to the Governor, the Legislature, and the California public in the *Integrated Energy Policy Report*. In the alternate years, the CEC prepares the *Integrated Energy Policy Report Update* to discuss the status of energy issues identified in the previous *Integrated Energy Policy Report* and to identify energy issues that may have emerged since that report was completed.

In the most recent Energy Policy Report (2005),³⁴ the CEC indicated that as the State's demand for electricity increases, California could face severe shortages in the next few years. Of particular concern are the potential impacts of higher-than-average summer temperatures, which can drastically increase the State's electricity demand, as well as shortages resulting from decreased hydroelectric generation in lower-than-average precipitation years. Either of these situations could cause dangerously low reserve margins and potential supply disruptions, particularly in southern California. Reserve margins could also be affected by the retirement of aging natural gas-fired power plants, which remain critical components of California's generation fleet, despite strong policy directives to diversify the State's electricity supplies.

34 California Energy Commission, *2005 Integrated Energy Policy Report*, November 2005.

The 2005 Energy Report assessment of electricity supply and demand concludes that maintaining adequate electricity reserves will be difficult over the next few years. The state has made some progress toward resource adequacy for investor-owned utilities by requiring them to maintain year-round 15 to 17 percent reserve margins. Jurisdictional authority over other load-serving entities is less clear. Until recently, there was no formal mechanism to ensure resource adequacy for publicly owned utilities, which provide up to 30 percent of the State's electricity. In September 2005, the Legislature passed and the Governor signed Assembly Bill (AB) 380 (Nunez), Chapter 367, Statutes of 2005, which extends jurisdiction over independent load serving entities and requires publicly owned utilities to report their respective supply circumstances to the CEC so that their resource adequacy progress can be accurately assessed.

Reducing the demand for energy is the most effective way to conserve energy. Reducing demand also reduces the likelihood of supply shortages that can affect reliability. It should be noted that after electricity, natural gas is the most volatile energy commodity.³⁵ While California will continue to depend upon petroleum fuels and natural gas to meet its energy needs for the foreseeable future, the use of various energy efficiency measures and renewable resources are top priorities in California's electricity policy. These ideas are reflected in the subsequent Energy Policy Report as discussed below.

The most recent Integrated Energy Policy Report, the 2006 Integrated Energy Policy Report Update,³⁶ discusses the status of energy issues since the previous Energy Report (2005) and identifies energy issues that may have emerged since that report was completed. The 2006 Energy Report focuses on two topics: the progress towards meeting renewable energy goals to generate 20 percent of the State's electricity from renewable resources by 2010 and 33 percent by 2020 (the Renewable Portfolio Standard); and clean energy development and energy saving opportunities arising from sustainable land use planning.

City Wide

All electrical service provided to the city is provided by the Sacramento Municipal Utilities District (SMUD). SMUD generates approximately 1,196.8 Megawatts (Mw) of electricity and delivers it to an approximately 900 square mile area within the county of Sacramento (including the city). SMUD obtains its electricity from a variety of sources, including hydro-generation, co-generation plants, advanced and renewable technologies (such as wind, solar, and biomass/landfill gas power) and power purchased on the wholesale market.³⁷ The majority of SMUD's generated power is produced by the Upper American River Project, a hydroelectric facility on the western slope of the Sierra Nevada. This project, consisting of eleven reservoirs and eight powerhouses, generates enough electricity to meet about 20 percent of SMUD's

35 California Energy Commission, *2006 Integrated Energy Policy Report Update*, January 2007, p. 61.

36 California Energy Commission, *2006 Integrated Energy Policy Report Update*, January 2007.

37 Sacramento Municipal Utilities District, <www.smud.org/about/power-supplies.html>, accessed August 9, 2007.

customer demand. In a normal water year, the Upper American River Project (UARP) provides roughly 1.8 billion kilowatt-hours of electricity, which is enough to power 180,000 homes. The UARP is able to provide operational flexibility, system reliability, and economical power. Existing SMUD facilities in the Policy Area include 230 kilovolt (Kv) transmission lines that run north of the American River, 115 Kv lines that run south of the river through the central city area. Various 69 Kv, 21 Kv and 12 Kv lines branch out from these to distribute electricity to individual residential, commercial and industrial customers. In addition, various substations and metering stations are scattered throughout the city to allow monitoring and distribution of electricity.³⁸

In 2006, SMUD completed Phase I of the Cosumnes Power Plant, which, upon completion of Phase II, is expected to support growth in the Sacramento area for decades to come. The 500-megawatt plant is located on the site of the now decommissioned Rancho Seco nuclear power plant. Construction of Phase II of the power plant, which would add an additional 500-megawatt output, is planned for development should the need arise. In addition, SMUD operates the Solano Wind Project, two photovoltaic generating facilities and two geothermal units. These power sources account for a small but important portion of the electricity generated by SMUD, since it is part of an effort to expand SMUD's renewable energy supplies.

SMUD offers a variety of programs that serve to preserve natural resources and reduce pollution. Through SMUD's Greenergy program, members can choose to buy energy from natural resources, such as the sun, wind, or methane gas. SMUD also offers incentives to its residential customers for purchasing and installing photo-voltaic solar panels. With regard to wind energy, the recent addition of eight wind turbines to SMUD's wind farm in Solano County produces up to 39 megawatts of power. SMUD owns additional land in the area with room for expansion to 200 megawatts pending approval by the Board of Directors.

The CEC and SMUD are also working together on research, development, and demonstration projects for renewable power generation under the Public Interest Energy Research (PIER) program. The program consists of a number of projects, most of which are developing new technologies that use the sun, wind, and biomass to generate electricity. Each project is helping to: (1) reduce California's dependency on non-renewable energy sources; (2) develop technologies and products that will create broad new renewable energy sources for California and the West; (3) develop resources that will allow SMUD and other electric utilities to increase their use of renewable generation; (4) provide technologies to help SMUD reduce its peak demand for electricity; and (5) make Sacramento a center for the development, testing, and implementation of new renewable generating technologies.

Natural gas service is provided to the city of Sacramento by PG&E. PG&E provides electrical and natural gas services through state regulated public utility contracts. The utility company is bound by contract to update its systems to meet any additional demand. The existing facilities in the area consist of 4.5-inch to 16-inch pipelines delivering service to all customers that are

38 Dave Brown, Principal Distribution System Engineer, SMUD, personal communication October 18, 2007.

not served by private propane tanks. As with cable and telephone services, natural gas lines are typically co-located with other utilities in trenches to reduce construction costs and environmental impacts.

PG&E provides electricity and natural gas distribution, electricity generation, transportation and transmission, natural gas procurement, transportation, and storage. Services are provided within 48 counties in California with a total service area of approximately 70,000 square miles in northern and central California. The company's service area stretches from Eureka in the north to Bakersfield in the south, to the Pacific Ocean in the west and the Sierra Nevada to the east. The utility has 123,054 circuit miles of electric distribution lines and 18,610 circuit miles of interconnected transmission lines. The utility provides services with 40,123 miles of natural gas distribution pipelines and 6,135 transportation pipelines.³⁹

PG&E serves approximately 4.1 million natural gas distribution customers. During the winter, approximately 70 percent of natural gas supplied is imported from Canada, and the balance is supported by California production wells. During the summer, this ratio is reversed. Also during summer, gas prices are lower so gas is stored in underground holders for use during winter peak use periods. It is anticipated that natural gas distribution lines in new developments will be placed underground in accordance with CPUC rules. However, the construction or reconstruction of overhead distribution facilities is periodically required to supply the underground circuits within new developments.

California has not experienced a widespread natural gas shortage in many years, as most of its statewide natural gas supply (87 percent) is imported. Current supplies are adequate to meet demands, although natural gas storage could be expanded to improve reliability.

South Area Community Plan and Focused Opportunity Areas

The discussion above under city wide also includes the South Area Community Plan (SACP) area as well as the Focused Opportunity Areas. There are no unique conditions in any of these areas relative to electricity of natural gas.

Regulatory Context

■ Federal

The Federal Energy Regulatory Commission regulates the transmission and sale of electricity in interstate commerce, licensing of hydroelectric projects, and oversight of related environmental matters.

39 Pacific Gas & Electric, <<http://www.pge.com>>, accessed August 9, 2007.

■ State

The California Public Utilities Commission (CPUC) sets forth specific rules that relate to the design, installation, and management of California's public utilities, including electric, natural gas, water and transportation, and telecommunications. CPUC Decision #77187 and #78500 state that utilities must be underground if the developable lots are less than three acres in size. CPUC Decision #81620 states that lots over three acres (large lot subdivision) are not required to underground utilities. A formal waiver from the CPUC is required for an exemption from complying with these decisions. CPUC Decision 95-08-038 governs the planning and construction of new transmission facilities, distribution facilities, and substations. The Decision requires permits for the construction of certain power line facilities or substations if the voltages would exceed 50 Kvs or the substation would require the acquisition of land or an increase in voltage rating above 50 Kvs. Distribution lines and substations with voltages less than 50 Kvs do not need to comply with this Decision; however, the utility must obtain any applicable local permits required for the construction and operation of these projects.

Title 20 and Title 24, California Code of Regulations (CCR)

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the CCR. Title 24 (AB 970) also contains energy efficiency standards for residential and nonresidential buildings based on a State mandate to reduce California's energy demand.

Warren-Alquist Energy Resources Conservation and Development Act

The State Energy Commission regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption (Warren-Alquist Energy Resources Conservation and Development Act Government Code section 25000 *et seq.*).

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of electricity and natural gas service. For electricity and natural gas service, some of the policies relevant to this issue include working closely with utility companies on long-range planning for newly developing areas and supporting and encouraging the utility companies to place utilities underground in new development areas. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Residential Energy Conservation Ordinance

The City of Sacramento has a Residential Energy Conservation Ordinance (RECO) per City Code 15.76. Houses sold in the city are supposed to undergo an energy efficiency survey and upgrade within cost-effectiveness limits.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Evaluation of potential impacts on electrical and natural gas services resulting from the proposed City of Sacramento 2030 General Plan is based on consultation with service providers, review of CEC policies, and compliance with state standards.

Proposed 2030 General Plan Policies

The following goals and policies from the proposed 2030 General Plan are relevant to electricity and natural gas service within the Policy Area.

UTILITIES (U)

Goal U 6.1 Adequate Level of Service. Provide for the energy needs of the city and decrease dependence on non-renewable energy sources through energy conservation, efficiency, and renewable resource strategies.

Policies

- U 6.1.1 **Electricity and Natural Gas Services.** The City shall continue to work closely with local utility providers to ensure that adequate electricity and natural gas services are available for existing and newly developing areas.
- U 6.1.2 **Peak Electric Load of City Facilities.** The City shall reduce the peak electric load for City facilities by 10 percent by 2015 compared to the baseline year of 2004, through energy efficiency, shifting the timing of energy demands, and conservation measures.
- U 6.1.3 **City Fleet Fuel Consumption.** The City shall reduce its fleet's fuel consumption by 15 percent by 2010 compared to the baseline year of 2003, and city operations shall be substantially fossil free (e.g., electricity, motor fuels).
- U 6.1.4 **Energy Efficiency of City Facilities.** The City shall improve energy efficiency of City facilities on a unit basis to consume 25 percent less energy compared to the baseline year of 2005.
- U 6.1.5 **Energy Consumption Per Capita.** The City shall encourage residents and businesses to consume 25 percent less energy by 2030 compared to the baseline year of 2005.
- U 6.1.6 **Renewable Energy.** The City shall encourage the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities.

- U 6.1.7 **Solar Access.** The City shall ensure, to the extent feasible, that sites, subdivisions, landscaping, and buildings are configured and designed to maximize solar access.
- U 6.1.8 **Other Energy Generation Systems.** The City shall promote the use of locally-shared solar, wind, and other energy generation systems as part of new planned developments.
- U 6.1.9 **Green Businesses.** The City shall assist regional organizations in efforts to recruit businesses to Sacramento that research, develop, manufacture, utilize, and promote energy efficiency, conservation, and advanced renewable technologies such as waste-to-energy facilities.
- U 6.1.10 **Energy Rebate Programs.** The City shall promote energy rebate programs offered by local energy providers to increase energy efficiency in older neighborhoods and developments.
- U 6.1.11 **Energy Efficiency Improvements.** The City shall develop and implement energy efficient standards for existing buildings and provide incentives to property owners to make improvements necessary to meet minimum energy efficiency standards upon sale of a property or change of lease of rental properties.
- U 6.1.12 **Energy Efficiency Audits.** The City shall continue to work with the Sacramento Metropolitan Utility District to conduct energy efficiency audits of existing buildings.
- U 6.1.13 **Energy Efficiency Incentives.** The City shall develop incentives to encourage the use of energy efficient vehicles, equipment, and lighting.
- U 6.1.14 **Sustainable Development and Resource Conservation Education.** The City shall work with appropriate agencies to develop educational materials and activities for residents and developers regarding the objectives and techniques of sustainable development and resource conservation.

Thresholds of Significance

For the purposes of this EIR, impacts on electricity and natural gas are considered significant if the proposed General Plan would:

- require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

Impacts and Mitigation Measures

A summary of all electricity and natural gas impacts and their levels of significance is located at the end of this technical section.

Impact 6.11-9	Implementation of the 2030 General Plan would not require or result in the construction of new energy production or transmission facilities.
Applicable Regulations	<i>CCR title 20,24</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policies U 6.1.6, U 6.1.9 through U 6.1.14</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As is noted in the Environmental Setting section, the state is currently experiencing constraints related to energy supply and delivery. These constraints are generally limited to peak demand days during the summer months, such that for the majority of the days during the year adequate energy supplies are reliably provided to consumers. In 2005, the CEC approved the State of California Energy Action Plan in an effort to alleviate these constraints.⁴⁰ If energy constraints remain, they are a reflection of the broad energy supply issues experienced by California as a whole, and not unique to the demands of the development of the city. In order to minimize these constraints, SMUD obtains its electricity from a variety of sources, including hydro-generation, co-generation plants, advanced and renewable technologies (such as wind, solar, biomass/landfill gas power), and power purchased on the wholesale market.⁴¹ Furthermore, SMUD will begin purchasing electricity produced from three dairy farms in Sacramento County. These farms use dairy digesters to process waste from cow manure into clean renewable energy. Starting in 2007, SMUD will purchase approximately 3.3 gigawatt-hours of electricity annually from these dairy farms.⁴² In addition to SMUD's efforts, Policy U 6.1.4 would encourage new and existing residential and commercial developers to use renewable and recyclable energy and consume 25 percent less energy compared to the baseline year of 2005.

Implementation of the City of Sacramento 2030 General Plan would create an increase in population and employment within the Policy Area, which would increase the demand for electricity, especially the demand to light, heat and air-condition the new residential and commercial uses. To serve this anticipated new development through 2030, SMUD has proposed several projects, including the construction of two new substations in conjunction with the proposed Railyards Specific Plan, construction of the second phase of the Cosumnes Power Plant, and installation of new 69 Kv, 21 Kv and 12 Kv power lines as the need arises. All electrical distribution lines, substations, transmission, delivery facilities, and easements required to serve the Policy Area are subject to CEQA review. Potential environmental effects for the construction of transmission lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials, land use, noise and vibration (during construction), traffic, visual resources, and health hazards.

40 California Energy Commission, <www.energy.ca.gov/energy_action_plan/index.html>, September 21, 2007.

41 Sacramento Municipal Utility District, <www.smud.org/about/power-supplies.html>, September 21, 2007.

42 Sacramento Municipal Utility District, 2006 Annual Report, p. 23.

With regard to natural gas, the proposed 2030 General Plan would also result in permanent and continued use of this resource. As indicated, PG&E provides natural gas service to the Planning Area. The existing facilities in the Area consist of 4.5-inch to 16-inch pipelines delivering service to all customers that are not served by private propane tanks. Because PG&E's demand projections are continuously updated, and PG&E's system has ample capacity to ensure continued levels of service to all customers within the region, PG&E has stated that it can supply natural gas upon buildout of the General Plan without jeopardizing other existing or projected service commitments. Potential environmental effects for the construction of gas lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials, land use, noise and vibration (during construction), traffic, visual resources, and health hazards.

Implementation of Titles 20 and 24 of the CCR would reduce impacts associated with an increased demand for electricity by implementing energy efficient standards for residential and non-residential buildings. In addition, implementation of the Warren-Alquist Energy Resources Conservation and Development Act would also coordinate research and development into energy supply and demand problems to reduce the rate of growth of energy consumption. Furthermore, Policies U 6.1.10 through U 6.1.13 in the General Plan encourage the spread of energy-efficient technology by offering rebates and other incentives to commercial and residential developers and recruiting businesses that research and promote energy conservation and efficiency, thus helping to minimize the impact of new development on energy resources. These policies shall be implemented in such a way as to conserve energy to the maximum extent feasible. Further, since there is adequate electrical supply, and new (unplanned) electrical production facilities would be constructed as needed, impacts to energy resources as a result of the proposed project would be considered ***less than significant***.

Mitigation Measures

None required.

Cumulative Impacts and Mitigation Measures

Development under the proposed City of Sacramento 2030 General Plan, in combination with all other development within the SMUD and PG&E service areas would result in the permanent and continued use of electricity and natural gas resources. This analysis reviews future cumulative impacts implementation of the proposed General Plan would have on electricity and natural gas resources.

Impact 6.11-10	Implementation of the proposed City of Sacramento 2030 General Plan combined with other development within the areas serviced by SMUD and PG&E would result in permanent and continued use of electricity and natural gas resources.	
Applicable Regulations	<i>None</i>	
Significance Before Mitigation	<i>Less than Significant</i>	
Mitigation Included in the SGP	<i>Policies U 6.1.1 through 6.1.14</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	<i>None required</i>	
Residual Significance	Less than Significant	

Future development in the Policy Area as well as areas in the region serviced by SMUD and PG&E would increase residential, commercial, and office needs for electricity and natural gas. Development in previously undeveloped areas would require the extension of existing lines and new transmission facilities and substations would be needed. The environmental impacts associated with the installation of new facilities would be analyzed by each development under separate environmental review as the utilities are extended. SMUD and PG&E continue to play active roles in supporting the use of renewable energy resources by promoting clean energy programs throughout the state. SMUD's "Greenergy" program in which customers are given the choice to purchase a percentage of their electricity from renewable resources such as solar, wind, geothermal, and hydroelectric sources is an example of these programs. SMUD and PG&E also actively research new forms of renewable energy such as the biomass resources provided by dairy farms. PG&E has also begun the "Waveconnect" program, which involves studying and potentially harnessing energy from coastal waves in the Humboldt and Mendocino counties to provide a new source of clean renewable energy.⁴³ Continuing these endeavors on the part of SMUD and PG&E would help to minimize the cumulative energy impacts within the Policy Area as well as the entire area serviced by SMUD and PG&E. The increase in demand for natural gas and electrical services could result in a potentially significant cumulative impact. Although it is unknown at this time what specific resources SMUD and PG&E would tap into in order to accommodate the energy demand of the proposed 2030 General Plan, both utility providers would install new distribution facilities, as needed to serve buildout of the general plan as well as other development within their respective service areas, according to California Public Utilities Commission rules. As part of the development review process, PG&E and SMUD receive sufficient opportunity to provide input on proposed projects to ensure their capability of providing an adequate level of service to the project site.

Through the policies set forth in the General Plan, energy conservation would have a major presence in the development of new structures and communities within the Policy Area. Standards and incentives related to energy-efficiency proposed by Policies U 6.1.10 through U 6.1.13 would have a lasting positive effect on the cumulative impacts in the Policy Area.

43 PG&E, PG&E to Study Wave Power in Humboldt & Mendocino February 28, 2007, <www.pge.com/about/news/mediarelations/newsreleases/q1_2007/070228.shtml>, accessed October 16, 2007.

Policies U 6.1.6 through U 6.1.8 focus on promoting the use of renewable resources, which would help reduce the cumulative impacts associated with non-renewable energy sources. The City specifically considers long-term impacts through General Plan Policies U 6.1.5 and U 6.1.12, which would allow the City to work closely with utility providers and industries during future development to promote and advance new energy conservation technologies. While the demand for energy within the Policy Area would add considerably to the cumulative impacts on energy resources, implementation of these policies in conjunction with the continued efforts on behalf of SMUD and PG&E to promote energy efficiency and renewable energy would make this a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

South Area Community Plan

The analysis of impacts related to energy is primarily based on data collection pertaining to the Policy Area as a whole. However, it is possible that some areas within the Policy Area may be more or less susceptible to these impacts than the Policy Area in general. The South Area Community Plan (SACP) area is located in a portion of the city that is no more susceptible to the impacts associated with electricity and natural gas than the remainder of the Policy Area because SMUD and PG&E would not necessarily develop special facilities specifically for the South Area Community. Rather, the South Area is served by the same available facilities as the rest of the Policy Area. Furthermore, there are no features in the SACP that would necessitate higher or lower demand for these utilities. For these reasons, the SACP would not be considered more or less susceptible to impacts associated with electricity and natural gas than the rest of the Policy Area. Specific impacts for individual development projects would be determined by the required goals and programs mandated by City policy. Therefore, it is assumed that impacts associated with energy resulting from projects in the SACP Area would be the same as they would be in the rest of the Policy Area. No additional mitigation would be necessary.

Focused Opportunity Areas

All of the Focused Opportunity Areas are not located in an area of the city that would be any more or less susceptible to impacts related to energy than the remainder of the Policy Area. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional mitigation beyond compliance with mandated state and local requirements.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the SACP and future development within the Policy Area could include potential impacts associated with electricity and natural gas service. At this time specific project information is not available (i.e., individual project site characteristics, site-specific location, etc.) and energy demand differs based on the type of development (i.e., commercial, industrial, residential, etc.) to evaluate potential impacts associated with electricity and natural gas service. Once specific development proposals are prepared and submitted to the City a project-specific environmental analysis would be prepared to analyze potential impacts related to electricity and natural gas service.

TELECOMMUNICATION

INTRODUCTION

Telecommunication service to the city is provided by AT&T (SBC), Sprint, Comcast, Surewest, Electric Lightwave, Inc. (ELI) The proposed 2030 General Plan would implement policies to encourage telecommunication technology and availability to all residents and businesses within the Policy Area.

ENVIRONMENTAL SETTING

AT&T and SBC

AT&T Local Services supplies data communications, 911 service, high-speed local and long distance telephone service, in most of the Sacramento area. It also leases certain fiber optic cable capacity to AT&T Broadband for cable television and internet. The majority of planned facilities are in place except for a few areas in South Sacramento. Additional improvements or relocations are generally made as the need arises to meet customer demand.

In 2006 AT&T merged with SBC to form a single telecommunications company. The transaction combines AT&T's global systems capabilities and fast-growing Internet protocol (IP)-based business with SBC's local exchange, broadband and wireless solutions.⁴⁴

Sprint

Sprint supplies wireless and long distance telephone service in most of the Sacramento Area. Sprint serves the Sacramento area with a combination of underground facilities and above ground cellular towers. Additional cellular towers are planned for the Sacramento area to provide better wireless service.

Comcast Cable

Comcast provides cable television service in the Sacramento Area. In addition to its own facilities, it leases certain fiber optic cable capacity from AT&T Local Services. Comcast serves the Sacramento area with a combination of underground and overhead fiber optic cable and copper coaxial cable. The signal is generated at a downtown site on N Street near the Capitol, and distributed to hub sites throughout the service area, from which local service is distributed. Additional improvements or relocations are generally made as the need arises to meet customer demand.

44 SBC Communications, Inc. <<http://sbc.merger-news.com/materials/am.html>>, accessed August 21, 2007.

Surewest

Surewest supplies local and long distance telephone service, wireless, digital television, and internet in the Sacramento Area. Surewest currently serves the greater Sacramento area, including Natomas, Arden, Carmichael Fair Oaks, Citrus Heights, Antelope, and Elk Grove.⁴⁵ Services are provided for both commercial and residential customers. Types of services provided by Surewest vary throughout the Sacramento area. Additional improvements or relocations are generally made as the need arises to meet customer demand.

Integra Telecom, Inc.

Integra Telecom, Inc. provides data communications, internet feed, and local and long distance voice communication in the Sacramento area for non-residential customers. Integra serves the Sacramento area with a combination of underground and overhead fiber optic cable and copper cable. The company has fiber optic connections to most SBC switching sites. Some customer sites may be connected to ELI facilities using SBC's T-1 connections. Additional improvements or relocations are generally made as the need arises to meet customer demand.

Regulatory Context

■ Federal

There are no applicable federal policies that pertain to local telecommunications services.

■ State

California Government Code Section 50030

Any permit fee imposed by a city, including a chartered city, a county, or a city and county, for the placement, installation, repair, or upgrading of telecommunications facilities such as lines, poles, or antennas by a telephone corporation that has obtained all required authorizations to provide telecommunications services from the Public Utilities Commission and the Federal Communications Commission, shall not exceed the reasonable costs of providing the service for which the fee is charged and shall not be levied for general revenue purposes.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to the provision of telecommunications service. For telecommunications service, some of the policies

45 Surewest Communications. <www.surewest.com/directories/products/sacramento/>, accessed August 21, 2007.

relevant to this issue include working closely with utility companies on long-range planning for newly developing areas and supporting and encouraging the utility companies to place utilities underground in new development areas. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

City of Sacramento Ordinance No. 97-537

In order to minimize interference with public use of city streets, reduce the attendant loss of parking and business, and avoid shortening the lifespan of public roads, the City has adopted Ordinance No. 97-537, which imposes a nondiscriminatory fee to telecommunications providers using the right-of-way to install facilities.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Evaluation of potential impacts on telecommunication services resulting from the proposed project is based on communication with the service providers.

Proposed General Plan Policies

The following goals and policies from the proposed 2030 General Plan are relevant to telecommunication service within the Policy Area. The proposed General Plan does not include any policies regarding telecommunication that are unique to any of the City's Community Plans or Focused Opportunity Areas.

UTILITIES (U)

Goal U 7.1 Telecommunication Technology. Provide state-of-the-art telecommunication services for households, businesses, institutions, and public agencies throughout the City that connect Sacramento to the nation and world.

Policies

U 7.1.1 **Access and Availability.** The City shall work with service providers to ensure access to and availability of a wide range of state-of-the-art telecommunications systems and services for households, businesses, institutions, and public agencies throughout the City.

U 7.1.2 **Adequate Facilities and Service.** The City shall work with utility companies to retrofit areas that are not served by current telecommunication technologies and shall provide strategic long-range planning of telecommunication facilities for newly developing areas, as feasible.

U 7.1.3 **State-of-the-Art Technology.** The City shall encourage local industries, higher educational institutions, and other entities to support innovation in the design and implementation of state-of-the-art telecommunication technologies and facilities.

- U 7.1.4 **Co-Location.** The City shall encourage compatible co-location of telecommunication facilities and shall work with utility companies to provide opportunities for siting telecommunications facilities on City owned property and public right-of-ways.
- U 7.1.5 **Incorporation into Public Buildings and Uses.** The City shall establish requirements for the incorporation and accessibility of state-of-the-art telecommunication systems and services (e.g., internet) for public use in public buildings (e.g., libraries) and support the development of informational kiosks in public places and streetscapes (e.g., parks, plazas, shopping malls).
- U 7.1.6 **Large Scale Developments.** The City shall establish requirements for the installation of state-of-the-art internal telecommunications technologies in new large scale planned communities and office and commercial developments (e.g., wiring of all new housing and businesses).
- U 7.1.7 **Household Telecommunication Systems.** The City shall encourage the installation of telecommunications systems (e.g., internet) in every city household to facilitate resident access to information about public services, transit, emergencies, and other information.
- U 7.1.8 **City Operations/Public Services.** The City shall continue to use telecommunications to enhance the performance of internal City operations and the delivery of public services.

Thresholds of Significance

For the purposes of this EIR, impacts on telecommunications are considered significant if the proposed General Plan would:

- require or result in either the construction of new telecommunication facilities or the expansion of existing telecommunication facilities, the construction of which could cause significant environmental effects.

Impacts and Mitigation Measures

A summary of all Telecommunication impacts and their levels of significance is located at the end of this technical section.

Impact 6.11-11	Implementation of the proposed 2030 General Plan could require the construction of new or expansion of existing telecommunication facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policy U 7.1.1 through U.7-1.4 and U 7.1.6</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

The city of Sacramento is served by multiple providers of telephone and cable services. Implementation of the proposed General Plan would result in growth in the Policy Area resulting

in the need for expansion of these services and the construction of new telecommunication facilities. However, most of the underground and aerial telephone and cable transmission lines are generally co-located with other utilities on poles or underground trenches and are constructed so as to reduce potential public safety hazards. Implementation of General Plan Policy U 7.1.2 would ensure utility companies retrofit areas that do not have facilities that meet current telecommunication technologies and provide strategies for long-range planning of telecommunication facilities for new development areas. Additionally, Policy U 7.1.6 specifically requires the City to implement state-of-the-art internal telecommunication facilities and software in large scale planned communities and office and commercial developments. Policies U 7.1.3 and U 7.1.4 address future advances in telecommunication, and ensure that utility providers within the city would be encouraged to maintain state-of-the-art facilities and practices, including those that help minimize demand for telecommunication services and, subsequently, construction of new facilities. With the proposed policies regulating development of telecommunications within the city, this impact can be considered ***less than significant***.

Mitigation Measures

None required.

Cumulative Impacts and Mitigation Measures

The cumulative setting for telecommunications impacts includes Sacramento county and affected communities. Most telecommunication providers to the city (such as Comcast and AT&T) are corporations with a national client-base, but maintain facilities on a local level in order to provide quality service. For this reason cumulative impacts on telecommunication associated with development in the Policy Area would not be considered in conjunction with development on a national or state level. The substantial residential and commercial development projected by the General Plan would, in turn, contribute to the cumulative demand for telecommunication services in Sacramento County as well as other counties in central and northern California are experiencing growth, and are therefore contributing to this demand for telecommunication services and, subsequently, demand for new telecommunication facilities. This cumulative setting accounts for the existing and proposed development within the city and portions of Sacramento County.

Impact 6.11-12	Implementation of the proposed City of Sacramento 2030 General Plan would result in permanent and continued need for telecommunication services.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>U 7.1.1 through U 7.1.8</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Development under the proposed City of Sacramento 2030 General Plan, in combination with all other development within the service areas of telephone and cable providers, would result in the permanent and continued need for telecommunications services. The provision of telecommunication services would not result in cumulative environmental impacts, as facilities are generally co-located and placed within public rights-of-way to reduce such impacts. The construction of new utility infrastructure is subject to CEQA review and compliance and the physical effects of extending services and infrastructure would be analyzed on a project by project basis as new development proposals are received. Fee-based facilities such as cable and telephone providers may also make improvements based on capitol income from service fees or connection fees, and may adjust those fees to ensure the income to provide adequate service for cumulative growth conditions. Policies U 7.1.1, U 7.1.2, U 7.1.4, and U 7.1.6 would allow the City to work closely with telecommunications providers to maintain necessary service levels while regulating development of new facilities. The long-term effects of these policies on the project's telecommunication services would ensure a ***less-than-significant impact***.

Mitigation Measures

None required.

South Area Community Plan

The analysis of impacts related to telecommunications is primarily based on data collection pertaining to the Policy Area as a whole. However, it is possible that some areas within the Policy Area may be more or less susceptible to these impacts than the Policy Area in general. The South Area Community Plan (SACP) area is located in a portion of the city that is no more susceptible to the impacts associated with telecommunications than the remainder of the Policy Area because the telecommunications providers do not necessarily develop special facilities specifically for the South Area Community. Rather, the South Area is served by the nearest available facilities much like the rest of the Policy Area. For this reason, the SACP would not be considered more or less susceptible to impacts associated with installation of telecommunications infrastructure. Specific impacts for individual development projects would be determined by the required goals and programs mandated by City policy. Therefore, it is assumed that impacts associated with telecommunications resulting from projects in the SACP Area would be the same as they would be in the rest of the Policy Area. No additional mitigation would be necessary.

Focused Opportunity Areas

All of the Focused Opportunity Areas are not located in an area of the city that would be any more or less susceptible to impacts related to telecommunications than the remainder of the Policy Area. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would require additional mitigation beyond compliance with mandated state and local requirements.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the SACP and future development within the Policy Area could include potential impacts associated with telecommunication service. At this time specific project information is not available (i.e., individual project site characteristics, site-specific location, etc.) and telecommunication demand differs based on the type of development (i.e., commercial, industrial, residential, etc.) to evaluate potential impacts associated with telecommunication service. Once specific development proposals are prepared and submitted to the City a project-specific environmental analysis would be prepared to analyze potential impacts related to telecommunication service.

SUMMARY OF PUBLIC UTILITIES IMPACTS

LEVEL OF SIGNIFICANCE

6.11-12 Implementation of the proposed City of Sacramento 2030 General Plan would result in permanent and continued need for telecommunication services.	6.11-11 Implementation of the proposed 2030 General Plan could require the construction of new or expansion of existing telecommunication facilities.	6.11-10 Implementation of the proposed City of Sacramento 2030 General Plan combined with other development within the areas serviced by SMUD and PG&E would result in permanent and continued use of electricity and natural gas resources.	6.11-9 Implementation of the 2030 General Plan would not require or result in the construction of new energy production or transmission facilities.	6.11-8 Implementation of the proposed 2030 General Plan, along with other future development in the SRCSWA service area could result in the need for construction of new solid waste facilities or expansion of existing facilities.	6.11-7 Implementation of the proposed 2030 General Plan could result in the construction of new solid waste facilities or expansion of existing facilities.	6.11-6 Implementation of the proposed 2030 General Plan, in combination with future development in the lower Sacramento River watershed, would increase the demand for storm drainage infrastructure.	6.11-5 Implementation of the proposed 2030 General Plan, in combination with future development in the SRCSD Service Area, would require expansion of wastewater conveyance and treatment capacity to serve the project's sewer needs in addition to existing commitments.	6.11-4 Implementation of the proposed 2030 General Plan would require the need for expansion of wastewater treatment facilities, which could cause significant environmental effects.	6.11-3 Implementation of the proposed 2030 General Plan would generate additional wastewater and stormwater that could require the expansion of existing conveyance and treatment facilities.	6.11-2 Implementation of the proposed 2030 General Plan would result in an increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and could require the construction of new water supply facilities.	6.11-1 Implementation of the proposed 2030 General Plan would increase demand for potable water.
Community Plan Areas											
Arden-Arcade	○	○	○	○	○	○	●	●	○	●	○
Central City	○	○	○	○	○	○	●	●	○	●	○
East Broadway	○	○	○	○	○	○	●	●	○	●	○
East Sacramento	○	○	○	○	○	○	●	●	○	●	○
Land Park	○	○	○	○	○	○	●	●	○	●	○
North Natomas	○	○	○	○	○	○	●	●	○	●	○
North Sacramento	○	○	○	○	○	○	●	●	○	●	○
Pocket	○	○	○	○	○	○	●	●	○	●	○
South Area	○	○	○	○	○	○	●	●	○	●	○
South Natomas	○	○	○	○	○	○	●	●	○	●	○
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable											

SUMMARY OF PUBLIC UTILITIES IMPACTS

LEVEL OF SIGNIFICANCE

6.11-1 Implementation of the proposed 2030 General Plan would increase demand for potable water.													
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6.11-10 Implementation of the proposed City of Sacramento 2030 General Plan combined with other development within the areas serviced by SMUD and PG&E would result in permanent and continued use of electricity and natural gas resources.													
6.11-11 Implementation of the proposed 2030 General Plan could require the construction of new or expansion of existing telecommunication facilities.													
6.11-12 Implementation of the proposed City of Sacramento 2030 General Plan would result in permanent and continued need for telecommunication services.													
Focused Opportunity Areas													
65 th Street/University Village	○	○	○	○	○	○	○	○	●	●	○	●	○
Arden Fair/Point West	○	○	○	○	○	○	○	○	●	●	○	●	○
Florin LRT/ Subregional Center	○	○	○	○	○	○	○	○	●	●	○	●	○
Meadowview LRT	○	○	○	○	○	○	○	○	●	●	○	●	○
River District	○	○	○	○	○	○	○	○	●	●	○	●	○
Robla	○	○	○	○	○	○	○	○	●	●	○	●	○
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable													

6.12 Transportation and Circulation



TRANSPORTATION AND CIRCULATION

INTRODUCTION

This section describes potential impacts on the transportation system associated with adoption of the City of Sacramento 2030 General Plan. The impact analysis examines the vehicular, transit, bicycle, pedestrian, and aviation components of the overall transportation system.

The City of Sacramento recognizes the importance of developing a first class, efficient, multi-modal transportation network that minimizes impacts to the environment and neighborhoods. The 2030 General Plan contains policies that will create a well-connected transportation network, support increased densities and a mix of uses in multi-modal districts, help walking and bicycling become more practical, improve transit to serve highly frequented destinations, conserve energy resources, reduce greenhouse gas emissions and air pollution, and do so while preserving auto mobility. The 2030 General Plan also includes policies related to parking, goods movement, airports, and transportation funding. The primary goal of the transportation network is to support Sacramento's development consistent with the Vision and Guiding Principles: Making Great Places, Growing Smarter, Maintaining a Vibrant Economy, Creating a Healthy City, Reducing our Carbon Footprint, and Developing a Sustainable Future.

Letters received in response to the NOP (see Appendix B) raised a number of concerns associated with transportation. Comments expressed concern about identifying existing and cumulative congestion levels, including the most current land use forecasts and roadway network assumptions for all jurisdictions in the region outside the City of Sacramento, identifying appropriate mitigation measures, and addressing all travel modes. All of these issues are addressed in this section. A letter submitted by Caltrans requested that the EIR identify impacts and mitigations at ramp intersections and address the need for additional crossings of the American and Sacramento Rivers for all modes. These latter issues are not addressed in this section. The analysis in this section includes an evaluation of existing and future conditions for over 200 roadway segments, but does not address individual intersections given the scale of this citywide analysis.

Information to prepare this section is based on the City of Sacramento 2030 General Plan Technical Background Report (TBR), City of Sacramento Department of Transportation (DOT) documents, the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan (MTP), the SACOG regional travel model (i.e., August 2007 SACMET version), adopted Transportation Concept Reports prepared by Caltrans for area state highways, Sacramento Regional Transit (RT) documents, the 2010 Sacramento City/County Bikeway Master Plan, and the City of Sacramento Pedestrian Master Plan.

The TBR prepared for the project is available electronically on the City's website (<http://www.sacgp.org/documents.html#tbr>) and on CD at the back of this document.

ENVIRONMENTAL SETTING

The existing physical conditions for the transportation system are described below. This description is organized by transportation system component beginning with the regional roadway system and including public transportation, bikeway, pedestrian, and aviation facilities. Much of this information is summarized from the TBR. A detailed discussion of traffic issues and background on travel patterns within the City are provided in Chapter 3, Mobility, of the TBR on pages 3-1 through 3-21.

City Wide

■ Regional Roadway System

Chapter 3, Mobility, included in the TBR provides information on travel behavior for City of Sacramento residents based on the 2000 U.S. Census and SACOG's 2000 Household Survey.

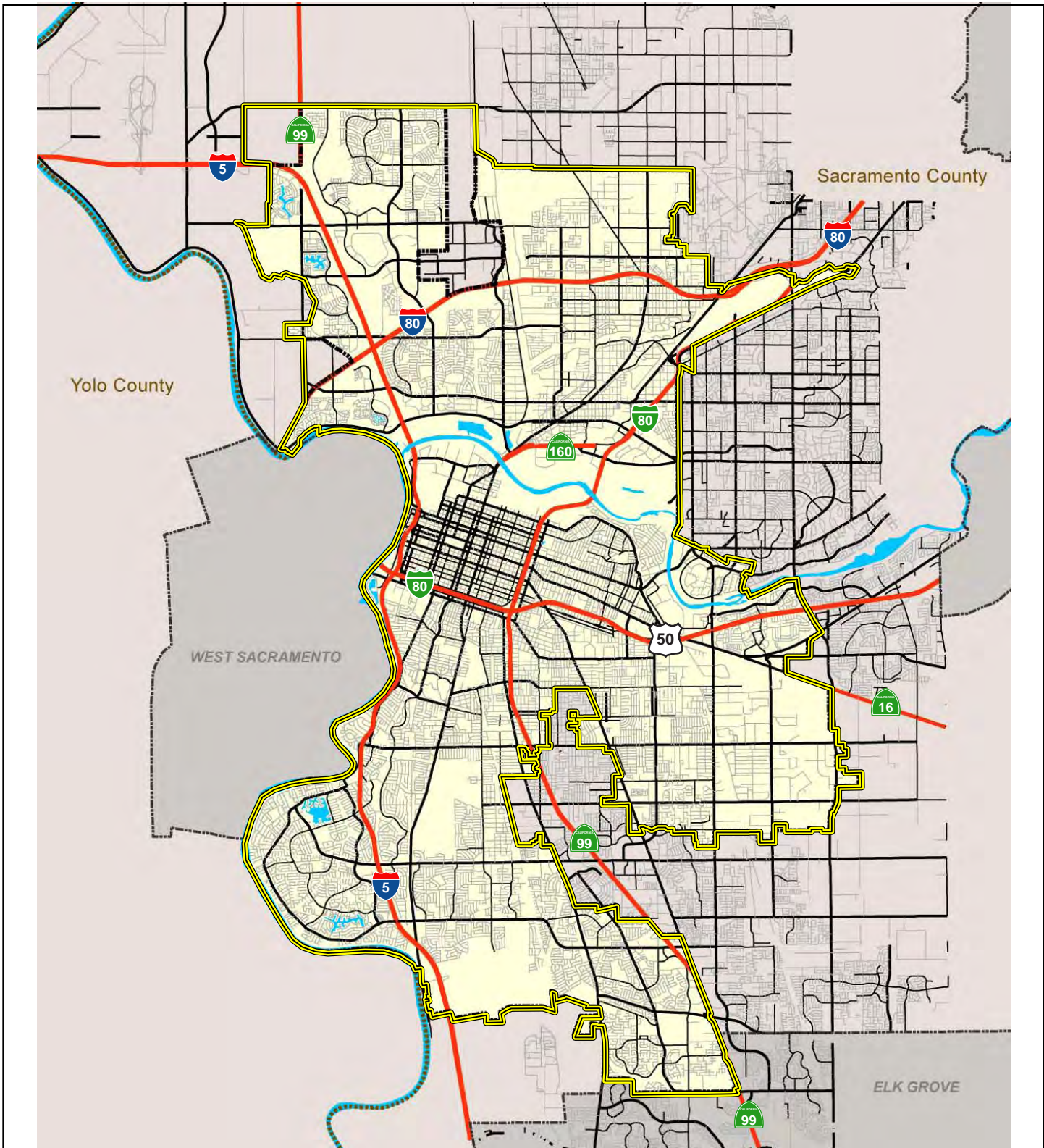
The major routes in the regional roadway system are shown according to functional classification in Figure 6.12-1. This highway network plays an important role in regional travel by connecting to and complementing the local street network. The larger highway and arterial classifications predominantly serve through travel rather than local trips. Smaller roads function as collectors funneling traffic from local streets to the highways and arterials.

■ Major City Roads





The City's roadway network consists of local, collector, and arterial roadways. The most common type of major roadway within the City is a four-lane arterial, although six and eight-lane arterials are also provided in areas with high traffic volumes. Figure 6.12-2 displays the number of travel lanes on roadways within the City and in the General Plan study area.

The City's Master Services Element provides the following definitions for City roadways.

- **Expressway:** A roadway with limited access, few cross streets (and no cross-streets without signals), limited driveway access (infrequent driveways and no residential driveways), and no on-street parking.
- **Major Arterial:** Provides mobility for high traffic volumes between various parts of the City and the region. Access to parcels is a secondary function and should be limited to the extent feasible. The City transportation network includes both suburban and urban arterials. Suburban arterials have higher speeds and have the greatest access control. Urban arterials have generally lower speeds and less access control due to the intensity of the development in the urban environment.



Legend

-  Policy Area
-  City Boundary
-  County Boundary
-  Water

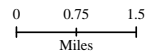
Street Classifications

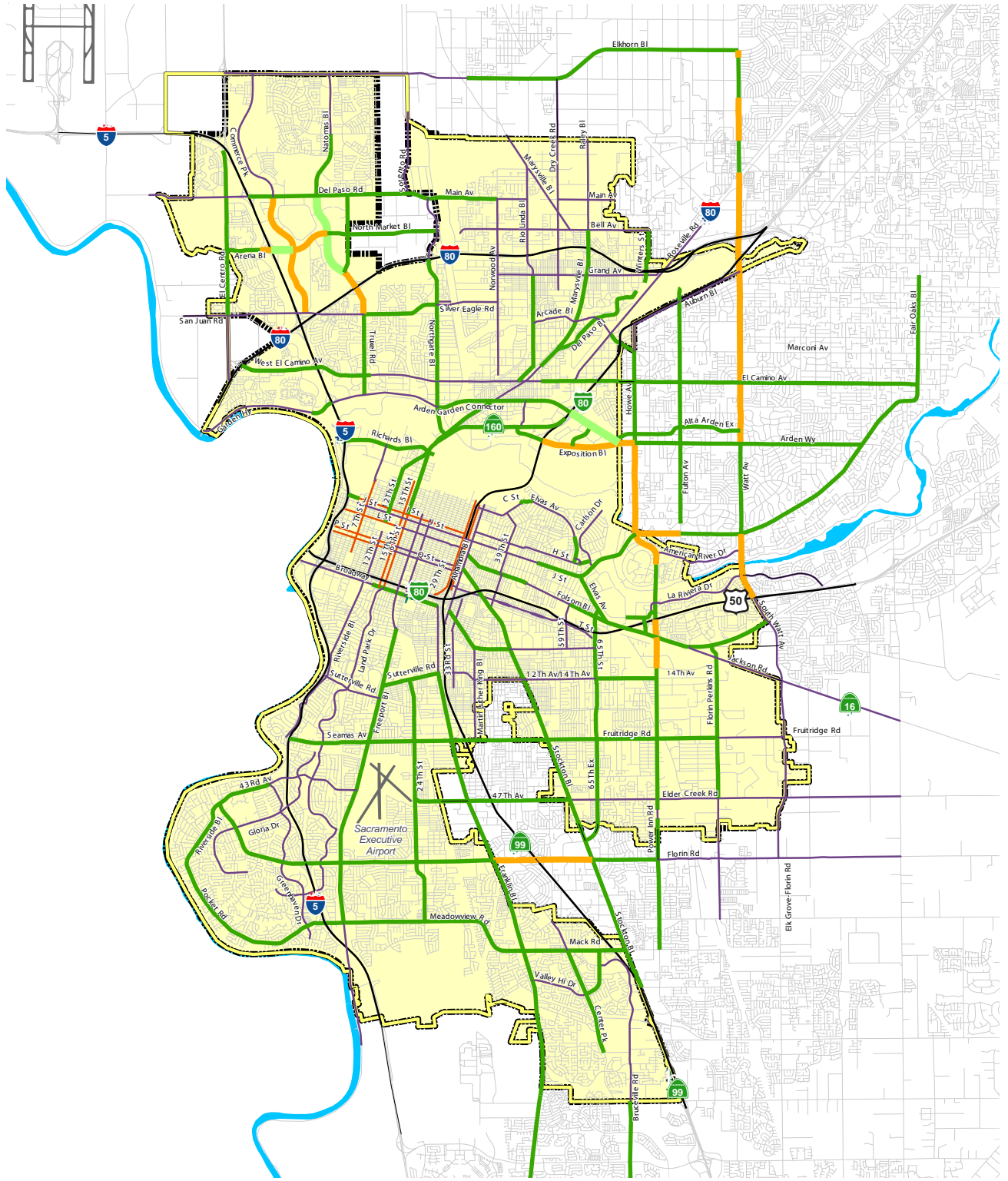
-  Highway
-  Arterial
-  Collector
-  Local

Figure 6.12-1
Street
Classifications



City of Sacramento,
General Plan, 2008.





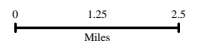
Legend

Existing number of lanes for general plan study segments

- 2
- 3
- 4
- 6
- 8

**Figure 6.12-2
Existing Number
of Travel Lanes**

City of Sacramento,
General Plan, 2008.



- **Minor Arterial:** A roadway that connects major facilities but has more access than a Major Arterial. Parking is allowed, but may be limited. Intersections with other arterials are signal controlled. Access is restricted, with no residential driveways except from multi-family units.
- **Collector:** Connects residential uses to the major street system.
- **Local:** Serves the interior of a neighborhood.

Major city roads are also part of the regional roadway system and typically provide the arterial connections to freeways. Interchanges exist at junctions of freeways with the following major city roadways:

- Pocket Road
- Florin Road
- Seamas Avenue/Fruitridge Road
- Sutterville Road
- P Street & Q Street
- I Street & J Street
- Richards Boulevard
- Garden Highway
- El Camino Avenue
- Arena Boulevard
- Del Paso Road
- Elkhorn Boulevard
- Truxel Road
- Northgate Boulevard
- Norwood Avenue
- Marysville Boulevard/Raley Boulevard
- Cosumnes River Boulevard
- Mack Road
- 47th Avenue
- Exposition Boulevard
- Arden Way
- Marconi Avenue
- Fulton Avenue

- Watt Avenue
- Stockton Boulevard
- 65th Street
- Power Inn Road/Howe Avenue

The entire list of roadways evaluated for this study is listed in Appendix G, along with existing geometric and traffic count data. Study roadways, with segments that presently carry over 20,000 daily vehicle trips, are listed below.

40,000-60,000 Daily Trips

- Howe Avenue
- Truxel Road
- Arden Way
- 47th Avenue
- Mack Road

20,000-40,000 Daily Trips

- | | |
|------------------------|--------------------------|
| • Folsom Boulevard | • Natomas Boulevard |
| • Florin Road | • Raley Boulevard |
| • Northgate Boulevard | • Sutterville Road |
| • Power Inn Road | • I Street |
| • Meadowview Road | • J Street |
| • Exposition Boulevard | • Arden Garden Connector |
| • El Camino Avenue | • Valley Hi Drive |
| • Fruitridge Road | • Elder Creek Road |
| • Freeport Boulevard | • Stockton Boulevard |
| • Florin Perkins Road | • Marysville Boulevard |
| • 65th Street | • Arena Boulevard |
| • Del Paso Road | • Broadway |
| • Franklin Boulevard | • College Town Drive |
| • Auburn Boulevard | • Richards Boulevard |
| • Bruceville Road | |

These roadways are heavily used by commuters traveling to work and school, and in most cases are also the major routes to commercial centers.

■ Roadway Capacity and Level of Service

The roadway level of service (LOS) was calculated for each roadway segment in the regional roadway system to evaluate the quality of existing traffic conditions. LOS is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. The LOS grades are generally defined in Table 6.12-1.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	LOS A represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.
B	LOS B has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
C	LOS C has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.
D	LOS D represents high-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.
E	LOS E represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
F	LOS F is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

Source: Transportation Research Board, Highway Capacity Manual, 2000.

For this General Plan, LOS was determined by comparing existing traffic volumes for roadway and freeway segments with daily LOS capacity thresholds. These thresholds are shown in Table 6.12-2.

The existing roadway segment LOS results are shown graphically in Figure 6.12-3. LOS is calculated using traffic count data collected for this study and provided by the City DOT, the Sacramento County DOT, and Caltrans (refer to Appendix G for a complete list of counts).

Streets and Roads Goal D of the 1988 City of Sacramento General Plan sets forth the LOS standards for the city. This policy reads as follows:

Work toward achieving an overall Level of Service C on the City's local and major street systems.

Operational Class	Number of Lanes	ADT Level-of-Service Capacity Threshold				
		A	B	C	D	E
Freeway Segments	2	14,000	21,600	30,800	37,200	40,000
	4	28,000	43,200	61,600	74,400	80,000
	6	42,000	64,800	92,400	111,600	120,000
	8	56,000	86,400	123,200	148,800	160,000
	10	70,000	108,000	154,000	186,000	200,000
	12	84,000	129,600	184,800	223,200	240,000
Arterial – Low Access Control (Low access control roads generally have frequent driveways and 25-35 mph speeds)	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial – Moderate Access Control (Moderate access roads generally have limited driveways and 35-45 mph speeds)	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,000	37,800	43,200	48,600	54,000
Arterial – High Access Control (High access roads generally have no driveways and 45-55 mph speeds)	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	43,000	48,000	54,000	60,000
Collector Street - Minor	2	5,250	6,125	7,000	7,875	8,750
	2	8,400	9,800	11,200	12,600	14,000
Collector Street - Major	4	16,800	19,600	22,400	25,200	28,000
Local	2	3,000	3,500	4,000	4,500	5,000

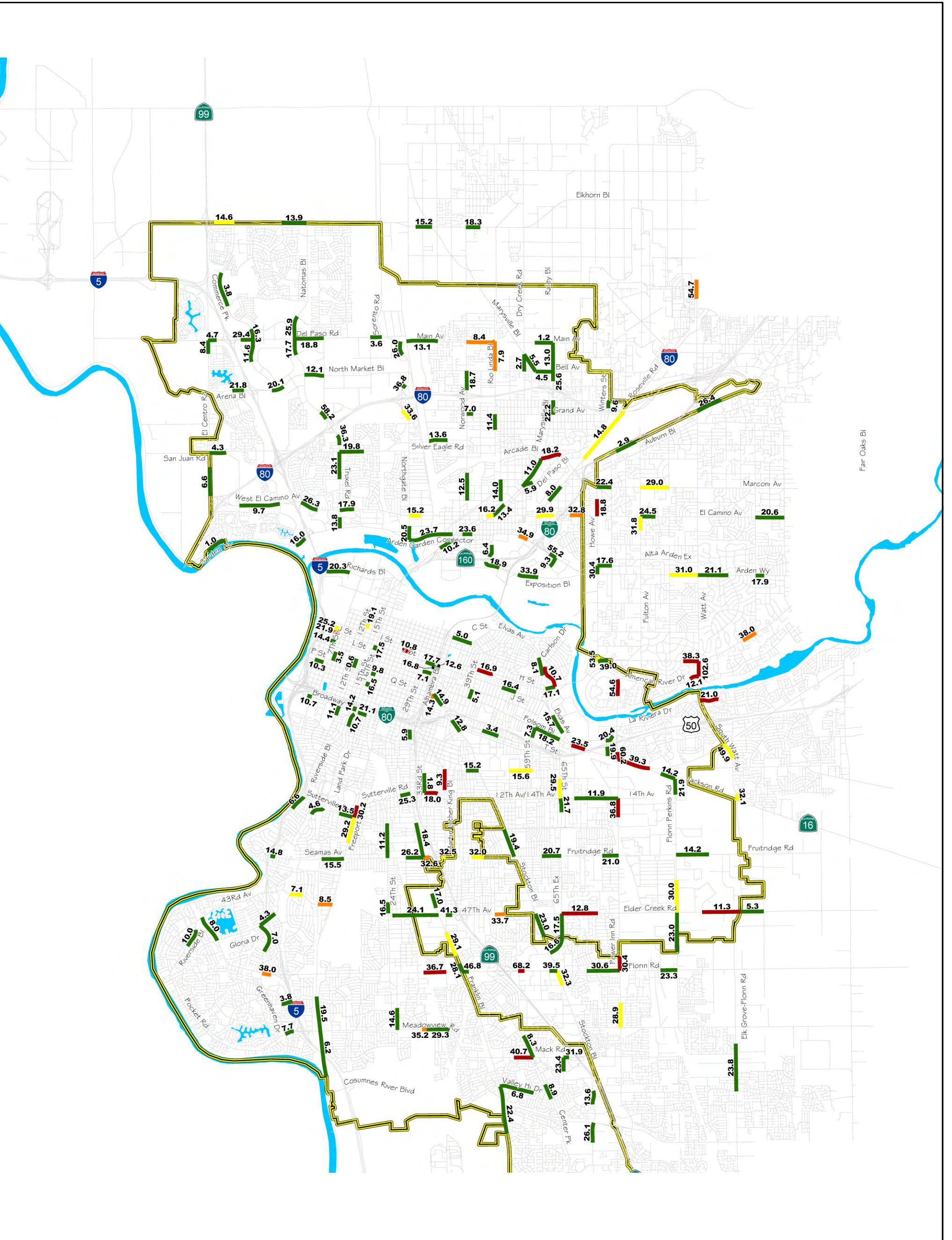
Source: City of Sacramento, 1996.

This policy generally established that roadways would operate no worse than LOS C. Appendix G contains a list of all study roadway segments and their corresponding LOS for the existing conditions analysis.

Table 6.12-3 lists the locations with existing unacceptable LOS according to the City's existing Streets and Roads standards.

A total of 38 roadway segments within unincorporated Sacramento County were evaluated to determine existing conditions just outside of the policy area boundary. Table 6.12-4 lists the locations of seven roadway segments with existing unacceptable LOS according to the County's existing standards.

Three road segments were evaluated in the City of West Sacramento including a portion of 3rd Street, West Capitol Avenue and Tower Bridge Gateway. The Tower Bridge and I Street Bridge, across the Sacramento River, were also evaluated. All of these road segments operate at acceptable levels under existing conditions according to the City of West Sacramento's existing standards.



Legend

Level of Service

- █ A - C
- █ D
- █ E
- █ F

52.6 Average Daily Traffic Volume (x1,000)

Policy Area

Water

**Figure 6.12-3
Existing Roadway
Level of Service**

Source: City of Sacramento, General Plan, 2008.

0 1.25 2.5
Miles

TABLE 6.12-3

**ROADWAY SYSTEM – EXISTING (2006-07)
CITY ROAD SEGMENTS OPERATING AT LOS D OR WORSE**

Roadway	Segment	Lanes	Daily Volume	Existing LOS
12 th Street	F to G Streets	3	19,200	D
12 th /14 th Avenue	33 rd to 34 th Streets	2	18,000	F
43 rd Avenue	S. Land Park to Holstein	2	7,100	D
65 th Street	San Joaquin to 14 th Avenue	4	29,500	D
Alhambra	Folsom to N	2	14,300	E
Arcade Boulevard	Marysville to Palmer	2	18,200	F
Arden Way	Harvard to Business 80	4	34,900	E
Blair Avenue	S. Land Park to Freeport	2	8,500	E
Broadway	58 th to 59 th Streets	2	15,600	D
El Camino Avenue	Auburn Blvd. to Business 80	4	29,900	D
El Camino Avenue	Business 80 to Howe	4	32,800	E
El Camino Avenue	Rio Linda to Del Paso	2	16,200	D
Elder Creek Road	Stockton to Elk Grove-Florin	2	12,800	F
Elkhorn Boulevard	SR 99 to E. Commerce	2	14,600	D
Florin Road	Greenhaven to I-5	4	38,000	E
Florin Road	UP Rail line to Luther	4	36,700	F
Florin Perkins Road	Fruitridge to Elder Creek	4	30,000	D
Folsom Boulevard	Howe to Bicentennial	4	39,300	F
Folsom Boulevard	UPRR to Jed Smith Drive	2	23,500	F
Freeport Boulevard	15 th to 16 th Avenue	4	30,200	F
Freeport Boulevard	Sutterville to Meer	4	29,200	D
Fruitridge Road	SR 99 to Martin Luther King	4	32,500	D
Fruitridge Road	44 th Avenue to Ethel	4	32,000	D
Fruitridge Road	Franklin to SR 99	4	32,600	E
H Street	39 th to 40 th Streets	2	16,900	F
Howe Avenue	American River to Swarthmore	4	54,600	F
Howe Avenue	US 50 to Folsom	6	60,200	F
I Street	5 th to 6 th Streets	4	25,200	D
I Street Bridge	3 rd to 3 rd Streets	2	12,700	D
J Street	5 th to 6 th Streets	3	21,900	E
Mack Road	Tangerine to Center Parkway	4	40,700	F
Martin Luther King Blvd.	Broadway to 6 th	2	9,300	F
Meadowview Road	Freeport to Mack	4	35,200	E
Northgate Boulevard	I-80 to W. El Camino	4	33,600	D
Power Inn Road	14 th Avenue to Belvedere	4	36,800	F
Rio Linda Boulevard	Main to Bell	2	7,900	E
Roseville Road	Connie to I-80	2	14,800	D
W. El Camino Avenue	Northgate to American	2	15,200	D

Source: City of Sacramento and Fehr & Peers, 2008.

Roadway	Segment	Lanes	Daily Volume	Existing LOS
County of Sacramento				
American River Drive	West of Watt	2	12,100	F
Howe Avenue	North of El Camino	2	18,800	F
Fair Oaks Boulevard	East of Watt	4	38,300	F
Watt Avenue	North of American River Bridge	6	102,600	F
La Riviera Drive	East of Watt	2	21,000	F
Power Inn Road	53 rd to Florin	3	30,400	F
Florin Road	SR 99 to 59 th	6	68,200	F
Source: County of Sacramento and Fehr & Peers, 2008.				

Two road segments were evaluated in the city of Elk Grove including a portion of Franklin Boulevard and Bruceville Road immediately south of the city's policy area boundary. These road segments operate under acceptable levels under existing conditions according to the City of Elk Grove's existing standards.

■ Freeways

Table 6.12-5 shows the operational levels of service for 19 freeway segments located within the city of Sacramento. Ten of the nineteen freeway segments currently operate at LOS F conditions.

Freeway	Segment	Current LOS
Interstate 5	Arena Blvd to I-80	D
Interstate 5	I-80 to W. El Camino	E
Interstate 5	US 50 to Sutterville	F
Interstate 5	43 rd Ave to Florin	D
Interstate 5	Cosumnes River Blvd to Laguna Blvd	D
Interstate 80	Reed to W. El Camino	C
Interstate 80	Norwood to Rio Linda	F
Interstate 80	Winters to Roseville	F
US 50	Freeport to SR 99	F
US 50	59 th to 65 th	F
US 50	Howe to Watt	E
State Route 51	Watt to I-80	F
State Route 51	Arden to El Camino	F
State Route 51	E St to Exposition	F
State Route 99	Broadway to 12 th	F
State Route 99	47 th to Florin	F
State Route 99	Mack to Calvine	C
State Route 99	Elkhorn to Elverta	C
State Route 160	Tribute to Business 80	C
Source: Fehr & Peers, 2008.		

The *Interstate 5 Transportation Concept Report* (Caltrans 1997), like all Caltrans transportation or route concept reports, identifies long-range improvements for specific state highway corridors. These reports also establish the “concept” or desired LOS for specific corridor segments. The long-range improvements are identified to bring the existing facility up to the design concept expected to adequately serve 20-year traffic forecasts. In addition, the ultimate design concept for the facility is also identified for conditions beyond the immediate 20-year design period. Throughout the city of Sacramento, the concept service level is LOS E. From Elk Grove Boulevard to the South Land Park overcrossing, the 20-year concept for Interstate 5 (I-5) is a six-lane freeway and the ultimate facility concept is an eight-lane freeway with three general-purpose lanes and one high occupancy vehicle (HOV) lane in each direction. From the South Land Park overcrossing to Interstate 80 (I-80), the 20-year and ultimate facility concept is a ten-lane freeway with four general-purpose lanes and one HOV lane in each direction. From I-80 to the Sacramento/Yolo County Line, the 20-year concept and the ultimate facility concept is an eight-lane freeway with three general-purpose lanes and one HOV lane in each direction.

The *Route Concept Report, Interstate 80* (Caltrans 2001) contains the 20-year improvement concept for I-80. Throughout the city of Sacramento, the concept service level is LOS E. The 20-year concept and the ultimate facility concept for the corridor is an eight lane freeway with three general-purpose lanes and one HOV lane in each direction.

The *State Route 50 Transportation Concept Report* (Caltrans 1998), contains the 20-year improvement concept for SR 50. Throughout the city of Sacramento, the concept service level is LOS F. From the Yolo/Sacramento County Line to the SR 50/51/99 junction, the 20-year concept and the ultimate facility concept is a 10-12 lane freeway plus auxiliary lanes, with one HOV lane in each direction. From the SR 50-51/99 junction to Sunrise Boulevard, the 20-year concept and the ultimate facility concept is a 10-12 lane freeway with one HOV lane in each direction.

The *State Route 99 Transportation Concept Report* (Caltrans 2004) contains the 20-year improvement concept for SR 99. Throughout the City of Sacramento, the concept service level is LOS F. The 20-year concept and the ultimate facility concept for the corridor is an eight lane freeway with one HOV lane in each direction.

The *State Route 51 (Capital City Freeway) Transportation Concept Report* (Caltrans 2004), contains the 20-year improvement concept for SR 51. Throughout the city of Sacramento, the concept service level is LOS F. From the US 50/SR 99 junction to just west of Arden Way, the 20-year concept for SR 51 is a six-lane freeway and the ultimate facility concept is an eight-lane freeway with three general-purpose lanes and one HOV lane in each direction. From just west of Arden Way to the I-80/SR 51 junction, the 20-year concept and ultimate facility concept is a six-lane freeway.

■ Traffic Safety

The recent accident history for city of Sacramento roadways (excluding state highways) was researched to identify locations with high accident rates. The City considers a location to have a high accident rate if the rate exceeds 1.0 accident per million vehicle miles (mvm) over the past three years. The TBR provides a detailed review of city wide accident data for a 3 ½ year period.

The City has implemented two programs to address safety issues on city roadways as summarized below.

- “Captain Jerry” Traffic Safety: This program was developed to educate elementary school children on how to safely travel to school, such as using seatbelts, school bus safety, and walking on sidewalks and crosswalks. Captain Jerry visits 10,000 children annually and presents maps showing safe routes for students to travel to school.
- Red Light Running Program: The City initiated this program in 1998 to address traffic accidents caused by vehicles running red lights. Cameras were placed at 11 intersections within the City based on the number of accidents caused by vehicles running red lights, traffic volumes, and community and police input. Since June 1999, the City has been issuing citations for red light violations captured by the cameras.

■ Public Transportation System

A wide range of transit services are provided in the city. Transit services include public bus service, light rail transit, commercial bus service, and passenger train service. Park-and-ride facilities are also provided throughout the city to encourage transit use and carpooling.

Local and regional transit services within the city are presented below.

Local Transit Service

The Sacramento RT District provides local bus and light rail service within the city and greater Sacramento area. The RT Board of Directors is comprised of elected officials from Sacramento, Sacramento County, Rancho Cordova, Citrus Heights, Folsom, and Elk Grove. RT had an operating budget of \$148.5 million in fiscal year 2007, with a capital budget of \$57.2 million. According to their Strategic Plan, RT’s purpose is to improve the quality-of-life in the region by enhancing regional mobility and providing a high LOS.

RT operates 97 bus routes with 256 compressed natural gas powered buses and 16 shuttle vans and provides approximately 37 miles of light rail service with 76 vehicles within the greater Sacramento area. RT provides service 365 days a year with buses operating from 5:00 AM to 11:30 PM every 15 to 75 minutes and light rail operating from 4:30 AM to 1:00 AM (except the Gold Line to Folsom which runs to 7:00 PM) with service at 15 minute intervals throughout the

day and every 30 minutes in the evening. The RT system consists of more than 3,600 bus stops, 47 light rail stops, and 25 bus and light rail transfer centers.

RT light rail service accounts for approximately 40 percent of ridership within the system and averages 50,000 weekday passengers and accounts for approximately 30 percent of system ridership. The average weekday ridership for buses is approximately 58,000 passengers (approximately 60 percent of RT ridership). RT ridership has increased over the past several years, serving 31 million passengers in 2006 compared to 14 million passengers in 1987.

Figure 6.12-4 displays the roadways in the city that are served by RT bus routes. The light rail stations and routes are also displayed on the figure. Two light rail lines – the Blue Line and the Gold Line – extend from outlying areas and cross in downtown Sacramento. Riders can travel along the Blue Line to the north-east through the Arden/Del Paso area to the I-80/Watt Avenue light rail station, and to the south through South Sacramento and past Sacramento City College to the Meadowview station. Riders can travel along the Gold Line from the Sacramento Valley station in downtown Sacramento to the east through East Sacramento and past California State University at Sacramento (CSUS) to the city of Folsom.

Although the RT system is accessible to the disabled community, RT also provides door-to-door service to city residents that are unable to travel on fixed-route bus and light rail lines. Paratransit, Inc. provides this service under contract through RT. Riders must qualify for this service by meeting the Americans with Disabilities Act (ADA) eligibility requirements.

Paratransit, Inc. has been serving the Sacramento area for 29 years and has 150 vehicles in operation. Paratransit has developed a state-of-the art facility featuring wireless dispatching of demand-responsive paratransit and route-deviated fixed route transit service. On-board technologies, such as satellite integrated automatic location systems and on-board navigation technology, provides higher route efficiency and minimal wait time for passengers.

Regional Transit Service

Greyhound provides commercial bus service with over 3,600 service locations within North America. Greyhound has a 24-hour station in downtown Sacramento on L Street and a daily station (8:30 AM to 5:00 PM) in northeast Sacramento on El Camino Avenue. Ticketing facilities are available at both locations and bus service varies by day, week, carrier, and season.

Amtrak provides passenger train service and has a station in downtown Sacramento on I Street. Amtrak offers round-trip train service from downtown Sacramento to the San Francisco Bay Area and to Placer County. The station is open seven days a week for ticket sales and baggage service. Parking is provided for Amtrak passengers at the station. The downtown Sacramento Station is served by the Coast Starlight (one daily round trip), California Zephyr (one daily round trip), and the Capitol Corridor (16 weekday round trips and 11 weekend round trips).

The Capitol Corridor is an intercity passenger train service that provides service between San Jose, Oakland/San Francisco, and Sacramento/Placer County along a 170-mile rail corridor. The Capitol Corridor Joint Powers Authority (CCJPA) is a partnership among the six local transit agencies in the eight-county service area that shares the administration and management of the Capitol Corridor. The San Francisco Bay Area Rapid Transit District (BART) provides day-to-day management support to the CCJPA along with the partners who help deliver the Capitol Corridor service. Between 1998 and 2006, ridership increased 176 percent to approximately 1.27 million riders, and revenue has more than doubled to \$16.1 million. In 2006, service was expanded by 33 percent on weekdays for a total of 32 daily trips between Sacramento and Oakland/San Francisco.

Park-and-Ride Lots

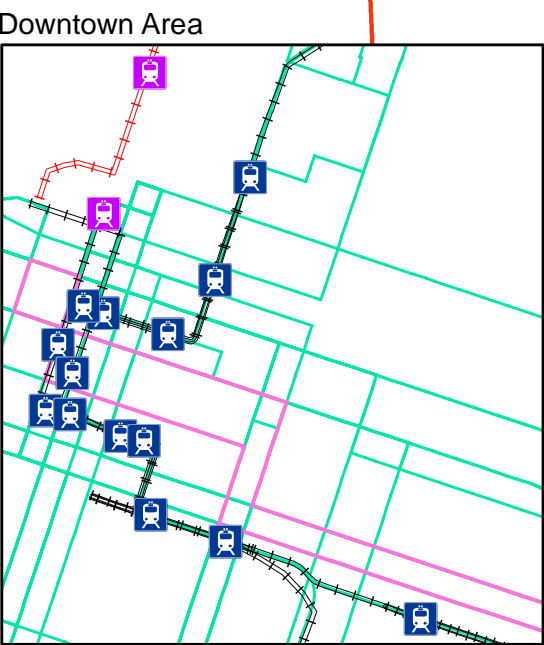
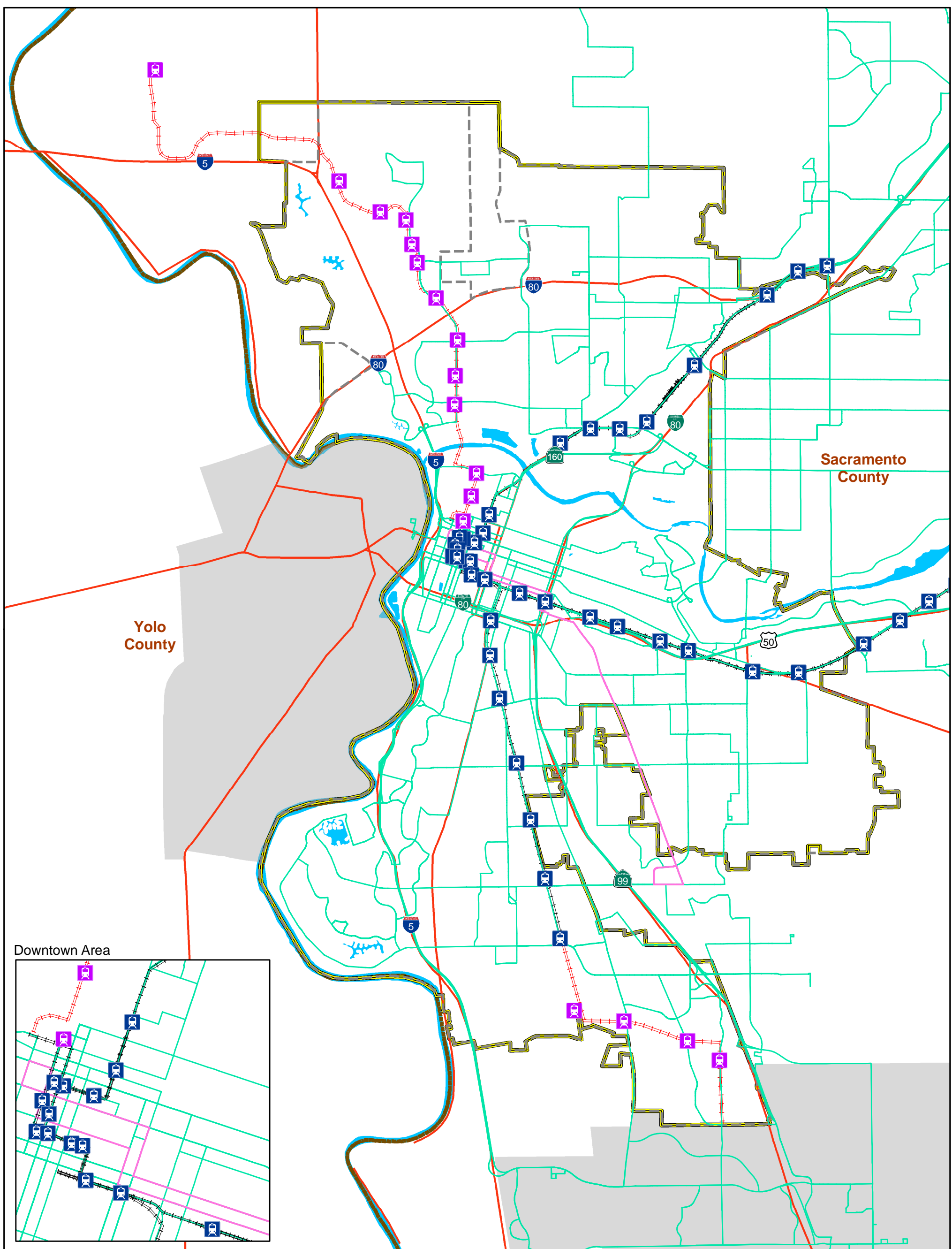
Park-and-ride lots provide opportunities for commuters to carpool or transfer to public transit. RT provides 18 park-and-ride lots (approximately 7,480 parking spaces) with free parking. The largest park-and-ride lots are located along the I-80/Watt Avenue LRT line at Roseville Road (1,090 parking spaces) and along the LRT South line at Florin Road (1,080 parking spaces). Caltrans has park-and-ride lots in, or within close proximity to, the city along SR 99 at Sheldon Road, Elkhorn Boulevard, Calvine Road, and the Caltrans maintenance yard in Elk Grove. These parking lots are provided to encourage travel other than by single occupant vehicles by offering an attractive and convenient place to leave a personal vehicle to transfer to public transportation or meet a carpool.

■ Bikeways

The City adopted the 2010 Sacramento City/County Bikeway Master Plan in 1995. The plan identifies existing and planned bicycle trails and routes within the city. The primary purpose of the bikeway master plan was to identify the recreational and commute needs of bicyclists and to promote bicycling as an alternative form of transportation. The plan also presents the appropriate design features of bikeways, such as signs and markings, and states the importance of implementing bicycle safety and education programs. As described previously, approximately 2 percent of city residents commute to work by bicycling. The goal of the bikeway improvements proposed in the City's Bikeway Master Plan is to increase bicycle ridership for work and non-work trips.

Bikeways are classified into the following three types.

- Class I—off-street bike paths
- Class II—on-street bike lanes marked by pavement striping and signage
- Class III—on-street bike routes that share the road with motorized vehicles



Legend

	Existing Light Rail Station		City Limit
	Proposed Light Rail Station		County Boundary
	Existing Light Rail		Policy Area
	Proposed Light Rail		Water
	Enhanced Bus Service		
	Bus Routes		

**Figure 6.12-4
Transit Services**

Source: City of Sacramento Light Rail data current as of May 2007

Existing and proposed bicycle facilities within the city are displayed in Figure 6.12-5. As shown, many roadways within the city contain on-street bike lanes (Class II) or are signed as a bicycle route (Class III).

The American River Bike Trail is a Class I bicycle facility between Discovery Park in Sacramento and the city of Folsom. The bicycle path is approximately 30 miles long and follows the American River. The path serves weekday bicyclists commuting to work and weekend recreational users.

■ Pedestrian Facilities

According to the City's Pedestrian Safety Guidelines, approximately five percent of all trips in the city are made by walking. As described previously, approximately 2.5 percent of city residents walk to work.

The city of Sacramento has 2,300 miles of sidewalks. However, over 400 miles of roads in Sacramento do not have sidewalks or pedestrian facilities. The City has implemented community programs and adopted guidelines over the past several years to enhance the pedestrian environment within Sacramento as described below.

The City's Neighborhood Traffic Management Program (NTMP) was adopted in 1995 and strives to improve neighborhood livability by slowing vehicles and creating a more desirable pedestrian environment.

In 2002, the City adopted Traffic Calming Guidelines to be used by City staff when reviewing proposed development projects. The guidelines are also used through the NTMP to educate residents of potential traffic calming devices.

The City adopted the Pedestrian Safety Guidelines in 2003 to provide design guidelines on the current best practices for pedestrian facilities, to promote the enhancement of existing facilities, and to ensure that new developments provide a pedestrian friendly environment.

In 2004, the City adopted Pedestrian Friendly Street Standards. The new roadway standards include narrower vehicle travel lanes and enhanced sidewalks to promote pedestrian travel within the city.

The City adopted a Pedestrian Master Plan, in 2007, that documents existing pedestrian infrastructure and establishes an implementation program for pedestrian improvement projects. The plan also presents LOS criteria for pedestrian facilities and design standards.

To ensure that pedestrian facilities comply with ADA standards, the City adopted a Transition Plan. The plan identifies physical improvements needed to provide access to services and activities for disabled users. The plan also contains a schedule for improving curb ramps at intersections in the City to meet ADA standards. The City provides \$5 million in funding for curb

ramp improvements each year. This funding allows the City to construct 1,500 curb ramps each year that meet ADA standards.

To promote safety for children walking to and from school, the City has developed Safe Routes to School maps and implemented “Kids X-ing,” which provides crossing guards at 35 elementary schools in the city through a five-year federal grant.

■ Neighborhood Traffic Management Program (NTMP)

The City has developed the NTMP to promote safety on local streets and improve the quality of life in the City’s neighborhoods. The objectives of the NTMP are to improve driver awareness and behavior, reduce traffic volumes and travel speeds, and enhance the environment of the neighborhood. The NTMP creates a partnership between the residents of the neighborhood and City DOT staff. Residents provide insight into the challenges and issues facing their neighborhood roadways and City staff present a variety of traffic calming solutions to meet the neighborhoods needs. Traffic calming plans developed through the NTMP are voted on by the residents of the neighborhood prior to implementation.

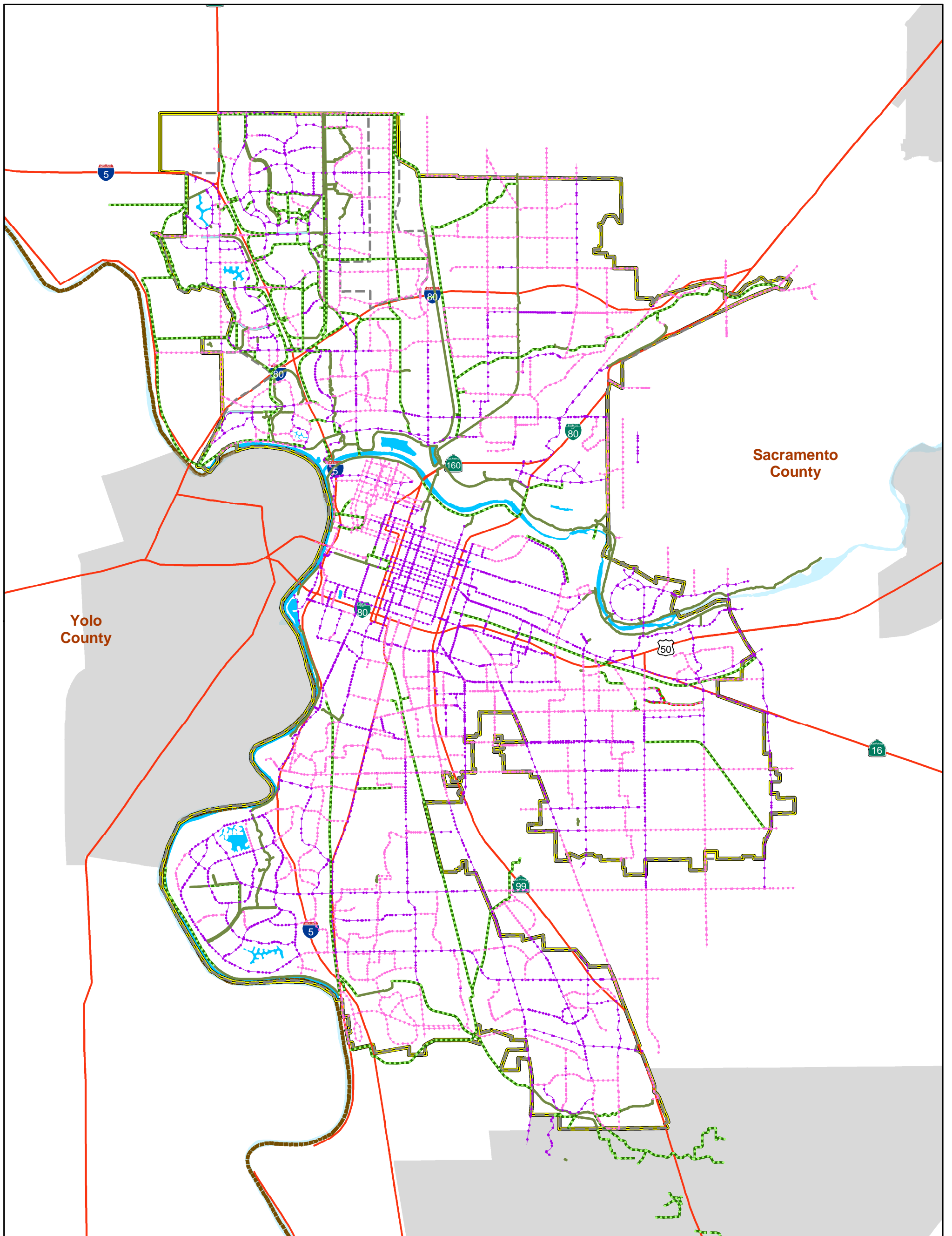
The NTMP has three major components:

1. Education: City staff informs neighbors of traffic calming tools available to address specific concerns, such as travel speeds, cut-through traffic, etc.
2. Engineering: A traffic calming plan is developed and implemented based on neighborhood input and engineering principles.
3. Enforcement: Improvements will be enforced by police and parking services.

The NTMP’s goal is to serve eight to twelve neighborhoods per year with one or more neighborhoods being selected from each council district. Residents submit a community action request form to the city and the program is initiated in the order the applications are received. The NTMP is funded by the gas and transportation sales tax. Over 40 neighborhoods have completed the process to date. A complete list of neighborhoods that have completed the process, are currently engaged in the process, or are scheduled to participate in the future is included on the city’s web site under Engineering Services.

■ Roadway Maintenance and Funding

According to the City’s Street Maintenance Program, 2,935 lane miles of paved roadway are located within the city. The City’s maintenance plan funds the re-paving of approximately 2.6 million square yards of roadway annually, which ensures that each roadway segment will be improved over a 10-year period. The annual cost for the maintenance program is approximately \$10 million.



Sacramento County

Yolo County

Legend

BikeMasterPlan

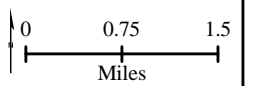
- Existing Off-street
- Existing On-street
- Existing wide sidewalk for Bike use
- Proposed Off-street
- Proposed Off-street (to be removed from BMP)
- Proposed On-street
- Proposed wide sidewalk for Bike use

- City Limit
- County Boundary
- Policy Area
- Water

Figure 6.12-5
Bicycle Facilities



Source: PBS&J 2007



The City also has a Capital Improvement Program (CIP) to fund transportation projects, such as roadway widening, signalization of intersections, signing and striping. Four subprograms are part of the CIP: 1) Street Maintenance, 2) Street Improvements, 3) Signal/Lights/Traffic Control, and, 4) Parking Facilities. The City's Transportation Programming Guide (TPG) indicates the priority of transportation projects and programs for implementation. The list of transportation projects is developed through a City-Community partnership in which City staff works with a Community Advisory Committee to determine the projects to be contained in the TPG.

A portion of the funding needed to maintain city roads and construct improvements is generated through the countywide ½ cent sales tax (Measure A). This sales tax was approved by Sacramento County voters in 1988 and re-authorized in 2004 to fund local transportation projects and air quality improvements. The purpose of the tax is to supplement local transportation revenues. This sales tax helps maintain existing local streets and construct improvements that benefit the Sacramento area. The tax also provides funding to local transit. Although Measure A has provided additional funding, the city still faces funding shortfalls for roadway maintenance and transportation projects.

■ Railways

The city is served by the Union Pacific Railroad (UPRR) freight trains. The UPRR serves 23 states in the western portion of the United States and is the largest North American railroad company. Transported commodities include chemicals, coal, food and food products, truck trailers and containers, forest products, grain and grain products, metals and minerals, and automobiles and parts. UPRR operates a railroad line that provides services within the Port of Sacramento.

UPRR also operates two railroad lines within the city in both the north-south and east-west directions. Through downtown Sacramento the railroad operates at-grade and impedes vehicle traffic flows through the area. Over 20 at-grade crossings are located throughout the city. Long freight trains can impact traffic operations on city streets, especially during peak commute hours.

■ Waterway Facilities

Waterways within the city serve as recreational facilities and as a means to transport goods. The Sacramento and American rivers are used by city residents and tourists for recreational use and are a vital part of the community. The Port of Sacramento, located just west of the city limits, imports and exports goods into the city and region.

The Port of Sacramento is located in West Sacramento in the southeast part of Yolo County and across the river from downtown Sacramento. The facility is operated by the Port Authority, which consists of the city of Sacramento, Sacramento County, city of West Sacramento, and Yolo County. Facilities and terminals located at the port include five docking bays (each

600 feet long), a Union Pacific rail yard that services the port, and commodity handling facilities, including bulk rice and bulk grain elevators, bulk commodities bagging facility, and dry bulk cargo warehousing.

■ Aviation System

Six airports that serve both military and civilian operations are located in or close to the city of Sacramento. Executive Airport in south Sacramento is the only facility located within the city limits. However, all six airports contribute to air travel within the region.

The Sacramento County Airport System oversees four airports: Executive Airport, Sacramento International, Mather Airport, and Franklin Field. Rio Linda Airport is not part of the Sacramento County Airport System; McClellan Airfield, although managed by the County Airport System is under the County's Department of Economic Development and Intergovernmental Affairs. A brief summary of physical and operational conditions at each airport is provided below. Figure 6.12-6 identifies airport locations.

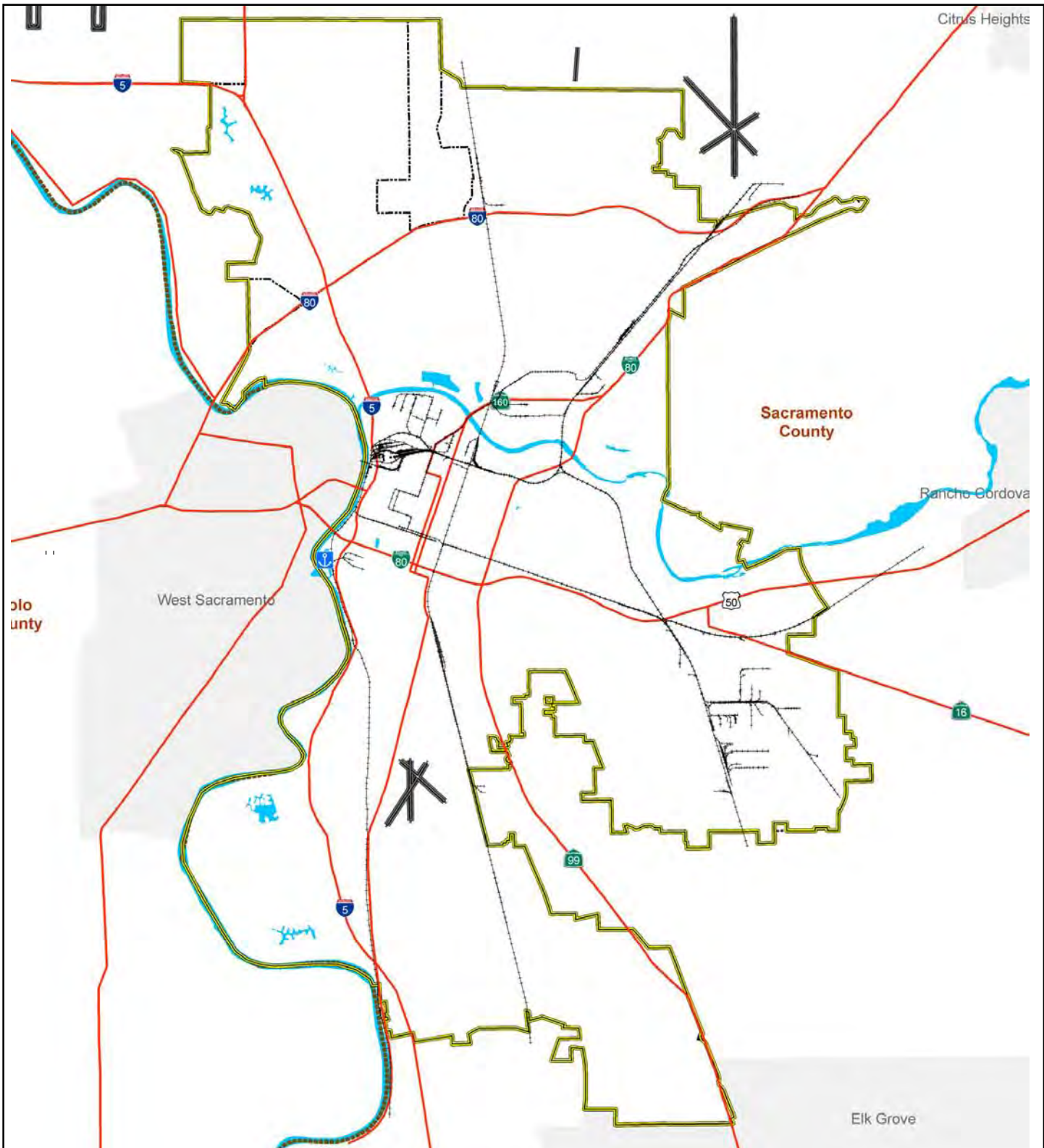
Executive Airport is owned by the City and located on Freeport Boulevard in South Sacramento. It has three runways; the largest runway is 5,503 feet long and 150 feet wide. About 365 aircraft are based at the field, 280 are single-engine and 70 are multi-engine airplanes. Executive Airport serves transient general aviation, local general aviation, air taxi, and limited military purposes.

Sacramento International, located 10 miles northwest of downtown Sacramento, is owned by Sacramento County and has two runways. The longest runway is 8,601 feet long and 150 feet wide. Sacramento International serves commercial, local general aviation, air taxi, and limited military purposes.

Sacramento County recently completed a 20-year Master Plan for Sacramento International. As stated in the Master Plan, passenger activity at the airport grew at an average rate of 6.4 percent per year between 1980 and 1999. For the next 20 years, passenger traffic is expected to grow by 3.5 percent per year. To accommodate the projected growth, the Master Plan identifies the following key improvements:

- Extend existing runway to 11,000 feet and construct a new runway (8,600 feet)
- Construct new passenger terminal (replace existing Terminal B)
- Improve the airport's roadway/circulation system

Mather Airport is located 10 miles east of Sacramento and has two runways. The longest runway is 11,301 feet long and 150 feet wide. About 152 aircraft are based at the airport; 35 single-engine, 36 multi-engine, and three jet-engine airplanes, 37 helicopters, and 41 military aircraft. Mather Airport serves local general aviation, air taxi, transient general aviation, commercial, and military purposes.

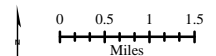


Legend

- Highway
- - - Railroad
- Airport
- Marina
- Water
- City Limit
- Policy Area
- Other City Boundaries
- County Boundary

**Figure 6.12-6
Goods
Movement**

PBS&J, 2007.



McClellan Airfield, located six miles northeast of Sacramento, is owned by Sacramento County and has one runway 10,600 feet long and 200 feet wide. The airfield has about 84 aircraft with 3 single-engine, 54 multi-engine, and 19 jet-engine airplanes, 4 helicopters, and 4 military aircraft. McClellan Airfield serves air taxi purposes, military, transient general aviation, and limited local general aviation purposes.

Rio Linda Airport is privately owned and is located one mile south of Rio Linda. It has one runway approximately 2,625 feet long and 42 feet wide. A total of 163 aircraft are based at the airport, with most being single-engine planes. Rio Linda Airport serves local general aviation and transient general aviation purposes.

Franklin Field is currently a public use airport owned and operated by Sacramento County. The facility is considered an uncontrolled airport since it does not have an air traffic control tower or personnel. There are approximately 36,000 operations each year at Franklin Field, including flight training. The airport was acquired by the County of Sacramento in 1947 from the federal government under the Surplus Property Act of 1944 and was the former site of bomber training during World War II.

■ Local Traffic Development Funding Programs

The City of Sacramento has adopted the following developer-funded traffic impact fee program to pay a portion of the cost of constructing future transportation improvements.

- The North Natomas Public Facilities Fee (PFF) was adopted by the City Council in 1994 and updated in 2005. The North Natomas New Growth Area is bounded by I-80 to the south, Elkhorn Boulevard to the north, and city limits to the east and the west. The PFF funds backbone infrastructure and is paid for by developers prior to issuance of building permits.

The City has finance plans that provide funding for transportation projects in several locations including the Railyards Planning Area, the Richards Boulevard Planning Area, and the Jacinto Creek Planning Area.

The City also has a Major Street Construction Tax, a surcharge on all new construction and reconstruction of buildings (excluding disaster reconstruction) that is currently set at 0.8% of building permit valuation. These funds can only be used for construction, replacement or alteration of major roadways, traffic control, and lighting.

The City is currently undertaking a study to develop a city wide development impact fee for transportation improvements.

South Area Community Plan

The South Area is served by two major north-south freeway routes, I-5 and SR 99. Access to these freeways is provided by a series of east-west arterial streets: Fruitridge Road, 47th Avenue, Florin Road, Meadowview Road, Mack Road, and Cosumnes River Boulevard. Major north-south arterials that serve the South Area are Freeport Boulevard, Franklin Road, and Bruceville Road. 24th Street is an important north-south collector street that traverses the South Area.

Transit service provided by RT in the South Area includes both light rail and bus routes. Light rail is provided along the “Blue Line” route. Light rail stations are located at 47th Street, Florin Road, and Meadowview Road in the South Area. The Phase 2 extension of light rail service to the South Area would add the following stations: Morrison Creek, Franklin Crossing, Center Parkway, and a terminus station at Cosumnes River College. The Community Bus Service Planning Study for the Oak Park and Meadowview communities identified gaps and deficiencies in the existing bus transit network including no north-south service on Franklin Boulevard south of Blair Avenue, no Sunday service on Franklin Boulevard south of Forest Parkway, and no Sunday service on 24th Street.

The South Area has several roadways that lack pedestrian facilities. The three most significant areas include Freeport Boulevard, Franklin Boulevard (near Florin Road), and the North Laguna area (Cosumnes River Boulevard, Bruceville Road, Jacinto, and Calvine). Pedestrian and bicycle access to the transit stations in the South Area is poor.

Executive Airport is located in the northwest portion of the South Area Community Plan, with access to both Freeport Boulevard and 24th Street. Executive Airport provides general aviation services.

Focused Opportunity Areas

■ River District

The River District Focused Opportunity Area is served by two major north-south freeway routes, I-5 and SR 160. Access to these freeways is provided by Richards Boulevard for major east-west travel through the district. The north-south arterials that currently serve the River District are 7th Street, 12th Street, and 16th Street. North B Street is an important east-west collector street.

Transit service provided by RT includes both light rail and bus routes. There are currently no light rail stations in the River District. The closest station is the Alkali Flat/La Valentina station at 12th and D streets. A new light rail station is planned along North 12th Street in the Gateway district. The planned Downtown-Natomas-Airport (DNA) light rail extension alignment will extend the Blue Line from the Sacramento Valley Amtrak Station north along 7th Street, west

along Richards Boulevard, and then north across a new transit bridge to an alignment along Truxel Road in South Natomas. A future light rail station is planned along the DNA line on the north side of Richards Boulevard, just west of 7th Street. Bus service is provided along Richards Boulevard, 7th Street, Dos Rios Boulevard, North 12th Street, North 16th Street, North B Street, and Sunbeam. The Greyhound bus station, currently located at 8th and L streets in downtown, may be relocating temporarily to 300 Richards Boulevard in the near future.

The Richards Boulevard area has several roadways that lack pedestrian facilities.

■ Robla

The Robla Focused Opportunity Area is served by I-80, a major east-west freeway route. Access to I-80 is provided by Raley Boulevard. Bell Avenue is an east-west arterial that serves the Robla Area. Dry Creek Road and Marysville Boulevard are important north-south collector streets that serve the Robla area. Main Avenue is an east-west collector street that traverses the Robla area.

RT provides two bus routes that serve portions of the Robla area, with service along Bell Avenue and Dry Creek Road. Most of the roadways in the Robla area lack either pedestrian or bicycle facilities.

■ Arden Fair/Point West

The Arden Fair/Point West Opportunity Area is served by two major freeway routes, SR 51 (Capital City Freeway) and SR 160. Access to these freeways is provided by Arden Way and Exposition Boulevard. Heritage Lane and Challenge Way are collector streets that link Arden Way and Exposition Boulevard.

Transit service provided by RT in the Arden Arcade/Point West area includes bus service primarily along Arden Way. Just to the west of the area, light rail service is provided along the “Blue Line” route with access at the Marconi and Royal Oaks stations.

Most roadways in the Arden Fair/Point West area have pedestrian facilities.

■ 65th Street/University Village

The 65th Street/University Village Area is served by SR 50, an east-west freeway route. Access to SR 50 is provided via 65th Street and Howe Avenue/Power Inn Road, the two major north-south arterials in the area. Folsom Boulevard is the only east-west arterial. Elvas Avenue is an important north-south collector street that traverses the 65th Street/University Village area. The planned extension of Ramona Avenue would provide a link between its present northerly terminus, at Brighton Avenue, and Folsom Boulevard. The future intersection of Ramona Avenue at Folsom Boulevard would also serve as a new access point for the CSUS campus.

RT provides bus and light rail service to the 65th Street/University Village area. Light rail is provided along the “Gold Line” route. Light rail stations are located at 59th Street, University/65th Street, and Power Inn Road. The University/65th Street light rail station and the bus transfer center serve the CSUS campus. Bus service to the area is provided along Folsom Boulevard, 65th Street, Elvas Avenue, and Power Inn Road/Howe Avenue.

The north-south Union Pacific rail line, which is elevated through this area, is a significant barrier to east-west travel for vehicles, pedestrians, and bicyclists as the only crossing presently occurs at Folsom Boulevard. The planned extension of 4th Avenue, from Redding Avenue to Ramona Avenue, would provide additional east-west connectivity.

The 65th Street/University Village area has several roadways that lack pedestrian and bicycle facilities.

■ Florin Center/Light Rail Station

The Florin Center/Light Rail Station Area is served by both I-5 and SR 99, north-south freeway routes. Access to I-5 and SR 99 is provided via Florin Road, the major east-west arterial in the area. Franklin Boulevard is the major north-south arterial that serves the area. In addition, 24th Street is an important north-south collector street that traverses the area.

Transit service provided by RT in the area includes both light rail and bus routes. Light rail is provided along the “Blue Line” route at the Florin station. Bus service to the area is provided along Florin Road, Franklin Boulevard, and 24th Street.

The north-south Union Pacific rail line is a significant barrier to east-west travel for vehicles, pedestrians, and bicyclists as the only crossing presently occurs at Florin Road.

The area has several roadways that lack pedestrian and bicycle facilities.

The city of Sacramento and Sacramento County, in collaboration with the Florin Road Partnership, are currently in the process of developing a Florin Road Commercial Corridor Plan. The corridor planning process is a joint planning initiative to develop a plan that will include housing and employment strategies as well as mobility plans focusing on transit, bicycle and pedestrian circulation.

■ Meadowview Light Rail Station

The Meadowview Light Rail Station Area is served by both I-5 and SR 99, north-south freeway routes. Access to I-5 and SR 99 is provided via Meadowview Road, the major east-west arterial in the area. Franklin Boulevard is the major north-south arterial that serves the area. 24th Street is an important north-south collector street that traverses the area.

Transit service provided by RT in the area includes both light rail and bus routes. Light rail is provided along the “Blue Line” route at the Meadowview station. Bus service to the area is provided along Meadowview Road, Franklin Boulevard, and 24th Street.

The north-south Union Pacific rail line is a significant barrier to east-west travel for vehicles, pedestrians, and bicyclists as the only crossing presently occurs at Meadowview Road.

The area has several roadways that lack pedestrian and bicycle facilities.

Regulatory Context

Existing transportation policies, laws, and regulations that would apply to the Mobility section of the proposed 2030 General Plan are summarized below.

■ Federal

There are no relevant federal regulations applicable to the 2030 General Plan.

■ State

The California Department of Transportation (Caltrans) provides for the mobility of people, goods, services, and information. Its mission is to work in partnership with others to provide the people of California with a safe, efficient, and effective intermodal transportation system by planning, developing, maintaining, and managing the interregional transportation system and assisting and guiding delivery of local and regional transportation services. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission and Caltrans for state funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

■ Regional

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region. Its members include the counties of Sacramento, El Dorado, Placer, Sutter, Yolo and Yuba as well as 22 cities. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region’s long-range transportation plan, SACOG assists in planning for transit, bicycle networks, clean air, and airport land uses. SACOG also maintains a regional model that is used for developing long-range travel forecasts.

Metropolitan Transportation Plan for 2035 (2008)

The Metropolitan Transportation Plan for 2035 (SACOG 2008) is a federally mandated long-range fiscally constrained transportation plan for the six-county area that includes El Dorado,

Placer, Sacramento, Sutter, Yolo, and Yuba counties. Most of this area is designated a federal non-attainment area for ozone, indicating that the transportation system is required to meet stringent air quality emissions budgets to reduce pollutant levels that contribute to ozone formation. To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the MTP. Consistency is measured based on whether the project was contained in the plan and its associated computer modeling of transportation and air quality impacts. In addition, any regionally significant transportation project planned for a city or county must be included in the MTP because of its potential effect on travel demand and air pollution.

2007/09 Metropolitan Transportation Improvement Program

The 2007/09 Metropolitan Transportation Improvement Program (SACOG 2006) is a list of transportation projects and programs to be funded and implemented over the next 3 years. SACOG submits this document to Caltrans and amends the program on a quarterly cycle. The Metropolitan Transportation Improvement Program (MTIP) and its amendments are subject to air quality conformity analysis under federal regulations, which limit the use of federal funds for regionally significant, capacity-increasing roadway projects.

■ Sacramento County

Measure A Transportation Expenditure Plan

Measure A is a countywide one-half percent sales tax, used to fund a program of roadway and transit improvements, approved by Sacramento County voters originally in 1988. The Countywide Transportation Expenditure Plan (CTEP) is a list of programs and projects that are eligible for funding. In November of 2004, Sacramento County voters approved a 30-year extension of Measure A that begins in April 2009. The measure provides funding for highway, street, and road construction; highway, street, and road maintenance; bus and light rail capital and operations; improved transportation services for elderly and handicapped persons; and transportation-related air quality programs. The measure also requires that jurisdictions adopt a fee that would generate additional revenue for the program.

■ Local

2010 Sacramento City/County Bikeway Master Plan

The 2010 Sacramento City/County Bikeway Master Plan (1995) provides recommendations for implementing a comprehensive and coordinated bikeway network for making travel by bicycle a viable transportation option in the City and County of Sacramento. The major goal of the plan is to “develop and maintain a coordinated approach by City/County and other agencies to implement the plan as funding becomes available or as development occurs.”

Pedestrian Master Plan

The City of Sacramento Pedestrian Master Plan (2007) provides a comprehensive vision for improving pedestrian conditions. The purpose is to make Sacramento a model pedestrian-friendly city – the “Walking Capital.” The goals of the plan fall into the following three categories.

- Create a walkable pedestrian environment throughout the city.
- Improve awareness of the pedestrian mode through education.
- Increase pedestrian safety.

City of Sacramento 1988 General Plan

The City’s 1988 General Plan contains policies and implementation measures relevant to all modes of transportation throughout the city. Specifically, the 1988 General Plan includes policies that address the need to ensure traffic flows smoothly and potential hazards to pedestrians, motorists, and bicyclists are reduced. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, the specific goals and policies contained in the 1988 plan are not included in this analysis.

IMPACTS AND MITIGATION MEASURES

This impact analysis describes the transportation analysis of the 2030 General Plan including the 2030 No Project scenario and identifies potential impacts that would be associated with adoption of the 2030 General Plan, and describes potentially feasible mitigation measures to reduce the magnitude of or avoid significant impacts. Quantitative impact analysis was conducted for 2030 conditions which accounts for development under the proposed 2030 General Plan as well as changes in the cumulative conditions during those intervening years.

Methods of Analysis

The transportation impact analysis is focused on circulation effects that would occur from increased travel demand associated with development under the circulation diagrams, policies, and implementation measures provided in the proposed 2030 General Plan. The proposed circulation diagrams for the 2030 General Plan are shown in Figures 6.12-7 through 6.12-12.

■ Analysis Scenarios

The transportation analysis is conducted for the following scenarios.

- Existing Conditions – conditions based on traffic counts collected in 2006 and 2007.

- 2030 No Project – conditions with 2030 land use forecasts for the city of Sacramento based on the 1988 General Plan policies.
- 2030 General Plan – conditions with 2030 land use forecasts for the city of Sacramento based on the proposed 2030 General Plan policies including the preferred land use plan.

■ Vehicular Roadway System

The transportation analysis for the roadway system followed the steps described below. Traffic conditions are characterized by examining daily operations for roadway segments throughout the city and in the adjacent unincorporated county.

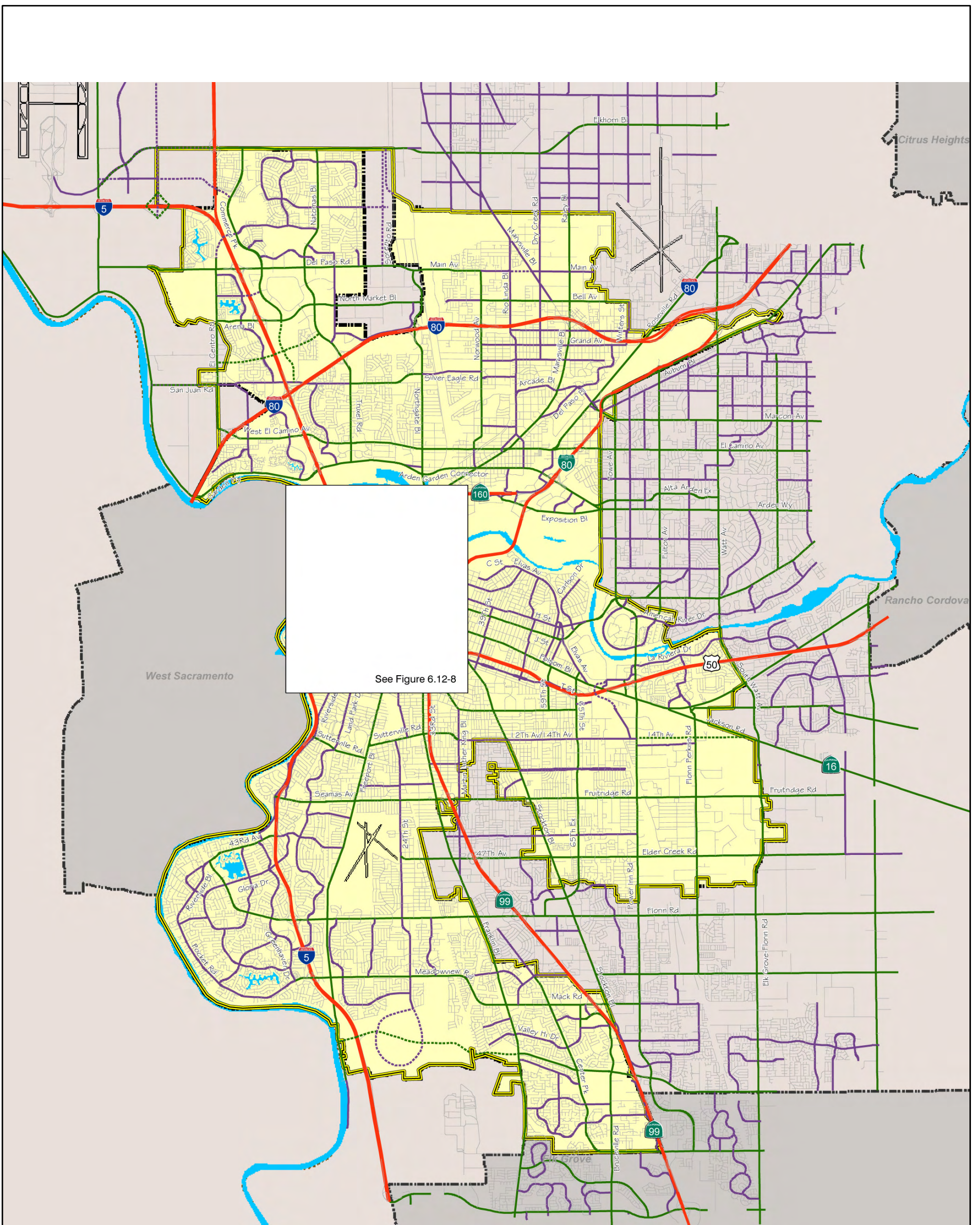
Detailed land use forecasts established allocations of future land use for both the 2030 No Project and 2030 General Plan scenarios by traffic analysis zone (TAZ) for 2030 conditions. The TAZs are geographic areas used to organize land use input data for the regional travel demand model. The TAZs are defined by natural borders such as roads, waterways, and topography and typically represent areas of homogenous travel behavior.

The 2030 No Project and 2030 General Plan scenarios have similar employment forecasts. The 2030 No Project scenario is forecast to have approximately 44,150 fewer residential units than the 2030 General Plan scenario. To maintain a similar number of total residential units in the six-county SACOG region for each of the alternatives, the land use forecast for the No Project alternative was adjusted by allocating an additional 44,150 residential units to TAZs in planned future growth areas outside of the city of Sacramento.

The draft roadway diagrams identify the functional classification and number of travel lanes on major roadways for the 2030 horizon year.

The land use forecasts and network assumptions for 2030 were input to the regional travel demand model developed and maintained by SACOG, and the model was run to generate regional transportation performance measures (for use in comparing the General Plan scenarios) and daily roadway segment volumes. Daily traffic volumes from the model were analyzed through a postprocessor that reads raw traffic volumes from the model for the 2030 horizon year and then adjusts these volumes to account for under- or overestimates that may have occurred in the base-year model.

Existing and projected daily traffic volumes for the roadway segments were analyzed using the LOS capacity thresholds as shown in Table 6.12-2. Existing deficiencies are identified based on the evaluation of existing traffic counts. Future deficiencies are identified for road segments that exceed the existing LOS standard of significance (i.e., LOS C conditions).



See Figure 6.12-8



Legend

- | | | |
|-----------------|-------------------------------|-----------------------|
| City Limit | Street Classifications | |
| Policy Area | Existing Roads | Proposed Roads |
| Water | Arterial | Arterial |
| County Boundary | Collector | Collector |
| | Highway | |
| | Local | |

Figure 6.12-7
2030 General Plan -
Street Classifications

Source: City of Sacramento, General Plan, March 2009.

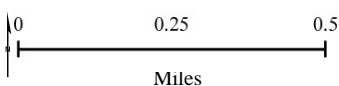


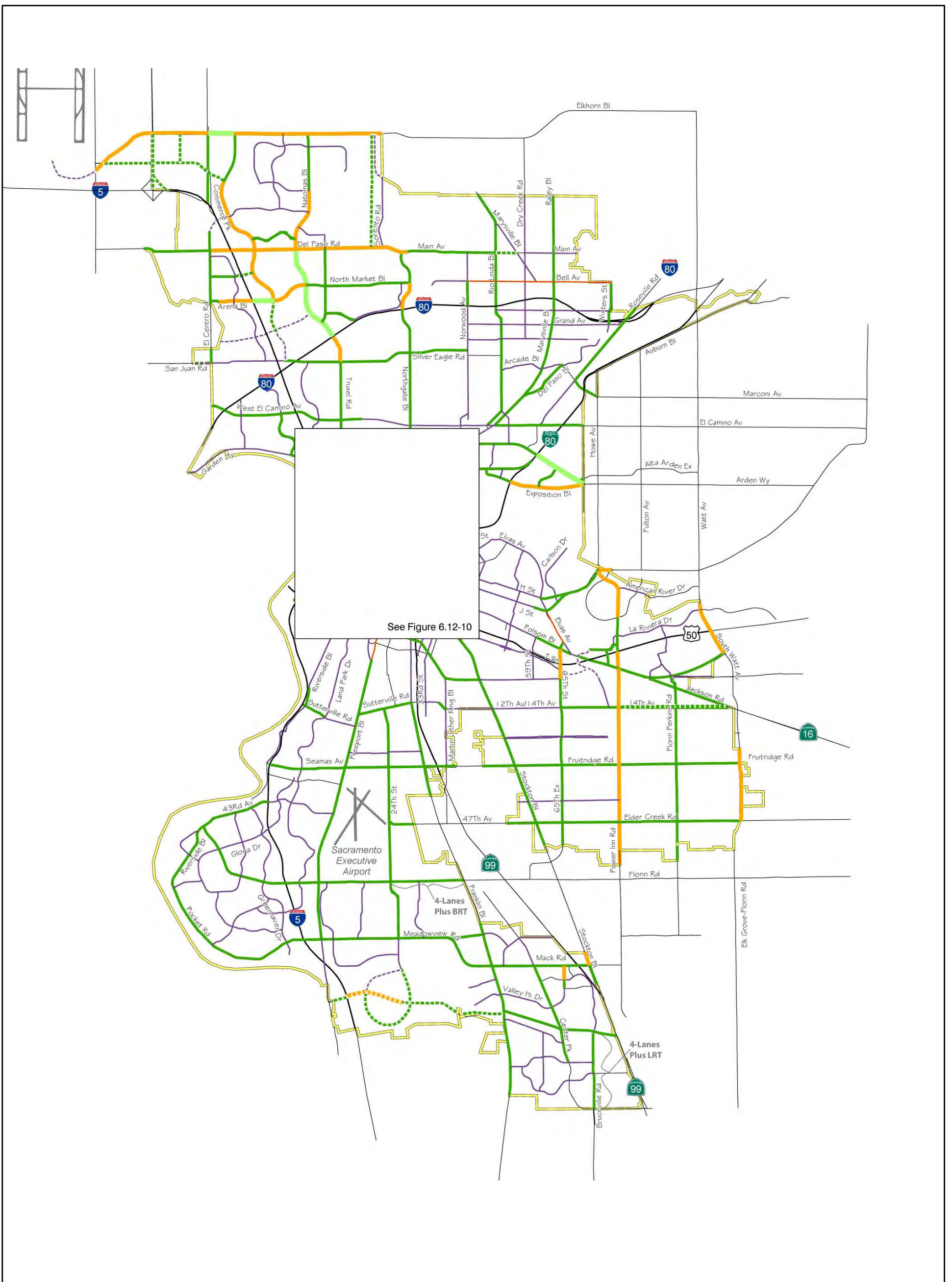
Legend

	City Limit	Street Classifications	
	Policy Area	Existing Roads	
	Water		Arterial
	County Boundary		Collector
			Highway
			Local
			Proposed Roads
			Arterial
			Collector

Figure 6.12-8
2030 General Plan -
Street Classifications
(Core Area)

Source: City of Sacramento, General Plan, March 2009.





See Figure 6.12-10

Legend

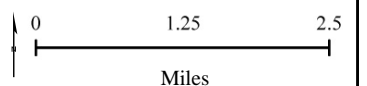
Number of Through Lanes

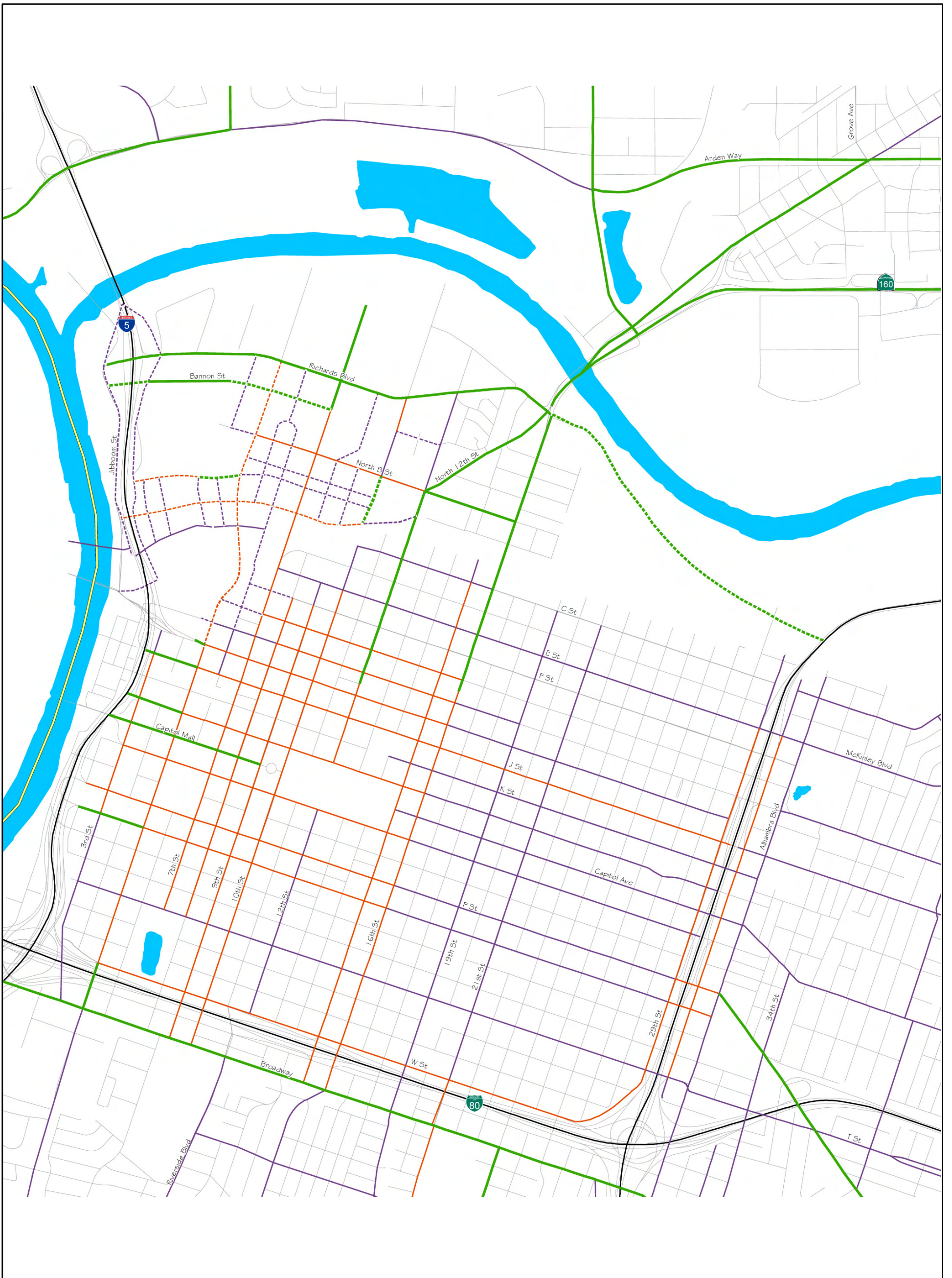
- 2
- 3
- 4
- 6
- 8
- Proposed Roads

- Policy Area
- Water

Figure 6.12-9
2030 General Plan -
Number of Lanes

Source: City of
Sacramento, General
Plan, March 2009.





Legend

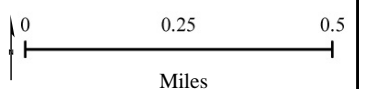
Number of Through Lanes

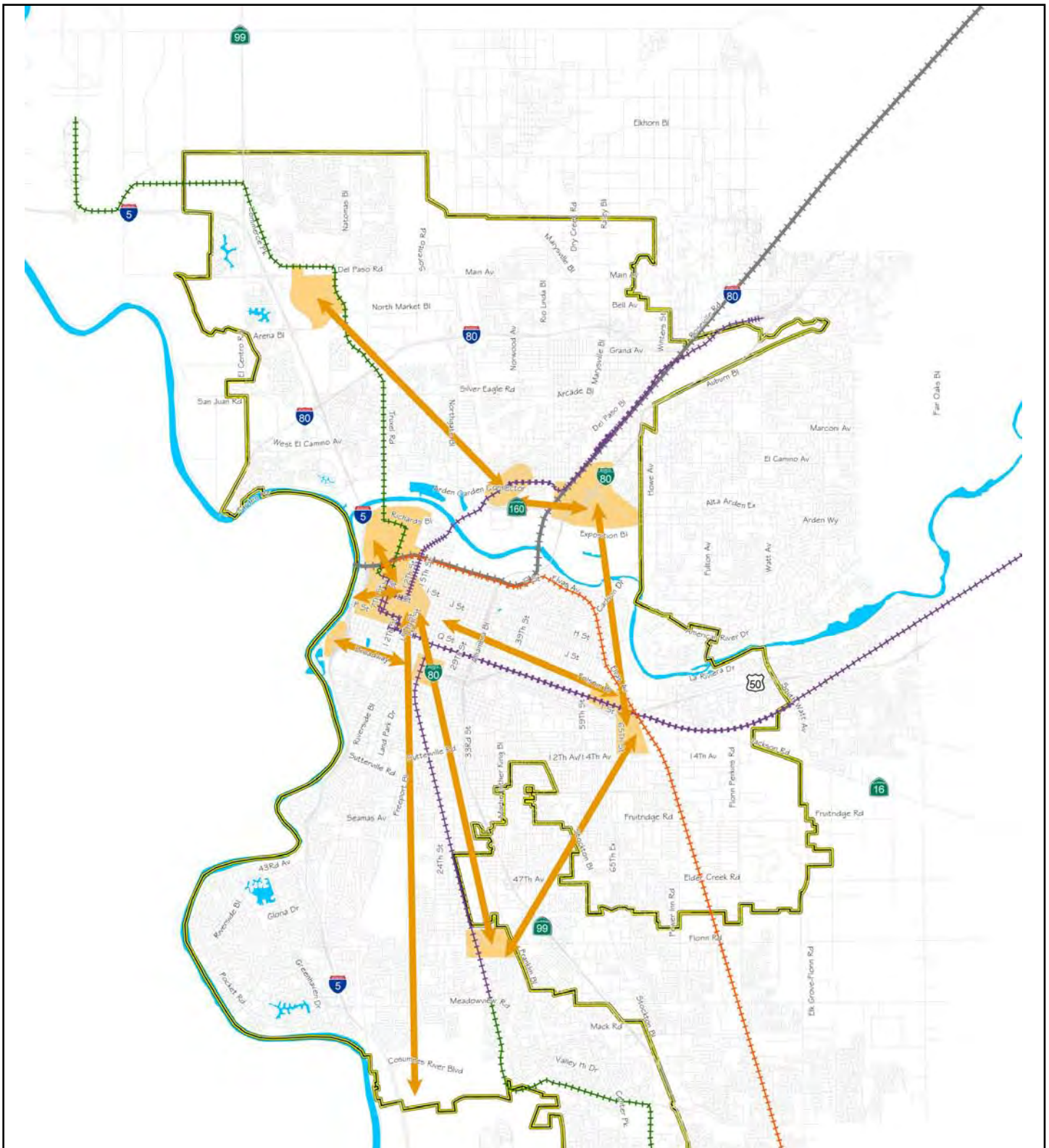
- 2
- 3
- 4
- 6
- 8
- Proposed Roads

- Policy Area
- Water

Figure 6.12-10
2030 General Plan -
Number of Lanes
(Core Area)

Source: City of
Sacramento, General
Plan, March 2009.





Legend

- Existing Light Rail Route
- Proposed Light Rail Route
- Proposed High Speed Rail Alignment
- Capitol Corridor/Planned Regional Rail Service
- Candidate Transit Corridor
- Activity Centers
- Policy Area
- Water

Figure 6.12-11
**2030 General Plan -
 Transit Corridors**

City of Sacramento, General Plan, 2008. 0 1.25 2.5 Miles

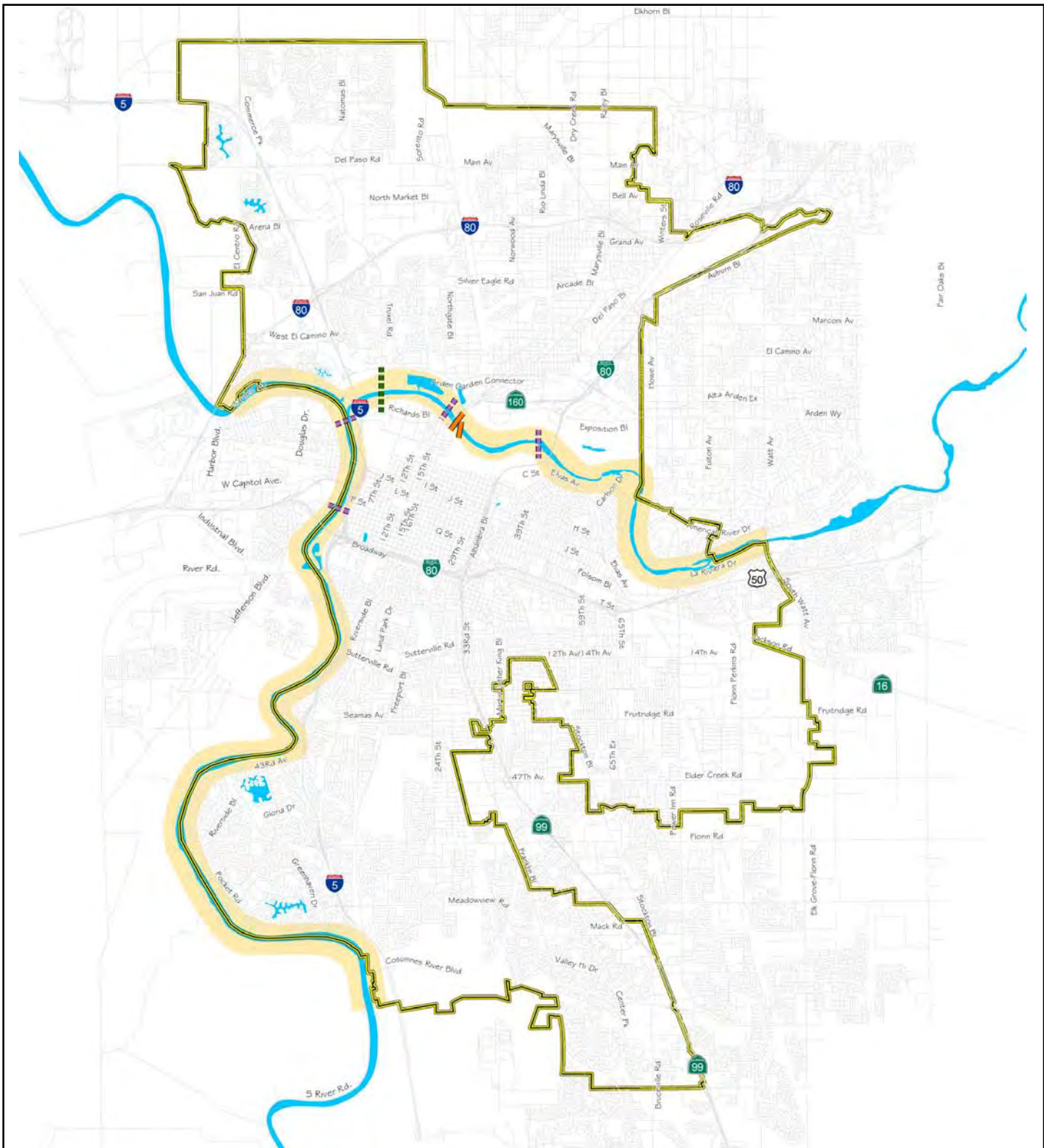


Figure 6.12-12
 2030 General Plan -
 River Corridors

Legend

- Riverfront Zone for Potential Future Bridge Crossings
- Water
- Proposed Bridge Crossing (Transit/Ped/Bike)
- Proposed Bridge Crossing (Ped/Bike)
- Existing Bridge Crossing (Ped/Bike)
- Policy Area



Freeways

Existing and projected daily volumes for freeway segments were also evaluated using the LOS capacity thresholds in Table 6.12-2. Significant impacts are identified for freeway segments that deteriorate to LOS F conditions. For freeway segments that are projected to operate at LOS F conditions under the 2030 No Project scenario, a significant impact is identified where the 2030 General Plan scenario adds one peak hour vehicle trip when compared to the 2030 No Project scenario, a threshold identified by Caltrans District 3 staff.

Transit, Pedestrian and Bicycle Facilities

The analysis of transit, pedestrian and bicycle facilities provides an assessment of the relative level of future use of each mode based on the travel forecasts prepared for the 2030 No Project and 2030 General Plan. A subsequent evaluation is provided as to whether the 2030 General Plan policies would adversely impact facilities, operations, or safety.

Parking

The analysis of parking facilities provides an evaluation as to whether the 2030 General Plan policies would eliminate or adversely affect an existing parking facility; interfere with the implementation of a proposed parking facility; or result in an inadequate supply of parking.

Safety

The analysis of safety issues provides an evaluation as to whether the 2030 General Plan policies would introduce new safety hazards along transportation facilities.

Proposed General Plan Policies

The Vision and Guiding Principles identify the following three mobility objectives.

- Develop a balanced, integrated, multi-modal transportation system that is efficient and safe with frequent service connecting every neighborhood to the rest of the city and the region.
- Provide a variety of transportation choices that promote accessible alternatives to the automobile including walking, bicycling, and taking transit.
- Expand and improve existing transit systems to encourage higher ridership that will lead to less dependence on the automobile and fossil fuels, and to better air quality.

The 2030 General Plan provides linkages between goals and policies in the various elements including Mobility, Land Use, Public Health and Safety, and Environmental Resources. The following goals and policies from the proposed 2030 General Plan Mobility, Land Use, and Public Health and Safety sections are relevant to mobility within the entire Policy Area. The

proposed General Plan Mobility Element includes a series of universal goals and policies that apply to all areas in the City. Unique location-specific goals and policies are included in the City's Community Plans.

MOBILITY (M)

Goal M 1.1 Comprehensive Transportation System. Provide a transportation system that is effectively planned, managed, operated, and maintained.

Policies

- M 1.1.1 **Right-of-Ways.** The City shall manage the use of transportation right-of-ways by all travel modes consistent with the goal to provide Complete Streets, as described in Goal M 4.2.
- M 1.1.2 **Travel System.** The City shall manage the travel system to best ensure safe operating conditions.
- M 1.1.3 **Emergency Services.** The City shall coordinate the development and maintenance of all transportation facilities with emergency service providers to ensure continued emergency service operations and service levels.
- M 1.1.4 **Facilities and Infrastructure.** The City shall effectively operate and maintain transportation facilities and infrastructure to preserve the quality of the system.

Goal M 1.2 Multimodal System. Provide expanded transportation choices to improve the ability to travel efficiently and safely to destinations throughout the city and region.

Policies

- M 1.2.1 **Multimodal Choices.** The City shall promote development of an integrated, multi-modal transportation system that offers attractive choices among modes including pedestrianways, public transportation, roadways, bikeways, rail, waterways, and aviation and reduces air pollution and greenhouse gas emissions.
- M 1.2.2 **LOS Standard.** The City shall allow for flexible Level of Service (LOS) standards, which will permit increased densities and mix of uses to increase transit ridership, biking, and walking, which decreases auto travel, thereby reducing air pollution, energy consumption, and greenhouse gas emissions.
- a. **Core Area Level of Service Exemption** – LOS F conditions are acceptable during peak hours in the Core Area bounded by C Street, the Sacramento River, 30th Street, and X Street. If a Traffic Study is prepared and identifies a LOS impact that would otherwise be considered significant to a roadway or intersection that is in the Core Area as described above, the project would not be required in that particular instance to widen roadways in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could still be found if the project provides improvements to other parts of the citywide transportation system in order to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any

mitigation for vehicular traffic impacts to road segments in order to conform to the General Plan. This exemption does not affect the implementation of previously approved roadway and intersection improvements identified for the Railyards or River District planning areas.

- b. Level of Service Standard for Multi-Modal Districts** – The City shall seek to maintain the following standards in the Central Business District, in areas within ½ mile walking distance of light rail stations, and in areas designated for urban scale development (Urban Centers, Urban Corridors, and Urban Neighborhoods as designated in the Land Use and Urban Form Diagram). These areas are characterized by frequent transit service, enhanced pedestrian and bicycle systems, a mix of uses, and higher density development.
- Maintain operations on all roadways and intersections at LOS A-E at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. LOS F conditions may be acceptable, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project.
- c. Base Level of Service Standard** – the City shall seek to maintain the following standards for all areas outside of multi-modal districts.
- Maintain operations on all roadways and intersections at LOS A-D at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. LOS E or F conditions may be accepted, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation as part of a development project or a City-initiated project.
- d. Roadways Exempt from Level of Service Standard** – The above LOS standards shall apply to all roads, intersections, or interchanges within the City except as specified below. If a Traffic Study is prepared and identifies a significant LOS impact to a roadway or intersection that is located within one of the roadway corridors described below, the project would not be required in that particular instance to widen roadways in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could still be found if the project provides improvements to other parts of the city wide transportation system in order to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any mitigation for vehicular traffic impacts to the listed road segment in order to conform to the General Plan.
- 12th/14th Avenue: State Route 99 to 36th Street
 - 24th Street: Meadowview Road to Delta Shores Circle
 - 65th Street: Folsom Boulevard to 14th Avenue
 - Alhambra Boulevard: Folsom Boulevard to P Street
 - Arcade Boulevard: Marysville Boulevard to Del Paso Boulevard

- Arden Way: Capital City Freeway to Ethan Way
 - Blair Avenue/47th Avenue: S. Land Park Drive to Freeport Boulevard
 - Broadway: 15th Street to Franklin Boulevard
 - Broadway: 58th to 65th Streets
 - El Camino Avenue: Stonecreek Drive to Marysville Boulevard
 - El Camino Avenue: Capitol City Freeway to Howe Avenue
 - Elder Creek Road: 65th Street to Power Inn Road
 - Florin Perkins Road: 14th Avenue to Elder Creek Road
 - Florin Road: Greenhaven Drive to I-5; 24th Street to Franklin Boulevard
 - Folsom Boulevard: 34th Street to Watt Avenue
 - Freeport Boulevard: Broadway to Seamas Avenue
 - Fruitridge Road: Franklin Boulevard to SR 99
 - Garden Highway: Truxel Road to Northgate Boulevard
 - Howe Avenue: American River Drive to Folsom Boulevard
 - J Street: 43rd Street to 56th Street
 - Mack Road: Meadowview Road to Stockton Boulevard
 - Martin Luther King Boulevard: Broadway to 12th Avenue
 - Marysville Boulevard: I-80 to Arcade Boulevard
 - Northgate Boulevard: Del Paso Road to SR 160
 - Raley Boulevard: Bell Avenue to I-80
 - Roseville Road: Marconi Avenue to I-80
 - Royal Oaks Drive: SR 160 to Arden Way
 - Truxel Road: I-80 to Gateway Park
- e. **Modify LOS Policies for Five Special Study Segments** - The City shall exempt the following five special study segments, in the event that the Street Classification diagram is modified to reduce the number of lanes on those segments from four lanes to two lanes.
- 24th Street: Meadowview Road to Cosumnes River Boulevard
 - Capitol Mall: 3rd Street to 5th Street
 - Folsom Boulevard: 34th Street to 47th Street and 59th Street to 65th Street
 - Garden Highway: Truxel Road to Northgate Boulevard
 - J Street: 43rd Street to 56th Street

M 1.2.3 **Multimodal Access.** The City shall promote the provision of multimodal access to activity centers such as commercial centers and corridors, employment centers, transit stops/stations, airports, schools, parks, recreation areas, historic sites, and tourist attractions.

Goal M 1.3 Barrier Removal. Improve system connectivity by removing barriers to travel.Policies

- M 1.3.1 **Grid Network.** The City shall require all new residential, commercial, or mixed-use development that proposes or is required to construct or extend streets to develop a transportation network that provides for a well-connected, walkable community, preferably as a grid or modified grid.
- M 1.3.2 **Private Complete Streets.** The City shall require large private developments (i.e., office parks, apartment complexes, retail centers) to provide internal complete streets that connect to the existing roadway system.
- M 1.3.3 **Eliminate Gaps.** The City shall eliminate “gaps” in roadways, bikeways, and pedestrian networks.
- a. The City shall construct new multi-modal crossings of the Sacramento and American Rivers.
 - b. The City shall plan and seek funding to construct grade-separated crossings of freeways, rail lines, canals, creeks, and other barriers to improve connectivity.
 - c. The City shall construct new bikeways and pedestrianways in existing neighborhoods to improve connectivity.
- M 1.3.4 **Barrier Removal for Accessibility.** The City shall remove barriers, where feasible, to allow people of all abilities to have access within and among infrastructure serving the community.
- M 1.3.5 **Connectivity to Transit Stations.** The City shall provide and enhance connectivity between modes by identifying roadway, bikeway, and pedestrianway improvements to be constructed within ½ mile of major transit stations. Transportation improvements in the vicinity of major transit stations shall emphasize the development of complete streets.
- M 1.3.6 **Multi-Jurisdictional Transportation Corridors.** The City shall work with adjacent jurisdictions to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved.
- M 1.3.7 **Regional Transportation Planning.** The City shall continue to actively participate in Sacramento Area Council of Governments (SACOG’s) regional transportation planning efforts to coordinate priorities with neighboring jurisdictions and continue to work with the Sacramento Regional Transit District (RT) and the California Department of Transportation (Caltrans) on transportation planning, operations, and funding.

Goal M 1.4 Transportation Demand Management. Decrease the dependence on single-occupant use of motor vehicles through Transportation Demand Management.Policies

- M 1.4.1 **Increase Vehicle Occupancy.** The City shall work with a broad range of agencies (e.g., SACOG, SMAQMD, Sacramento RT, Caltrans) to encourage and support programs that increase vehicle occupancy including the provision of traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, and other methods.

- M 1.4.2 **Automobile Commute Trip Reduction.** The City shall encourage employers to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- M 1.4.3 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.
- M 1.4.4 **Off-Peak Deliveries.** The City shall encourage business owners to schedule deliveries at off-peak traffic periods.
- Goal M 1.5 Emerging Technologies and Services. Use emerging transportation technologies and services to increase transportation system efficiency.**

Policies

- M 1.5.1 **Facilities for Emerging Technologies.** The City shall assist in the provision of support facilities such as alternative fueling stations (e.g., electric and hydrogen) for emerging technologies.
- M 1.5.2 **Use of Public Right-of-Way.** The City shall provide for the use of public right-of-way, including parking facilities at major transit stations and employment centers, for support facilities such as alternative fueling stations in urban centers and other areas where appropriate.
- M 1.5.3 **Public-Private Transportation Partnerships.** The City shall provide incentives for and cooperate with public-private transportation partnerships (such as car sharing companies) to establish pilot programs within the Central City, urban centers, employment centers, and other appropriate areas, to reduce single-occupant vehicle use.
- M 1.5.4 **High Emission Vehicle Buy-back.** The City shall support the efforts of the Sacramento Air Quality Management District and other agencies and organizations that have buy-back programs for high emissions vehicles.
- M 1.5.5 **Neighborhood Electric Vehicles.** The City shall encourage developments and street systems that support the use of Neighborhood Electric Vehicles (NEV).
- M 1.5.6 **Provide Fair Share of Intelligent Transportation Systems Improvements.** The City shall coordinate with Caltrans and provide a fair share of funding to implement Intelligent Transportation Systems improvements on the following freeway segments, upon mutual agreement of terms between the City and Caltrans.
- Interstate 5: Arena Boulevard to I-80
 - Interstate 5: I-80 to West El Camino Avenue
 - State Route 50: Freeport Boulevard to State Route 99
 - State Route 50: 59th Street to 65th Street
 - State Route 50: Howe Avenue to Watt Avenue
 - State Route 51 (Capital City Freeway): Watt Avenue to I-80
 - State Route 51 (Capital City Freeway): Arden Way to El Camino Avenue
 - State Route 99: Broadway to 12th Avenue

- Goal M 2.1 Integrated Pedestrian System.** Design a universally-accessible, safe, convenient, and integrated pedestrian system that promotes walking.
- Goal M 3.1 Safe, Comprehensive, and Integrated Transit System.** Create and maintain a safe, comprehensive, and integrated transit system as an essential component of a vibrant transportation system.
- Goal M 4.1 Roadway System.** Create a roadway system that will ensure the safe and efficient movement of people, goods, and services that supports livable communities and reduces air pollution and greenhouse gas emissions.

Policies

- M 4.1.1 **Emergency Access.** The City shall develop a roadway system that is redundant to the extent feasible to ensure mobility in the event of emergencies.
- M 4.1.2 **Balancing Community Impacts with Economic Development Goals.** The City shall evaluate and strive to balance impacts to the community and the environment with economic development goals when adding or modifying roads and bridges.
- M 4.1.3 **Community Outreach.** The City shall continue to work with the community on an individual project basis to identify feasible solutions to lessen the impacts of arterial and collector improvements on local streets.
- M 4.1.4 **Partnerships with Other Agencies.** The City shall develop partnerships with agencies to inspect and maintain bridge facilities.
- M 4.1.5 **Bridge Crossings.** The City shall continue to work with adjacent jurisdictions establish the appropriate responsibilities to fund, evaluate, plan, design, construct, and maintain new river crossings.
- M 4.1.6 **Roundabouts.** The City shall consider roundabouts as an intersection traffic control option with demonstrated air quality and safety benefits, where deemed feasible and appropriate.
- Goal M 4.2 Complete Streets. Provide complete streets that balance the diverse needs of users of the public right-of-way.**
- M 4.2.1 **Adequate Rights-of-Way.** The City shall ensure that all new roadway projects and major reconstruction projects provide appropriate and adequate rights-of-way for all users including bicyclists, pedestrians, transit riders, and motorists except where pedestrians and bicyclists are prohibited by law from using a given facility.
- M 4.2.2 **Pedestrian and Bicycle-Friendly Streets.** The City shall ensure that new streets in areas with high levels of pedestrian activity (e.g., employment centers, residential areas, mixed-use areas, schools) support pedestrian travel by providing such elements as detached sidewalks, frequent and safe pedestrian crossings, large medians to reduce perceived pedestrian crossing distances, Class II bike lanes, frontage roads with on-street parking, and/or grade-separated crossings.
- M 4.2.3 **Adequate Street Tree Canopy.** The City shall ensure that all new roadway projects and major reconstruction projects provide for the development of an adequate street tree canopy.

- M 4.2.4 **Pedestrian and Bicycle Facilities on Bridges.** The City shall identify existing and new bridges that can be built, widened, or restriped to add pedestrian and/or bicycle facilities.
- M 4.2.5 **Multi-Modal Corridors.** The City shall designate multi-modal corridors in the Central City, within and between urban centers, along major transit lines, and/or along commercial corridors to receive increased investment for transit, bikeway, and pedestrian way improvements.
- M 4.2.6 **Identify Gaps in Complete Streets.** The City shall identify streets that can be “more complete” either through a reduction in the number or width of travel lanes or conversions, with consideration for emergency vehicle operation. The City shall consider new bikeways, enhanced sidewalks, on-street parking, and exclusive transit lanes on these streets.
- Goal M 4.3 Neighborhood Traffic.** Enhance the quality of life within existing neighborhoods through the use of neighborhood traffic management techniques, while recognizing the City’s desire to provide a grid system that creates a high level of connectivity.
- Goal M 4.4 Roadway Functional Classification and Typology.** Maintain an interconnected system of streets that allows travel on multiple routes by multiple modes.
- Goal M 5.1 Integrated Bicycle System.** Create and maintain a safe, comprehensive, and integrated bicycle system and support facilities throughout the city that encourage bicycling that is accessible to all.
- Goal M 6.1 Managed Parking.** Provide and manage parking such that it balances the citywide goals of economic development, livable neighborhoods, sustainability, and public safety with the compact multi-modal urban environment prescribed by the General Plan.
- Goal M 7.1 Safe Movement of Goods.** Provide for the safe and efficient movement of goods to support commerce while maintaining livability in the city and region.
- Goal M 8.1 Aviation Facilities.** Promote general and commercial aviation facilities within the parameters of compatible surrounding uses.
- Goal M 9.1 Transportation Funding.** Provide sufficient funding to construct and maintain the transportation facilities needed to achieve the City’s mobility goals.

LAND USE AND URBAN DESIGN (LU)

Policies

- LU 1.1.1 **Regional Leadership.** The City shall be the regional leader in sustainable development and encourage compact, higher-density development that conserves land resources, protects habitat, supports transit, reduces vehicle trips, improves air quality, conserves energy and water, and diversifies Sacramento’s housing stock.
- LU 1.1.5 **Infill Development.** Promote and provide incentives for infill development, redevelopment, and growth in existing urbanized areas to enhance community character, optimize City investments in infrastructure and community facilities,

support increased transit use, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, and enhance retail viability.

- LU 2.1.3 **Complete and Well-structured Neighborhoods.** The City shall promote the design of complete and well-structured neighborhoods whose physical layout and land use mix promote walking to services, biking, and transit use; foster community pride; enhance neighborhood identity; ensure public safety; are family-friendly and address the needs of all ages and abilities.
- LU 2.5.1 **Connected Neighborhoods, Corridors, and Centers.** The City shall require that new development, both infill and greenfield, maximizes connections and minimizes barriers between neighborhoods corridors, and centers within the city..
- LU 2.5.2 **Overcoming Barriers to Accessibility.** The City shall strive to remove and minimize the effect of natural and manmade barriers to accessibility between and within existing neighborhoods, corridors and centers.
- LU 2.6.1 **Sustainable Development Patterns.** The City shall promote compact development patterns and higher-development intensities that use land efficiently; reduce pollution and automobile dependence and the expenditure of energy and other resources; and facilitate walking, bicycling, and transit use.
- LU 2.7.6 **Walkable Blocks.** The City shall require new development and redevelopment projects to create walkable, pedestrian-scaled blocks, publicly accessible mid-block and alley pedestrian routes where appropriate, and sidewalks appropriately scaled for the anticipated pedestrian use.
- LU 4.1.3 **Walkable Neighborhoods.** The City shall require the design and development of neighborhoods that are pedestrian-friendly and include features such as short blocks; broad and well-appointed sidewalks (e.g., lighting, landscaping, adequate width); tree-shaded streets; buildings that define and are oriented to adjacent streets and public spaces; limited driveway curb cuts; paseos and pedestrian lanes; alleys, traffic-calming features; convenient pedestrian street crossings, and access to transit.
- LU 4.1.5 **Connecting Key Destinations.** The City shall promote better connections by all travel modes between residential neighborhoods and key commercial, cultural, recreational, and other community-supportive destinations for all travel modes.
- LU 4.2.1 **Enhanced Walking and Biking.** The City shall pursue opportunities to promote walking and biking in existing suburban neighborhoods through improvements such as:
 - Introducing new pedestrian and bicycle connections
 - Adding bike lanes and designating and signing bike routes
 - Narrowing streets where they are overly wide
 - Introducing planting strips and street trees between the curb and sidewalk
 - Introducing traffic circles, speed humps, traffic tables, and other appropriate traffic-calming improvements
- LU 5.5.2 **Transit-oriented Development.** The City shall actively support and facilitate mixed-use retail, employment, and residential development around existing and future transit stations.

- LU 6.1.8 **Sidewalks and Pedestrian Amenities.** The City shall require that sidewalks along mixed-use corridors are wide enough to accommodate significant pedestrian traffic and the integration of public amenities and landscaping.
- LU 7.1.2 **Housing in Employment Centers.** The City shall require compatible integration of housing in existing and proposed employment centers to help meet housing needs and reduce vehicle trips and commute times, where such development will not compromise the City's ability to attract and maintain employment-generating uses.

PUBLIC HEALTH AND SAFETY (PHS)

Policy

- PHS 3.1.4 **Transportation Routes.** Restrict transport of hazardous materials within Sacramento to routes that have been designated as such routes.

Table 6.12-6 shows all roadways where a future widening is shown on the Street Classification diagrams in the proposed 2030 General Plan Mobility Element.

Proposed South Area Community Plan Policies

The following mobility policies are identified for the South Area Community Plan in the proposed 2030 General Plan.

Policies

- SA.M 1.1 **Sidewalk Deficiencies.** The City shall improve the South Area's sidewalk network, especially along Freeport Boulevard, Franklin Boulevard (near Florin Road), and the North Laguna area (Cosumnes River Boulevard, Bruceville Road, Jacinto Road, and Calvine Road) to eliminate deficiencies such as intermittent, inadequate, or dangerous sidewalks.
- SA.M 1.2 **Walkable Communities – Franklin Boulevard.** The City shall coordinate sidewalk and street lighting improvements with Sacramento County along Franklin Boulevard just south of Fruitridge Road and implement improvements along Florin Road.
- SA.M 1.3 **Regional Transit Bus Service Expansion and Retention.** The City shall encourage Regional Transit to expand bus service in the community to increase the number of routes, frequency of service, and hours of operation, and other areas of service deficiency.
- SA.M 1.4 **Cosumnes River Boulevard.** The City shall prioritize, in the city's Capital Improvement Program, the construction of a new interchange at I-5/Cosumnes River Boulevard and a new Cosumnes River Boulevard connector that includes a light rail right-of-way and attractive landscaping and streetscape.
- SA.M 1.5 **Connectivity to Delta Shores Development.** The City shall require street connections between the Delta Shores development and the Meadowview neighborhoods to the north.
- SA.M 1.6 **Meadowview Street Network.** The City shall support the proposed circulation patterns of the Village Meadows, Sunnyside Meadows, and Steamboat Bend developments, ensuring that an east/west link through the Job Corps site to Detroit Avenue is provided, and that 24th Street is extended.

TABLE 6.12-6

**MAJOR CITY ROADWAYS UNDER EVALUATION FOR NEW ROADS
OR PLANNED WIDENINGS**

Roadway	From	To	Existing # of Lanes	2030 General Plan # of Lanes
5 th Street	H St	Richards Bl	0	3
6 th Street	H St	Richards Bl	0	2
7 th Street	F St	Richards Bl	2	3
65 th Street	Folsom Bl	Broadway	4	6
4 th Avenue	Redding Av	Ramona Av	0	2
14 th Avenue	Power Inn Rd	Jackson Rd	0	4
24 th Street	Meadowview Rd	Cosumnes River Bl	0	4
N. B Street	5 th St	10 th St	2	3
Arden Way	Harvard St	SR 160 Connector	4	6
Bannon Street	Bercut Dr	Sequoia Pacific Bl	2	4
Bannon Street	Sequoia Pacific Bl	10 th St	0	4
Bercut Drive	Bannon St	Railyards Bl	0	2
Bruceville Road	Calvine Rd	South City Limits	4	4 plus LRT
Commerce Way	Elkhorn Bl	Club Center	2	4
Commerce Way	Ottumwa Dr	Del Paso Bl	4	6
Commerce Way	Arena Bl	Natomas Crossing	0	4
Commerce Way	Natomas Crossing	San Juan Rd	0	2
Cosumnes River Bl	Freeport Bl	I-5	0	4
Cosumnes River Bl	I-5	24 th St	0	6
Cosumnes River Bl	24 th St	Franklin Bl	0	4
Cosumnes River Bl	Franklin Bl	Bruceville Rd	2	4
Del Paso Road	Towncenter Dr	Pell Dr	4	6
El Centro Road	Del Paso Rd	San Juan Rd	2	4
El Centro Road	North Terminus	E. Commerce Wy	0	2
Elder Creek Rd	Stockton Bl	Elk Grove-Florin Rd	2	4
Elder Creek Rd	Power Inn	S Watt Ave	2	4
Elkhorn Bl	Airport Bl	Power Line Rd	0	2
Elkhorn Bl	Power Line Rd	East City Limits	2	6
Florin Road	24 th St	Franklin Bl	4	4 plus BRT
Folsom Bl	UPRR	Hornet Dr.	2	4
Fruitridge Rd	Florin-Perkins Rd	S Watt Ave	2	4
G Street	5 th St	7 th St	0	2
Garden Highway	I-5	Northgate Bl	2	4
Howe Ave	American River	Swarthmore	4	6
Main Ave	Kelton Wy	Austin St	3	4
Main Ave	Norwood Ave	Rio Linda Bl	2	4
Main Ave	Rio Linda Bl	Marysville Bl	0	4
Metro Air Parkway	I-5	Elkhorn Rd	0	4
Natomas Bl	N. Bend Dr	Club Center Dr	4	6
Natomas Bl	Club Center Dr	Elkhorn Bl	2	4
Natomas Crossing	Duckhorn Dr	Bilsted Wy	0	2
Northgate Bl	SR 160	Garden Hwy	2	4
Norwood Ave	Jessie Ave	Bell Ave	2	4
Power Inn Rd	14 th Ave	Florin Rd	4	6
Railyard Bl	Jibboom St	12 th St	0	3
Raley Bl	North City Limits	Bell Ave	2	4
Ramona Extension	Brighton Ave	Folsom Bl	0	2
Roseville Rd	Connie Dr	North City Limits	2	4
Snowy Egret Bl	El Centro Rd	E. Commerce Way	0	4
S. Watt Ave	Kiefer Bl	Elder Creek Rd	2	6
Sutter's Landing Pkwy	SR 160	Capitol City Fwy	0	4
West El Camino Ave	I-80	Grasslands Dr	2	4

Sources: City of Sacramento Transportation Programming Guide, SACOG Metropolitan Transportation Plan for 2035; City of Sacramento, Railyards Specific Plan, December 2007; City of Sacramento, North Natomas Community Plan, amended May 3, 1994; Delta Shores Project Application, (P06-187), November 2, 2006.

- SA.M 1.7 **Highway 99/Sheldon Road Interchange.** The City shall require streetscape enhancements for development along Sheldon Road and coordinate with the City of Elk Grove on the construction of improvements to the Highway 99/Sheldon Road interchange.
- SA.M 1.8 **Highway 99/Florin Road Interchange.** The City shall require streetscape enhancements for development along Florin Road and coordinate the construction of improvements to the Highway 99/Florin Road interchange with Sacramento County.
- SA.M 1.9 **Laguna Bikeways.** The City shall provide bikeway improvements within the PG&E power line easement in Laguna.
- SA.M 1.10 **Freeport Shores Bikeways.** The City shall provide a pedestrian/bicycle path connecting the Sacramento River Trail to the Freeport Shores Sports Complex.
- SA.M 1.11 **Sacramento Executive Airport.** The City shall support policies and standards of the Executive Airport and Comprehensive Land Use Plan (CLUP) to continue operation with measures designed to decrease noise and safety hazards in the surrounding community.
- SA.M 1.12 **Sacramento Executive Airport.** The City shall participate in the Sacramento County Executive Airport master planning process.

Thresholds of Significance

For the purposes of this EIR, impacts on transportation and circulation are considered significant if the proposed General Plan would:

Roadways in City of Sacramento

- cause the roadway facility to degrade from LOS C or better to LOS D or worse. For facilities that are already worse than LOS C without the project, a significant impact occurs if the project increases the V/C ratio by 0.02 or more on a roadway.

[Note: The proposed policies for the 2030 General Plan would change the LOS policy for roadways such that the standard in multi-modal districts would be LOS E and the standard in all areas outside of multi-modal districts would be LOS D.]

Roadways in Unincorporated Sacramento County

- cause the roadway facility to degrade from LOS E or better to LOS F or worse. For facilities that are already worse than LOS E without the project, a significant impact occurs if the project increases the V/C ratio by 0.05 or more on a roadway.

Roadways in City of Elk Grove

- cause the roadway facility to degrade from LOS D or better to LOS E or worse. For facilities that are already worse than LOS D without the project, a significant impact occurs if the project increases the V/C ratio by 0.05 or more on a roadway.

Roadways in City of West Sacramento

- cause the roadway facility to degrade from LOS C to LOS D or worse, or LOS D to LOS E or worse for roadway segments within one-quarter mile of a freeway interchange or bridge crossing of the Deep Water Ship Channel, barge canal, or Sacramento River. For facilities that exceed the above acceptable LOS thresholds without the project, a significant impact occurs if the project increases the V/C ratio by more than 0.05.

Freeways

Interstate 5 and Interstate 80

- cause the freeway segment to change from LOS A, B, C, D, or E under the 2030 No Project to LOS F, or
- add one trip to a freeway segment already operating worse than LOS E under the 2030 No Project.

State Routes 50, 51 and 99

- add one trip to a freeway segment already operating worse than LOS F under the 2030 No Project.

Transit

- change the project-generated ridership, when added to the existing or future ridership, exceeds existing and/or planned system capacity that adversely affects transit system operations or facilities in a way that discourages ridership (e.g., removes shelter, reduces park and ride). Capacity is defined as the total number of passengers the system of buses and light rail vehicles can carry during the peak hours of operation.

Bicycles

- eliminate or adversely affects an existing bikeway facility in a way that discourages bicycle uses; interferes with the implementation of a proposed bikeway; or results in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

Pedestrian Facilities

- adversely affect an existing pedestrian facility or results in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/motor vehicle conflicts.

Parking

- exceed the available or planned parking supply for typical day conditions. However, the impact would not be significant if the project is consistent with the parking requirements stipulated in the City Code.

Results of the Transportation System Analysis

■ Regional Performance Measures Results

The regional performance measures results provide an indication of whether the 2030 General Plan would achieve a fundamental goal of reducing vehicle travel (i.e., vehicle miles traveled per capita). The following discussion provides a comparison of the 2030 General Plan and 2030 No Project scenarios. The 2030 No Project assumes build-out of development in the city of Sacramento based on current (1988) General Plan policies. Regional transportation performance measures generated by the travel demand model are shown in Table 6.12-7 for the 2030 No Project and 2030 General Plan.

Performance Measure	City of Sacramento				Six County Region			
	2005 Base Year	2030 No Project	2030 General Plan	Percent Change: 2030 Scenarios	2005 Base Year	2030 No Project	2030 General Plan	Percent Change: 2030 Scenarios
Population	497,200	580,000	676,000	16.6%	2,089,159	3,491,952	3,491,952	0.0%
Households	182,800	232,045	276,191	19.0%	768,073	1,283,806	1,283,806	0.0%
Employment	353,900	459,130	457,359	-0.4%	985,018	1,540,086	1,538,982	0.1%
Daily Vehicle Trips	2,428,301	3,333,599	3,453,042	3.6%	7,084,233	11,523,052	11,351,540	-1.5%
Daily Person Trips	3,105,136	4,328,717	4,699,733	8.6%	9,506,615	15,691,006	15,616,959	-0.5%
Daily Vehicle Miles Traveled (VMT)	18,318,977	25,068,166	25,363,131	1.2%	48,367,743	74,892,121	73,793,936	-1.5%
Daily Vehicle Trips per Capita	4.9	5.7	5.1	-11.1%	3.4	3.3	3.3	-1.5%
Daily Person Trips per Capita	6.2	7.5	7.0	-6.8%	4.6	4.5	4.5	-0.5%
Daily VMT per Capita	36.8	43.2	37.5	-13.2%	23.2	21.4	21.1	-1.5%

Source: Fehr & Peers, 2008.

The daily vehicle miles traveled (VMT) per capita in the city of Sacramento decreases by 13.2 percent with the 2030 General Plan, when compared to the 2030 No Project. This is a significant reduction and indicates that the 2030 General Plan would accomplish one of its key mobility goals. The reduction in VMT per capita also indicates that the 2030 General Plan reinforces the Blueprint adopted by the SACOG, because the VMT per capita would be significantly lower with the 2030 General Plan than the 2030 No Project.

For the six-county region, the 2030 General Plan yields a decrease in VMT per capita of 1.5 percent, when compared to the 2030 No Project. The reduction in VMT per capita is smaller for the six-county region because both the 2030 No Project and 2030 General Plan scenarios

assume the Blueprint land use forecasts adopted by SACOG for all jurisdictions outside the city of Sacramento. The difference between the two scenarios, on a regional basis, is therefore the assumed levels of development within the city of Sacramento.

■ City wide Mode Share Results

The city wide mode share results provide an indication of whether the 2030 General Plan would achieve a fundamental goal of increasing transit, bicycle, and pedestrian travel. The projected level of travel by mode, as generated by the travel demand model, is shown in Table 6.12-8 for the 2030 No Project and 2030 General Plan.

Mode	Number of Person Trips				Percent by Mode			
	2005 Base Year	2030 No Project	2030 General Plan	Percent Change: 2030 Scenarios	2005 Base Year	2030 No Project	2030 General Plan	Percent Change: 2030 Scenarios
Drive Alone	1,463,395	1,979,828	2,027,036	2.4%	47.1%	45.7%	43.1%	-5.7%
Carpool	1,380,903	1,924,314	2,085,777	8.4%	44.5%	44.5%	44.4%	-0.2%
Transit	68,762	148,737	221,087	48.6%	2.2%	3.4%	4.7%	36.9%
Walk	162,290	229,647	309,601	34.8%	5.2%	5.3%	6.6%	24.2%
Bike	29,785	46,191	56,232	21.7%	1.0%	1.1%	1.2%	12.1%
Totals	3,105,136	4,328,717	4,699,733	8.6%	100.0%	100.0%	100.0%	

Source: Fehr & Peers, 2008.

The number of daily transit, walk, and bike trips would see increases between 20 and 50 percent with the 2030 General Plan, when compared to the 2030 No Project. Increases in person trips of approximately 50 percent for transit, 35 percent for walk, and 22 percent for bike modes are projected. This is a significant increase and indicates that the 2030 General Plan would accomplish several of its key mobility goals.

The percentage of Drive Alone trips decreases by 5.7 percent with the 2030 General Plan, when compared to the 2030 No Project. This occurs despite the fact that the total number of person trips increases by 8.6 percent, largely a function of the fact that the 2030 General Plan has 19 percent more households (i.e., 44,150 more units) than the 2030 No Project scenario.

Results of the Roadway System Analysis

The results of the roadway analysis are described in this section for the 2030 No Project and 2030 General Plan scenarios. The results of the analysis focused on 2030 conditions with the proposed circulation diagram improvements assumed in place.

■ Roadway Segment Analysis Results – Current City LOS C Threshold

Figures 6.12-13 and 6.12-14 show the roadway segment LOS for the 2030 No Project and 2030 General Plan.

Roadway Segments – City of Sacramento

To determine the potential impacts of the 2030 General Plan on roadways within the city of Sacramento, an analysis of 180 roadway segments was conducted. As shown in Figures 6.12-13 and 6.12-14, approximately 60 percent of the roadways evaluated within the city of Sacramento would operate at LOS C or better with the 2030 General Plan.

Table 6.12-9 shows 74 road segments within the city of Sacramento that would operate at LOS D, E or F conditions with the 2030 General Plan. The table also identifies whether those road segments, under the 2030 General Plan, would trigger any of the following conditions.

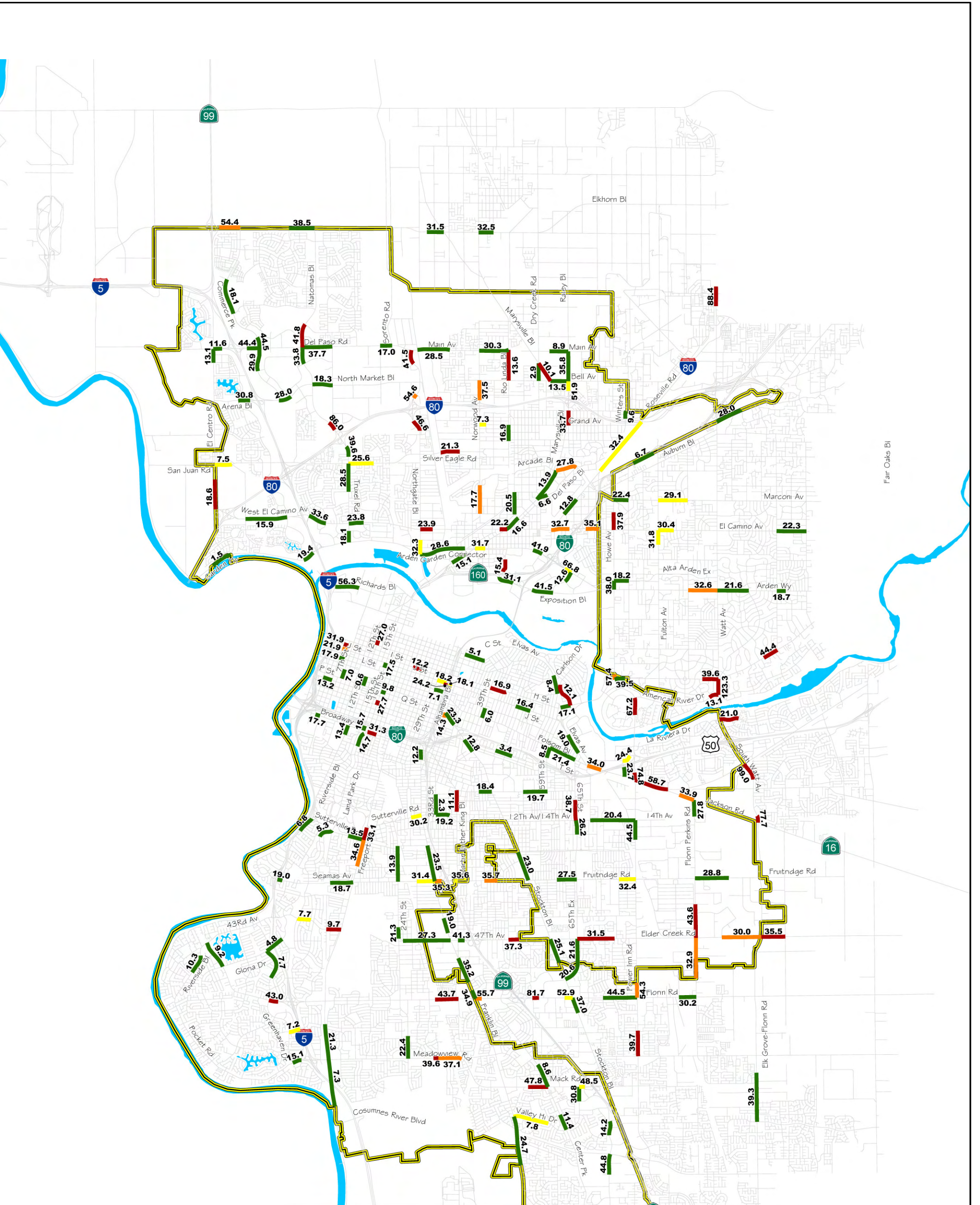
- Significant Project Impact – comparing 2030 General Plan to 2030 No Project conditions
- Fail to Meet LOS C Goal – in 1988 (current) General Plan
- Fail to Meet LOS D/E Goals – as proposed in 2030 General Plan
- Cumulative Impact – comparing 2030 General Plan to existing conditions

Significant project impacts would occur for 30 of the road segments for the 2030 General Plan. The data for these segments are shown in Table 6.12-9. Table 6.12-9 shows that 23 of the 30 road segments would operate at LOS D, E or F conditions under the 2030 No Project scenario. The remaining 7 road segments would operate at LOS C conditions.

A total of 74 roadway segments would fail to achieve LOS C or better conditions, a goal in the current (1988) General Plan, with conditions under the 2030 General Plan. All but seven of those roadway segments would also fail to achieve LOS C or better conditions under the 2030 No Project scenario.

A total of 47 roadway segments would fail to achieve LOS D/E or better conditions, the proposed 2030 General Plan LOS policy, with conditions under the 2030 General Plan. All but four of those roadway segments would also fail to achieve LOS D/E or better conditions under the 2030 No Project scenario.

Cumulative impacts would occur for 39 roadway segments.



Legend

Level of Service

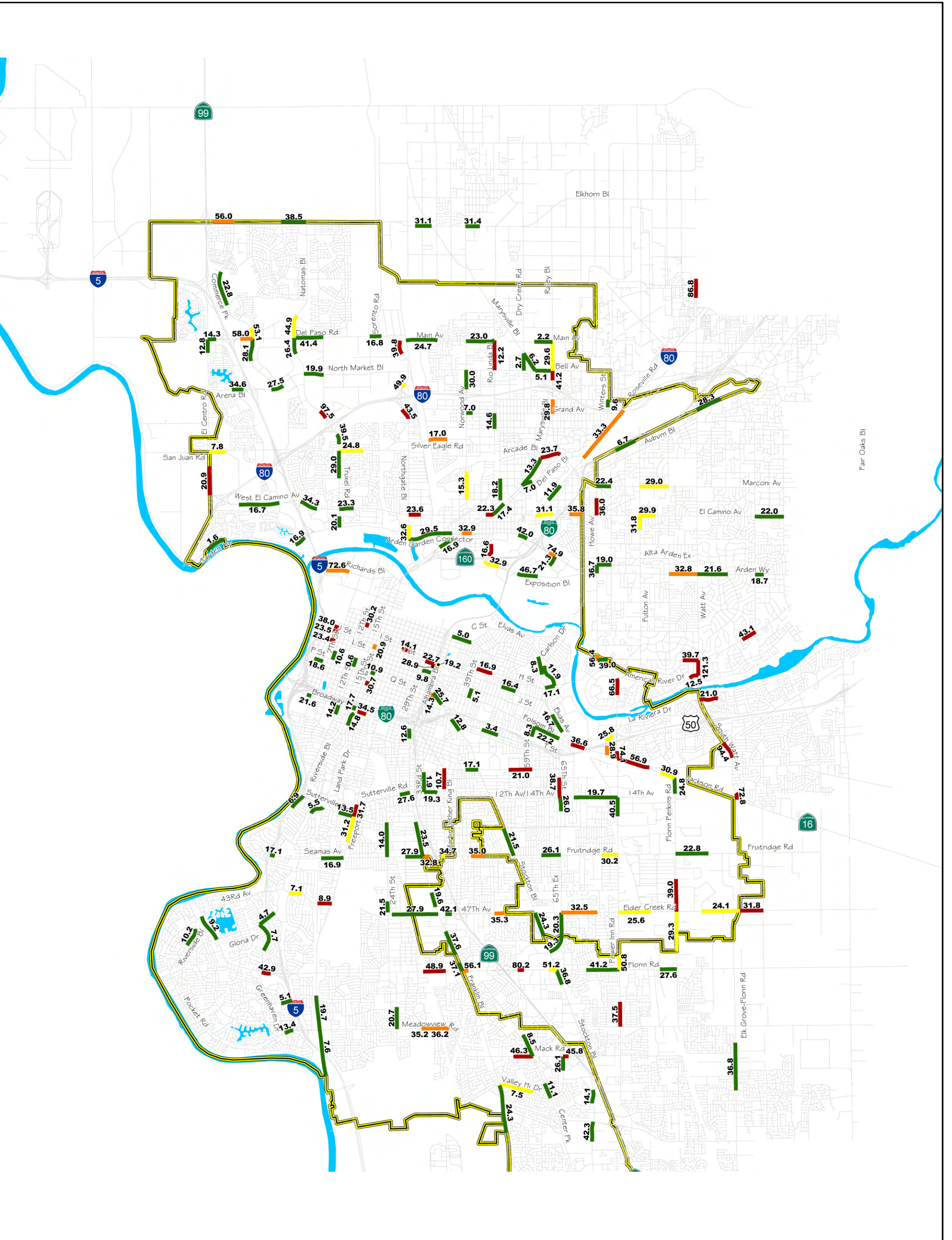
- █ A - C
- █ D
- █ E
- █ F

- 52.6 Average Daily Traffic Volume (x1,000)
- Policy Area
- Water

Figure 6.12-13
 Year 2030
 No Project Roadway
 Level of Service

Source: City of Sacramento, General Plan, 2008.

0 1.25 2.5
 Miles



Legend

Level of Service

- █ A - C
- █ D
- █ E
- █ F

- 52.6 Average Daily Traffic Volume (x1,000)
- Policy Area
- Water

Figure 6.12-14
 Year 2030
 General Plan Roadway
 Level of Service

Source: City of Sacramento, General Plan, 2008.

0 1.25 2.5
 Miles

TABLE 6.12-9⁵

2030 CITY ROADWAY IMPACTS – SEGMENTS OPERATING AT LOS D, E, OR F CONDITIONS

Roadway	From	To	Current # of Lanes	Current LOS	# of Lanes	2030 Conditions				Significant Project Impact ¹	Does Not Meet Old LOS C Goal ²	Does Not Meet New LOS D/E Goal ³	Cumulative Impact ⁴
						No Project		General Plan					
						LOS	V/C	LOS	V/C				
12TH ST	F ST	G ST	3	D	3	F	1.20	F	1.34	√	√	√	√
12TH/14TH AV	33RD ST	34TH ST	2	E	2	F	1.28	F	1.29		√	√	√
15TH ST	J ST	K ST	3	C	3	C	0.78	E	0.93	√	√		√
16TH ST	R ST	S ST	3	C	3	F	1.23	F	1.36	√	√	√	√
29TH ST	J ST	K ST	3	C	3	F	1.08	F	1.28	√	√	√	√
30TH ST	J ST	K ST	3	A	3	D	0.80	D	0.85	√	√		√
43RD AV	S. LAND PARK	HOLSTEIN	2	D	2	D	0.88	D	0.81		√		
65TH ST	SAN JOAQUIN	14TH AVE	4	D	4	F	1.08	F	1.08		√	√	√
ALHAMBRA BL	FOLSOM	N	2	E	2	E	0.95	E	0.95		√	√	
ARCADE BL	MARYSVILLE	PALMER	2	F	2	F	3.18	F	2.71		√	√	√
ARDEN WY	DEL PASO	ROYAL OAKS	4	B	4	D	0.88	E	0.91	√	√		√
ARDEN WY	POINT WEST	HERITAGE	8	B	8	D	0.84	E	0.94	√	√	√	√
BANNON ST	BERCUT	5TH	2	A	4	B	0.70	E	0.91	√	√		√
BLAIR AV/43 RD AV	S. LAND PARK	FREEPORT	2	E	2	F	1.11	F	1.02		√	√	√
BROADWAY	16TH	17TH	4	C	4	F	1.04	F	1.15	√	√	√	√
BROADWAY	58TH	59TH	2	D	2	F	1.09	F	1.17	√	√	√	√
COLLEGE TOWN DR	LA RIVIERA	HORNET	4	B	4	D	0.81	D	0.86	√	√		√
COMMERCE PK	NEW MARKET	DEL PASO	4	A	6	C	0.74	D	0.89	√	√		√
DEL PASO RD	I-5	TRUXEL	6	A	6	C	0.74	E	0.97	√	√		√
EL CAMINO AV	RIO LINDA	DEL PASO	2	D	2	F	1.23	F	1.24		√	√	√
EL CAMINO AV	AUBURN BL	B-80	4	D	4	E	0.91	D	0.86		√		√
EL CAMINO AV	B-80	HOWE	4	E	4	E	0.98	E	0.99		√	√	√
ELDER CREEK RD	STOCKTON	ELK GROVE- FLORIN	2	D	4	F	1.05	D	0.85		√		
ELDER CREEK RD	65TH ST	BIBB	4	B	4	E	0.98	E	0.90		√	√	√
ELDER CREEK RD	YOUNGER CREEK	S WATT AVE	2	C	4	E	1.00	D	0.80		√		
ELKHORN BL	SR-99	E COMMERCE	2	D	6	E	0.91	E	0.93	√	√	√	√
EXPOSITION BL	SR 160	TRIBUTE	4	A	4	C	0.78	D	0.82	√	√		√
FLORIN PERKINS	ELDER CREEK	FLORIN	4	B	4	E	0.91	D	0.81		√		√
FLORIN PERKINS	FRUITRIDGE	ELDER CREEK	4	D	4	F	1.21	F	1.08		√	√	√
FLORIN RD	GREENHAVEN	I-5	4	E	4	F	1.08	F	1.07		√	√	√

TABLE 6.12-9⁵

2030 CITY ROADWAY IMPACTS – SEGMENTS OPERATING AT LOS D, E, OR F CONDITIONS

Roadway	From	To	Current # of Lanes	Current LOS	# of Lanes	2030 Conditions				Significant Project Impact ¹	Does Not Meet Old LOS C Goal ²	Does Not Meet New LOS D/E Goal ³	Cumulative Impact ⁴
						No Project		General Plan					
						LOS	V/C	LOS	V/C				
FLORIN RD	UP RAIL LINE	LUTHER	4	F	4	F	1.21	F	1.36	√	√	√	√
FOLSOM BL	HOWE	BICENTENNIAL	4	F	4	F	1.63	F	1.58		√	√	√
FOLSOM BL	UPRR	JED SMITH DRIVE	2	F	4	E	0.94	F	1.02	√	√	√	√
FREEPORT BL	SUTTERVILLE	MEER	4	D	4	E	0.96	D	0.87		√		√
FREEPORT BL	15TH AV	16TH AV	4	F	4	F	1.10	F	1.06		√	√	√
FRUITRIDGE RD	FRANKLIN	SR 99	4	E	4	E	0.98	E	0.91		√	√	
FRUITRIDGE RD	SR 99	MARTIN LUTHER KING BL	4	D	4	D	0.89	D	0.87		√		√
FRUITRIDGE RD	44TH ST	ETHEL	4	D	4	E	0.99	E	0.97		√	√	√
FRUITRIDGE RD	WALLACE	FLORIN- PERKINS	4	A	4	D	0.90	D	0.84		√		√
H ST	39TH	40TH	2	F	2	F	1.93	F	1.93		√	√	
HORNET DR	COLLEGE TOWN	WB 50 ON-RAMP	4	B	4	C	0.79	E	0.96	√	√		√
HOWE AV	AMERICAN RIVER	SWARTHMORE	4	F	6	F	1.12	F	1.11		√	√	√
HOWE AV	US 50	FOLSOM	6	F	6	F	1.25	F	1.24		√	√	√
I ST	5TH	6TH	4	D	4	F	1.06	F	1.27	√	√	√	√
I ST	21ST	22ND	2	A	2	B	0.68	F	1.01	√	√	√	√
I STREET BRIDGE	3RD	3RD	2	D	2	F	1.95	F	2.17	√	√	√	√
J ST	5TH	6TH	3	E	3	E	0.97	F	1.04	√	√	√	√
J ST	28TH	29TH	3	C	3	D	0.81	F	1.01	√	√	√	√
JACKSON RD	SOUTH OF	FOLSOM	2	C	4	E	0.94	D	0.86		√		√
L ST	5TH	6TH	3	B	3	C	0.80	F	1.04	√	√	√	√
MACK RD	MEADOWVIEW	FRANKLIN	4	C	4	E	0.93	E	0.91		√	√	√
MACK RD	TANGERINE	CENTER PKWY	4	F	4	F	1.20	F	1.16		√	√	√
MACK RD	CENTER PKWY	STOCKTON	4	C	4	F	1.35	F	1.27		√	√	√
MARTIN LUTHER KING BL	BROADWAY	6TH AV	2	F	2	F	1.27	F	1.22		√	√	√
MARYSVILLE BL	NORTH	GRAND	4	C	4	F	1.12	E	0.99		√	√	√
MEADOWVIEW RD	FREEPORT	MACK	4	E	4	F	1.10	E	0.98		√		
NATOMAS BL	N. BEND DRIVE	DEL PASO	6	A	6	C	0.77	D	0.83	√	√		√

TABLE 6.12-9⁵

2030 CITY ROADWAY IMPACTS – SEGMENTS OPERATING AT LOS D, E, OR F CONDITIONS

Roadway	From	To	Current # of Lanes	Current LOS	# of Lanes	2030 Conditions				Significant Project Impact ¹	Does Not Meet Old LOS C Goal ²	Does Not Meet New LOS D/E Goal ³	Cumulative Impact ⁴
						No Project		General Plan					
						LOS	V/C	LOS	V/C				
NORTHGATE BL	DEL PASO	NORTH MARKET	4	C	4	F	1.15	F	1.11		√	√	√
NORTHGATE BL	NORTH MARKET	I-80	6	B	6	E	0.91	D	0.83		√		√
NORTHGATE BL	I-80	W EL CAMINO	4	D	4	F	1.17	F	1.09		√	√	√
NORTHGATE BL	HARDING	GARDEN HY	4	A	4	D	0.81	D	0.82		√		√
NORWOOD AV	LAS PALMAS	ELEANOR	2	B	2	E	0.98	D	0.85		√		√
RALEY BL	CITY LIMITS	BELL	2	C	4	E	0.99	D	0.82		√		√
RALEY BL	BELL	I-80	4	C	4	F	1.44	F	1.14		√	√	√
RICHARDS BL	BERCUT	5TH	4	A	4	B	0.70	E	0.91	√	√		√
RIO LINDA BL	MAIN	BELL	2	A	2	E	0.91	F	1.39		√	√	√
ROSEVILLE RD	CONNIE	I-80	2	D	4	D	0.90	E	0.93	√	√	√	√
ROYAL OAKS DR	SR 160	SOUTHGATE	2	C	2	F	1.10	F	1.19	√	√	√	√
SAN JUAN RD	TRUXEL	ROCKHAMPTON	4	B	4	D	0.85	D	0.83		√		√
SILVER EAGLE RD	NORTHGATE	NORWOOD	2	C	2	F	1.18	F	1.21		√	√	√
TOWER BRIDGE	3RD	3RD	4	A	4	F	1.13	F	1.23	√	√	√	√
TRUXEL RD	GATEWAY PARK	I-80	8	C	8	F	1.08	F	1.22	√	√	√	√
VALLEY HI DR	CENTER	FRANKLIN	2	C	2	D	0.89	D	0.86		√		√
WEST EL CAMINO AV	NORTHGATE	AMERICAN	2	D	2	F	1.33	F	1.31		√	√	√

Notes:

1. Significant Project Impact – 2030 General Plan creates a significant impact, based on level of service and v/c thresholds, when compared to the 2030 No Project.
2. Does Not Meet LOS C Goal – 2030 General Plan does not meet the LOS C goal in the old version of the General Plan.
3. Does not Meet LOS D/E Goal – 2030 General Plan does not meet the LOS D/E goal in the new 2030 General Plan.
4. Cumulative Impact – a significant cumulative impact occurs, based on level of service and v/c thresholds, when comparing the 2030 General Plan to existing conditions.
5. Segments that would operate at LOS A, B or C under the 2030 General Plan are not listed in this table, but are shown in Figure 6.12-14.

LOS = Level of Service; V/C = Volume/capacity ratio.

Source – Fehr & Peers, 2008.

Special Study Segments

Additional modeling and analysis was conducted for six roadway segments, all of which are either existing four-lane facilities or are planned to be four-lane facilities, to determine the potential impacts of reducing the number of through lanes to two lanes. The six roadway segments are described below.

- 24th Street: Meadowview Road to Cosumnes River Boulevard
- Capitol Mall: 3rd Street to 9th Street
- Elvas Avenue: C Street to H Street
- Folsom Boulevard: 34th Street to 47th Street, 59th Street to 65th Street
- Garden Highway: Truxel Road to Northgate Boulevard
- J Street: 43rd Street to 56th Street

Two additional special study segments will be addressed in separate special studies. The segment of 65th Street, from Folsom Boulevard to 14th Avenue, is currently being assessed as part of the 65th Street Station Area Study. The segment of Broadway, from Front Street to Franklin Boulevard, will be assessed in a future study of potential Sacramento River crossings.

24th Street: Meadowview Road to Cosumnes River Boulevard

24th Street is currently a four-lane facility from Sutterville Road to Meadowview Road. The short existing segment of 24th Street, south of Meadowview Road, is wide enough to provide four through lanes, but is marked as a two-lane facility. The planned Delta Shores project proposes to extend 24th Street, from its present southerly terminus, south to Cosumnes River Boulevard as a four-lane facility. Current volumes on the existing segment of 24th Street, from Meadowview Road to Sutterville Road, range from approximately 11,000 to 17,000 daily vehicle trips.

The planned southerly segment of 24th Street, south of Meadowview Road, is projected to serve approximately 10,000 to 16,000 daily vehicle trips as a four-lane facility, a similar level to the existing portions of 24th Street north of Meadowview Road. The number of future trips served by 24th Street, if it were reduced from a four-lane to a two-lane facility, would decrease by approximately 1,000 daily trips. The LOS D threshold for a two-lane (i.e., low access control) arterial such as 24th Street is 13,500 trips per day. Since the projected volumes would exceed this threshold, reducing the planned number of through lanes on 24th Street, south of Meadowview Road, to two lanes would result in LOS E conditions. A reduction in the number of planned lanes, to two through lanes, is not projected to result in a significant diversion of traffic to parallel routes such as Franklin Boulevard or Freeport Boulevard.

Capitol Mall: 3rd Street to 9th Street

Capitol Mall is currently a four-lane facility from Front Street to 9th Street. At its western end, it connects to the Tower Bridge and provides a key link across the Sacramento River to the city of West Sacramento. Current volumes on the Tower Bridge are approximately 15,000 daily vehicle trips. Tower Bridge and the western end of Capitol Mall, from Front Street to Fifth Street currently serves from 11,000 to 15,000 daily vehicle trips and serves as a primary commute route for motorists traveling to and from the west. Tower Bridge and Capitol Mall is also a key route for buses, bicyclists and pedestrians traveling to downtown Sacramento. Planned improvements along this corridor include the Streetcar project that would link the cities of Sacramento and West Sacramento, as well as the provision of on-street bike lanes on Capitol Mall.

Capitol Mall is projected to serve approximately 13,000 to 21,000 daily vehicle trips based on its current four-lane configuration, with the highest volumes projected to occur between Front Street and Fifth Street. The number of future trips served by Capitol Mall, if it were reduced from a four-lane to a two-lane facility, would decrease by as much as 5,000 daily trips west of 5th Street, to 2,000 daily trips east of 8th Street. The resulting daily volumes on Capitol Mall, as a two-lane facility, would range from 10,000 to 16,000. The LOS E threshold for a two-lane (i.e., low access control) arterial such as Capitol Mall is 15,000 trips per day. Since the projected volumes for the segment west of Fifth Street would exceed this threshold, reducing the planned number of through lanes on Capitol Mall to two lanes would result in LOS F conditions. A reduction in the number of planned lanes, to two through lanes, is projected to result in a significant diversion of traffic to parallel routes such as J Street, N Street, 5th Street, and 7th Street. These routes would experience increases in daily traffic ranging from 1,200 to 2,400 trips.

Elvas Avenue: C Street to H Street

Elvas Avenue is currently a four-lane facility for several blocks at the western and eastern ends of the study segment. The central portion of the corridor is a two-lane facility. This portion of Elvas Avenue currently serves 8,100 daily trips, and is designated in the draft mobility element as a four-lane arterial.

This portion of Elvas Avenue is projected to serve approximately 8,300 daily vehicle trips as a four-lane facility, a small increase over existing levels. The number of future trips served by this portion of Elvas Avenue, if it were reduced from a four-lane to a two-lane facility, would decrease by approximately 100 daily trips. The LOS D threshold for a two-lane (i.e., low access control) arterial such as Elvas Avenue is 13,500 trips per day. This portion of Elvas Avenue would operate at LOS B conditions if the planned number of through lanes were reduced to two lanes with a median. A reduction in the number of planned lanes, to two through lanes, is not projected to result in a diversion of traffic to parallel routes.

Folsom Boulevard: 34th Street to 47th Street, 59th Street to 65th Street

Most of the above segment of Folsom Boulevard is currently a four-lane facility, with no left turn lanes. Several blocks in the central portion of this segment have a two-lane section with a left turn pocket. This portion of Folsom Boulevard currently serves from 14,000 to 18,000 daily trips, and is designated in the draft mobility element as a four-lane arterial.

This portion of Folsom Boulevard is projected to serve approximately 21,000 to 26,000 daily vehicle trips. The number of future trips served by this segment of Folsom Boulevard, if it were reduced from a four-lane to a two-lane facility, would range from 17,000 to 22,000 daily trips. The LOS D threshold for a two-lane (i.e., high access control) arterial such as Folsom Boulevard is 13,500 trips per day. Since the projected volumes would exceed this threshold, reducing the planned number of through lanes on this segment of Folsom Boulevard to two lanes would result in LOS E-F conditions. A reduction in the number of planned lanes, to two through lanes, is projected to result in a significant diversion of traffic to parallel routes such as J Street, which would experience an increase of approximately 2,000 daily trips.

Garden Highway: Truxel Road to Northgate Boulevard

Garden Highway is currently a two-lane facility from Truxel Road to Northgate Boulevard. It is designated in the draft mobility element as a four-lane arterial.

This portion of Garden Highway is projected to serve approximately 28,000 to 30,000 daily vehicle trips. The number of future trips served by this segment of Garden Highway, if it were reduced from a four-lane to a two-lane facility, would range from 23,000 to 24,000 daily trips. The LOS D threshold for a two-lane (i.e., high access control) arterial such as Garden Highway is 18,000 trips per day. Since the projected volumes would exceed this threshold, reducing the planned number of through lanes on this segment of Garden Highway to two lanes would result in LOS F conditions. A reduction in the number of planned lanes, to two through lanes, is projected to result in a significant diversion of traffic to parallel routes such as West El Camino Avenue, San Juan Road, and Northgate Boulevard. These routes would experience an increase in daily traffic ranging from 1,100 (San Juan Road) to as high as 5,100 daily trips (Northgate Boulevard).

J Street: 43rd Street to 56th Street

The above segment of J Street is currently a four-lane facility, with no left turn lanes. This portion of J Street currently serves approximately 16,000 daily trips, and is designated in the draft mobility element as a four-lane arterial.

This portion of Folsom Boulevard is projected to serve approximately 16,000 to 21,000 daily vehicle trips. The number of future trips served by this segment of Folsom Boulevard, if it were reduced from a four-lane to a two-lane facility, would range from 14,000 to 19,000 daily trips. The LOS D threshold for a two-lane (i.e., high access control) arterial such as J Street is 13,500 trips per day. Since the projected volumes would exceed this threshold, reducing the planned

number of through lanes on this segment of J Street to two lanes would result in LOS E-F conditions. A reduction in the number of planned lanes, to two through lanes, is projected to result in a small diversion of traffic to parallel routes such as Folsom Boulevard, which would experience an increase of approximately 500 daily trips.

Roadway Segments – Adjacent Jurisdictions

To determine the potential impacts of the 2030 General Plan on roadways in unincorporated Sacramento County, an analysis of 39 roadway segments was conducted. For the purposes of the following analysis, impacts to roadway segments are identified based on standards of significance as defined by Sacramento County.

A total of 12 road segments within the unincorporated Sacramento County would operate at LOS F conditions with the 2030 General Plan. No significant project impacts would occur for the Sacramento County road segments for the 2030 General Plan. These results are shown in Table 6.12-10. Table 6.12-10 shows that all of the County road segments that operate at LOS F under the 2030 General Plan would also operate at LOS F under the No Project scenario.

Volumes and congestion levels are projected to be lower under the 2030 General Plan, when compared to the 2030 No Project scenario, for 23 of the 39 County roadway segments. The primary reason that projected volumes are higher on many segments in the 2030 No Project scenario is that the 44,150 residential units that can't be accommodated in the City of Sacramento under this option (i.e., based on the current General Plan) would be built in the unincorporated County and other adjacent counties. The traffic generated by these units would have an increased impact on County roadways in the 2030 No Project scenario because they would commute along these routes to access major job centers.

Based on the analysis, the traffic generated by build-out of the 2030 General Plan would not result in significant traffic impacts for any of the 39 County roadway segments that were evaluated.

Three road segments were evaluated in the city of West Sacramento including a portion of 3rd Street, West Capitol Avenue and Tower Bridge Gateway. Based on the analysis, the traffic generated by build-out of the 2030 General Plan would result in significant traffic impacts – based on the city of West Sacramento LOS thresholds and related significance standards – for the following roadway segment.

- Tower Bridge Gateway – 3rd to 5th Streets

Two road segments were evaluated in the city of Elk Grove including a portion of Franklin Boulevard and Bruceville Road immediately south of the City's policy area boundary. Based on the analysis, the traffic generated by build-out of the 2030 General Plan would not result in significant traffic impacts based on the city of Elk Grove LOS thresholds and related significance standards.

TABLE 6.12-10							
2030 ROADWAY IMPACTS FOR ADJACENT JURISDICTIONS							
Roadway	Segment	Current LOS	# of Lanes	2030 Conditions			
				No Project		General Plan	
				LOS	V/C	LOS	V/C
County of Sacramento							
47 th Avenue	East of SR 99	E	4	F	1.04	E	0.98
Alta Arden Ex	Howe to Bell	A	4	A	0.46	A	0.48
American River Dr	West of Watt	F	2	F	1.50	F	1.43
Arden Wy	Morse to Bell	D	4	E	0.91	E	0.91
Arden Wy	Watt to Eastern	A	4	A	0.60	A	0.60
Arden Wy	Eastern to Stewart	A	4	A	0.52	A	0.52
El Camino Av	Howe to Bell	B	4	D	0.84	D	0.83
El Camino Av	Garfield to Fair Oaks	A	4	B	0.62	B	0.62
El Centro Rd	San Juan to I-80	A	4	A	0.52	A	0.58
Elder Creek Rd	S. Watt to Bradshaw	C	4	F	1.18	F	1.06
Elk Grove-Florin / S Watt Ave	McCoy to Gerber	B	6	B	0.66	B	0.61
Elkhorn Blvd	Marysville to Rio Linda	A	6	A	0.53	A	0.52
Elkhorn Blvd	Dry Creek to Rio Linda	A	6	A	0.54	A	0.52
Fair Oaks Blvd	Howe to University	B	6	B	0.66	B	0.65
Fair Oaks Blvd	East of Watt	F	4	F	1.10	F	1.10
Fair Oaks Blvd	Estates Dr to Eastern	E	4	F	1.11	F	1.08
Fair Oaks Blvd	North of Walnut	C	4	D	0.87	D	0.86
Florin Rd	Franklin to Lincolnshire	C	6	E	0.93	E	0.94
Florin Rd	SR 99 to 59 th	F	6	F	1.36	F	1.34
Florin Rd	65 th to Stockton	B	6	D	0.88	D	0.85
Florin Rd	Strand to Power Inn	C	6	C	0.74	B	0.69
Florin Rd	Edith to Florin Perkins	B	4	D	0.84	C	0.77
Franklin Blvd	41 st to 42 nd	A	4	A	0.53	A	0.54
Franklin Blvd	Martin Luther King to 51 st	B	5	C	0.78	D	0.84
Fulton Av	South of El Camino	D	4	D	0.88	D	0.88
Howe Av	Fair Oaks to Cadillac	D	6	E	0.96	E	0.94
Howe Av	North of Arden	D	4	F	1.06	F	1.02
Howe Av	North of El Camino	B	4	F	1.26	F	1.20
La Riviera Dr	East of Watt	F	2	F	2.40	F	2.40
Marconi Av	Fulton to Watt	D	4	D	0.81	D	0.81
Marconi Av	Auburn to Howe	B	4	B	0.62	B	0.62
Power Inn Rd	53 rd to Florin	D	4	F	1.51	F	1.41
Power Inn Rd	Heminway to Gerber	D	4	F	1.10	F	1.04
Sorento Rd	North of Del Paso	A	6	A	0.28	A	0.28
South Watt Av	Folsom to Kiefer	D	6	F	1.65	F	1.57
Stockton Bl	Florin to 66 th	D	4	F	1.03	F	1.02
Watt Av	North of American River Br	F	6	F	2.06	F	2.02
Watt Av	North of Palm	E	6	F	1.47	F	1.45
S Watt Ave	North of Jackson Hwy	D	6	F	1.30	F	1.21
City of Elk Grove							
Bruceville Rd	South of Laguna	B	6	B	0.66	B	0.64
Franklin Bl	North of Sims	B	6	A	0.46	A	0.45
City of West Sacramento							
3 rd St	North of W. Capitol Avenue	A	2	A	0.55	B	0.67
Tower Bridge Gateway	3 rd to 5 th Streets	A	4	E	0.96	F	1.12
W. Capitol Av	West of 5 th Street	A	4	F	1.21	F	1.25
Notes: LOS = Level of Service. V/C = Volume/capacity ratio. Source: Fehr & Peers, 2008.							

■ Freeway Segment Analysis Results – Current LOS Thresholds

To determine the potential impacts of the 2030 General Plan on freeway segments, an analysis of 19 freeway segments was conducted. Caltrans has identified a concept service level E for I-5 and I-80, and a concept service level F for SR 50, SR 51, and SR 99. For the purposes of the following analysis, impacts to freeway segments are identified based on standards of significance as defined by Caltrans.

A total of 15 freeway segments would operate at LOS F conditions with the 2030 General Plan. Significant impacts would occur on eight of the freeway segments for the 2030 General Plan. These results are shown in Table 6.12-11. Table 6.12-11 shows that all of the 15 road segments that operate at LOS F under the 2030 General Plan would also operate at LOS F under the No Project scenario.

TABLE 6.12-11

2030 FREEWAY SEGMENT IMPACTS

Freeway	Segment	Current LOS	2030 # of Lanes	2030 conditions					
				No Project			General Plan		
				Volume	LOS	V/C	Volume	LOS	V/C
Interstate 5	Arena Bl to I-80	D	9F+H	256,000	F	1.21	284,000	F	1.33
Interstate 5	I-80 to W. El Camino	E	10F+H	277,000	F	1.15	297,000	F	1.22
Interstate 5	US 50 to Sutterville	F	8F+H	208,000	F	1.07	209,000	F	1.06
Interstate 5	43 rd Ave to Florin	D	8F+H	172,000	D	0.89	174,000	D	0.88
Interstate 5	Cosumnes River Bl to Laguna Bl	D	6F+H	135,000	E	0.94	135,000	D	0.93
Interstate 80	Reed to W. El Camino	C	6F	143,000	F	1.19	143,000	F	1.19
Interstate 80	Norwood to Rio Linda	F	6F+H	187,000	F	1.24	186,000	F	1.22
Interstate 80	Winters to Roseville	F	6F+H	192,000	F	1.29	181,000	F	1.21
US 50	Freeport to SR 99	F	12F	317,000	F	1.32	321,000	F	1.34
US 50	59 th to 65 th	F	8F+H	304,000	F	1.59	308,000	F	1.61
US 50	Howe to Watt	E	9F+H	231,000	F	1.07	233,000	F	1.08
State Route 51	Watt to I-80	F	6F	152,000	F	1.27	154,000	F	1.29
State Route 51	Arden to El Camino	F	9F	208,000	F	1.15	213,000	F	1.19
State Route 51	E St to Exposition	F	6F	181,000	F	1.51	181,000	F	1.51
State Route 99	Broadway to 12 th	F	8F+H	266,000	F	1.33	267,000	F	1.34
State Route 99	47 th to Florin	F	6F+H	217,000	F	1.38	217,000	F	1.37
State Route 99	Mack to Calvine	C	6F+H	153,000	D	0.92	153,000	D	0.89
State Route 99	Elkhorn to Elverta	C	4F	103,000	F	1.29	101,000	F	1.26
State Route 160	Tribute to Business 80	C	4F	63,000	D	0.79	69,000	D	0.86

Notes:

LOS = Level of Service.

V/C = Volume/capacity ratio.

10F+H = 10 freeway lanes plus two high occupancy vehicle (i.e., carpool) lanes.

Source: Fehr & Peers, 2008.

The build-out of the 2030 General Plan would add traffic to the following eight freeway segments that would be operating at unacceptable levels under the 2030 No Project scenario and would therefore result in significant traffic impacts, based on the Caltrans LOS threshold and related significance standards. The percent increase in traffic, based on a comparison of the 2030 General Plan to the 2030 No Project, is shown in parenthesis.

- Interstate 5 – Arena Boulevard to I-80 (11 percent increase)
- Interstate 5 – I-80 to West El Camino Avenue (7.4 percent increase)
- State Route 50 – Freeport Boulevard to State Route 99 (1.1 percent increase)
- State Route 50 – 59th Street to 65th Street (1.2 percent increase)
- State Route 50 – Howe Avenue to Watt Avenue (0.7 percent increase)
- State Route 51 (Capital City Freeway) – Watt Avenue to I-80 (1.4 percent increase)
- State Route 51 (Capital City Freeway) – Arden Way to El Camino Avenue (2.6 percent increase)
- State Route 99 – Broadway to 12th Avenue (0.7 percent increase)

The increment of traffic added by the 2030 General Plan is substantial for the first two freeway segments on I-5 listed above. For the remaining six freeway segments, the difference between the 2030 General Plan and the 2030 No Project (e.g., which assumes build-out of the current General Plan) is relatively small and would not result in a noticeable change in conditions.

Impacts and Mitigation Measures

A summary of all Transportation and Circulation impacts and their levels of significance is located at the end of this technical section.

■ Roadway System – City of Sacramento

Significant project impacts, as defined by the City's current standard of significance for roadways, would occur for 30 of the road segments for the 2030 General Plan. A total of 74 roadway segments would also fail to achieve LOS C or better conditions, a goal in the current (1988) General Plan, with conditions under the 2030 General Plan. The 2030 General Plan proposes to change the current LOS C goal to a tiered standard with a goal of LOS E conditions in multi-modal districts and LOS D conditions in other areas. A total of 47 roadway segments would fail to achieve LOS D-E or better conditions under the 2030 General Plan.

While it is possible to identify road widenings that would accomplish LOS D-E conditions for the 47 road segments that exceed the proposed goal, the following mitigation measures describe alternative ways to address these impacts in light of proposed policies that encourage a built environment that reduces automobile dependence and promotes more sustainable (e.g., more energy efficient, less polluting) modes of transportation, such as walking, bicycling, and transit use. The project impacts would therefore be significant and unavoidable, since the mitigation measures necessary to address the current standard of significance are inconsistent with proposed policies and associated goals in the 2030 General Plan.

The following analysis therefore addresses the issue of policy consistency within the 2030 General Plan, which would require modification to either the Street Classification diagram to

identify wider roadways to accomplish the proposed LOS D or E goals or to the proposed LOS goals to provide exemptions where the addition of lanes is not feasible or desired. In cases where an exemption is ultimately approved for an individual roadway, an alternative mitigation is identified to provide improvements to increase walking, bicycling and transit use in the exempt area or corridor.

Impact 6.12-1	Implementation of the proposed 2030 General Plan could result in roadway segments located within the Policy Area that do not meet the City's current LOS C standard or the proposed LOS D-E goal.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, M 1.4.2, and M 4.1.5</i>
Significance after Mitigation Included in the SGP	<i>Significant</i>
Additional Mitigation	None available
Residual Significance	Significant and Unavoidable

As discussed above, approximately 60 percent of the roadways evaluated within the city of Sacramento would operate at LOS C or better with the 2030 General Plan. Significant project impacts would occur for 30 of the road segments for the 2030 General Plan, as shown in Table 6.12-9. Table 6.12-9 shows that 23 of the 30 road segments would operate at LOS D, E or F conditions under the 2030 No Project scenario. The remaining 7 road segments would operate at LOS C conditions. As shown in Table 6.12-12, a total of 25 roads along with Tower Bridge and I Street Bridge would need to be widened to operate at LOS C. Widening of these roadways and bridges would not be feasible because it would require the purchase and removal of businesses and residences to accommodate wider roads or modifications to historic structures that may not be feasible due to the structural limitations.

However, the 2030 General Plan will add a new Implementation Program in Part 4 of the 2030 General Plan to address potential future river crossings. That Implementation Program¹ reads, "The City shall conduct additional studies to identify the location of future river crossings and shall amend the Street Classification Diagram to include new bridge locations."

A total of 47 roadway segments as well as the Tower Bridge and I Street Bridge would fail to achieve LOS D-E or better conditions under the 2030 General Plan, as shown in Table 6.12-13. Proposed General Plan Policy M 4.1.5 states that the City shall continue to work with adjacent jurisdictions to help fund, evaluate, plan, design, construct, and maintain new river crossings. However, in order to achieve LOS D-E roadways and the two bridges would need to be widened to accommodate more lanes or new bridges would need to be constructed. Additional roadway, transit, bicycle and pedestrian capacity is needed across the rivers to support the land use plan

1 Note: Since the publication of the Final MEIR, the implementation program has been identified as Implementation Program 22.

TABLE 6.12-12

**NUMBER OF THROUGH LANES REQUIRED TO MITIGATE SIGNIFICANT IMPACTS
BASED ON CURRENT SIGNIFICANCE THRESHOLDS FOR ROADWAYS**

Roadway	Impact Limits	Existing # of Lanes	2030 # of Lanes	# of Lanes for LOS C	# of Lanes for LOS D-E
12TH STREET	F to L Streets	3	3	5	4
15TH STREET	Broadway to J Street	3	3	4	4
16TH STREET	Broadway to G Street	3	3	5	5
29TH STREET	J to Q Streets	3	3	5	4
30TH STREET	J to Q Streets	3	3	4	-
ARDEN WAY	Del Paso to Royal Oaks	4	4	6	-
	Capital City Fwy to Ethan Way	8	8	10	10
BANNON ST	Bercut to 5 th Street	2	4	5	-
BROADWAY	15th St to Franklin Blvd	4	4	6	6
BROADWAY	58 th to 65 th Streets	2	2	4	4
COLLEGE TOWN DRIVE	La Riviera to Hornet	4	4	6	-
COMMERCE PKWY	New Market to Del Paso	6	6	8	-
DEL PASO ROAD	I-5 to Truxel	4	6	8	-
ELKHORN BL	SR 99 to E. Commerce	2	6	8	8
EXPOSITION BL	SR 160 to Tribute	4	4	6	-
FLORIN ROAD	24th St to Franklin Blvd	4	4	8	6
FOLSOM BL	UPRR to Howe Ave	2	4	6	6
HORNET DRIVE	College Town to US 50	4	4	6	-
I STREET	3rd to 16 th Streets	4	4	6	5
	16th to 30 th Streets	2	2	4	3
I STREET BRIDGE	3 rd to 3 rd Streets	2	2	6	6
J STREET	3rd to 16 th Streets	3	3	4	4
	16th to 30 th Streets	3	3	4	4
L STREET	3rd to 16 th Streets	3	3	4	4
NATOMAS BLVD	Del Paso Rd to N. Bend Dr	6	6	8	6
RICHARDS BL	Bercut to 5 th Street	4	4	5	-
ROSEVILLE ROAD	Marconi Ave to I-80	2	4	6	6
ROYAL OAKS DRIVE	SR 160 to Arden Way	2	2	4	4
SILVER EAGLE ROAD	Northgate to Norwood	2	2	4	4
TOWER BRIDGE	3 rd to 3 rd Streets	4	4	8	6
TRUXEL ROAD	I-80 to Gateway Park	8	8	14	10

Notes:

“-“ in “# of Lanes for LOS D-E” column indicates that no mitigations are required to provide LOS D-E conditions.

Source: Fehr & Peers, 2007.

TABLE 6.12-13

NUMBER OF THROUGH LANES REQUIRED TO ACHIEVE PROPOSED ROADWAY LEVEL OF SERVICE (LOS) D-E CONDITIONS

Roadway	Impact Limits	Existing # of Lanes	2030 # of Lanes	# of Lanes for LOS D-E	Feasible to Provide Lanes for LOS D-E?
12th Street	F to L Streets	3	3	4	No
12th/14th Av	SR 99 to 36 th Street	2	2	4	No
16th Street	Broadway to G Street	3	3	5	No
29th Street	J to Q Streets	3	3	4	No
65 th Street	Folsom Blvd to 14 th Ave	4	4	6	No
Alhambra Bl	Folsom Blvd to P Street	2	2	4	No
Arcade Bl	Marysville to Del Paso Blvd	2	2	4	No
Arden Way	Capital City Fwy to Ethan Wy	8	8	10	No
Blair Av	S. Land Park to Freeport Blvd	2	2	4	No
Broadway	15 th St to Franklin Blvd	4	4	6	No
Broadway	58 th to 65 th Streets	2	2	4	No
El Camino Av	Stonecreek Dr to Marysville Blvd	2	2	4	No
El Camino Av	Capital City Fwy to Howe Av	4	4	6	No
El Camino Av	Northgate Blvd to American	2	2	4	No
Elder Creek	65 th St to Power Inn Rd	2	4	6	No
Elkhorn Bl	SR 99 to E. Commerce Pkwy	2	6	8	Yes
Florin Perkins	14 th Av to Elder Creek Rd	4	4	6	No
Florin Rd	Greenhaven Dr to I-5	4	4	6	No
Florin Rd	24th St to Franklin Blvd	4	4	6	No
Folsom Bl	Howe Av to Watt Av	4	4	8	No
Folsom Bl	UPRR to Howe Av	2	4	6	No
Freeport Bl	Broadway to Seamas Av	4	4	6	No
Fruitridge Rd	Franklin Blvd to SR 99	4	4	6	No
Fruitridge Rd	44 th St to Ethel	4	4	6	No
H St	Alhambra Blvd to Carlson Dr	2	2	4	No
Howe Av	American River to US 50	4	6	8	No
Howe Av	US 50 to Folsom Blvd	4	6	8	No
I St	3rd to 16 th Streets	4	4	5	No
I St	16th to 30 th Streets	2	2	3	No
I St Bridge	3 rd to 3 rd Streets	2	2	6	No
J St	3rd to 16 th Streets	3	3	4	No
J St	16th to 30 th Streets	3	3	4	No
L St	3rd to 16 th Streets	3	3	4	No
Mack Rd	Meadowview Rd to Franklin Blvd	4	4	6	No
Mack Rd	Tangerine to Center Pkwy	4	4	6	No
Mack Rd	Center Pkwy to Stockton Blvd	4	4	6	No
Martin Luther King Jr. Bl	Broadway to 12 th Ave	2	2	4	No
Marysville Bl	I-80 to Arcade Blvd	2	4	6	No
Northgate Bl	Del Paso Rd to N. Market Blvd	4	4	6	No
Northgate Bl	I-80 to W. El Camino Av	4	4	6	No
Raley Bl	Bell Av to I-80	4	4	6	No
Rio Linda Bl	Main St to Bell Av	2	2	4	Yes
Roseville Rd	Marconi Av to I-80	2	4	6	No
Royal Oaks Dr	SR 160 to Arden Wy	2	2	4	No
Silver Eagle	Northgate Blvd to Norwood Av	2	2	4	Yes
Tower Bridge	3 rd to 3 rd Streets	4	4	6	No
Truxel Road	I-80 to Gateway Park	8	8	10	No

Source: Fehr & Peers, 2008.

and to link the Central City with adjacent neighborhoods and jurisdictions. The widening of existing roadways or bridges would require right-of-way acquisitions that would not be feasible on all of these roadways (or bridges) with the exception of three roadways (indicated in the table) because widening would require the purchase and removal of homes or businesses or modifications to historic structures. All but seven of those roadway segments would also fail to achieve LOS D-E or better conditions under the 2030 No Project scenario. An assessment of the 47 roadway segments yielded a conclusion that modifying the Street Classification diagram to show added future lanes is feasible for three segments: Elkhorn Boulevard from SR 99 to E. Commerce Parkway (from 6 to 8 lanes), Rio Linda Boulevard from Grand Avenue to the north city limits (from 2 to 4 lanes), and Silver Eagle Road from Northgate Boulevard to Norwood Avenue (from 2 to 4 lanes). Implementation of road widenings for the remaining roadway segments would require right-of-way acquisitions and/or streetscape modifications that would result in significant impacts on adjacent businesses and residences as well as pedestrian and bicycle facilities. The City will amend the Street Classification diagram to identify additional future lanes for these three roadways. The City could instead modify the proposed Level of Service (LOS) policy to exempt the roadways from the proposed LOS D-E goal; however, instead of amending the LOS policy, the City has chosen to modify the Street Classification diagram to show an increased number of through lanes for those three specific roadway segments. For the remaining roadway segments, the City is amending Policy M 1.2.2 in the Mobility section to exempt them from the proposed LOS D-E goal. The City is adding the following text bullets under Policy M 1.2.2:

- a. **Core Area Level of Service Exemption** - LOS F conditions are acceptable during peak hours in the Core Area bounded by C Street, the Sacramento River, 30th Street, and X Street. If a Traffic Study is prepared and identifies a LOS impact that would otherwise be considered significant to a roadway or intersection that is in the Core Area as described above, the project would not be required in that particular instance to provide further vehicular capacity-enhancing improvements to that road segment or intersection in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could still be found if the project provides improvements to other parts of the city wide transportation system in order to improve transportation-system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any mitigation for vehicular traffic impacts to road segments or intersections in order to conform to the General Plan. This exemption does not affect the implementation of previously approved roadway and intersection improvements identified for the Railyards or River District planning areas.
- b. **Level of Service Standard for Multi-Modal Districts** - The City shall seek to maintain the following standards in multi-modal districts that are characterized by frequent transit service, enhanced pedestrian and bicycle systems, a mix of uses, and higher density development. This shall include areas within ½ mile walking

distance of light rail stations outside the Core Area and mixed-use corridors as designated by the City.

Maintain operations on all roadways and intersections at Level of Service E or better at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. Congestion in excess of Level of Service E may be acceptable, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation as part of a development project or a City-initiated project.

- c. **Base Level of Service Standard** - The City shall seek to maintain the following standards for all areas outside of multi-modal districts.

Maintain operations on all roadways and intersections at Level of Service D or better at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. Congestion in excess of Level of Service D may be acceptable, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation as part of a development project or a City-initiated project.

- d. **Roadways Exempt from Level of Service Standard** - The above LOS standards shall apply to all roads, intersections or interchanges within the City except as specified below. If a Traffic Study is prepared and identifies a significant LOS impact to a roadway or intersection that is located within one of the roadway corridors described below, the project would not be required in that particular instance to provide further vehicular capacity-enhancing improvements to that roadway or intersection in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could still be found if the project provides improvements to other parts of the city wide transportation system in order to improve transportation-system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any mitigation for vehicular traffic impacts to the listed road segment or intersection in order to conform to the General Plan.

- 12th/14th Avenue: State Route 99 to 36th Street
- 65th Street: Folsom Boulevard to 14th Avenue
- Alhambra Boulevard: Folsom Boulevard to P Street
- Arcade Boulevard: Marysville Boulevard to Del Paso Boulevard
- Arden Way: Capital City Freeway to Ethan Way
- Blair Avenue/47th Avenue: S. Land Park Drive to Freeport Boulevard
- Broadway: 15th Street to Franklin Boulevard
- Broadway: 58th to 65th Streets
- El Camino Avenue: Stonecreek Drive to Marysville Boulevard
- El Camino Avenue: Capitol City Freeway to Howe Avenue
- Elder Creek Road: 65th Street to Power Inn Road

- Florin Perkins Road: 14th Avenue to Elder Creek Road
- Florin Road: Greenhaven Drive to I-5; 24th Street to Franklin Boulevard
- Folsom Boulevard: 65th Street to Watt Avenue
- Freeport Boulevard: Broadway to Seamas Avenue
- Fruitridge Road: Franklin Boulevard to SR 99
- Howe Avenue: American River Drive to Folsom Boulevard
- Mack Road: Meadowview Road to Stockton Boulevard
- Martin Luther King Boulevard: Broadway to 12th Avenue
- Marysville Boulevard: I-80 to Arcade Boulevard
- Northgate Boulevard: Del Paso Road to SR 160
- Raley Boulevard: Bell Avenue to I-80
- Roseville Road: Marconi Avenue to I-80
- Royal Oaks Drive: SR 160 to Arden Way
- Truxel Road: I-80 to Gateway Park

In addition, there are five special study segments that do not meet the proposed LOS D-E goal. These special study segments include 24th Street, Capitol Mall, Folsom Boulevard, Garden Highway, and J Street. The City is revising Policy M 1.2.2 to exempt five special study segments that would not meet the proposed LOS D-E goal for the 2030 horizon year. The City is adding the following text bullet under Policy M 1.2.2:

- e. **Modify LOS Policies for Five Special Study Segments** - The City shall exempt the following five special study segments, in the event that the Street Classification diagram is modified to reduce the number of lanes on those segments from four lanes to two lanes.
 - 24th Street: Meadowview Road to Cosumnes River Boulevard
 - Capitol Mall: 3rd Street to 5th Street
 - Folsom Boulevard: 34th Street to 47th Street and 59th Street to 65th Street
 - Garden Highway: Truxel Road to Northgate Boulevard
 - J Street: 43rd Street to 56th Street

Although significant revisions have been made to Policy M 1.2.2 and the Street Classification diagram, these revisions would not be able to reduce the significance of the impact; therefore, the impact would be a *potentially significant impact*.

Mitigation Measures

Implementation of the above policy language and changes to the Street Classification diagram would not improve traffic flow, but would be required to provide policy consistency within the 2030 General Plan. This would be accomplished by eliminating the identified inconsistencies

with applicable LOS policies by revising those policies to match LOS projections. Implementation of the 2030 General Plan changes summarized above would not be able to reduce the significance of the impact; therefore, the impact would be **significant and unavoidable**. In addition future crossings of the Sacramento and American rivers would have potential localized impacts including traffic, biological, cultural, and noise. These impacts would be **significant and unavoidable**.

None available.

Impact 6.12-2	Implementation of the proposed 2030 General Plan could result in roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.
Applicable Regulations	None
Significance Before Mitigation	Significant
Mitigation Included in the SGP	Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, M 1.4.2, and M 4.1.5
Significance after Mitigation Included in the SGP	Significant
Additional Mitigation	None available
Residual Significance	Significant and Unavoidable

The traffic generated by build-out of the 2030 General Plan would result in significant traffic impacts for one roadway segment in the City of West Sacramento. LOS F conditions would occur on the portion of Tower Bridge Gateway between 3rd Street and 5th Street in West Sacramento. General Plan Policy M 4.1.5 calls for the City to continue to work with adjacent jurisdictions to help fund, evaluate, plan, design, construct and maintain new river crossings. General Plan Policy M 1.3.3 requires the City shall eliminate “gaps” in roadways, bikeways, and pedestrian networks and to construct new multi-modal crossings of the Sacramento and American rivers. This would include coordinating with the City of West Sacramento on any future bridge crossings across the Sacramento River. This is considered a *potentially significant impact*.

Based on an analysis of 38 roadway segments in Sacramento County and two roadway segments in the city of Elk Grove, the 2030 General Plan would not generate significant impacts for any other roadway segments.

Mitigation Measure

Widening the impacted segment of Tower Bridge Gateway is not feasible, because the city of West Sacramento has adopted policies indicating they will not widen Tower Bridge Gateway beyond four lanes or provide additional turn lanes at key intersections. Compliance with Policy M 4.1.5 would help to ensure adequate bridge crossings are provided. However, since a portion of the improvement would be located outside the jurisdiction of the city of Sacramento, the city

of Sacramento cannot guarantee implementation and/or the timing of this mitigation measure; therefore, impact is considered **significant and unavoidable**.

None available.

Impact 6.12-3	Implementation of the proposed 2030 General Plan could result in freeway segments that do not meet the jurisdiction's minimum acceptable level of service threshold.	
Applicable Regulations	<i>None</i>	
Significance Before Mitigation	<i>Significant</i>	
Mitigation Included in the SGP	<i>Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, M 1.4.2 and M 1.5.6</i>	
Significance after Mitigation Included in the SGP	<i>Significant</i>	
Additional Mitigation	None available	
Residual Significance	Significant and Unavoidable	

Traffic generated by build-out of the 2030 General Plan would result in significant traffic impacts—based on the Caltrans LOS threshold and related significance standards—for the following eight freeway segments:

- Interstate 5 – Arena Boulevard to I-80
- Interstate 5 – I-80 to West El Camino Avenue
- State Route 50 – Freeport Boulevard to State Route 99
- State Route 50 – 59th Street to 65th Street
- State Route 50 – Howe Avenue to Watt Avenue
- State Route 51 (Capital City Freeway) – Watt Avenue to I-80
- State Route 51 (Capital City Freeway) – Arden Way to El Camino Avenue
- State Route 99 – Broadway to 12th Avenue

The two segments of I-5 listed above would have to be widened to provide a total of twelve (12) mixed-flow lanes and two HOV lanes to provide LOS E conditions under the 2030 General Plan scenario. The widening to 12 lanes would be required under both the 2030 No Project and 2030 General Plan scenarios. No additional widening is feasible for the segments of State Route 50, 51 and 99 listed above given the concept service level F identified for these routes by Caltrans. The city of Sacramento is participating in the I-5 Sub-regional Mitigation Working Group that is working on implementing a regional mitigation fee program to provide funding for a set of regional highway and transit projects on the I-5 corridor. In addition, implementation of policy M 1.5.6 would require the City shall coordinate with Caltrans to provide a fair share of funding to implement Intelligent Transportation Systems (ITS) improvements on the freeway segments listed above. This is a *potentially significant impact*.

Mitigation Measure

Implementation of policy M 1.5.6 would improve future conditions but not reduce the impact to a less-than-significant level. Since Caltrans has the decision-making authority on implementing improvements to the above freeway segments, the City of Sacramento cannot guarantee implementation and/or the timing of this mitigation measure; therefore, the impact would remain **significant and unavoidable**.

None available.

Impact 6.12-4	Implementation of the proposed 2030 General Plan could adversely affect transit facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 1.4.1 through M 1.4.3, M 3.1.1 through M 3.1.7, M 3.1.9, M 3.1.11 through 3.1.15, M 9.1.1, M 9.1.5; LU 1.1.1, LU 1.1.4, LU 2.1.3, LU 2.5.1, LU 2.6.4, LU 2.7.6, and LU 5.5.2</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Table 6.12-6 indicates that the 2030 General Plan would result in an increase in the number of city wide transit trips of approximately 49 percent, when compared to the 2030 No Project scenario. The total number of transit trips is projected to increase from approximately 150,000 under the 2030 No Project to 220,000 under the 2030 General Plan. The MTP for 2035, adopted by the SACOG Board in March 2008, identifies a significant increase in transit funding for the region. The MTP provides funding for additional Capitol Corridor and San Joaquin rail service, light rail extensions, a 170 percent increase in bus service hours, 10 new bus rapid transit (BRT) lines, and new streetcar lines.

The proposed General Plan includes policies in the Mobility section (M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 1.4.1 through M 1.4.3, M 3.1.1 through M 3.1.7, M 3.1.9, M 3.1.11 through M 3.1.15, M 9.1.1, and M 9.1.5) that specifically address providing a safe, comprehensive and integrated transit system throughout the city. Policies include providing attractive choices among all modes including public transit, improved connections to transit stations, a safe and rider-friendly environment near transit stations, a unified traveler information system, new transit facilities to respond to future needs, operating enhancements to provide more efficient service, dedicated transit facilities where appropriate, developer contributions for transit improvements, and new funding for transit operations. New policies in the Land Use and Urban Design Element (LU 1.1.1, 1.1.4, 2.1.3, 2.5.1, 2.6.4, 2.7.6, and 5.5.2) support increased transit use and access to transit by providing for compact development, infill development, complete and well-

structured neighborhoods, maximized connections between neighborhoods and districts, reduced automobile dependence, walkable blocks, connections to transit in new neighborhoods, and transit-oriented development around existing and future transit stations. Roadway improvements proposed as part of the Mobility Element update do not affect the implementation of these policies.

Therefore, the proposed 2030 General Plan would not adversely affect transit system operations. Impacts would be *less than significant* and no mitigation is necessary.

Mitigation Measure

None required.

Impact 6.12-5	Implementation of the proposed 2030 General Plan could result in an impact on pedestrian facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 2.1.1 through M 2.1.10, M 4.2.1 through M 4.2.6, M 9.1.1; LU 1.1.1, LU 1.1.4, LU 2.1.3, LU 2.5.1, LU 2.5.2, LU 2.6.4, LU 2.7.5, LU 4.1.3, LU 4.1.4, LU 4.2.1, LU 6.1.8, and LU 7.1.2</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Table 6.12-6 indicates that the 2030 General Plan would result in an increase in the number of citywide pedestrian trips of approximately 35 percent, when compared to the 2030 No Project scenario. The total number of pedestrian trips is projected to increase from approximately 230,000 under the 2030 No Project to 310,000 under the 2030 General Plan.

The proposed General Plan includes policies in the Mobility section (M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 2.1.1 through M 2.1.10, M 4.2.1 through M 4.2.6, and M 9.1.1) that specifically address providing a universally-accessible, safe, convenient and integrated pedestrian system throughout the city. Policies include providing attractive choices among all modes, improved pedestrian connections to transit stations, a continuous pedestrian network, convenient and safe street crossings, and improved safety through managed vehicle speeds. New policies in the Land Use and Urban Design section (LU 1.1.1, 1.1.4, 2.1.3, 2.5.1, 2.5.2, 2.6.4, 2.7.5, 4.1.3, 4.1.4, 4.2.1, 6.1.8, and 7.1.2) support increased walking by providing for compact development, infill development, complete and well-structured neighborhoods, maximized connections between neighborhoods and districts, reduced barriers to accessibility, reduced automobile dependence, walkable blocks, walkable neighborhoods, connections between key destinations, enhanced pedestrian facilities between neighborhoods, pedestrian amenities, and housing in employment centers.

Therefore, the proposed General Plan would not adversely affect pedestrian facilities or result in unsafe conditions. Impacts would be **less than significant** and no mitigation is necessary.

Mitigation Measure

None required.

Impact 6.12-6	Implementation of the proposed 2030 General Plan would adversely affect bicycle facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 4.2.1 through M 4.2.6, M 5.1.1 through M 5.1.13, M 9.1.1, LU 1.1.1, LU 1.1.4, LU 2.1.3, LU 2.5.1, LU 2.5.2, LU 2.6.4, LU 4.1.4, and LU 4.2.1</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

Table 6.12-8 indicates that the 2030 General Plan would result in an increase in the number of citywide bicycle trips of approximately 22 percent, when compared to the 2030 No Project scenario. The total number of bicycle trips is projected to increase from approximately 46,000 under the 2030 No Project to 56,000 under the 2030 General Plan.

The proposed General Plan includes policies in the Mobility section (M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 5.1.1 through M 5.1.13, M 4.2.1 through M 4.2.6, and M 9.1.1) that specifically address providing a safe, comprehensive and integrated bikeway system throughout the city. Policies include providing attractive choices among all modes, improved bikeway connections to transit stations, a continuous bikeway network, connections between new development and bikeway facilities, Class II bike lanes on all new arterial and collector streets, improved bikeway safety, bike facilities in new development, and bicycle parking at transit facilities. New policies in the Land Use and Urban Design section (LU 1.1.1, 1.1.4, 2.1.3, 2.5.1, 2.5.2, 2.6.4, 4.1.4, and 4.2.1) support increased bicycling by providing for compact development, infill development, complete and well-structured neighborhoods, maximized connections between neighborhoods and districts, reduced barriers to accessibility, reduced automobile dependence, connections between key destinations, and enhanced bicycle facilities between neighborhoods.

Therefore, the proposed General Plan would not adversely affect bicycle facilities or result in unsafe conditions. Impacts would be **less than significant** and no mitigation is necessary.

Mitigation Measure

None required.

Impact 6.12-7	Implementation of the proposed 2030 General Plan could adversely affect parking facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 6.1.1 through M 6.1.7</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

For the parking system, a significant impact is identified if the 2030 General Plan eliminates or adversely affects an existing parking facility; interferes with the implementation of a proposed parking facility; or results in an inadequate supply of parking.

The proposed General Plan includes policies in the Mobility section (M 6.1.1 through M 6.1.7) that specifically address providing sufficient parking for businesses, while protecting adjacent neighborhoods and the environment. Policies include providing adequate parking considering access to existing and funded transit, shared parking opportunities for mixed use development, and implementation of Transportation Demand Management plans. The policies also provide for reducing parking standards over time to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

Therefore, the proposed General Plan would not adversely affect parking facilities or result in an inadequate parking supply. Impacts would be ***less than significant*** and no mitigation is necessary.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

Cumulative transportation impacts are based on the future traffic volumes presented in the discussion of Impacts and Mitigations presented above. Future traffic volumes for the 2030 No Project and 2030 General Plan scenarios were projected using the regional travel model and by incorporating all of the regional model data and projects on the regional system within and outside of the City. This includes traffic from neighboring jurisdictions. These projections include all reasonably foreseeable and probable future projects in the region.

Cumulative impacts are identified by comparing Existing conditions to 2030 General Plan conditions. The impact is considered cumulatively significant if the change exceeds the thresholds identified in the standards of significance. The 2030 General Plan's contribution to the cumulative impact is considered significant if an impact is triggered when comparing 2030 No Project and 2030 General Plan conditions.

Cumulative impacts on pedestrian, bicycle and parking facilities are captured in the project impact discussion above.

Impact 6.12-8	Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that would adversely impact the existing LOS for city roadways.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, M 1.4.2, and M 4.1.5</i>
Significance after Mitigation Included in the SGP	<i>Significant</i>
Additional Mitigation	None available
Residual Significance	Significant and Unavoidable

As discussed above, Table 6.12-9 identifies cumulative impacts on a total of 66 roadway segments. Table 6.12-9 identifies all roadways in the city that would experience a significant increase in traffic associated with full buildout of the 2030 General Plan that would exceed the city's current LOS C threshold.

Cumulative development would result in a significant impact and the project's contribution to that impact would be significant resulting in a *potentially significant cumulative impact*.

Mitigation Measure

Although the City made significant revisions to Policy M 1.2.2, added a new policy to address potential future river connections (M 4.1.5), and amended the Street Classification diagram, these revisions would not be able to reduce the significance of the impact. Therefore, cumulative impacts on city roadways would be ***significant and unavoidable***.

None available.

Impact 6.12-9	Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic on roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, M 1.4.2, and M 4.1.5</i>
Significance after Mitigation Included in the SGP	<i>Significant</i>
Additional Mitigation	None available
Residual Significance	Significant and Unavoidable

As discussed above, cumulative development associated with full buildout of the 2030 General Plan would result in significant traffic impacts for one roadway segment in the City of West Sacramento. LOS F conditions would occur on the portion of Tower Bridge Gateway between 3rd Street and 5th Street in West Sacramento. This is considered a *potentially significant cumulative impact*.

Based on an analysis of 38 roadway segments in Sacramento County and two roadway segments in the city of Elk Grove, the 2030 General Plan would not generate significant impacts for any other roadway segments

Mitigation Measure

Widening the impacted segment of Tower Bridge Gateway is not feasible, because the city of West Sacramento has adopted policies indicating they will not widen Tower Bridge Gateway beyond four lanes or provide additional turn lanes at key intersections. While compliance with Policy M 4.1.5 would help to ensure adequate bridge crossings are provided. A portion of the improvement would be located outside the jurisdiction of the city of Sacramento, and the city of Sacramento does not have control over the implementation of this mitigation, and the impact is therefore deemed ***significant and unavoidable***.

None available.

Impact 6.12-10	Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that could exceed the LOS along some freeway segments.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.2.2, M 1.3.1, M 1.3.2, M 1.3.3, M 1.3.5, M 1.3.6, M 1.4.1, and M 1.4.2</i>
Significance after Mitigation Included in the SGP	<i>Significant</i>
Additional Mitigation	None available
Residual Significance	Significant and Unavoidable

As discussed above, implementation of the 2030 General Plan would contribute to a cumulative impact for the following eight freeway segments.

- Interstate 5 – Arena Boulevard to I-80
- Interstate 5 – I-80 to West El Camino Avenue
- State Route 50 – Freeport Boulevard to State Route 99
- State Route 50 – 59th Street to 65th Street
- State Route 50 – Howe Avenue to Watt Avenue
- State Route 51 (Capital City Freeway) – Watt Avenue to I-80

- State Route 51 (Capital City Freeway) – Arden Way to El Camino Avenue
- State Route 99 – Broadway to 12th Avenue

The cumulative impact is significant and the project's contribution to this impact is considerable. Therefore, cumulative impacts associated with increased traffic volumes on freeways would be considered a *potentially significant cumulative impact*.

Mitigation Measure

Implementation of policy M 1.5.6 would reduce impacts, but not to a less-than-significant level. Therefore, the cumulative impacts on freeways would be **significant and unavoidable**.

None available.

Impact 6.12-11	Implementation of the proposed 2030 General Plan under cumulative conditions could adversely affect transit facilities.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Significant</i>
Mitigation Included in the SGP	<i>Policies M 1.1.3, M 1.2.1 through M 1.2.3, M 1.3.5, M 1.4.1 through M 1.4.3,, M 3.1.1 through M 3.1.7, M 3.1.9, M 3.1.11 through 3.1.15, M 9.1.1, M 9.1.5; LU 1.1.1, LU 1.1.4, LU 2.1.3, LU 2.5.1, LU 2.6.4, LU 2.7.5, and LU 5.5.2</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

As discussed above, Table 6.12-6 indicates that the 2030 General Plan would result in an increase in the number of citywide transit trips of approximately 49 percent, when compared to the 2030 No Project scenario. The total number of transit trips is projected to increase to 220,000 under the 2030 General Plan. This is a significant increase in transit usage. The MTP for 2035, adopted by the SACOG Board in March 2008, identifies a significant increase in transit funding for the region. The MTP provides funding for additional Capitol Corridor and San Joaquin rail service, light rail extensions, a 170 percent increase in bus service hours, 10 new bus rapid transit (BRT) lines, and new streetcar lines.

As discussed under Impact 6.12-4, the 2030 General Plan includes a number of policies that specifically address providing a safe, comprehensive and integrated transit system throughout the city. Policies include providing attractive choices among all modes including public transit, improved connections to transit stations, a safe and rider-friendly environment near transit stations, a unified traveler information system, new transit facilities to respond to future needs, operating enhancements to provide more efficient service, dedicated transit facilities where appropriate, developer contributions for transit improvements, and new funding for transit

operations. New policies in the Land Use and Urban Design section also support increased transit use and access to transit by providing for compact development, infill development, complete and well-structured neighborhoods, maximized connections between neighborhoods and districts, reduced automobile dependence, walkable blocks, and connections to transit in new neighborhoods.

The project's contribution to the increase in transit usage would not be considerable due to the plan's goal of increasing the availability of transit services throughout the City. Therefore, the 2030 General Plan would not have a considerable cumulative impact on transit system operations, after implementation of General Plan policies. Cumulative impacts would be ***less than significant*** and no mitigation is necessary.

Mitigation Measure

None required.

South Area Community Plan

As stated above under the Cumulative Context, the analysis of mobility issues is primarily based on site-specific characteristics of each individual site. Site-specific mobility analyses would determine the specific individual mobility issues at each individual project site throughout the South Area Community Plan (SACP) area. Therefore, it is assumed that impacts resulting from projects in the SACP area would be the same as they would be in the rest of the Policy Area.

Level of Service F conditions are projected along Florin Road from the Union Pacific rail line east to SR 99. The SR 99/Florin Road interchange will be heavily congested in the future. Additionally, the full four-quadrant cloverleaf design of the interchange is not conducive to pedestrian and bicycle travel along Florin Road. These issues could be addressed by reconstructing the interchange to provide a partial cloverleaf configuration with pedestrian-friendly ramp junctions.

As noted in the existing setting, the Community Bus Service Planning Study for the Oak Park and Meadowview communities identified gaps and deficiencies in the existing bus transit network including no north-south service on Franklin Boulevard south of Blair Avenue, no Sunday service on Franklin Boulevard south of Forest Parkway, and no Sunday service on 24th Street.

As noted in the existing setting, the South Area has several roadways that lack pedestrian facilities. The three most significant areas include Freeport Boulevard, Franklin Boulevard (near Florin Road), and the North Laguna area (Cosumnes River Boulevard, Bruceville Road, Jacinto, and Calvine). Pedestrian and bicycle access to the transit stations in the South Area is poor. These issues could be addressed by providing pedestrian and bicycle improvements in the vicinity of light rail stations in the South Area.

Focused Opportunity Areas

All of the Focused Opportunity Areas are located in areas of the city that would not be any more or less susceptible to potential mobility impacts than the remainder of the Policy Area. Site-specific analyses for projects within these areas would be required prior to development activities to determine whether individual project sites would require additional mitigation beyond mandated federal, state, and local requirements. A discussion of mobility issues in each of the areas is provided below.

■ River District

The River District Focused Opportunity Area is a historically industrial district that is in the process of transitioning to a mixed-use district with a combination of residential, office, and retail uses. Several major developments have been approved in the area including the Railyards Specific Plan Area, the Township 9 project, and the Cannery project. The roadway network is a grid system with large block sizes, typical of industrial districts. Transitioning to a mixed-use district would require the development of a denser grid system with additional streets and enhanced pedestrian facilities, to create a pedestrian-friendly environment.

The planned reconstruction of the I-5/Richards Boulevard interchange, as a “split diamond” facility, would provide additional capacity to support planned development levels. The SR 160/Richards Boulevard intersection, a three-way intersection presently controlled by a traffic signal, is also planned for eventual conversion to a full grade-separated interchange.

Major new roadways that would be constructed in the Richards Boulevard area include an extension of 5th Street as a three-lane facility from H Street to Richards Boulevard and an extension of Bannon Street as a four-lane facility between I-5 and North 12th Street.

■ Robla

The Robla area currently includes a mix of low-density residential and industrial uses. A substantial portion of the area is either undeveloped or developed at low intensity levels. The area between Raley Boulevard and Dry Creek Road is occupied primarily by residential uses. Most of the industrial uses in the area are located either along or to the east of Raley Boulevard, between the Robla area and McClellan Park.

The roadway network is primarily a grid system with large block sizes. Many of the streets are discontinuous, and most do not have either pedestrian or bicycle facilities. Projected growth would require the development of a denser grid system with new streets and enhanced pedestrian and bicycle facilities.

The planned extension of Main Avenue, between Rio Linda Boulevard and Marysville Boulevard, would provide a continuous east-west route parallel to Bell Avenue. Bell Avenue is the only continuous east-west roadway in the area between I-80 and Elkhorn Boulevard.

■ Arden Fair/Point West

The Arden Fair/Point West area is largely developed and includes a mix of retail, office, and residential uses. The Arden Fair mall, located north of Arden Way and east of Business 80, is a regional shopping center and the major traffic generator in the area. The area between the Union Pacific rail line and Capital City Freeway includes a mix of office, industrial, and hotel uses.

The roadway network is a modified grid system with large block sizes due to the existing large scale commercial development and the barriers created by Capital City Freeway, the Union Pacific rail line, and the American River. Exposition Boulevard and Heritage Lane have Class II bicycle facilities. East of Capital City Freeway, all of the streets have attached sidewalks. Most streets serving the industrial areas west of Capital City Freeway do not have sidewalks.

Level of service E conditions are projected along Arden Way from Point West Way to Heritage Lane along the frontage of the Arden Fair mall. The Business 80/Arden Way interchange is currently heavily congested and is expected to operate at LOS F conditions. Additionally, the current design of the interchange is not conducive to pedestrian and bicycle travel along Arden Way. These issues could be addressed by reconstructing the interchange to provide improved pedestrian and bicycle facilities.

■ 65th Street/University Village

The 65th Street/University Village area includes a mix of retail, industrial, and residential uses. The area is located immediately adjacent to the CSUS campus. The Folsom Boulevard corridor is in the process of transitioning from an auto-oriented commercial strip to a mixed-use transit district. Two major student housing projects have been constructed in recent years by private development interests. Several new development projects are in the planning stages including a mixed-use project located immediately adjacent to the 65th Street light rail station, the CSUS faculty housing project located east of Ramona Avenue, and the Target project located at the northeast corner of 65th Street/4th Avenue. Transitioning to a mixed-use transit district would require the development of a denser grid system with additional streets and enhanced pedestrian facilities, to create a pedestrian-friendly environment.

The roadway network is a grid system with large block sizes due to a mix of factors including the existing large scale commercial (i.e., retail and industrial) development and the barriers created by SR 50, the Union Pacific rail line, and the light rail line. Folsom Boulevard narrows to a two-lane section at the underpass with the Union Pacific rail line, creating a constraint for east-west travel in the area. Many streets in the area do not have continuous sidewalks.

The planned extension of 4th Avenue, between Redding Avenue and Ramona Avenue, would provide a continuous east-west route parallel to Folsom Boulevard. Folsom Boulevard is the only continuous east-west roadway in the area between J Street/Fair Oaks Boulevard and 14th Avenue. The planned extension of Ramona Avenue would provide a new north-south link between its present northerly terminus, at Brighton Avenue, and Folsom Boulevard. The future intersection of Ramona Avenue at Folsom Boulevard would also serve as a new access point for the CSU Sacramento campus.

Additional east-west tunnels under the Union Pacific rail line are being studied as part of the *65th Street Station Area Study* by the City of Sacramento, including a possible extension of 65th Street under the tracks that would provide a new all-mode access to the CSUS campus. Another alternative being studied is a potential transit/pedestrian/bicycle connection to the CSUS campus that would be provided via an extension of 67th Street north from Folsom Boulevard.

■ Florin Center/Light Rail Station

The Florin Center/Light Rail Station area currently includes a mix of retail and low-density residential uses. The area around the Florin light rail station is in the process of transitioning from an auto-oriented commercial strip to a mixed-use transit district. A new housing project is planned immediately adjacent to the Florin light rail station. Transitioning to a mixed-use transit district would require the development of a denser grid system with additional streets and enhanced pedestrian facilities, to create a pedestrian-friendly environment.

The roadway network is a grid system with large block sizes due to a mix of factors including the existing large scale retail development and the barriers created by the Union Pacific rail line. Many streets in the area do not have continuous sidewalks.

■ Meadowview Light Rail Station

The Meadowview Light Rail Station area currently includes a mix of retail and low-density residential uses. A new housing project is planned immediately adjacent to the Meadowview light rail station. Many streets in the area do not have continuous sidewalks.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts associated with mobility. At this time specific project information is not available (i.e., individual building design, site-specific location, etc.) to evaluate potential impacts

associated with mobility. The City has identified specific goals and policies that address concerns associated with mobility. Once specific development proposals are prepared and submitted to the city a project-specific environmental analysis would be prepared to analyze potential impacts on mobility.

SUMMARY OF TRANSPORTATION AND CIRCULATION IMPACTS

LEVEL OF SIGNIFICANCE

	6.12-11 Implementation of the proposed 2030 General Plan under cumulative conditions could adversely affect transit facilities.	6.12-10 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that could exceed the LOS along some freeway segments.	6.12-9 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic on roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.	6.12-8 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that would adversely impact the existing LOS for city roadways.	6.12-7 Implementation of the proposed 2030 General Plan could adversely affect parking facilities.	6.12-6 Implementation of the proposed 2030 General Plan would adversely affect bicycle facilities.	6.12-5 Implementation of the proposed 2030 General Plan could result in an impact on pedestrian facilities.	6.12-4 Implementation of the proposed 2030 General Plan could adversely affect transit facilities.	6.12-3 Implementation of the proposed 2030 General Plan could result in freeway segments that do not meet the jurisdiction's minimum acceptable level of service threshold.	6.12-2 Implementation of the proposed 2030 General Plan could result in roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.	6.12-1 Implementation of the proposed 2030 General Plan could result in roadway segments located within the Policy Area that do not meet the City's current LOS C standard or the proposed LOS D-E goal.
Community Plan Areas											
Arden-Arcade	○	●	○	●	○	○	○	○	●	○	●
Central City	○	●	●	●	○	○	○	○	●	●	●
East Broadway	○	●	○	●	○	○	○	○	●	○	●
East Sacramento	○	○	○	●	○	○	○	○	○	○	●
Land Park	○	●	○	●	○	○	○	○	●	○	●
North Natomas	○	●	○	●	○	○	○	○	●	○	●
North Sacramento	○	●	○	●	○	○	○	○	●	○	●
Pocket	○	○	○	●	○	○	○	○	○	○	●
South Area	○	●	○	●	○	○	○	○	●	○	●
South Natomas	○	●	○	●	○	○	○	○	●	○	●
Focused Opportunity Areas											
65 th Street/University Village	○	○	○	●	○	○	○	○	○	○	●
Arden Fair/Point West	○	●	○	●	○	○	○	○	●	○	●
Florin LRT/Subregional Center	○	○	○	●	○	○	○	○	○	○	●
Meadowview LRT	○	○	○	●	○	○	○	○	○	○	●
River District	○	○	○	●	○	○	○	○	○	○	●
Robla	○	○	○	●	○	○	○	○	○	○	●
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable											

6.13 Urban Design and Visual Resources



URBAN DESIGN AND VISUAL RESOURCES

INTRODUCTION

This section provides a description of existing visual conditions in the Policy Area and evaluates potential changes to those conditions that could result from implementation of the proposed 2030 General Plan (proposed project).

In the 2030 General Plan, Urban Design and Visual Resources are addressed primarily in the Land Use and Urban Design Element and the Historic and Cultural Resources Element. The policies of these elements seek to enhance the quality of life in Sacramento by creating and preserving attractive buildings, streets, and public spaces that facilitate and enrich the life of the community, and by seeking a balanced and sustainable mix of residential, employment, commercial, and service uses.

Comments received in response to the NOP (see Appendices A and B) included concerns about the effects of increasing densities in the neighborhoods surrounding the downtown area. This issue is both a visual and a historic resources issue and is discussed in both sections of the EIR (see section 6.4, Cultural Resources). The other issue raised was potential impacts on visual corridors near the Tower Theater.

Information to prepare this section was obtained from the Technical Background Report (TBR), review of the proposed City of Sacramento General Plan 2030 policies, and the Sacramento City Code. The TBR prepared for the project is available electronically on the City's website (<http://www.sacgp.org/documents.html#tbr>) and on CD at the back of this document.

ENVIRONMENTAL SETTING

City Wide

■ Scenic Resources

Visual resources are an important component of the quality of life of any community. As users experience a place, their primary sensory interaction with that place is visual in nature. A wide variety of shapes, colors, and textures form the view of and from the city of Sacramento, including structures, roadways, waterways, and vegetation.

“Aesthetic value” refers to the perception of the natural beauty of an area, as well as the elements that create or enhance its visual quality. While aesthetic value is subjective, it is typically included as a criterion for evaluating those elements that contribute to the quality that

distinguishes an area. Most communities identify scenic resources as an important asset, although what is considered “scenic” may vary according to its environmental setting.

“Scenic resources” can include natural open spaces, topographic formations, and landscapes. These are resources that can be maintained and enhanced to promote a positive image in the future. Many people associate natural landforms and landscapes with scenic resources, such as oak woodlands, lakes, rivers, streams, and some historical areas. Scenic resources can also include urban open spaces and the built environment. Examples of these would include parks, trails, pathways, nature centers, archaeological and historical resources, and architectural features. “Viewsheds” constitute the range of vision in which scenic resources may be observed. They are defined by physical features that frame the boundaries or context to one or more scenic resources.

■ Views and Vistas

The Policy Area is a valley floor characterized by flat terrain in a predominately built-out environment. The average elevation is 25 feet above sea level. Long-range views within the Policy Area are generally expansive because of the flat terrain throughout the city. However, due to the flat terrain and existing mature trees buildings often block views. The western portion of the city lies at an elevation of about 20 feet and the terrain slopes upward to the east. Low rises are occasionally present, probably originating as natural banks of the Sacramento and American rivers. The American River, Morrison Creek, and other local drainages have downcut through the plain, forming low near-vertical stream banks from place to place. With the exception of these stream banks, ground slope within the city does not exceed eight percent and is most often between zero and three percent.

Views onto and across the city to the east include views of the foothills and mountains. The Sierra Nevada mountain range can be seen directly behind the city skyline driving east across the Sacramento-Yolo Causeway on Interstate 80 (I-80).

Views of the Central City

The Policy Area includes large portions of developed areas, ranging from single-family residential homes to high-rise office buildings in the downtown area. The areas where homes dominate the viewshed are generally areas with more green space, less artificial light meaning darker nighttime views, and less glare due to the limited amount of reflective materials. Views of the Central City offer a mix of building types and sizes, interspersed with parks, trees, and municipal uses. Building designs run from historic architecture to modern structures. The Central City/Midtown area includes distinctive housing styles from several different architectural eras, including the Victorian Delta Style (1880s through 1890s), Queen Anne Style (1880s through 1890s), Craftsman Bungalow Style (1900 through 1920s), and Mediterranean/Spanish Eclectic Style (1920s through 1930s). Views of the Central City include the State Capitol Building, Old Sacramento, Tower Bridge, the Sacramento River, the Downtown Railyards, and

Interstate 5 (I-5). The Central City contains many skyscrapers the exteriors of which are dominated by glass and can produce glare. The downtown area is also significantly brighter than the outlying residential areas due to the amount of artificial light associated with exterior building lights, street lights, roadways, and parking area lights.

Views of South Sacramento

Views of the South Sacramento area are characterized by single-family neighborhoods and low-scale shopping areas. The areas where homes dominate the viewshed are generally areas with more green space, less artificial light meaning darker nighttime views, and less glare due to the limited amount of reflective materials. The commercial uses in South Sacramento tend to be concentrated in community shopping centers and along commercial strips such as Florin Road, Franklin Boulevard, Mack Road, Freeport Boulevard, Fruitridge Road, and Stockton Boulevard. The few office uses in south Sacramento are located primarily in the vicinity of Florin Road, Power Inn Road, and around Methodist Hospital off of State Route 99 (SR 99). The commercial uses are primarily located in strip malls which are characterized as primarily single-story structures dominated by signage and logos with surface parking lots adjacent to the front of the buildings. Views within the southern area of Sacramento include Executive Airport, Laguna Creek, and the undeveloped Sacramento Regional Community Service District bufferlands. Executive Airport is visible along Freeport Boulevard. Small planes, metal airplane hangars, and surface parking lots are visible from the roadway. The main entrance is landscaped with trees, planters and low shrubs, beyond which a surface parking lot and the various buildings are visible. The majority of the buildings, including the hangers, are warehouse-like buildings with metal siding. The airstrips are paved and there is artificial lighting throughout the night providing sky glow over the airport.

Views of North Sacramento

The northern portion of Sacramento includes the Natomas area and North Sacramento. The North Natomas area contains some of the largest portions of undeveloped former agricultural land in the area. However, a large area within North Natomas has been developed with residential neighborhoods interspersed with retail centers. The Natomas area has been the focus of intense development in the last 10 to 20 years and as such is somewhat uniform in character. Within the residential neighborhoods the main roadways are 6 to 8 lanes wide with street lights in most areas, the residential subdivisions consist primarily of modern two-story homes that maximize lot coverage and minimize landscaping, 6 to 10-foot high concrete walls or wood fences are visible from the main roadways, and many areas are gated. The retail centers generally consist of large concrete buildings located adjacent to the street frontage as well as set back with large, sparsely landscaped surface parking areas. These retail centers also generally have a significant amount of artificial lighting both in the parking lots and on the storefronts and signs. Many of the storefront consist primarily of glass that can be a source of glare. Land to the north of the North Sacramento Community Plan area includes McClellan Park, which is being redeveloped for housing as well as warehouse and distribution uses. The

viewscape varies at McClellan Park with similar typical new development as described above in the Natomas area. Views in North Sacramento are also characterized by the American River and the adjoining American River Parkway.

Views of East Sacramento

The eastern portion of the Policy Area includes East Sacramento south of the American River and the Arden Arcade area to the north of the American River. Both of these areas are largely built out. Views of the Arden Arcade area are characterized with residential and commercial uses. The areas where homes dominate the viewshed are generally areas with more green space, less artificial light meaning darker nighttime views, and less glare due to the limited amount of reflective materials. Many of the neighborhoods in this area were established decades ago and as such are dominated by mature trees that provide a wide tree canopy over streets lined with single and two-story homes ranging from small bungalows to more modern structures. This area also includes open space, parks, and waterways, as well as the Cal Expo Parkway.

■ Natural Elements

Known as the “City of Trees,” Sacramento is distinguished by an abundance of trees in almost every area. From the elevated freeways that bisect the downtown area to vistas from the eastern foothills, long distance views onto the Policy Area are filled with trees and developed areas. Sacramento is located at the confluence of the American and Sacramento rivers, both of which are some of the primary natural scenic resources of the Policy Area, in the broad and flat plain of the Sacramento Valley. These two rivers are significant physical features which help define the community. Additional details on the natural elements of the area are provided in section 6.6, Scenic Resources in the TBR.

■ Open Space

Open space provides visual relief from urbanized areas, including views for residents, motorists, and pedestrians. Since a majority of Sacramento is currently developed or planned for development, open space within the Policy Area is provided in the form of conserved lands, parks, agricultural land, and vacant lands. See Chapter 4.0 Land Use, and sections 6.2 Agricultural Resources, and 6.9 Parks and Open Space in this MEIR for more detailed information on the acreage and distribution of these types of open spaces.

■ Manmade Elements

Manmade elements such as buildings and structures, historic buildings and landmarks, freeways and scenic highways, as well as city neighborhoods are also considered scenic resources, as discussed below.

Buildings and Structures

The city of Sacramento includes the Central City area, with a downtown distinguished by high rise office towers (soon to include residential towers) in excess of 40 stories high. Sacramento's downtown skyline is visible from miles around the city, including from eastbound I-80 on the Sacramento-Yolo Causeway, from westbound I-80 above the city of Roseville, from northbound I-5 between Elk Grove and Sacramento, from westbound Highway 50 (U.S. 50), and from southbound I-5 and SR 99 north of the downtown area. Distinctive features of the skyline include the Wells Fargo Center, the California Environmental Protection Agency (EPA) building, the U.S. Federal Courthouse, and, by night, the blue light of the Esquire Plaza. Significant buildings in downtown Sacramento also include the California State Capitol and Sutter's Fort located in downtown and Midtown Sacramento, respectively. Additional descriptions of this type of visual resource can be found in section 6.6 Scenic Resources, in the TBR.

Historic resources make up an important component of the build environment and are located mostly within the Central City. These resources are described in more detail in section 6.4 Cultural Resources of this MEIR.

Landmarks

In addition to the linear infrastructure systems, there are also discrete manmade elements within the landscape that serve as landmarks that inform city character. The term landmark here is used to refer to something (e.g., monument, building, other structure) that is easily recognizable. While landmarks in this sense could include an historic resource it should not be confused with the discussion of Landmarks in the Cultural Resource section of this MEIR. Through their scale and/or distinctive design, landmarks become reference points within the city that provide structure and orientation, and contribute to the design character to the surrounding area. The Capitol building and Tower Bridge are two key landmarks in Sacramento. Together, Tower Bridge, Capitol Mall and the Capitol Building create a dramatic gateway entrance to the Central City that establishes a unique sense of place. Other Central City landmarks include both old and new City Hall, Memorial Auditorium, the Elks Building, and the historic train station (The Depot) in the Union Pacific rail yards. Buildings such as the Tower Theater, with its Art Deco tower, give character and distinction to the Broadway commercial corridor. Contemporary buildings also serve as landmarks, with Arco Arena in North Natomas being the most obvious example. In addition to Tower Bridge, the I Street Bridge and Water In-take structure along the Sacramento River are two other distinctive infrastructure landmarks.

In addition to buildings and structures, parks can also serve as landmarks within the city. Capitol Mall plays a critical role in organizing the entry experience to the downtown and the State Capitol. Similarly, formal parks such as Cesar Chavez Park, Capitol Park, Land Park, Curtis Park, and McKinley Park all are distinctive landmarks that contribute to the identity and formal structure of the neighborhoods in which they are located. Additional prominent landmarks include Arco Arena in the Natomas area, Tower Bridge in downtown, the water tower

west of I-5 near the Town of Freeport, Cal-Expo in the Arden Area, and Executive Airport in the South Area.

Scenic Highways

California's Scenic Highway Program was created in 1963, and the scenic highway designation serves to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources. Adjacent to the Policy Area, State Route 160 is designated as a Scenic Highway from the Contra Costa County line to the southern city limit of Sacramento, for a length of 35 miles. The highway name is River Road, and the highway meanders through the historic Delta agricultural area and small towns along the Sacramento River. River Road becomes Freeport Boulevard as it enters the city limits.

Freeways

Many views of the Policy Area are from the several Interstate and U.S. freeway routes that intersect the city. The freeways themselves are also a visual component of the city landscape, intersecting each other in the downtown area. I-5 and SR 99 are the two main north/south routes. I-5 is a major truck route within the State of California and runs through the downtown area, adjacent to the Sacramento River. SR 99 is a four- to six-lane highway extending south from Business 80 (Capital City Freeway) to South Sacramento, Elk Grove, and the Central Valley. I-80, U.S. 50, and Capital City Freeway are the main east/west routes through the Policy Area. I-80 extends from the San Francisco Bay area, through West Sacramento and Sacramento and over the Sierra Nevada. I-80 is a six-lane freeway within the city. U.S. 50 is an eight-lane freeway within the city and extends from downtown Sacramento to the Tahoe Basin. Capital City Freeway is a six-lane freeway in the city and extends north-east from downtown Sacramento through Sacramento County, connecting to I-80 just east of Watt Avenue.

The freeways running through the Policy Area are most visible through the downtown Sacramento area, where several major interchanges intersect, and the Capital City Freeway is elevated over existing residential, commercial, and office buildings. All of these corridors are multi-lane, limited access roadways that carry high volumes of traffic. In some areas, such as through downtown, these roadways are elevated, and in others they are barricaded with sound walls, berms and vegetation. These corridors create obvious physical and visual barriers; the combined effect of which is quite destructive of the physical pattern and social integration of the city. They cut the community into at least 10 subareas that have limited physical or visual access between them. Even when elevated to allow for access between neighborhoods, the looming overhead structures and the deserted sub-structure rights-of-way create "dead zones" divide rather than unify the community.

Streets in the Policy Area range from multi-lane, signalized roads to narrow tree-lined streets in residential neighborhoods. Roadways in the city also include minor arterials, collector streets

that connect residential uses to major street systems, and local streets that serve the interior of a neighborhood.

Railroads

While their structural elements are not as dramatic or obstructive as the freeway system, rail lines also contribute to the city's urban form at the macro scale. The city has two types of rail systems, light rail and heavy rail, and each has different implications for urban form and community character. The primary function of the heavy gauge rail system is to serve transportation of freight cargo and some regional transit via Amtrak. Given their cargo function the heavy rail lines tend to be located adjacent to industrial and warehouse type uses whose design character is utilitarian and scaled for train and truck traffic and large-scale storage and manufacturing operations. One line runs through North Sacramento, East Sacramento, and the midtown area.

Light rail systems, on the other hand, are for public transit and are intended to attract people and to serve populated destinations. The rails and trains are designed to be more integral to the urban fabric, as in the downtown where light rail lines are located in the center of active urban streets. Thus, unlike the heavy rail lines that create edges and barriers within the community, light rail lines can function as magnets or focal features around which development and people can congregate. Since the city's three light rail lines are aligned along existing and former heavy rail corridors, the transition from edge condition to focal feature is only partial at this point in time. The high density, mixed use development in the downtown is indicative of light rail's potential to influence urban form and character, while the outlying stations still tend to be stand alone elements that are not fully integrated with, nor have significantly influenced the surrounding development patterns.

Other Human-made Elements

Other elements that affect the urban form and character of the community at the macro scale include features such as high tension power transmission lines and drainage/irrigation canals. While neither of these has as dramatic an influence on urban form and community character as the freeways or railroads, both tend to create physical barriers or breaks in the urban fabric that decrease accessibility between neighborhoods and a shared sense of place or identity. As tall, vertical elements in a predominantly horizontal landscape, the power transmission lines also have a significant visual impact that lends an industrial character to the surrounding landscape.

■ Sensitive Receptors

A sensitive receptor is defined as an individual that is especially sensitive to changes in aesthetic qualities, which could include changes in lighting, shadows, or surrounding visual character, for example. Uses that accommodate sensitive receptors in the Policy Area include residential, recreational, and park uses. In general, users of public areas such as parks and

trails are considered sensitive receptors to visual resources. The city contains over 200 parks, and over 60 miles of walking/jogging trails, and bicycle trails. Land uses that serve sensitive receptors are located throughout the Policy Area.

■ Light and Glare

Light that falls beyond the intended area is referred to as light trespass. Types of light trespass include spill light and glare. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spill light and glare, waste energy, and if designed incorrectly, could be considered unattractive.

Spill light can adversely affect light sensitive uses, such as residential neighborhoods at nighttime. Light dissipates with increased distance from the source.

Ambient light levels or illumination is measured in foot-candles. Table 6.13-1 lists typical ambient illumination levels in foot-candles for exterior and interior lighting. "Horizontal" foot-candles measure light illumination on a horizontal surface, such as a sidewalk or parking lot; "vertical" foot-candles measure light illumination on a vertical surface.

TYPICAL ILLUMINATION LEVELS IN FOOT-CANDLES	
Light Source	Foot-Candles
Starlight	0.0002
Moonlight	0.02
Street Lighting	0.6-1.6
Direct Sunlight	6,000-10,000
Office Lighting	70-150
<small>Source: City of Napa General Plan, Parks and Recreation Element, Environmental Impact Report, SCH # 93043063, June 1993.</small>	

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare.

As described under "Views and Vistas" above, the Policy Area includes a wide variety of visual characteristics, which include various light and glare levels. The city of Sacramento is primarily built-out, and a significant amount of artificial light and glare from urban uses already exists. The downtown area has a higher concentration of artificial light and reflective surfaces that produce glare than the outlying residential areas.

■ Evolution of City Form

To understand why Sacramento looks the way it does today, it is useful to examine how it came to have its current form and character. One of the key lessons from history is the role of transportation and the gold rush in shaping Sacramento from its origins in the mid-19th century to the present. Prior to the wide spread use of the automobile rail and water transportation as well as street cars played a key role in how and where the city developed. The pattern of today's Central City is remarkably true to the original platting maintaining the rectilinear grid of 365-foot square blocks. More details are available in both section 6.4, Cultural Resources, in this MEIR and in section 6.6, Scenic Resources, in the TBR.

■ Community Building Blocks

From the macro or city wide scale to a more location-specific scale, four basic community building blocks can be used to describe Sacramento's urban character: neighborhoods, centers, districts, and corridors.

Neighborhoods

Neighborhoods are the fundamental building blocks of the city. More than the city as a whole, neighborhoods are the areas with which people can most identify. Neighborhoods can vary in their land use composition, but generally consist of predominantly residential uses supplemented by public facilities such as parks and schools and in some instances by local-serving retail services.

Neighborhoods are defined by a number of factors. Externally, neighborhoods can be defined by natural features, such as the American or Sacramento rivers, or by manmade features such as freeways, arterial roadways, rail lines, and canals. Most often however, they are defined by inherent qualities such as their historic identity, physical character, or some other unifying feature. In some cases, particularly in newer development areas, neighborhoods can be defined by little more than a developer's marketing concept.

Ideally, neighborhoods are not just visually or physically defined, but also serve as functional social units within the community where people know their neighbors and can safely live, work, play, shop, and go to school.

Centers

Centers are unique, identifiable areas that are defined by their common functional role, mix of uses, density/intensity, physical form and character, and/or environmental setting as places for commerce, employment, entertainment, culture, and living. Centers can include a mix of plazas, cafes, bookstores, and restaurants that draw a variety of people and offer a welcome setting. Examples of identifiable centers include Downtown, Midtown, and Arden Fair/Point

West. Centers usually provide commercial and employment uses (without housing) and/or mixed-use projects that integrate housing with retail, office, community facilities, and other uses within the same structure or on the same site. These areas also integrate community-serving uses, such as public meeting rooms and daycare facilities in key activity areas.

Districts

Whereas the focus of neighborhoods is their residential component, the defining element of a district tends to be a dominant single use or focal point, such as the State Capitol and State government center, the UC Davis Medical Center, Sacramento State University, and Cal Expo. Districts can also be defined more generally by a common pattern of use such as the city's industrial districts. Districts that have a primary tenant or function may have a distinctive physical layout or design character, but more commonly districts are defined by the functional characteristics associated with their primary use. As a result, district urban form and character can vary greatly, generating forms as diverse as Cal Expo, the Florin/Fruitridge industrial area, and the State government center.

Corridors

Corridors are connectors between districts and neighborhoods, and include boulevards, arterial streets, and light rail lines. The defining elements of a corridor are twofold: its function as a connector between destinations within the community and its function as a transportation route. Sacramento has a number of key corridors that fit this description, including: Freeport, Franklin, Stockton, Folsom, Del Paso, and Northgate Boulevards, and the South, Northwest and Folsom light rail lines. Each of these is a primary route that links the downtown to the outlying portions of the city or interconnects districts.

The combination of connector and transportation route combines to make corridors a magnet for certain uses, but also generate significant community design issues. As regional connectors, corridors are particularly attractive to commercial uses that desire the high visibility, high volumes of pass-by traffic, and convenient access. Corridors can also result in narrow parcels that are shallow in depth and abut residential neighborhoods.

South Area Community Plan

The South Area is located in the southernmost part of the city. The area encompasses about 23.5 square miles and is bound on the north by 35th Avenue and Fruitridge Road, on the south by the city limits and Sheldon Road, on the east by SR 99, and on the west by Freeport Boulevard. Existing development is predominately single-family residential neighborhoods. The Plan identifies distinct districts or subareas including Delta Shores, Executive Airport, Meadowview, Parkway, and Valley Hi/North Laguna. The southern most portion of this area is primarily vacant/agricultural land. The remainder of the plan area is a dominated by typical

1950s and 1960s one- and two-story homes with pockets of small retail shopping centers and small parks dispersed throughout.

Focused Opportunity Areas

The City of Sacramento has defined six Focused Opportunity Areas as sub-areas of the 10 community plans for the 2030 General Plan including: River District, Robla, Arden Fair/Point West, 65th Street/University Village, Florin Center/Light Rail Station, and Meadowview Light Rail Station (see Figure 3-4 in Chapter 3.0, Project Description). These areas, which are all within the Policy Area, have been identified as important sub-areas of the community for development in the future through infill, reuse, or redevelopment. A description of each Focused Opportunity Area will be included in the applicable community plan. The following provides a brief, general descriptive paragraph on the visual aspects of each area.

■ River District

The River District Opportunity Area is located north of the downtown area, south of and adjacent to the American River between the Sacramento River and I-80. It includes the industrial area centered around Richards Boulevard and a portion of the Union Pacific Railyards. Development along Richards Boulevard is generally stark with large metal sided and brick clad buildings with surface parking lots with limited trees and other natural elements. Vacant lots dominated by weeds and debris are also visible.

■ Robla

The Robla Opportunity Area is located in the northeast section of the Policy Area adjacent to the Policy Area's northern boundary. It is currently described as a semi-rural residential development. This type of development generally consists of smaller one- and two-story homes on larger lots than would generally be found in an urban environment. Some of these rural residences are several acres and include small scale agricultural operations. While mature trees are common formal landscaping is not. Street trees are limited in this area. In addition, there are large areas of undeveloped land dominated by weeds visible throughout.

■ Arden Fair/Point West

The Arden Fair/Point West Opportunity Area is located along the eastern boundary of the Policy Area and is centered on the Capital City Freeway/SR 160 intersection. This area is primarily built out, but there are some pockets of undeveloped land visible. The area includes Arden Fair Mall, Market Square, and Cal Expo. Residential development in the area general consists of ranch style homes that are one-to two-stories and include varying amounts of landscaping. Mature trees are common since many of the residential areas were built out over 50 years ago. Shopping centers are generally of the strip mall variety and include several businesses in a single building that is set back from the street surrounded by surface parking. Street lights are

common in both residential and commercial areas and utilities such as electricity and telephone are visible on overhead poles.

■ 65th Street/University Village

The 65th Street/University Village Opportunity Area is located along the U.S. 50 corridor at 65th Street. This area includes the California State University, Sacramento, campus. Folsom Boulevard is a commercial corridor that runs through this opportunity area and consists of one- and two-story buildings of various architectural styles that contain a mix of small businesses. The streets are generally narrow, between two- to four-lanes, with some on street parking depending on the street. Street lights are common in both residential and commercial areas and utilities such as electricity and telephone are visible on overhead poles.

■ Florin Center/Light Rail Station

The Florin Center/Light Rail Station Opportunity Area is located in South Sacramento, is centered on the Florin Light Rail Station and has a large residential component. The residential development generally consists of a typical 1960s era subdivision with one- and two-story Ranch style architecture. Street lights are common in both residential and commercial areas and utilities such as electricity and telephone are primarily carried on overhead poles.

■ Meadowview Light Rail Station

The Meadowview Light Rail Station Opportunity Area is the smallest of the opportunity areas and it is centered around the Meadowview Light Rail Station. The residential development in this area generally consist of a typical 1960s era subdivision with one- and two-story Ranch style architecture. There are also small pockets of new residential development, built within the last 5 years, and a few vacant parcels of lands. Street lights are common in both residential and commercial areas and overhead electrical and telephone lines are visible.

Regulatory Context

■ Federal

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) established a method for providing federal protection for certain of the country's remaining free-flowing rivers, preserving them and their immediate environments for the use and enjoyment of present and future generations. Eligible rivers can be designated as Wild River Areas, Scenic River Areas, or Recreational River Areas. As stated above, the American River from Nimbus Dam to the confluence of the Sacramento River is designated as a Recreational River Area.

Recreational River Areas are: “Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.”

The Wild and Scenic Rivers Act, under Section 10, includes management direction for designated rivers. Section 10(a) states the following:

...each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeological, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

The American River is managed through the American River Parkway Plan.

■ State

California Scenic Highway Program

In 1963, the State legislature established the California Scenic Highway Program through Senate Bill 1467. This Senate Bill added section 260 et seq. to the Streets and Highway Code. In these statutes, the State proclaims its intent to:

...establish the State's responsibility for the protection and enhancement of California's natural scenic beauty.

After it is determined that a proposed highway satisfies the qualifications for Scenic Highway designation, the local jurisdiction, with support of its citizens, must adopt a program to protect the scenic corridor. The zoning and land use along the highway must meet the State's minimum requirements for scenic highway corridor protection. The five legislatively required standards for scenic highways under Section 261 of the Streets and Highways Code are:

- Regulation of land use and density of development (i.e., density classifications and types of allowable land uses),
- Detailed land and site planning (i.e., permit or design review authority and regulations for the review of proposed developments),
- Prohibitions of off-site outdoor advertising and control of on-site outdoor advertising,
- Careful attention to and control of earthmoving and landscaping (i.e., grading ordinances, grading permit requirements, design review authority, landscaping and vegetation requirements), and
- The design and appearance of structures and equipment (i.e., placement of utility structures, microwave receptors, etc.).

As stated in Section IV of Caltrans' "Guidelines for the Official Designation of Scenic Highways."

A Scenic Corridor is defined as the area of land generally adjacent to and visible from the highway. It is usually limited by topography and/or jurisdictional boundaries.

■ Local

City of Sacramento 1988 General Plan

The City's 1988 General Plan contains policies and implementation measures relevant to visual resources. Specifically, the 1988 General Plan includes policies that improve the quality of residential neighborhoods by protecting, preserving and enhancing their character and establishes development standards for water-related open space lands throughout the city to enhance the visual amenities of these uses. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 1988 General Plan would be superseded. Therefore, they are not included in this analysis.

Design Review Districts

The city of Sacramento includes the following 14 Design Review Districts: Alhambra Corridor Special Planning District (SPD), Broadway/Stockton SPD, Campus Commons Design Review District (DRD), Central Business District, Central City DRD, Del Paso Heights DRD, Expanded North Area DRD, North Sacramento DRD, Northgate Boulevard SPD and Expanded DRD, Oak Park DRD, R Street Corridor SPD, Railyards SPD, Richards Boulevard SPD, and Strawberry Manor DRD. The Design Director and design review staff are responsible for reviewing and taking action on design review applications. Per the Design Review Code (Sacramento City Code Chapter 17.132) development applications are reviewed to ensure that:

- the desirability of adjacent and surrounding properties is enhanced;
- the benefits of occupancy of adjacent and surrounding properties are improved;
- the value of surrounding properties is increased;
- appropriate development of adjacent and surrounding properties is encouraged; and
- the maintenance and improvement of surrounding properties is encouraged, resulting in the enhancement of the health, safety, aesthetics, and general welfare of the inhabitants of the area and the inhabitants of the city at large.

Certain types of projects on properties within one of the design review districts are required to file a design review application for one of four levels of design review; over the counter design review, staff level design review, design director design review or design commission design review.

The following are city wide policy documents that guide the community design of Sacramento:

- Light Rail Transit Land Use Policies and Guidelines (January 2005)

- Neighborhood Commercial Corridor Design Principles (October 2003)
- Single Family Residential Design Principles (January 1998/Adopted September 2000)
- Minimum Design Standards for New Construction of Single and Two Family Dwellings (Adopted October 2002)
- Multi-Family Residential Design Principles (August 2000)
- Preservation Element
- Major Architectural Styles (Undated)
- Sacramento Urban Design Plan
- Central City Neighborhood Design Guidelines
- American River Parkway Plan
- Sacramento Central City Neighborhood Design Guidelines (September 1999)
- North Sacramento Single and Multi-Family Residential Design Guidelines (January 1994)
- North Sacramento Commercial, Office & Industrial Design Guidelines (January 1994)
- Alhambra Corridor Design Review Guidelines (December 1992)
- Design Guidelines: Oak Park (January 1990)
- Design Guidelines: Del Paso Heights (August 1989)
- Sacramento Central Business District Urban Design Plan: Framework Plan, Architectural Design Guidelines, and Street Guidelines (February 1987)
- North Natomas Development Guidelines (November 1994)

Each of these documents is summarized in section 2.3, Community Design, of the TBR.

Capitol View Protection Ordinance

Section 17.96.100 of the Sacramento City Code was established in February 1992 to recognize the State Capitol building and the surrounding grounds of Capitol Park as a unique cultural and open space resource. The ordinance establishes building height limits, setback requirements and parking alternatives within a portion of the Central Business District surrounding Capitol Park. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The TBR was the main document used as the basis for the environmental setting and the analysis in this section. Aerial maps and personal knowledge of the area were also used in the process of preparing this section.

Impacts on urban design and visual resources were evaluated using the thresholds of significance listed below. The proposed project was analyzed to determine if it would create glare that would cause a public hazard or annoyance or cast light from oncoming traffic or residences. These types of impacts would be the greatest where large infill opportunities exist or in currently undeveloped areas; therefore, these are the areas that are focused on in the analysis. Impacts are evaluated assuming full buildout of the Policy Area.

Proposed General Plan Policies

The following goals and policies from the proposed General Plan are relevant to urban design and visual resources within the entire Policy Area. The proposed General Plan does not include any policies regarding police protection that are unique to any of the City's Focused Opportunity Areas or Community Plans, with the exception of the South Area Community Plan listed below.

LAND USE AND URBAN DESIGN (LU)

Goal LU 2.1 City of Neighborhoods. Maintain a city of diverse, distinct, and well-structured neighborhoods that meet the community's needs for complete, sustainable, and high-quality living environments, from the historic downtown core to well-integrated new growth areas.

Policies

- LU 2.1.1 **Neighborhoods as a Basic Unit.** Recognizing that Sacramento's neighborhoods are the basic living environments that make-up the city's urban fabric, the City shall strive through its planning and urban design to preserve and enhance their distinctiveness, identity, and livability from the downtown core to well integrated new growth areas.
- LU 2.1.2 **Protect Established Neighborhoods.** The City shall preserve, protect, and enhance established neighborhoods by providing sensitive transitions between these neighborhoods and adjoining areas, and requiring new development, both private and public, to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood.
- LU 2.1.3 **Complete and Well-structured Neighborhoods.** The City shall promote the design of complete and well-structured neighborhoods whose physical layout and land use mix promote walking to services, biking, and transit use; foster community pride; enhance neighborhood identity; ensure public safety; are family-friendly and address the needs of all ages and abilities.

- LU 2.1.4 **General Plan Density Regulations for Mixed-Density Development Projects.** Where a developer proposes a multi-parcel development project with more than one residential density or FAR, the applicable density or FAR range of the General Plan Land Use Designation shall be applied to the net developable area of the entire project site rather than individual parcels within the site. Some parcels may be zoned for densities/intensities that exceed the maximum allowed density/intensity of the project site's Land Use Designation, provided that the net density of the project as a whole is within the allowed range.
- LU 2.1.5 **Neighborhood Centers.** The City shall promote the development of strategically-located (e.g., accessible to surrounding neighborhoods) mixed-use neighborhood centers that accommodate local-serving commercial, employment, and entertainment uses; provide diverse housing opportunities; are within walking distance of surrounding residents, and are efficiently served by transit.
- LU 2.1.6 **Neighborhood Enhancement.** The City shall promote infill development, redevelopment, rehabilitation, and reuse efforts that contribute positively (e.g., architectural design) to existing neighborhoods and surrounding areas.

Goal LU 2.2 City of Rivers. Preserve and enhance Sacramento's riverfronts as signature features and destinations within the city and maximize riverfront access from adjoining neighborhoods to facilitate public enjoyment of this unique open space resource.

Policies

- LU 2.2.1 **World-Class Rivers.** The City shall encourage development throughout the city to feature (e.g., access, building orientation, design) the Sacramento and American Rivers and shall develop a world-class system of riverfront parks and open spaces that provide a destination for visitors and respite from the urban setting for residents.
- LU 2.2.2 **Waterway Conservation.** The City shall encourage the conservation and restoration of rivers and creeks within the urbanized area as multi-functional open space corridors that complement adjoining development and connect the city's parks and recreation system to the Sacramento and American Rivers.
- LU 2.2.3 **Improving River Development and Access.** The City shall require new development along the Sacramento and American Rivers to use the natural river environment as a key feature to guide the scale, design, and intensity of development, and to maximize visual and physical access to the rivers.

Goal LU 2.3 City of Trees and Open Spaces. Maintain a multi-functional "green infrastructure" consisting of natural areas, open space, urban forest, and parkland, which serves as a defining physical feature of Sacramento, provides visitors and residents with access to open space and recreation, and is designed for environmental sustainability.

Policies

- LU 2.3.1 **Multi-functional Green Infrastructure.** The City shall strive to create a comprehensive and integrated system of parks, open space, and urban forests that frames and complements the city's urbanized areas.
- LU 2.3.2 **Adjacent Development.** The City shall require that development adjacent to parks and open spaces complements and benefits from this proximity by:

- Preserving physical and visual access;
- Requiring development to front, rather than back, onto these areas;
- Using single-loaded streets along the edge to define and accommodate public access;
- Providing pedestrian and multi-use trails;
- Augmenting non-accessible habitat areas with adjoining functional parkland; and
- Extending streets perpendicular to parks and open space and not closing off visual and/or physical access with development.

Goal LU 2.4 City of Distinctive and Memorable Places. Promote community design that produces a distinctive, high-quality built environment whose forms and character reflect Sacramento’s unique historic, environmental, and architectural context, and create memorable places that enrich community life.

Policies

- LU 2.4.1 **Unique Sense of Place.** The City shall promote quality site, architectural and landscape design that incorporates those qualities and characteristics that make Sacramento desirable and memorable including walkable blocks, distinctive parks and open spaces, tree-lined streets, and varied architectural styles.
- LU 2.4.2 **Responsiveness to Context.** The City shall require building design that respects and responds to the local context, including use of local materials, responsiveness to Sacramento’s climate, and consideration of cultural and historic context of Sacramento’s neighborhoods and centers.
- LU 2.4.3 **Enhanced City Gateways.** The City shall ensure that public improvements and private development work together to enhance the sense of entry at key gateways to the city.
- LU 2.4.4 **Iconic Buildings.** The City shall encourage the development of iconic public and private buildings in key locations to create new landmarks and focal features that contribute to the city’s structure and identity.
- LU 2.4.5 **Distinctive Urban Skyline.** The City shall encourage the development of a distinctive urban skyline that reflects the vision of Sacramento with a prominent central core that contains the city’s tallest buildings, complemented by smaller urban centers with lower-scale mid- and high-rise development.

Goal LU 2.7 City Form and Structure. Require excellence in the design of the city’s form and structure through development standards and clear design direction.

Policies

- LU 2.7.1 **Development Regulations.** The City shall promote design excellence by ensuring City development regulations clearly express intended rather than prohibited outcomes and reinforce rather than inhibit quality design.
- LU 2.7.2 **Design Review.** The City shall require design review that focuses on achieving appropriate form and function for new and redevelopment projects to promote creativity, innovation, and design quality.
- LU 2.7.3 **Transitions in Scale.** The City shall require that the scale and massing of new development in higher-density centers and corridors provide appropriate transitions in

building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.

- LU 2.7.4 **Public Safety and Community Design.** The City shall promote design of neighborhoods, centers, streets, and public spaces that enhances public safety and discourages crime by providing street-fronting uses (“eyes on the street”), adequate lighting and sight lines, and features that cultivate a sense of community ‘ownership.’
- LU 2.7.5 **Development Along Freeways.** The City shall promote high quality development character of buildings along freeway corridors and protect the public from the adverse effects of vehicle-generated air emissions, noise, and vibration, using such techniques as:
- Requiring extensive landscaping and trees along the freeway fronting elevation;
 - Establish a consistent building line, articulating and modulating building elevations and heights to create visual interest; and
 - Include design elements that reduce noise and provide for proper filtering, ventilation, and exhaust of vehicle air emissions.
- LU 2.7.6 **Walkable Blocks.** The City shall require new development and redevelopment projects to create walkable, pedestrian-scaled blocks, publicly-accessible mid-block and alley pedestrian routes where appropriate, and sidewalks appropriately-scaled for the anticipated pedestrian use.
- LU 2.7.7 **Buildings that Engage the Street.** The City shall require buildings to be oriented to and actively engage and complete the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking.
- LU 2.7.8 **Screening of Off-street Parking.** The City shall reduce the visual prominence of parking within the public realm by requiring most off-street parking to be located behind or within structures or otherwise fully or partially screened from public view.

Goal LU 4.1 Neighborhoods. Promote the development and preservation of neighborhoods that provide a variety of housing types, densities, and designs and a mix of uses and services that address the diverse needs of Sacramento residents of all ages, socio-economic groups, and abilities

Policies

- LU 4.1.1 **Mixed-use Neighborhoods.** The City shall require neighborhood design that incorporates a compatible and complementary mix of residential and non-residential (e.g., retail, parks, schools) uses that address the basic daily needs of residents and employees.
- LU 4.1.2 **Neighborhood Amenities.** The City shall encourage appropriately-scaled community-supportive facilities and services within all neighborhoods to enhance neighborhood identity and provide convenient access within walking and biking distance of city residents.
- LU 4.1.3 **Walkable Neighborhoods.** The City shall require the design and development of neighborhoods that are pedestrian-friendly and include features such as short blocks; broad and well-appointed sidewalks (e.g., lighting, landscaping, adequate width); tree-shaded streets; buildings that define and are oriented to adjacent streets and

public spaces; limited driveway curb cuts; paseos and pedestrian lanes; alleys, traffic-calming features; convenient pedestrian street crossings, and access to transit.

- LU 4.1.4 **Alley Access.** The City shall encourage the use of well-designed and safe alleys to access individual parcels in neighborhoods in order to reduce the number of curb cuts, driveways, garage doors, and associated pedestrian/ automobile conflicts along street frontages.
- LU 4.1.5 **Connecting Key Destinations.** The City shall promote better connections by all travel modes between residential neighborhoods and key commercial, cultural, recreational, and other community-supportive destinations for all travel modes.
- LU 4.1.6 **Neighborhood Transitions.** The City shall provide for appropriate transitions between different land use and urban form districts along the alignment of alleys or rear lot lines, rather than along street centerlines, in order to maintain consistent scale, form and character on both sides of public streetscapes.
- LU 4.1.7 **Connections to Open Space.** The City shall ensure that new and existing neighborhoods contain a diverse mix of parks and open spaces that are connected by trails, bikeways, and other open space networks and are within easy walking distance of residents.
- LU 4.1.8 **Neighborhood Street Trees.** The City shall encourage the strategic selection of street tree species to enhance neighborhood character and identity and preserve the health and diversity of the urban forest.
- LU 4.1.9 **Residential Diversity.** The City shall avoid concentrations of single-use high-density multifamily residential uses (e.g., apartments and condominiums) in existing or new neighborhoods.
- LU 4.1.10 **Balanced Neighborhoods.** The City shall require new major residential development to provide a balanced housing mix that includes a range of housing types and densities.
- LU 4.1.11 **Senior Housing Development.** The City shall encourage the development of senior housing in neighborhoods that are accessible to public transit, commercial services, and health and community facilities.
- LU 4.1.12 **Family-Friendly Neighborhoods.** The City shall promote the development of family-friendly neighborhoods throughout the city that provide housing that accommodates families of all sizes and provides safe and convenient access to schools, parks, and other family-oriented amenities and services.
- LU 4.1.13 **Gated Communities.** The City shall discourage creation of gated communities in an effort to promote social cohesiveness and maintain street network efficiency, adequate emergency response times, and convenient travel routes for all street users.

Goal LU 4.2 Suburban Neighborhoods. Encourage the creation of more complete and well-designed suburban neighborhoods that provide a variety of housing choices and mix of uses that encourage walking and biking.

Policies

- LU 4.2.1 **Enhanced Walking and Biking.** The City shall pursue opportunities to promote walking and biking in existing suburban neighborhoods through improvements such as:

- Introducing new pedestrian and bicycle connection;
- Adding bike lanes and designating and signing bike routes;
- Narrowing streets where they are overly wide;
- Introducing planting strips and street trees between the curb and sidewalk; and
- Introducing traffic circles, speed humps, traffic tables, and other appropriate traffic-calming improvements.

LU 4.2.2 **Enhanced Urban Forest.** The City shall pursue opportunities to enhance the urban forest in existing suburban neighborhoods by undertaking neighborhood street tree planting programs that introduce more trees into the public right-of-way, rather than depending on trees in private yards. Potential strategies include:

- Introducing new planting strips and street trees between the curb and sidewalk;
- Creating tree wells in existing sidewalks;
- Adding trees in new curb extensions and traffic circles; and
- Adding trees to public parks and greenways.

Goal LU 4.3 Traditional Neighborhoods. Retain the pedestrian-scale, pre-automobile form, and lush urban forest that typifies traditional neighborhoods and contributes to their special sense of place.

Policies

LU 4.3.1 **Traditional Neighborhood Protection.** The City shall protect the pattern and character of Sacramento’s unique traditional neighborhoods, including the street-grid pattern, architectural styles, street-tree canopy, and access to public transit, neighborhoods services and amenities.

LU 4.3.2 **Replacement of Non-Conforming Densities in Traditional Neighborhoods.** The City shall preserve the existing diversity of housing types and densities on each block of Traditional Neighborhoods. Where proposed residential development on a parcel within a Traditional Neighborhood block would exceed the maximum allowed density, the City may allow the development if it would not cause the overall density for the block to be exceeded. Where the density of existing development on a Traditional Neighborhood block falls outside the applicable density range of its land use designation, the City shall allow replacement development on the parcel that maintains the same density.

Goal LU 4.4 Urban Neighborhoods. Promote vibrant, high-density, mixed-use urban neighborhoods with convenient access to employment, shopping, entertainment, civic uses (e.g., school, park, place of assembly, library, or community center), and community-supportive facilities and services.

Policies

LU 4.4.1 **Well-defined Street Fronts.** The City shall require that buildings in urban neighborhoods maintain a consistent setback from the public right-of-way in order to create a well defined public sidewalk and street.

LU 4.4.2 **Building Orientation.** The City shall require that building facades and entrances directly face the adjoining street frontage and include a high proportion of transparent windows facing the street in buildings with non-residential uses at street level.

- LU 4.4.3 **Building Design.** The City shall encourage sensitive design and site planning in urban neighborhoods that mitigates the scale of larger buildings through careful use of building massing, setbacks, facade articulation, fenestration, varied parapets and roof planes, and pedestrian-scaled architectural details.
- LU 4.4.4 **Ample Public Realm.** The City shall require that higher-density urban neighborhoods include small public spaces and have broad tree-lined sidewalks furnished with appropriate pedestrian amenities that provide comfortable and attractive settings to accommodate high levels of pedestrian activity.
- LU 4.4.5 **Parking and Service Access and Design.** The City shall require that, to the degree feasible, parking and service areas in urban neighborhoods be accessed from alleys or side streets to minimize their visibility from streets and public spaces. Curb cuts for driveways should not be allowed along the primary street frontage.
- LU 4.4.6 **Mix of Uses.** The City shall encourage the vertical and horizontal integration of a complementary mix of commercial, service and other non-residential uses that address the needs of families and other household types living in urban neighborhoods. Such uses may include daycare and school facilities, retail and services, and parks, plazas, and open spaces.

Goal LU 5.1 Centers. Promote the development throughout the city of distinct, well-designed mixed-use centers that are efficiently served by transit, provide higher-density, urban housing opportunities; and serve as centers of civic, cultural, and economic life for Sacramento’s neighborhoods and the region.

Policies

- LU 5.1.5 **Vertical and Horizontal Mixed-use.** The City shall encourage and, where feasible, require the vertical and horizontal integration of uses within commercial centers and mixed-use centers, particularly residential and office uses over ground floor retail.

Goal LU 5.2 Suburban Centers. Promote more attractive, pedestrian-friendly suburban centers that serve surrounding neighborhoods and businesses as local gathering places where people shop and socialize.

Policies

- LU 5.2.2 **Enhanced Design Character.** The City shall encourage renovation, infill, and redevelopment of existing suburban centers that reduces the visual prominence of parking lots, makes the centers more pedestrian friendly, reduces visual clutter associated with signage, and enhances the definition and character of the street frontage and associated streetscape.
- LU 5.2.3 **Public Space.** The City shall work with suburban centers to integrate pedestrian amenities, traffic-calming features, plazas and public areas, attractive streetscapes, shade trees, lighting, and open spaces within the existing center to create destinations for area residents to shop and gather.

Goal LU 5.4 Regional Commercial Centers. Establish major mixed use activity centers through development and reinvestment in regional commercial centers that are vibrant, regionally-accessible destinations where people live, work, shop, and congregate in a mix of retail, employment, entertainment, and residential uses.

Policies

LU 5.4.2 **Enhanced Design Character.** The City shall encourage redevelopment of existing regional commercial centers into dynamic mixed-use centers by replacing surface parking with structured parking, replacing parking area drive aisles with pedestrian-friendly shopping streets, infilling parking areas with multi-story mixed-use buildings, and creating attractive, well-appointed streetscapes and plazas.

Goal LU 5.6 Central Business District. Promote the Central Business District (CBD) as the regional center of the greater Sacramento area for commerce, culture, and government.

Policies

LU 5.6.4 **Building Height Transitions.** The City shall maintain height standards for the CBD and adjoining transition areas consistent with the General Plan vision for a higher-density Central City and sensitive transitions to surrounding neighborhoods.

LU 5.6.5 **Capital View Protection.** The City shall ensure development conforms to the Capital View Protection Act.

Goal LU 6.1 Corridors. Support the development of major circulation corridors that balance their vehicular function with a vibrant mix of uses that contribute to meeting local and citywide needs for retail, services, and housing and provide pedestrian-friendly environments that serve as gathering places for adjacent neighborhoods.

Policies

LU 6.1.10 **Corridor Transit.** The City shall require design and development along mixed-use corridors that promotes the use of public transit and pedestrian and bicycle travel and maximizes personal safety through development features such as:

- Safe and convenient access for pedestrians between buildings and transit stops, parking areas, and other buildings and facilities; and
- Roads designed for automobile use, efficient transit service as well as pedestrian and bicycle travel.

LU 6.1.12 **Visual and Physical Character.** The City shall promote development patterns and streetscape improvements that transform the visual and physical character of typical automobile-oriented corridors by:

- Enhancing the definition of the corridor by locating buildings at the back of the sidewalk, and establishing a consistent street wall;
- Introducing taller buildings that are in scale with the wide, multi-lane street corridors;
- Locating off-street parking behind or between buildings (rather than between building and street);
- Reducing visual clutter by regulating the number, size and design quality of signs;
- Removing utility poles and under-grounding overhead wires; and
- Adding street trees.

LU 6.1.13 **Differentiating the Corridor.** The City shall promote development patterns that break up long, undifferentiated corridors of commercial strip development by establishing distinct activity nodes or centers that are distinguished by features such as their primary tenants, mix of uses, scale and intensity of development, and architectural character.

LU 6.1.14 **Compatibility with Adjoining Uses.** The City shall ensure that the introduction of higher-density mixed-use development along major arterial corridors is compatible with adjacent land uses, particularly residential uses, by requiring such features as:

- Buildings setback from rear or side yard property lines adjoining single-family residential uses;
- Building heights stepped back from sensitive adjoining uses to maintain appropriate transitions in scale and to protect privacy and solar access;
- Landscaped off-street parking areas, loading areas, and service areas screened from adjacent residential areas, to the degree feasible; and
- Lighting shielded and directed downward to minimize impacts on adjacent residential uses.

Goal LU 7.2 Industrial Development. Maintain industrial districts that provide for the manufacturing of goods, flex space, and research and development that are attractive, compatible with adjoining non-industrial uses, and well-maintained.

Policies

LU 7.2.2 **Internal Movement.** The City shall require industrial uses proposed near existing and planned residential areas to be designed to limit the impacts of truck traffic on these residential areas.

LU 7.2.5 **Industrial Development Design.** The City shall require that new and renovated industrial properties and structures incorporate high high-quality design and maintenance including:

- Extensive on-site landscaping and buffers;
- Visual screening of areas used for outdoor storage, processing, and other industrial operations;
- Consistent architectural treatment of all building elevations;
- Consistent and well-designed signage;
- Control of on-site lighting, noise, odors, vibrations, toxic materials, truck access, and other factors that may impact adjoining non-industrial land uses; and
- Employee amenities, such as outdoor seating for employees.

LU 7.2.6 **Property Maintenance.** The City shall encourage and, where subject to redevelopment, require owners of visually-unattractive or poorly-maintained industrial properties to upgrade existing structures and properties to improve their visual quality.

Goal LU 8.1 Public/Quasi-Public. Provide for governmental, utility, institutional, educational, cultural, religious, and social facilities and services that are located and designed to complement Sacramento’s neighborhoods, centers, and corridors and to minimize incompatibility with neighborhoods and other sensitive uses.

Policies

- LU 8.1.4 **Excellence in Public Projects.** The City shall lead by example, demonstrating design excellence in City projects, and City-subsidized redevelopment projects.
- LU 8.1.6 **Architecture and Planning that Complements Adjoining Uses.** The City shall ensure that the City-owned public buildings, sites, and infrastructure are designed to be compatible in scale, mass, character, and architecture with the district or neighborhood in which they are located.
- LU 8.1.7 **Compatibility of Non-City Public Uses.** The City shall encourage school and utility districts and other government agencies that may be exempt from City land use control and approval to plan their properties and design buildings at a high level of visual and architectural quality that maintains the character of the neighborhood or district in which they are located.

Goal LU 9.1 Open Space, Parks, and Recreation. Protect open space for its recreational, agricultural, safety, and environmental value and provide adequate parks and open space areas throughout the city.

Policies

- LU 9.1.4 **Open Space Buffers.** The City shall use traditional, developed parks and employ innovative uses of open space to “soften” the edges between urban areas and the natural environment.

ENVIRONMENTAL RESOURCES (ER)

Goal ER 7.1 Visual Resource Preservation. Maintain and protect significant visual resources and aesthetics that define Sacramento.

Policies

- ER 7.1.1 **Protect and Enhance Scenic Views.** The City shall protect and enhance views from public places to the Sacramento and American rivers, adjacent greenways, landmarks, and urban views of the downtown skyline and the State Capitol along Capitol Mall.
- ER 7.1.2 **Visually Complimentary Development.** The City shall require new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American rivers, and along streams.
- ER 7.1.3 **Minimize Removal of Existing Resources.** The City shall require new commercial, industrial, and residential development to minimize the removal of mature trees, and other significant visual resources present on the site.
- ER 7.1.4 **Standards for New Development.** The City shall seek to ensure that new development does not significantly impact Sacramento’s natural and urban landscapes.
- ER 7.1.5 **Lighting.** The City shall minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary.
- ER 7.1.6 **Glare.** The City shall require that new development avoid the creation of incompatible glare through development design features.

Thresholds of Significance

For the purposes of this EIR, impacts on Urban Design and Visual resources are considered significant if the proposed General Plan would:

- cast glare in such a way as to cause public hazard or annoyance for a sustained period of time; or
- cast light onto oncoming traffic or residential uses.

Impacts and Mitigation Measures

A summary of all Urban Design and Visual Resources impacts and their levels of significance is located at the end of this technical section.

Impact 6.13-1	Implementation of the proposed 2030 General Plan could cast glare in such a way as to cause a public hazard or annoyance for a sustained period of time.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Potentially Significant</i>
Mitigation Included in the SGP	<i>Policy ER 7.1.6</i>
Significance after Mitigation Included in the SGP	<i>Potentially Significant</i>
Additional Mitigation	Mitigation Measure 6.13-1
Residual Significance	Less than Significant

The city of Sacramento is primarily built-out, and a significant amount of glare from urban uses already exists. However, new development permitted under the proposed 2030 General Plan could create new sources of glare from any of the following: parking lots/structures and glare from reflective building surfaces. These new sources would be more noticeable from new development in large infill areas and previously undeveloped sites outside of the downtown area. As a result these new sources of glare could affect the day or nighttime views of adjacent sensitive land uses. These sensitive land uses could generally be considered as undeveloped lands and residential uses adjacent to commercial or industrial areas.

Daytime glare could be produced by the increased amount of surface area of proposed commercial and residential structures, which could reflect or concentrate sunlight. Policy ER 7.1.6 requires that new development avoid creating unsafe and incompatible glare by incorporating design features to reduce or eliminate glare. In addition, design policies in the 2030 General Plan address the visual character of development areas as well as compatibility of adjoining uses, which would indirectly regulate the impact of glare. Because details of the type of glass material to be used are unknown, exterior materials used to construct new buildings could include materials that could result in glare if the surfaces are highly reflective; however, taking into consideration that the city is nearly built-out with few substantial vacant areas remaining the majority of future development would be infill and additional glare in these

types of areas would be minimal given the existing surroundings. The exception to this could be high-rise skyscrapers in the downtown area that could produce substantial amounts of glare if significant amounts of glass and other reflective materials are used on the exterior of the building. These types of projects would be required to go through the City’s Design Review process as well as undergo project level CEQA analysis. However, because future development could contribute to glare this is considered a *potentially significant impact*.

Mitigation Measure

Compliance with Mitigation Measure 6.13-1 would ensure that glare associated with new development, particularly in the downtown area, would be reduced to a **less-than-significant level**.

6.13-1 *The City shall amend the Zoning Code to prohibit new development from:*

- 1) *using reflective glass that exceeds 50 percent of any building surface and on the ground three floors;*
- 2) *using mirrored glass;*
- 3) *using black glass that exceeds 25 percent of any surface of a building; and*
- 4) *using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building.*

Impact 6.13-2	Implementation of the proposed 2030 General Plan could cast light onto oncoming traffic or residential uses.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Less than Significant</i>
Mitigation Included in the SGP	<i>Policy LU 6.1.14, LU 7.2.5, and ER 7.1.5</i>
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>
Additional Mitigation	None required
Residual Significance	Less than Significant

The city of Sacramento is primarily built-out, and a significant amount of ambient light from urban uses already existing. However, new development permitted under the proposed 2030 General Plan could create new sources of light from any of the following: exterior building lighting, lighted recreation facilities (such as outdoor ball fields), new street lighting, parking lot lights, and headlights of vehicular traffic. As a result these new sources of light could affect the day or nighttime views of adjacent sensitive land uses. These sensitive land uses could generally be considered as undeveloped lands and residential uses adjacent to commercial or industrial areas.

As implementation of the general plan occurs it would primarily result in development of infill or vacant or underutilized parcels, as well as intensification and reuse of existing sites, the majority

of new development would be located in areas that commonly experience at least minimal impacts from existing light sources. The only exception to this would be development in those few outlying areas that are currently undeveloped (e.g., Delta Shores, Panhandle, Greenbriar, Camino Norte, etc.).

There would be some construction of residential uses adjacent to commercial uses. Commercial facilities typically involve substantial amounts of lighting for building exteriors and parking lots. Additionally, the potential introduction of new playfields (and associated field lighting) could result in light spillover onto adjacent properties. Policy ER 7.1.5 requires that misdirected, excessive, or unnecessary outdoor lighting be minimized. Nighttime lighting is necessary to provide safe environments (e.g., roadways, sidewalks, parking lots, etc.) and provide opportunities for nighttime activities (e.g., athletic events). Light dissipates with increased distance from the source. Light sources that are directed to illuminate specific areas are less likely to spillover onto other areas.

The proposed 2030 General Plan contains policies to address these potential nighttime lighting impacts. Specifically, Policy LU 6.1.14, Compatibility with Adjoining Uses, includes a requirement for lighting to be shielded and directed downward to minimize impacts on adjacent residential uses and Policy LU 7.2.5 addresses industrial development by requiring that factors that could affect surrounding non-industrial uses, including on-site lighting, be controlled.

The city of Sacramento is primarily built-out with a significant amount of ambient light already existing, especially near the downtown area. The new development that would be allowed under the 2030 General Plan would be subject to the above policies as well as design review. With an emphasis on infill development within the city, additional light sources would be concentrated within existing lit areas and would not result in extensive use of lighting in outlying areas of the city. Therefore, the amount of additional lighting that could be created as a result of the 2030 General Plan would be a small fraction in relation to the existing ambient light already present in the city. Due to this small contribution as well as the mechanisms in place aimed at reducing the impacts of light on surrounding uses including residential and roadways this impact is considered ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The geographic context for the analysis of cumulative Urban Design and Visual Resources impacts is the Policy Area, which includes all cumulative growth within Sacramento County as well as the city of West Sacramento due to its close proximity. This cumulative impact analysis considers implementation of the proposed 2030 General Plan.

Impact 6.13-3	Implementation of the proposed 2030 General Plan, in combination with other projects in the county and West Sacramento, could cast glare in such a way as to cause public hazard or annoyance for a sustained period of time.
Applicable Regulations	<i>None</i>
Significance Before Mitigation	<i>Potentially Significant</i>
Mitigation Included in the SGP	<i>Policy ER 7.1.6</i>
Significance after Mitigation Included in the SGP	<i>Potentially Significant</i>
Additional Mitigation	Mitigation Measure 6.13-3
Residual Significance	Less than Significant

Sacramento is an urbanized area with skyscrapers in the downtown area along with multi-story office buildings located along major roadways that generate the primary source of glare in the Policy Area. Glare from sunlight hitting a glass surface could cause a public hazard or annoyance to motorists. At certain times of the day buildings with glass dominated facades can impact drivers within sight of them. Development along the riverfront in the city of West Sacramento also contributes to the cumulative glare in the area. However, the majority of glare comes from tall buildings located in downtown or along major roadways. Cumulative development within the Policy Area as well as in Sacramento County and neighboring West Sacramento could increase daytime glare primarily through intensified infill development. This could result in a potentially significant cumulative effect.

Under the proposed 2030 General Plan the majority of cumulative development would occur within the Policy Area. At this time the specifics concerning building materials and configurations are uncertain. However, many projects would be required to go through the City's Design Review process and future projects would, in many cases, also be subject to CEQA review and may require further mitigation for glare impacts. However, it is uncertain if glare would be an issue with future development. Therefore, the project's contribution would be considerable and the cumulative impact; would be considered *potentially significant*.

Mitigation Measure

Mitigation Measure 6.13-3 would require building features that would reduce glare impacts within the Policy Area, the major contributor to the cumulative amount of glare, and therefore reducing the project's contribution to the cumulative increase to less than considerable. Therefore, the mitigation measures reduce the cumulative impact to ***less than significant***.

6.13-3 *Implement Mitigation Measure 6.13-1.*

Impact 6.13-4	Implementation of the proposed 2030 General Plan, in combination with other projects in the county and West Sacramento, could cast light onto oncoming traffic or residential uses.	
Applicable Regulations	<i>None</i>	
Significance Before Mitigation	<i>Less than Significant</i>	
Mitigation Included in the SGP	<i>Policy LU 6.1.14 and LU 7.2.5</i>	
Significance after Mitigation Included in the SGP	<i>Less than Significant</i>	
Additional Mitigation	None required	
Residual Significance	Less than Significant	

Sacramento is an urbanized city and contains numerous existing sources of nighttime lighting. Existing development within the Policy Area as well as the city of West Sacramento and the remainder of Sacramento County outside of the city limits have resulted in a cumulative increase in nighttime lighting. The cumulative effect of this past development has resulted in a cumulative loss of available nighttime views resulting in a potentially significant cumulative effect.

Future development would occur within the Policy Area within existing urban uses, which would already be subject to lighting from existing development and vehicle headlights. Policies LU 6.1-14 and 7.2-5 would reduce light impacts within the Policy Area, the major contributor to the cumulative amount of artificial light; therefore, reducing the project's contribution to the cumulative increase to less than considerable. Therefore, the project's cumulative impact would be ***less than significant***.

Mitigation Measure

None required.

South Area Community Plan

As discussed in the impact discussion above, the Policy Area is primarily built out with only a few large, vacant areas available for large-scale development. Future development of these areas would contribute the most to the light and glare impacts discussed above. The South Area Community Plan (SACP) does contain the Delta Shores project site, which is the largest remaining vacant area within the SACP Area. Impacts related to light and glare in the SACP area would generally be no more severe than what was analyzed above for the Policy Area as a whole with the exception of the Delta Shores project. Specific impacts for individual development projects would be determined as mandated by City policy. Specifically the Delta Shores project is currently undergoing environmental review, which would include an analysis on this issue area.

Focused Opportunity Areas

None of the Focused Opportunity Areas are located in an area of the city that would be any more or less susceptible to potential light and glare impacts than the remainder of the Policy Area. Site-specific analysis for individual development projects within each Opportunity Area would determine whether individual project sites would result in significant impacts with relation to light and glare and require additional mitigation beyond compliance with mandated state and local requirements.

Insufficient Information to Support a Complete Analysis of the Potential Impacts

Section 15176(c) of the CEQA Guidelines acknowledges that all the information necessary to analyze potential impacts associated with anticipated future development may not be available. It is anticipated that future development within the Focused Opportunity Areas, specifically the River District, as well as in the South Area Community Plan and future development within the Policy Area could include potential impacts on urban design and visual resources including light and glare issues. At this time specific project information is not available to evaluate potential impacts on light and glare associated with any potential new development project. The City has identified specific goals and policies that address concerns associated with visual character and new development. Once specific development proposals are prepared and submitted to the City a project-specific environmental analysis would be prepared to analyze potential impacts.

SUMMARY OF URBAN DESIGN AND VISUAL RESOURCES IMPACTS				
LEVEL OF SIGNIFICANCE				
	6.13-1 Implementation of the proposed 2030 General Plan could cast glare in such a way as to cause a public hazard or annoyance for a sustained period of time.	6.13-2 Implementation of the proposed 2030 General Plan could cast light onto oncoming traffic or residential uses.	6.13-3 Implementation of the proposed 2030 General Plan, in combination with other projects in the county and West Sacramento, could cast glare in such a way as to cause public hazard or annoyance for a sustained period of time.	6.13-4 Implementation of the proposed 2030 General Plan, in combination with other projects in the county and West Sacramento, could cast light onto oncoming traffic or residential uses.
Community Plan Areas				
Arden-Arcade	●	○	●	○
Central City	●	○	●	○
East Broadway	●	○	●	○
East Sacramento	●	○	●	○
Land Park	●	○	●	○
North Natomas	●	○	●	○
North Sacramento	●	○	●	○
Pocket	●	○	●	○
South Area	●	○	●	○
South Natomas	●	○	●	○
Focused Opportunity Areas				
65 th Street/University Village	●	○	●	○
Arden Fair/Point West	●	○	●	○
Florin LRT/Subregional Center	●	○	●	○
Meadowview LRT	●	○	●	○
River District	●	○	●	○
Robla	●	○	●	○
○ = less than significant ● = less than significant with mitigation incorporated ● = significant and unavoidable				

7.0 Other CEQA Required Considerations



OTHER CEQA REQUIRED CONSIDERATIONS

INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) growth-inducing impacts of the proposed project. It should be noted that although growth inducement itself is not considered an environmental effect, it could potentially lead to foreseeable physical environmental effects, which are discussed under Growth Inducing Impacts below.

Significant Environmental Effects

Chapter 2.0 of this MEIR, Summary of Environmental Effects, and sections 6.1 through 6.13 of this MEIR provide a comprehensive identification of the proposed project's environmental effects, including the level of significance both before and after mitigation.

Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 6.0 of this MEIR. Project-specific and cumulative impacts that cannot be avoided if the project is approved as proposed include:

Project-Specific Significant and Unavoidable Impacts

- 6.1-2 Implementation of the proposed 2030 General Plan could result in construction activities that would increase NO_x levels above 85 pounds per day.
- 6.1-3 Implementation of the proposed 2030 General Plan would result in operational emissions that would increase either of the ozone precursors, NO_x or reactive organic gases (ROG), above 65 pounds per day.
- 6.1-4 Implementation of the proposed 2030 General Plan would result in PM₁₀ concentrations due to the emission of particulate matter associated with construction

activities at a level equal to or greater than five percent of the state ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours).

- 6.3-2 Implementation of the proposed 2030 General Plan could adversely affect special-status plant species due to the substantial degradation of the quality of the environment or reduction of population or habitat below self-sustaining levels.
- 6.3-3 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status invertebrates.
- 6.3-4 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.
- 6.3-5 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status amphibians and reptiles.
- 6.3-6 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status mammals.
- 6.3-7 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status fish.
- 6.3-8 Implementation of the proposed 2030 General Plan could result in the loss or modification of riparian habitat, resulting in a substantial adverse effect.
- 6.3-9 Implementation of the proposed 2030 General Plan could result in a substantial adverse effect on state or federally protected wetlands and/or waters of the United States through direct removal, filling, or hydrological interruption.
- 6.3-10 Implementation of the 2030 General Plan could result in the loss of CDFG defined sensitive natural communities such as elderberry savanna, northern claypan vernal pool and northern hardpan vernal pool resulting in a substantial adverse effect.
- 6.4-1 Implementation of the 2030 General Plan could cause a substantial change in the significance of historical resources as defined in CEQA Guidelines section 15064.5.

- 6.4-2 Implementation of the 2030 General Plan could cause a substantial change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5.
- 6.8-1 Implementation of the 2030 General Plan could result in exterior noise levels in the Policy Area that are above the upper value of the normally acceptable category for various land uses (per Table EC-1) due to an increase in noise levels.
- 6.8-2 Implementation of the 2030 General Plan would result in residential interior noise levels of L_{dn} 45 dB or greater caused by an increase in noise levels.
- 6.8-4 Implementation of the 2030 General Plan could permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction.
- 6.11-2 Implementation of the proposed 2030 General Plan would result in an increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and could require the construction of new water supply facilities.
- 6.11-4 Implementation of the proposed 2030 General Plan would require the need for expansion of wastewater treatment facilities, which could cause significant environmental effects.
- 6.12-1 Implementation of the proposed 2030 General Plan could result in roadway segments located within the Policy Area that do not meet the City's current LOS C standard or the proposed LOS D-E goal.
- 6.12-2 Implementation of the proposed 2030 General Plan could result in roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.
- 6.12-3 Implementation of the proposed 2030 General Plan could result in freeway segments that do not meet the jurisdiction's minimum acceptable level of service threshold.

Cumulative Significant and Unavoidable Impacts

- 6.1-7 Implementation of the proposed 2030 General Plan, in conjunction with other construction activities in the SVAB, would increase cumulative construction-generated NO_x levels above 85 pounds per day.
- 6.1-8 Implementation of the proposed 2030 General Plan, in conjunction with other development in the SVAB, would increase cumulative operational levels of either ozone precursors, NO_x or reactive organic gases (ROG), above 65 pounds per day.

- 6.1-9 Implementation of the proposed 2030 General Plan, in conjunction with other development in the SVAB, would emit particulate pollutants associated with construction activities at a cumulative level equal to, or greater than, five percent of the CAAQS (50 micrograms/cubic meter for 24 hours).
- 6.4-3 Implementation of the 2030 General Plan, in conjunction with other development within the county, could cause a substantial change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5.
- 6.4-4 Implementation of the 2030 General Plan, in conjunction with other development within the Central Valley, could cause a substantial change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5.
- 6.8-7 Implementation of the 2030 General Plan along with other development in the region could result in an increase in interior and exterior noise levels in the Policy Area that are above acceptable levels.
- 6.8-9 Implementation of the 2030 General Plan could result in cumulative construction vibration levels that exceed the vibration-peak-particle velocities greater than 0.5 inches per second.
- 6.11-5 Implementation of the proposed 2030 General Plan, in combination with future development in the SRCSD Service Area, would require expansion of wastewater conveyance and treatment capacity to serve the project's sewer needs in addition to existing commitments.
- 6.12-8 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that would adversely impact the existing LOS for city roadways.
- 6.12-9 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic on roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.
- 6.12-10 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that could exceed the LOS along some freeway segments.

Significant Irreversible Environmental Effects

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the proposed project. Section 15126.2(c) states:

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

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

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources;
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the Policy Area would result in the continued commitment of the area to urban development, thereby precluding non-urban uses for the lifespan of the 2030 General Plan. Restoration of the Policy Area to a less developed condition would not be feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the project. While implementation of the 2030 General Plan would result in the use, transport, storage, and disposal of hazardous wastes, as described in section 6.6 Hazards and Hazardous Materials, all activities would comply with applicable state and federal laws related to hazardous materials transport, use and storage, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the 2030 General Plan would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are urbanization of vacant or rural areas and the change in visual character of the city, increased generation of pollutants, including greenhouse gas emissions and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during construction activities. Operations associated with future uses would also consume fossil fuels, water, and natural gas and electrical energy and contribute to climate change. These unavoidable consequences of urban growth are described in the appropriate sections in Chapter 6.0 of this MEIR.

Resources that would be permanently and continually consumed by implementation of the 2030 General Plan include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result the inefficient or wasteful use of resources. With respect to operational activities, compliance with all applicable building codes, as well as general plan policies, standard conservation features, and current City programs

would ensure that natural resources are conserved to the maximum extent possible. It is possible that new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, future construction activities related to implementation of the 2030 General Plan would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Growth Inducing Impacts

As required by section 15126.2(d) of the CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. Although growth inducement itself is not considered an environmental effect, it could potentially lead to environmental effects.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area; a change in zoning or general plan amendment approval); or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Economic Effects:** This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include effects such as the “multiplier effect.” A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

■ Elimination of Obstacles to Growth

Growth in an area may result from the removal of physical impediments or restrictions to growth, as well as the removal of planning impediments resulting from land use plans and policies. In this context, physical growth impediments may include nonexistent or inadequate access to an area or the lack of essential public services (e.g., water service), while planning impediments may include restrictive zoning and/or general plan designations.

The project would be developed within the city limits which contain established land uses and supporting infrastructure (roads, water distribution, wastewater and drainage collection, and energy distribution). Two areas are outside the city limits but within the Policy Area, Camino Norte, and the northern portion of Panhandle, are currently greenfields without a supporting infrastructure. The Greenbriar project has recently been approved by Sacramento LAFCO and the City for future annexation and development.

The General Plan includes redevelopment and reinvestment of areas within the city which could intensify the uses over what currently exists in some areas. The existing infrastructure capacity could be an obstacle to this growth. Intensification of development in the downtown and midtown areas could require the modification and/or replacement of existing infrastructure in order to support the increased land use intensity associated with the 2030 General Plan. The development of roads and other utilities infrastructure would be required to develop land uses in the Camino Norte and the northern portion of Panhandle areas, which would eliminate growth restrictions that currently exist in the northern portion of the city.

In addition, as discussed in section 6.11, Public Utilities, future development within the Policy Area as well as in neighboring areas would require construction of a new water intake structure (diversion) and water treatment plant on the Sacramento River in order to meet future peak day water demands. Construction of this infrastructure would allow development to occur both within the Policy Area as well as in the larger region. Impacts associated with this new infrastructure have been evaluated in a separate EIR/EIS and significant environmental impacts identified along with mitigation measures. Construction of this facility would eliminate an obstacle to future growth and could remove an obstacle for future development to the north and east.

An established transportation network exists in the Policy Area that offers local and regional access within and around the city. Major highways include I-5, I-80, Business 80 (Capital City Freeway), Highway 50, and SR 99. The Policy Area also contains numerous arterial, collector, and neighborhood streets. Circulation within the Policy Area would be enhanced by the addition of new roads in vacant or underdeveloped areas, road widenings, bike lanes, new sidewalks and/or repairs, and road repairs. Improvements to streets within the Policy Area are anticipated to occur in order to serve the increased population generated by the 2030 General Plan. Although these roadway improvements would be intended to facilitate improved circulation in

and around the city, they would improve the circulation system in the city's vicinity and could remove an obstacle for further redevelopment outside the Policy Area to the north and east.

Water and sanitary sewer service is currently provided to the Policy Area by existing transmission mains throughout the city. It is possible that some existing pipelines may need to be expanded (upsized) or replaced and new pipelines may need to be constructed to accommodate service demands from new growth in the Policy Area. It is anticipated that new or expanded pipelines would only be constructed to serve growth expected to occur within the Policy Area. However, while these improvements would be designed to accommodate uses proposed in the 2030 General Plan, the improvements could be sized to support other development outside the Policy Area to the north or east which could remove an obstacle to growth.

Electricity and natural gas transmission infrastructure presently exists within the city limits and near the proposed greenfield areas of Camino Norte and the northern portion of the Panhandle. Development of the 2030 General Plan could necessitate the construction of additional distribution systems to convey energy to uses that are not currently served by public energy utilities. In addition, it is anticipated that upgrading/upsizing of existing utilities could occur within street right-of-ways in areas where there is significant reinvestment in vacant or underutilized areas. While these improvements would be designed to accommodate uses proposed in the 2030 General Plan, the improvements could be sized to support other development in the Policy Area or adjacent to the Policy Area which could remove an obstacle to growth.

While the city limits and the surrounding area are mostly urbanized, implementation of the 2030 General Plan includes improvements to roadways and utilities distribution infrastructure that would be sized to accommodate more growth than just that associated with the project. As such, these improvements could eliminate an obstacle to further redevelopment and growth outside of the Policy Area.

■ Economic Effects

In addition to the employment generated by the proposed project, additional local employment can be generated through the multiplier effect. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region.

Two different types of additional employment are tracked through the multiplier effect. Indirect employment includes those additional jobs that are generated through the expenditure patterns of direct employment associated with the project. For example, workers in the office and retail portions of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates induced employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to support businesses within the proposed project. For example, when a manufacturer buys or sells products, the employment associated with those inputs or outputs are considered induced employment.

When an employee from the project goes out to lunch, the person who serves the project employee lunch holds a job that was indirectly caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced employment.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

Increased future employment generated by employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento metropolitan region and beyond.

■ Impacts of Induced Growth

Planning documents such as general plans and the regional SACOG Blueprint try to plan for future growth and plan for potential impacts due to this growth. While these documents attempt to incorporate the most current population projections, new development projects are often not included in the plans. For example, since the adoption of the current General Plan (1988), the City has begun working toward higher intensity uses within the Central City, which would cause an increase in population, which could exceed the 1988 General Plan projections. There have been several planned and recently approved projects throughout the city that include higher density residential areas and commercial mixed use projects, which in combination with projects assumed in the existing General Plan, would exceed the current (1988) General Plan's population projections.

In addition to growth in the city from other development projects, the 2030 General Plan would increase the population within the Policy Area by approximately 195,000 residents. While growth in the city is an intended consequence of the 2030 General Plan, growth induced directly and indirectly by the proposed project could adversely affect the greater Sacramento area. Potential impacts associated with induced growth in the area could include: traffic congestion; air quality deterioration, including an increase in greenhouse gas; loss of habitat and wildlife;

increase in impervious area and stormwater runoff; impacts on utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in population-growth-induced housing demand in the greater Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as new schools, libraries, and parks. Indirect and induced employment and population growth would further contribute to the loss of open space because it would encourage conversion from undeveloped land to urban uses for housing and infrastructure.

While the 2030 General Plan would contribute to direct, indirect, and induced growth in the area, it would also provide residential and employment opportunities for existing and future residents of the city. It would also help prevent suburban sprawl to greenfields outside the city by providing increased density within the Policy Area. It would also enhance the vitality of the city and create and enhance an urban core, which are goals of the 2030 General Plan.

Cumulative Impacts

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed project. As defined in CEQA Guidelines section 15355, "Cumulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (CEQA Guidelines section 15130(a)). Through the evaluation of cumulative impacts, CEQA attempts to ensure that large-scale environmental impacts will not be ignored.

CEQA Guidelines section 15130(b) identifies the following elements as necessary for an adequate discussion of cumulative effects:

- Cumulative context in the form of a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.
- The geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limitation used.
- A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

The analysis of cumulative effects “need not provide as great detail as is provided for the effects attributable to the project alone,” but the discussion “shall reflect the severity of the impacts and their likelihood of occurrence.” (CEQA Guidelines section 15130(a)(b)) Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of past, present, and probable future projects, are significant, the lead agency then must determine whether the project’s incremental contribution to such significant cumulative impact is “cumulatively considerable” (and thus significant in and of itself). (CEQA Guidelines section 15130(a)) CEQA Guidelines section 15130(a)(2) states “[w]hen the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.”

Section 15130, subdivision (b)(1)(B)(2), states an EIR must analyze probable future projects which include “projects requiring an agency approval for an application which has been received at the time the notice of preparation is released, unless abandoned by the applicant; projects included in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; projects included in a summary of projections of projects (or development areas designated) in a general plan or a similar plan; projects anticipated as a later phase of a previously approved project (e.g. a subdivision); or those public agency projects for which money has been budgeted.”

Cumulative impacts for each impact area are identified in each of the technical sections in Chapter 6. A summary of the project-specific and cumulative impacts for the project is included in Chapter 2.0, Summary of Impacts and Mitigation Measures. The basis of the cumulative analysis varies by technical area. In general, the cumulative context for the technical analyses is buildout of the Policy Area. However, certain technical areas require a different context based upon the area potentially affected by project or the area from which other projects could contribute to the impact. For instance, air quality impacts are evaluated against conditions in the entire Sacramento Valley Air Basin; thus, the analysis takes into consideration emissions beyond the boundaries of the Policy Area. Similarly, the cumulative context for traffic assumes regional development that would contribute to traffic on local and regional roadways. Other cumulative analyses, such as cultural or biological resources, consider the potential loss of resources in a broader, more regional context, depending on the extent of the resource in question.

The City has defined Special Study Areas, beyond the boundaries of the 2030 General Plan, which are adjacent to existing city limits and are of interest to the City of Sacramento. The Special Study Areas include the Town of Freeport, Fruitridge/Florin Unincorporated Area, East

Study Area, Arden-Arcade Area Study Area, and Natomas Joint Vision Study Area (see Figure 3-5 in Chapter 3.0, Project Description). The planning, development, and redevelopment of these unincorporated areas need to be coordinated by both the City and County. In some cases, part or all of these areas may eventually be annexed by the City. The Town of Freeport, Fruitridge Florin Study Area, and Arden-Arcade Study Area do not contain large undeveloped areas, so a substantial amount of growth is not anticipated in these areas, although some redevelopment could take place. Redevelopment in these areas would not contribute substantially to the cumulative growth in the region. The East Study Area and Natomas Joint Vision Area of Interest (Joint Vision Area) both contain undeveloped land that could support major new growth.

The East Area encompasses about 9,191 acres east of Sacramento's city limits. The northern part of the East Area, known as Rosemont, is an established community with low-density suburban neighborhoods and commercial corridors. The middle and southern parts of the East Area are made up of exhausted aggregate mining operations, open space areas, and scattered industrial uses. Much of the undeveloped part of the East Area lies in the central and southern area around Jackson Highway. This area is transitioning from exhausted mining operations and will become available land in limited ownership, which could be converted to urban uses. Because of the development capacity already included in the 2030 Policy Area, the City anticipates that any development of this area would not occur within the timeframe of the 2030 General Plan. In addition, if development outside the Policy Area were to occur within the timeframe of the 2030 General Plan, due to infrastructure constraints in this area, it would likely occur north of the Policy Area. For these reasons, the cumulative analyses in this Draft MEIR do not include assumptions for additional development in the East Area.

The Joint Vision Area encompasses approximately 18,424 acres north and west of the city of Sacramento. The Joint Vision Area is predominately agricultural and open space that abuts existing residential neighborhoods on the south (e.g., North Natomas) and rural development on the east (e.g., Rio Linda). Sacramento International Airport is located in the Joint Vision Area just north of I-5, about three miles west of SR 99.

Because the development potential of the Natomas Joint Vision Area of Interest is large and various studies are underway in this area, this MEIR discloses the Joint Vision effort to the extent that future potential cumulative development could occur.

The Joint Vision Area is a collaborative effort between the City and County of Sacramento to develop a conceptual blueprint for the 10,000-acre area of the County between the northern city limits and Sutter County. In December 2002, the City Council and County Board of Supervisors entered into a Memorandum of Understanding (MOU), which defined a set of guiding principles for the implementation of the following goals:

- Proactively guide future urban growth for more efficient use of the land, while securing permanent preservation of open space/farmland at a mitigation ratio of at least one-to-one;
- Improve future air quality through efficient land use, which reduces automobile travel by accommodating future growth according to Smart Growth principles adopted by City Council (Smart Growth Principles/Resolution);
- Provide for revenue sharing between the City and County to prevent competition for tax revenues and promote balanced regional planning; and
- Protect future airport operations.

The purpose of the Joint Vision MOU is to define a mutually acceptable set of proposed principles that the City and County are prepared to consider when evaluating future land use planning in the Natomas Basin. The principles set forth in the MOU are intended to guide future discussion and the ultimate negotiation of an agreement between the County and the City. The Joint Vision MOU asserts that growth in the Natomas Basin is inevitable and assigns to the City the primary responsibility for planning new growth in the area. The Joint Vision MOU also contemplates that any implementation of its principles will require discretionary legislative actions by the relevant land-use jurisdictions and further state and federal environmental review.

The Joint Vision MOU does not approve development, nor does it involve any specific development proposals. It is not a concrete development proposal establishing a set level of development or land use patterns (e.g., number of housing units, acres of a specific land use, or amount of square footage of a proposed use). It does not commit any funds, nor does it change the existing agricultural-use designations. The Joint Vision MOU does not waive any existing land use requirements, but rather contemplates the necessity for further discretionary approvals and environmental review.

The Joint Vision MOU is a roadmap or conceptual agreement for development in the area and identifies general concepts. Generally, the Joint Vision Area is expected to be a mixture of residential densities and non-residential uses, and open space. It is anticipated that a large amount of open space would be dedicated for habitat preservation and farmland retention in this area as part of the eventual development proposal. To date, no land use plans have been proposed or adopted, and all considerations to date have been conceptual.

The ultimate development scenario that would be proposed for the Joint Vision Area is not known and will not be known within the time this MEIR is being considered. The Joint Vision Area itself is not a project within the meaning of CEQA, nor does it propose any specific project which could be meaningfully evaluated. Given the tentative, general nature of the Joint Vision MOU and the considerable number of local, state, and federal level approvals that would be required before any development could occur within the Joint Vision Area, future development within the Joint Vision Area is not considered reasonably certain to occur at this time. It would be nearly impossible to speculate on the unspecified and uncertain development that might be

proposed in the future under the Joint Vision MOU. Far too little is known about the scope, location, or types of land uses that might be proposed in the future to assist decision makers in evaluating any potential environmental tradeoffs.

Because the Joint Vision Area is speculative at this time, it is considered separately and less extensively than the cumulative development that is currently planned and proposed (i.e., specific development proposals have been submitted) and is evaluated in this MEIR. Future development in the Joint Vision Area would be the subject of extensive CEQA review and consideration by the City and County, neighboring jurisdictions, regulatory agencies including the California Department of Fish and Game and U.S. Fish and Wildlife Service, local service providers, and LAFCO, and its likely implementation is best described as unknown at this time.

8.0 Climate Change



STAFF NOTE REGARDING CLIMATE CHANGE: Climate change is discussed in several portions of the Master EIR. Additional climate change information includes discussions from the original Draft Master EIR (the section set forth below), Final Master EIR including the Climate Change Master Response and comment letters from the California State Attorney General (Letter #2) and the Sacramento Metropolitan Air Quality Management District (Letter #6), the City's responses to each letter, the Findings of Fact and Statement of Overriding Considerations, and the Errata No. 2 excerpt that addresses climate change. These materials have been compiled as a convenience to readers interested in the various technical aspects of the climate change issue.

INTRODUCTION

Greenhouse gas emissions reduction and air quality improvements are fundamental objectives that underlie policies throughout the 2030 General Plan. The 2030 General Plan addresses these objectives primarily by providing land use, mobility, and energy conservation policies intended to reduce automobile trips and greenhouse gas emissions on a per capita basis. The 2030 General Plan also provides for a citywide greenhouse gas assessment and reduction goal.

This Chapter addresses the effects of development under the proposed 2030 General Plan (proposed project) on global greenhouse gas emissions and the potential for these emissions to cumulatively contribute to global climate change.

The issue of climate change is inherently a cumulative issue on a global scale, and as such it is not currently possible to determine the significance of the contribution of development of the 2030 General Plan Policy Area to global temperature increases. Science is not currently sophisticated enough to measure the influence of a City's contribution to climate change as reflected in the following statement by the Intergovernmental Panel on Climate Change, "difficulties remain in attributing temperature on smaller than continental scales and over time scales of less than 50 years. Attribution at these scales, with limited exceptions, has not yet been established."¹ Therefore, we cannot currently determine the significance of a project area the size of a large city to determine if it can by itself generate enough greenhouse gas emissions to measurably influence global climate change. A project contributes to a potentially significant impact by its incremental contribution to the cumulative increase in greenhouse gas emissions from all sources, which together can produce measurable global climate changes.

1 Intergovernmental Panel on Climate Change, 2007. G.C. Hegerl, "Understanding and Attributing Climate Change Chapter 9, Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change.

Therefore, this analysis focuses on the project's cumulative contribution to the global inventory of greenhouse gas emissions as well as the effect that climate change would have on the Policy Area.

This analysis focuses on the major greenhouse gas, carbon dioxide (CO₂). Nitrous oxide (N₂O), and methane gas (CH₄) also contribute to global warming, but constitute a smaller percentage of GHG emissions than CO₂. Transportation-related emissions (CO₂), natural gas consumption emissions (CO₂), and emissions from the combustion of fossil fuels for electricity (CO₂) are quantified as well as emissions from solid waste (CH₄).

Recent changes in mean temperature and precipitation are evidence of the changes already taking place in the frequency and intensity of climate extremes. Worldwide, adverse impacts of climate change are expected to negatively affect agriculture and food security, water resources, coastal zones, public health, climate-related disaster risk management, and natural resources management.² According to the *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, California faces similar adaptation challenges due to impacts of climate change. Specifically, California is facing public health impacts, reduced snowpack, increased flood hazards, sea-level rise, and increased risk of wildfires.³ Adaptation to these climate change impacts is a complementary strategy to mitigating greenhouse gas emissions for effectively managing climate change risks. Therefore, the possible effects of global climate change on water supply, decreased Sierra snowpack, increased wildfire frequency, rising sea levels, poor air quality, and extreme heat events are also discussed in this section.

Comments received in response to the NOP (see Appendix B) included concerns expressed by the Sacramento Metropolitan Air Quality Management District (SMAQMD) that the proposed General Plan should include a discussion of climate change and the proposed General Plan's contribution to it.

Sources for this section include data from the Intergovernmental Panel on Climate Change (IPCC), the U.S. Environmental Protection Agency (EPA), the Pew Center on Global Climate Change, the California Department of Water Resources (DWR), California Energy Commission (CEC), California Environmental Protection Agency California Climate Action Team (CAT), California Air Resources Board (CARB), California Air Pollution Control Officers Association (CAPCOA), the Sacramento Area Council of Governments (SACOG), and the SMAQMD.

2 United Nations Development Programme, Programming Climate Change Adaptation, www.undp.org/gef/adaptation/climate_change/02.htm, accessed March 28, 2008.

3 Climate Action Team, California Environmental Protection Agency, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006, pp. 19-39.

ENVIRONMENTAL SETTING

Climate Change

Global climate change refers to the change in the average weather of the earth that may be measured by changes in ocean currents, wind patterns, storms, precipitation, and temperature. Projected climate changes would affect California's public health through changes in air quality, weather related disasters, and a possible increase in infectious disease. If extreme precipitation and severe weather events become more frequent, and if sanitation and water-treatment facilities have inadequate capacity or are not maintained, increases in infectious diseases could result.⁴

The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. Many of the recent concerns over global climate change refer to this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of greenhouse gas emissions needed to stabilize global temperatures and climate change impacts. The IPCC predicted that the range of global mean temperature change from year 1990 to 2100, given different scenarios, could range from 1.1°C to 6.4°C. Regardless of analytical methodology, global average temperature and sea level are expected to rise under all scenarios.⁵

The IPCC's Assessment makes it clear that the impacts of future climate change will be mixed across regions. For example, according to the IPCC Fourth Assessment report, there may be large differences in regional population, income and technological development under alternative scenarios, which are often a strong determinant of the level of vulnerability to climate change.

■ Potential Effects of Climate Change

The climate in California is expected to become increasingly warmer during the 21st century due to the accumulation of GHGs in the atmosphere. Exactly how much warmer the climate would become depends on the rate at which human activities, such as the burning of fossil fuels, continues. The IPCC Special Report on Emissions Scenarios (SRES) has developed a set of

4 California Environmental Protection Agency, *AB 1493 (Pavley) Briefing Package: Global Warming and Greenhouse Gas Emissions from Motor Vehicles*, <www.climatechange.ca.gov/documents/AB1493_PRESENTATION.PPT#558,1,AB> 1493 (Pavley) Briefing Package Global Warming and Greenhouse Gas Emissions from Motor Vehicles, accessed April 28, 2008.

5 R.B. Alley et al., *Climate Change 2007: The Physical Science Basis Summary for Policymakers*, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, February 2007.

possible future greenhouse gas emissions scenarios based on different assumptions about global development. Based on a recent analysis for California of SRES emission scenarios, there are three general emissions scenarios: a higher emissions scenario, a medium-high emissions scenario, and a lower emissions scenario. Figure 8-1 shows CO₂ concentration levels for the three emissions scenarios.

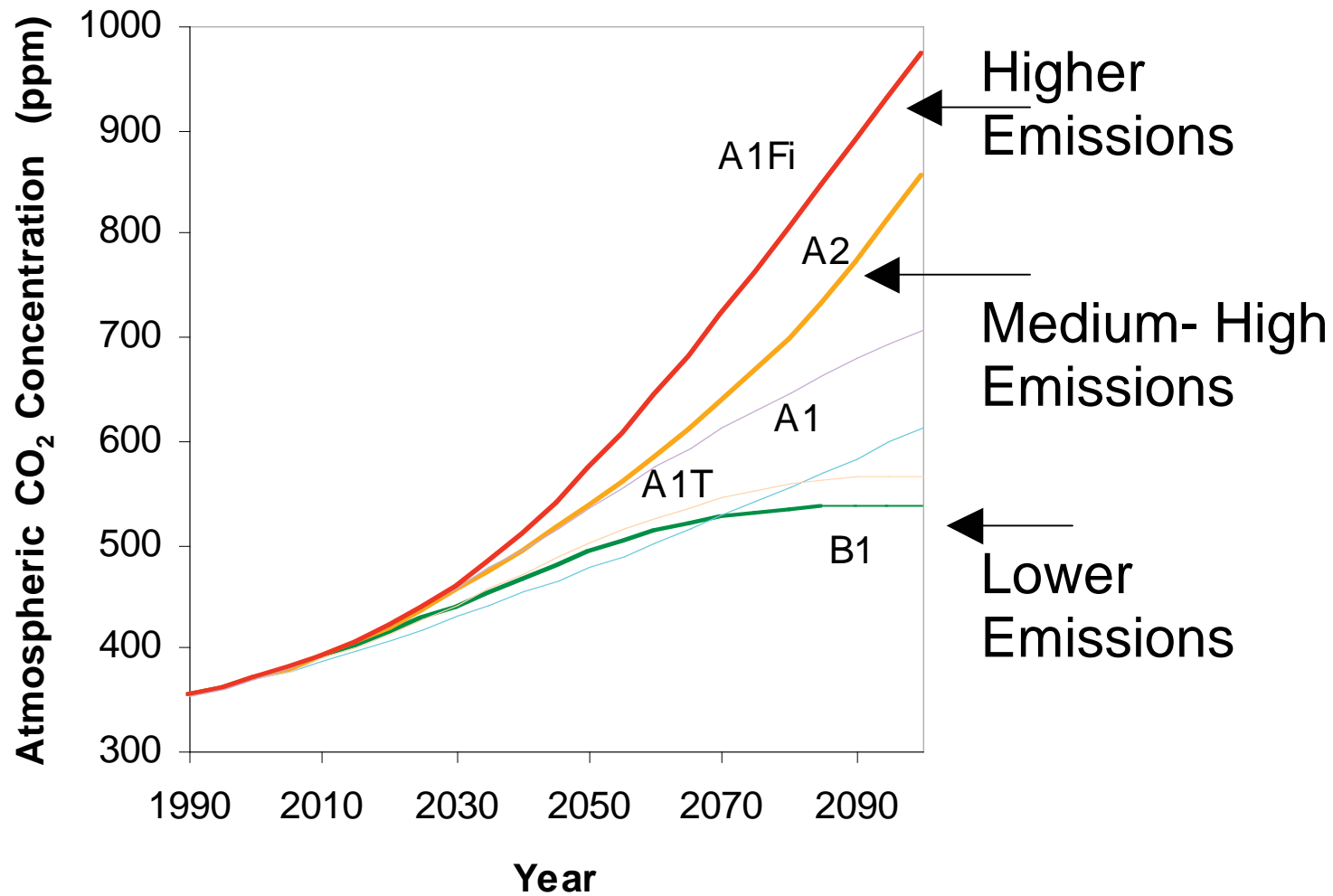
The higher emissions scenario represents rapid fossil-fuel intensive economic growth, global population that peaks mid-century then declines, and the introduction of new and more efficient technologies toward the end of the 21st century. Global warming emissions increase rapidly, reaching about 25 gigatonnes per year (Gt/yr), which is more than three times the present rate of emissions, by 2050. The medium-high emissions scenario is based on a projection of continuous population growth combined with slower economic growth and technological change than in the other scenarios. In contrast, the lower emissions scenario represents a world with population growth similar to the highest emissions scenarios, but with rapid changes towards a service and information economy with the introduction of clean and resource-efficient technologies. The lower emissions scenario has CO₂ emissions peaking just below 10 Gt/yr in mid-century before dropping below the current-day level of 7 Gt/yr by 2100. Under this scenario, despite a reduction in CO₂ emissions, the global CO₂ concentration would double, relative to its pre-industrial level, by the end of this century. It is important to note that even at the lower emissions scenario, increases in global temperature are predicted to be between 1.7 and 3.0 degrees Celsius (3 to 5.5 degrees Fahrenheit). In the medium-high emissions scenario and the higher emissions scenario, temperatures are predicted to increase between 3.1 and 4.3 degrees Celsius (5.5 to 8 degrees Fahrenheit) and 4.4 to 5.8 degrees Celsius (8 to 10.5 degrees Fahrenheit), respectively.⁶

According to these climate models, the temperature rise in California is expected to increase anywhere between 1.7 and 5.8 degrees Celsius. Even the smallest rise in average temperature would result in consequences that would affect the Sacramento region. Because of the uncertainty of impacts, the different warming scenarios are discussed below, in relation to each affected area: water resources, decreased Sierra snowpack, salt water intrusion, increased wildfire frequency, rising sea levels, flooding, poor air quality, and extreme heat events.

Water Resources

Global climate change is playing an increasingly important role in scientific and policy debates related to water management. The most consequential impacts of climate change on water resources in the United States are likely to occur in the mid-latitudes of the west, such as California, where the runoff cycle is largely determined by snow accumulation and subsequent melt patterns. It is well documented that the effects of a warmer climate on the timing of runoff in these regions likely would shift a portion of spring and summer runoff to periods earlier in the

6 State of California, Environmental Protection Agency, Climate Action Team, March 2006, Climate Action Team Report to Governor Schwarzenegger and the California Legislature, pp. 19-24.



Legend

- █ Higher Emissions
- █ Medium-High Emissions
- █ Lower Emissions

Figure 8-1
 IPCC Global Emissions Scenarios

Source: California Climate Action Team, California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, Figure 4-1.

year. Despite the high degree of regulation in many water supply systems throughout the western United States, the effects of these shifts on runoff seasonality generally are considered to be undesirable, because the amount of water stored in snowpack can be substantial and, under normal (i.e., historical) conditions, this stored water is relied upon to augment low stream flows during the relatively dry summers.⁷

Developing evidence indicates global climate change would have a marked effect on water resources in California. More than 150 peer-reviewed scientific articles on climate and water issues in California have been published to date, with many more in preparation, addressing a range of considerations from proposed improvements in the downscaling of general circulation models to understanding how reservoir operations might be adapted to new conditions.⁸ Rising temperatures and sea levels, and changes in hydrological systems are recognized as potential threats to California's economy, public health, and environment.⁹

Decreasing Sierra Nevada Snowpack

As increased GHG emissions accumulate in the atmosphere and average global temperatures rise, more precipitation would fall as rain instead of snow. In addition, the snow that does fall would melt earlier in the year, reducing the Sierra Nevada snowpack. Between 2070 and 2099, the Sierra Nevada is predicted to have a 30 to 60 percent loss of snowpack at the lower emissions scenario. Snowpack losses at the medium high emissions scenario are expected between 70 and 80 percent; at the higher emissions scenario, the Sierra would have losses of approximately 90 percent.¹⁰ The decreasing snowpack would have negative implications for water managers, hydropower generation, and seriously curtail or even eliminate snow-related recreational activities. A potential loss of 5 million acre-feet or more of average annual water storage is expected in the state's snowpack according to the California Department of Water Resources.¹¹ The decrease in snowpack has the potential to affect the Sacramento area through a potential in increased flooding.

Sea Level Rise

The warming of the planet has resulted in an incremental increase in sea levels which has been observed in San Francisco and San Diego during the last century. Sea levels have risen an

7 VanRheenen, N.T., A.W. Wood, R.N. Palmer, and D.P. Lettenmaier, *Potential Implications of PCM Climate Change Scenarios for Sacramento-San Joaquin River Basin Hydrology and Water Resources Climatic Change*, 62:257-281, 2004.

8 Kiparsky, M., and P.H. Gleick, *Climate Change and California Water Resources: A Survey and Summary of the Literature. The California Water Plan, Volume 4 – Reference Guide*. Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security, 2003.

9 U.S. Climate Change Science Program. Overview of U.S. Research on Climate and Global Change. Available at <http://www.climatechange.gov>. accessed on March 3, 2005.

10 California Environmental Protection Agency, California Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 38, Figure 4-9.

11 California Department of Water Resources, *Progress on Incorporating Climate Change into Management of California's Water Resources, Technical Memorandum Report*, 2006.

average of 7.6 inches from 1900 to 2000.¹² California's coast and estuaries will experience increasing sea levels during the next century. In the lower emissions scenario, sea levels are expected to rise 6 to 14 inches; in the medium high emissions scenario, sea levels are expected to rise 14 to 22 inches; and in the higher emission scenario, sea levels are expected to rise 22 to 30 inches.¹³ An increase in sea levels has the potential to affect California's water resources by increasing the salinity intrusion into the Sacramento-San Joaquin River Delta, increasing the potential for Delta levee failure, increasing the potential for salinity intrusion into coastal aquifers (groundwater), and by increasing the potential for flooding near the mouths of rivers due to backwater effects.¹⁴ As sea levels rise due to climate change, the mean high tide mark will move farther up land in and around the Delta. A one-meter sea level rise (39 inches), which is the midpoint of the range expected by 2100, would inundate approximately 209,920 acres in the Delta. Figure 8-2 shows how a one meter rise in sea level would affect the Delta.

Sea level rise is a product of two main processes: thermal expansion of sea water and widespread melting of ice sheets. The thermal expansion of water refers to an increase in the volume of water at constant mass due to heating. Sea level rise would also be affected by melting ice sheets. The only remaining ice sheets on Earth are in Antarctica and Greenland. The IPCC projects that ice mass loss from melting of the Greenland ice sheet will continue to outpace accumulation from snowfall. Accumulation from snowfall on the Antarctic ice sheet is projected to outpace losses from melting. However, loss of ice mass on the Antarctic ice sheet may continue, if there is sufficient loss of ice mass via outlet glaciers.¹⁵ If major ice sheets begin melting, the sea level may rise to 1.4 meters (55 inches) by 2100 which has the potential to affect the Policy Area.¹⁶

Increasing Wildfires

Wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions. Thus, future risks will not be uniform through the state. For example, if precipitation increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are expected to increase by 30 percent toward the end of the 21st century because more winter rain would simulate the growth of more plant "fuel" available to burn in the fall. Alternatively, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out

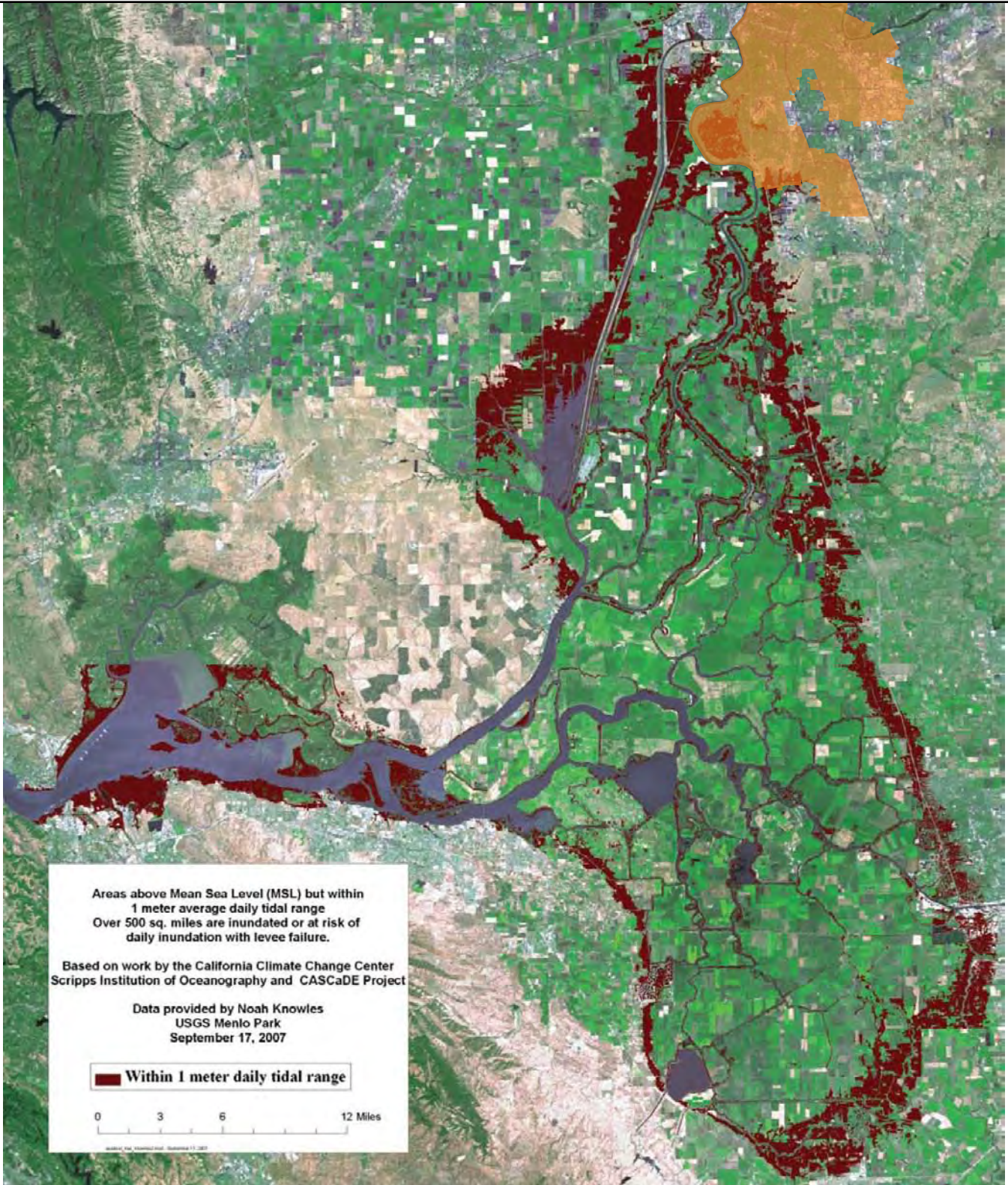
12 California Environmental Protection Agency, California Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 32.

13 Ibid., p. 38, Figure 4-9.

14 California Department of Water Resources, *Progress on Incorporating Climate Change into Management of California's Water Resources, Technical Memorandum Report*, 2006.

15 IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 5-7.

16 Governor's Delta Vision Blue Ribbon Task Force, *Our Vision for the California Delta*, January 29, 2008, p. 3 and 25.



Legend

 Policy Area

Figure 8-2
Area of Potential
Inundation from a One
Meter Rise in Sea Level

Source: Governor's Delta Vision Blue Ribbon Task Force,
Our Vision for the California Delta, January 29, 2008.

and increasing the flammability of forest vegetation.¹⁷ Statewide, in the lower emissions scenario, a 10 to 35 percent increase in wildfire frequency is estimated. For the medium high emissions scenario, a 55 percent increase in wildfire frequency is expected.¹⁸ The potential increase in wildfires could impact the Sacramento area. The biggest wildfire threat would occur in wildlands located along the Sacramento and American rivers.

Public Health

Global warming under any of the three emissions scenarios would affect public health by exacerbating air pollution, intensifying heat waves, and expanding the range of infectious diseases. The primary concern in this case is not the change in average climate, but the projected increase in extreme conditions which pose the most serious health risks.

Poor Air Quality

California experiences the worst air quality in the nation and is in nonattainment for the state's air quality standards for ground-level ozone and airborne particulate matter. These pollutants can cause or aggravate a wide variety of health problems including asthma and other acute respiratory and cardiovascular diseases, and can decrease lung function in children. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. In the lower emissions scenario, a 25 to 35 percent increase in days meteorologically conducive to ozone formation are predicted. Under the medium high emissions scenario, a 75 to 85 percent increase is expected.¹⁹

Severe Heat

By 2100, if temperatures rise to the higher warming range, there could be up to 100 more days per year with temperatures above 95 degrees Fahrenheit in the City of Sacramento.²⁰ As temperatures rise, there would be greater incidences of death due to dehydration, heat stroke and exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. Those that are most vulnerable to the effects of extreme heat are children, the elderly, people with existing health problems, and the poor. In all emissions scenarios, it is expected that there would be 2 to 4 times as many heat wave days in major urban centers. There would also be a 3 to 20 percent increase in electricity demands in order to provide air conditioning to businesses

17 California Energy Commission, *Our Changing Climate: Assessing the Risks to California*, A Summary Report from the California Climate Action Center, July 2006, pp. 10-11.

18 California Environmental Protection Agency, *California Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006, p. 38, Figure 4-9.

19 Ibid.

20 California Energy Commission, *Our Changing Climate: Assessing the Risks to California*, A Summary Report from the California Climate Action Center, July 2006, p. 5.

and residences.²¹ Figure 8-3 shows the projected increase in extreme heat days in the major metropolitan areas of California.

■ Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHG), analogous to the way a greenhouse retains heat. Common GHG include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values determined from ice cores spanning many thousands of years.

The accumulation of GHG in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, the earth's surface would be about 34°C cooler according to the *California Climate Action Team Report* (CAT Report) prepared in 2006. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

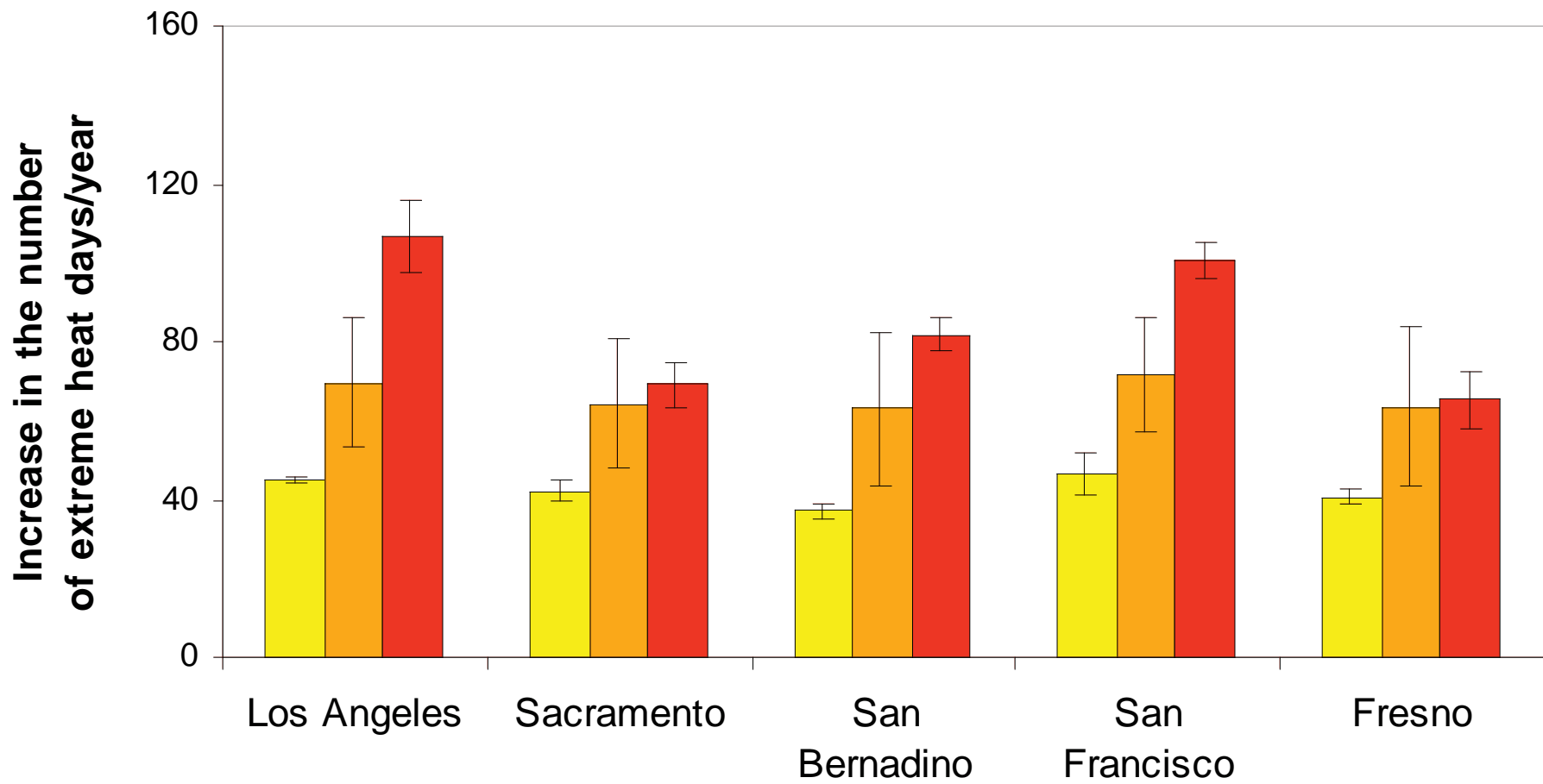
Individual GHGs have varying potential to contribute to global warming (GWP) and atmospheric lifetimes (see Table 8-1). The carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent measure. The reference gas for GWP is carbon dioxide; carbon dioxide has a GWP of one. By comparison, methane's GWP is 21. This means that methane has a greater global warming effect than carbon dioxide on a molecule per molecule basis.²² One million metric tons of carbon dioxide equivalent (MMT_{CO₂e}) is the mass emissions of an individual GHG multiplied by its GWP.

Of all greenhouse gases in the atmosphere, water vapor is the most abundant, important, and variable. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves.

Carbon dioxide (CO₂) is an odorless, colorless gas, which has both natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of carbon dioxide are from burning coal, oil, natural gas,

21 California Environmental Protection Agency, California Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 38, Figure 4-9.

22 U.S. Environmental Protection Agency, U.S. Greenhouse Gas Inventory Program, Office of Atmospheric Programs, *Greenhouse Gases and Global Warming Potential Values*, April 2002, <www.epa.gov/climatechange/emissions/downloads/ghg_gwp.pdf>, accessed April 28, 2008.



Legend

- Lower Warming
- Medium Warming
- High Warming

Figure 8-3
Projected Increase in Extreme Heat Days

Source: California Climate Action Team, California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, Figure 4-4.

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

Source: U.S. Environmental Protection Agency. 2006. Non CO₂ Gases Economic Analysis and Inventory. Global Warming Potentials and Atmospheric Lifetimes. Website <http://www.epa.gov/nonco2/econ-inv/table.html>. Accessed December 20, 2006.

and wood. The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 parts per million (ppm) to 379 ppm in 2005. This is an increase of 35 percent in global CO₂ concentrations. As determined from ice cores, the atmospheric concentration of carbon dioxide in 2005 exceeds the natural range over the last 650,000 years (180 to 300 ppm). From 1995 to 2005, the annual carbon dioxide concentration growth-rate was 1.9 ppm per year, which is larger than it has been since the beginning of continuous direct atmospheric measurements from 1960 to 2005 at 1.4 ppm per year.²³

Methane (CH₄) is a flammable gas and is the main component of natural gas. When one molecule of methane is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. There are no ill health effects from methane. A natural source of methane is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle. The global atmospheric concentration of methane has increased from a pre-industrial value of about 715 parts per billion (ppb) to 1,732 ppb in the early 1990s. The methane concentration in 2005 was 1,774 ppb. The atmospheric concentration of methane in 2005 exceeds by far the natural range of the last 650,000 years (320 to 790 ppb) as determined from ice cores. Growth rates have declined since the early 1990s, consistent with total emissions of anthropogenic and natural sources being nearly constant during this period.²⁴

Nitrous oxide (N₂O), also known as laughing gas, is a colorless greenhouse gas. Higher concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur

23 R.B. Alley et al., *Climate Change 2007: The Physical Science Basis Summary for Policymakers*, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, February 2007.

24 Ibid.

in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, racecars, and as an aerosol spray propellant. The global atmospheric nitrous oxide concentration has increased from a pre-industrial value of about 270 ppb to 319 ppb in 2005. The growth rate has been approximately constant since 1980.²⁵

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs for automobile air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above the earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. Concentrations of tetrafluoromethane in the atmosphere are over 70 parts per trillion (ppt).²⁶ The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF₆) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest GWP of any gas evaluated, 23,900. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Ozone is a greenhouse gas; however, unlike other GHG, ozone in the troposphere is relatively short-lived and, therefore, its effects are not globally important. It is difficult to make an accurate determination of the contribution of ozone precursors (nitrogen oxides and volatile organic compounds) to global climate change.²⁷

25 Ibid.

26 U.S. Environmental Protection Agency, *Science: High Global Warming Potential (GWP) Gases and Climate Change*, <www.epa.gov/highgwp/scientific.html>, accessed April 28, 2008.

27 Hendrix, Michael, and Cori Wilson, Michael Brandman Associates, Association of Environmental Professionals, *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*, June 29, 2007, Page 3, <www.csac.counties.org/images/public/Advocacy/ag_natres/AEP_Global_Climate_Change_June_29_Final%5B1%5D.pdf>, accessed April 28, 2008.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Aerosols can also affect cloud formation. Sulfate aerosols are emitted when fuel-containing sulfur is burned. Black carbon (or soot) is emitted during bio mass burning or incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

In order to stabilize the global concentration of GHG emissions in the atmosphere, emissions would need to reach a peak and decline thereafter. Table 8-2 shows six different stabilization scenarios assuming peaking years for CO₂ emissions as early as 2015 and as late as 2090. If current concentrations of CO₂, which are at 379 ppm, were stabilized, a 50 to 85 percent reduction from 2005 emissions would be required by 2050. This would result in a peaking year of CO₂ emissions between 2000 and 2015. Even if stabilization were to occur within Category I, a 2.0 to 2.4°C temperature increase above pre-industrial levels would be expected along with a 0.4 to 1.4 meter sea level rise. Currently, the concentration of CO₂ in the atmosphere is increasing at a rate of 2 ppm per year. Climate models show that the temperature increase associated with CO₂ concentration implies that CO₂ exceeding 450 ppm would result in dangerous consequences.²⁸

■ Greenhouse Gas Emission Inventory

In 2004, total worldwide GHG emissions was estimated to be 20,135 MMTCO₂e, excluding emissions/removals from land use, land use change, and forestry. This includes the presence of sinks, or GHG removal processes that play an important role in the GHG inventory as forest and other land uses absorb carbon. In 2004, GHG emissions in the U.S. were 7,074.4 MMTCO₂e. In 2005, total U.S. GHG emissions were 7,260.4 MMTCO₂e, a 16.3 percent increase from 1990 emissions, while U.S. gross domestic product has increased by 55 percent over the same period. Emissions rose from 2004 to 2005, increasing by 0.8 percent.

California is a substantial contributor of GHG as it is the second largest contributor in the U.S. and the sixteenth largest in the world. In 2004, California produced 497 MMTCO₂e,²⁹ which is approximately 7 percent of 2004 U.S. emissions and 2.4 percent of global emissions. In California, the most common GHG is CO₂ from fossil fuel combustion, which constitutes approximately 81 percent of all GHG emissions.³⁰ The remainder of GHGs constitute a small percentage of the total: nitrous oxide constitutes 6.8 percent, methane 6.4 percent, high GWP

28 NASA, Goddard Institute for Space Studies, "Research Finds that Earth's Climate is Approaching 'Dangerous' Point," May 30, 2007, <www.giss.nasa.gov/research/news/20070530>, accessed May 15, 2008.

29 California Air Pollution Control Officers Association, CEQA and Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008, p. 8.

30 State of California, Environmental Protection Agency, Climate Action Team, *Climate Action Team Report to Governor Schwarzenegger and the California Legislature*, March 2006, p. 11.

TABLE 8-2

GHG CONCENTRATION STABILIZATION SCENARIOS

Category	CO ₂ concentration at stabilization (2005 = 379 ppm)	CO ₂ e concentration at stabilization including GHG and aerosols (2005 = 379 ppm)	Peaking year for CO ₂ emissions	Change in global CO ₂ emissions in 2050 (percent of 2005 emissions)	Global average temperature increase above pre-industrial at equilibrium using 'best estimate' climate sensitivity	Global average sea level rise above pre-industrial at equilibrium from thermal expansion only	Number of assessed scenarios
	ppm	ppm	year	percent	°C	meters	
I	350 – 400	445 – 490	2000 – 2015	-85 to -50	2.0 – 2.4	0.4 – 1.4	6
II	400 – 440	490 – 535	2000 – 2020	-60 to -30	2.4 – 2.8	0.5 – 1.7	18
III	440 – 485	535 – 590	2010 – 2030	-30 to +5	2.8 – 3.2	0.6 – 1.9	21
IV	485 – 570	590 – 710	2020 – 2060	+10 to +60	3.2 – 4.0	0.6 – 2.4	118
V	570 – 660	710 – 855	2050 – 2080	+25 to +85	4.0 – 4.9	0.8 – 2.9	9
VI	660 – 790	855 – 1130	2060 – 2090	+90 to +140	4.9 – 6.1	1.0 – 3.7	5

Notes:

- The emission reductions to meet a particular stabilization level reported in the mitigation studies assessed here might be underestimated due to missing carbon cycle feedbacks.
- Atmospheric CO₂ concentrations were 379ppm in 2005. The best estimate of total CO₂-eq concentration in 2005 for all long-lived GHG is about 455ppm, while the corresponding value including the net effect of all anthropogenic forcing agents is 375ppm CO₂-eq.
- Ranges correspond to the 15th to 85th percentile of the post-TAR scenario distribution. CO₂ emissions are shown so multi-gas scenarios can be compared with CO₂-only scenarios
- The best estimate of climate sensitivity is 3°C.
- Note that global average temperature at equilibrium is different from expected global average temperature at the time of stabilization of GHG concentrations due to the inertia of the climate system. For the majority of scenarios assessed, stabilization of GHG concentrations occurs between 2100 and 2150.
- Equilibrium sea level rise is for the contribution from ocean thermal expansion only and does not reach equilibrium for at least many centuries. These values have been estimated using relatively simple climate models (one low-resolution AOGCM and several EMICs based on the best estimate of 3°C climate sensitivity) and do not include contributions from melting ice sheets, glaciers and ice caps. Long-term thermal expansion is projected to result in 0.2 to 0.6m per degree Celsius of global average warming above pre-industrial. (AOGCM refers to Atmosphere-Ocean General Circulation Model and EMICs to Earth System Models of Intermediate Complexity.)

Source: Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*, November 2007, Table SPM 6, p. 20.

gases 3.5 percent, and non-fossil fuel CO₂ emissions constitute 2.3 percent.³¹ CO₂ emissions in California are mainly associated with fossil fuel consumption in the transportation sector (41.2 percent) with the industrial sector as the second-largest source (22.8 percent). Electricity production, from both in-state and out-of-state sources,³² agriculture, forestry, commercial, and residential activities comprise the balance of California's climate change emissions.

Based on these inventories of California GHG emissions, several emission reduction regulations have been established for the state. Through Executive Order (EO) S-3-05, the following GHG

31 Ibid.

32 Both in-state and out-of-state electricity sources are included in GHG emissions in California. This is due to the difficulty inherent in separating the electricity that originates from an in-state source or an out-of-state source. The in-state and out-of-state sources could be split by the percentages they contribute in California, but this percentage would vary by region, time of year, and energy demand. Thus, this percentage would be difficult to obtain because energy providers must supplement what it cannot obtain from in-state with sources from out of state and the percentage of in-state and out-of-state sources fluctuates depending on the market in a given period of time. For a conservative analysis, both in-state and out-of-state sources are considered.

emission reduction targets were established: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. The California Climate Action Team's Report (CAT Report) to the Governor in 2006, contains recommendations and strategies to help ensure the targets in Executive Order S-3-05 are met.³³ In addition to EO S-3-05, as part of the California Global Warming Solutions Act of 2006 (AB 32), the CARB is required to establish a statewide GHG emissions cap for 2020 based on 1990 emissions. By January 1, 2008, CARB was to determine what the California GHG emission inventory was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level to be achieved by 2020. On December 6, 2007, CARB approved the recommended amount of 427 MMTCO₂e as the total statewide GHG 1990 emissions level, which is also what California must reduce its emissions to by 2020. CARB also estimated the State's GHG emissions in 2020 without implementation of additional GHG reduction strategies. For the "business-as-usual" estimate in 2020, total emissions are approximated at 600 MMTCO₂e.³⁴

Figure 8-4 shows the GHG reductions necessary to reduce emissions from the "business as usual" scenario in 2020 down to 1990 levels.

Regulatory Context

Because the effects of climate change present growing economic, social, and environmental risks around the globe, many states in the U.S. and governments around the world have taken action and made commitments to reducing GHG emissions and establish strategies for addressing this issue. Examples of international, national, and local regulations are discussed below.

■ International

Montreal Protocol

The Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol governs compounds that deplete ozone in the stratosphere—chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform. The Protocol provided that these compounds were to be phased out by 2000 (2005 for methyl chloroform). In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC) to assess "the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation".³⁵

33 State of California, Environmental Protection Agency, Climate Action Team, *Climate Action Team Report to Governor Schwarzenegger and the California Legislature*, March 2006.

34 California Air Resources Board, Staff Report, California 1990 Greenhouse Gas Emission Level and 2020 Emissions Limit, Public Release Date: November 16, 2007.

35 Principles Governing IPCC Work, Approved at the Fourteenth Session (Vienna, 1-3 October 1998) on 1 October 1998, <www.climate-science.gov/Library/ipcc/princ.pdf>, accessed April 28, 2008.

United Nations Framework Convention on Climate Change

On March 21, 1994, the United States joined a number of countries around the world in signing the *United Nations Framework Convention on Climate Change* (UNFCCC). Under the Convention, governments: "gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change."³⁶

Kyoto Protocol

A particularly notable result of UNFCC efforts was a treaty known as the Kyoto Protocol. Countries signed the treaty to demonstrate their commitment to reducing GHG emissions or to engaging in emissions trading. More than 160 countries representing 55 percent of global emissions (not including the United States) are currently participating in the protocol. In 1998, U.S. Vice President, Al Gore, symbolically signed the Protocol; however, in order for the Protocol to be formally ratified the U.S. Congress must adopt it, which has not yet occurred.

■ Federal

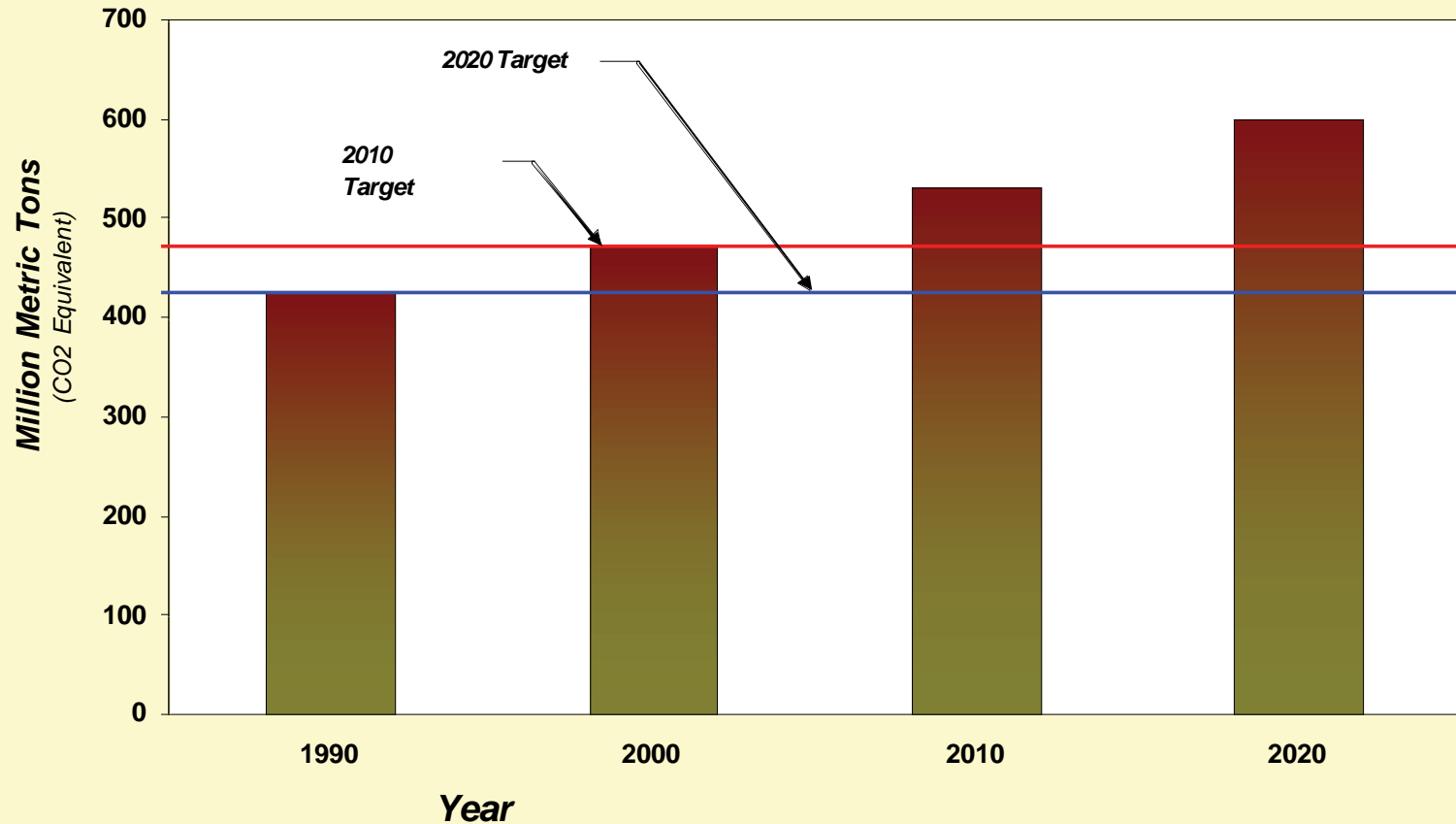
U.S. Environmental Protection Agency

The U.S. EPA is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The EPA also has jurisdiction over emission sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the EPA requires each state with non-attainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in non-attainment areas, using a combination of performance standards and market-based programs.

The EPA currently does not regulate GHG emissions from motor vehicles. In a recent court case, *Massachusetts v. EPA* (Supreme Court Case 05-1120) it was argued before the U.S. Supreme Court on November 29, 2006, in which it was petitioned that EPA regulate four GHG, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was rendered

36 United Nations, Department of Public Information, News and Media Division, *Press Conference on Climate Change*, January 16, 2007, <www.un.org/News/briefings/docs/2007/070116_de_Boer.doc.htm>, accessed April 28, 2008.



Legend
 Actual and Project Emissions

Figure 8-4
 AB 32 Required GHG
 Reductions

Source: California Climate Action Team, California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, Figure 3-1.

on April 2, 2007, in which the Court held that petitioners have standing to challenge the EPA and that the EPA has statutory authority to regulate emission of GHG from motor vehicles. The State of California has requested that the federal government adopt stricter smog control requirements over 50 different times. The state passed AB 1493 (see discussion below) and is one of the few states acting to independently adopt stricter rules to curb emissions from automobiles. California has the authority under the federal Clean Air Act to set its own air pollution standards -- if it can convince the federal EPA that the state faces "compelling and extraordinary conditions." If the EPA agrees, it issues the state a waiver, which opens the door for other states to adopt similar regulations. On December 19, 2007, the federal EPA denied California's request for the necessary waiver to implement its law. Therefore, the state is now pursuing a lawsuit against the federal EPA.

Federal Clean Air Act

The Federal CAA, as amended, establishes air quality standards for several pollutants. These standards are divided into primary standards and secondary standards. Primary standards are designed to protect public health, and secondary standards are intended to protect public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. The CAA requires that regional plans be prepared for non-attainment areas illustrating how the federal air quality standards could be met. The CARB approved the most recent revision of the SIP in 1994, and submitted it to the EPA. The SIP, approved by the EPA in 1996, consists of a list of ROG and NO_x control measures for demonstrating future attainment of ozone standards. The steps to achieve attainment will continue to require significant emissions reductions in both stationary and mobile sources.

Lieberman-Warner Climate Security Act

The Lieberman-Warner Climate Security Act (S. 2191) is the first greenhouse gas cap-and-trade legislation approved by a full Congressional committee on December 5, 2007. The bill, as passed by the Senate Environment and Public Works Committee in an 11-8 vote, would establish a cap-and-trade program within the U.S. requiring a 70 percent reduction in GHG emissions from covered sources, which represent over 80 percent of total U.S. emissions. The bill as amended also includes complementary policies, such as a low carbon fuel standard and provisions aimed at enhancing energy efficiency. The cap on facilities producing HFCs would start in 2010 at 300 MMTCO₂e and decline to 90 MMTCO₂e by 2037, remaining at that level through 2050. Emissions from all other covered facilities would be capped at 5,775 MMTCO₂e in 2012, with this cap decreasing annually to 1,732 MMTCO₂e in 2050. The two caps combined would result in roughly a 19 percent reduction from 2005 levels in 2020 and a 70 percent reduction from 2005 levels by 2050. Taken together, the bill would reduce overall U.S. GHG emissions by 63 percent by 2050.³⁷

37 The Pew Center on Global Climate Change, U.S. Federal Action on Climate Change, <www.pewclimate.org/federal/analysis/congress/110/lieberman-warner>, accessed April 28, 2008.

■ State

California Air Resources Board

The CARB, a part of the California EPA (Cal EPA) is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. The CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. The CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

In addition to reducing emissions of criteria air pollutants under the California Clean Air Act (CCAA), the CARB has been tasked with monitoring and reducing GHG emissions under AB 32. CARB is required to: 1) establish a statewide GHG emissions cap for 2020, based on 1990 emissions by January 1, 2008; 2) adopt mandatory reporting rules for significant sources of GHG by January 1, 2008; 3) adopt a plan by January 1, 2009 indicating how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms and other actions; 4) adopt regulations by January 1, 2011 to achieve the maximum technologically feasible and cost-effective reductions in GHGs, including provisions for using both market mechanisms and alternative compliance mechanisms; 5) convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee to advise ARB; 6) ensure public notice and opportunity for comment for all CARB actions; 7) prior to imposing any mandates or authorizing market mechanisms, requires CARB to evaluate several factors, including but not limited to: impacts on California's economy, the environment, and public health; equity between regulated entities; electricity reliability, conformance with other environmental laws, and to ensure that the rules do not disproportionately impact low-income communities; and 8) adopt a list of discrete, early action measures by July 1, 2007 that can be implemented before January 1, 2010 and adopt such measures.³⁸

California Clean Air Act

The CCAA of 1988 requires non-attainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide standards. The CCAA also requires that by the end of 1994 and once every three years thereafter, the air districts are to assess their progress toward attaining the air quality standards. The triennial

38 California Air Resources Board, AB 32 Fact Sheet – California Global Warming Solutions Act of 2006, September 25, 2006, <www.arb.ca.gov/cc/factsheets/ab32factsheet.pdf>, accessed April 28, 2008.

assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three year period.

Air Toxics Hot Spots Information and Assessment Act

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 et seq., provides for the regulation of over 200 air toxics and is the primary air contaminant legislation in the state. Under the Act, local air districts may request that a facility account for its toxic air contaminant (TAC) emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public. The TAC control strategy involves reviewing new sources to ensure compliance with required emission controls and limits, maintaining an inventory of existing sources of TACs, and developing new rules and regulations to reduce TAC emissions. The purpose of AB 2588 is to identify and inventory toxic air emissions and to communicate the potential for adverse health effects to the public.

Assembly Bill 1807

AB 1807, enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. The CARB is responsible for the identification and control of TACs, except pesticide use. AB 1807 defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. The CARB prepares identification reports on candidate substances under consideration for listing as TACs. The reports and summaries describe the use of and the extent of emissions in California resulting in public exposure, together with their potential health effects.

In 1998, the CARB identified diesel particulate matter (DPM) as a toxic air contaminant under the AB 1807 program. DPM is emitted into the air via heavy-duty diesel trucks, construction equipment, and passenger cars. In October 2000, the CARB released a report entitled *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. This plan identifies DPM as the predominant TAC in California and proposes methods for reducing diesel emissions.

Senate Bill 656

As a first step in the implementation of Senate Bill 656 (SB 656, Reducing Particulate Matter in California), the CARB approved a list of the most readily available, feasible, and cost-effective control measures that can be employed by air districts to reduce particulate matter PM₁₀ and PM_{2.5} (collectively referred to as PM) in 2004. The list is based on rules, regulations, and programs existing in California as of January 1, 2004, for stationary, area-wide, and mobile sources. As a second step air districts must adopt implementation schedules for selected

measures from the list. The implementation schedules will identify the appropriate subset of measures, and the dates for final adoption, implementation, and the sequencing of selected control measures. In developing the implementation schedules, each air district will prioritize measures based on the nature and severity of the PM problem in their area and cost-effectiveness. Consideration is also given to ongoing programs such as measures being adopted to meet national air quality standards or the state ozone planning process. The consideration and adoption of air district rules in their implementation schedules, coupled with CARB's ongoing programs, will ensure continued progress in reducing public exposure to PM and attainment of the state and federal standards.

Senate Bill 700

In September 2003, the California Legislature adopted SB 700: Agriculture and Air Quality Summary and Implementation. This bill removed a long-standing statute that exempted agricultural operations from obtaining operating permits for sources of air pollution. The bill requires agricultural sources with emissions greater than or equal to one-half the threshold for a federal major source to obtain a permit, and sources that meet or exceed the threshold for a federal major source to obtain a federal operating permit from U.S. EPA or a local district with a federally approved federal operating permits program.

California Code of Regulations Title 24

Although it was not originally intended to reduce greenhouse gases, California Code of Regulations Title 24 Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings* were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest amendments, made in October 2005, currently require new homes to use half the energy they used only a decade ago. Energy efficient buildings require less electricity, and electricity production by fossil fuels results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

California Assembly Bill 1493

California Assembly Bill 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHG emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB will apply to 2009 and later model year vehicles. CARB estimates that the regulation will reduce climate change emissions from the light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.³⁹ However, as discussed above, the federal EPA has not issued a waiver needed by the state in order to enforce this law. Therefore, the state is now pursuing a lawsuit against the federal EPA.

39 California Air Resources Board, *Fact Sheet, Climate Change Emission Control Regulations*, December 2004, <www.arb.ca.gov/cc/factsheets/cc_newfs.pdf>, accessed April 28, 2008.

Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. The California Climate Action Team's Report (CAT Report) to the Governor in 2006, contains recommendations and strategies to help ensure the targets in Executive Order S-3-05 are met.⁴⁰

California Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG in California. GHG as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires the CARB, the state agency charged with regulating state-wide air quality, to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to state-wide levels in 1990 by 2020. On or before June 30, 2007, CARB is required to publish a list of discrete early-action GHG emission reduction measures that can be implemented by 2010. The law further requires that such measures achieve the maximum technologically feasible and cost effective reductions in GHGs from sources or categories of sources to achieve the statewide greenhouse gas emissions limit for 2020.

AB 32 also requires that by January 1, 2008, CARB shall determine what the state-wide greenhouse gas emissions level was in 1990, and approve a state-wide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not yet been approved, reported emissions vary from 425 to 468 MMTCO₂e. In 2004, the emissions were estimated at 492 MMTCO₂e.⁴¹ Shortly after AB 32 was passed the City wrote a letter of support to the legislative sponsors of the bill.

CARB published its final report, *Proposed Early Actions to Mitigate Climate Change in California*, which describes recommendations for discrete early action measures to reduce GHG emissions in October 2007. The measures included are part of California's strategy for achieving GHG reductions under AB 32. One of the sources for the potential measures includes the CAT Report. Three new regulations are proposed to meet the definition of "discrete early action greenhouse gas reduction measures," which include the following: 1) a low carbon fuel standard; 2) reduction of HFC-134a emissions from non-professional servicing of motor vehicle air conditioning systems; and 3) improved landfill methane capture. CARB

40 State of California, Environmental Protection Agency, Climate Action Team, *Climate Action Team Report to Governor Schwarzenegger and the California Legislature*, March 2006.

41 California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, Staff Final Report, December 2006, p. i.

estimates that by 2020, the reductions from those three measures would be approximately 13-26 million metric tons of carbon dioxide equivalent.

Under AB 32, CARB has the primary responsibility for reducing GHG emissions. However, the CAT Report contains strategies that can be undertaken by many other California agencies. In addition, CARB staff are working on several non-regulatory measures including guidance documents and protocols to encourage the public, local government, and businesses to take positive steps to reduce GHG emissions.

Executive Order S-01-07

Governor Arnold Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a state-wide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The process for meeting the 2020 target includes coordination between Cal EPA, the University of California, and the California Energy Commission to develop and propose a draft compliance schedule to meet the 2020 Target by June 30, 2007. The order also requires that a Low Carbon Fuel Standard for transportation be established for California.

Senate Bill 1368

Senate Bill (SB) 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission (PUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. Similarly, the California Energy Commission (CEC) was tasked with establishing a similar standard for local publicly-owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and the CEC. In January 2007, the PUC adopted an interim GHG Emissions Performance Standard, which requires that all new long-term commitments for baseload generation entered into by investor-owned utilities have emissions no greater than a combined cycle gas turbine plant (i.e., 1,100 pounds of CO₂ per megawatt-hour). A "new long-term commitment" refers to new plant investments (new construction), new or renewal contracts with a term of 5 years or more, or major investments by the utility in its existing baseload power plants. In May 2007, the CEC approved regulations that prohibit the state's publicly owned utilities from entering into long-term financial commitments with plants that exceed the standard adopted by the PUC of 1,100 pounds of CO₂ per megawatt hour.

Senate Bill 1078

SB 1078 establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice

aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 107 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcomes of this legislation will impact regional transportation powered by electricity.

Senate Bill 97

The provisions of Senate Bill 97 enacted in August 2007 as part of the State Budget negotiations, direct the Office of Planning and Research to propose CEQA Guidelines advising lead agencies how to mitigate the impacts of greenhouse gas emissions. OPR has been directed to promulgate such guidelines by July 2009, and the Resources Agency has been directed to adopt such guidelines by January 2010. At this time, however, there are no CEQA Guidelines or other formal direction from regulatory agencies regarding the analysis of greenhouse gas emissions.

Additional California Climate Change Initiatives

The Western Regional Climate Action Initiative was signed on February 26, 2007 by five states: 1) Washington, 2) Oregon, 3) Arizona, 4) New Mexico, and 5) California. British Columbia, Canada joined on April 20, 2007. The Initiative calls for collaboration to identify, evaluate, and implement ways to reduce GHG emissions in the states collectively and to achieve related co-benefits. The Initiative calls for designing a regional market-based multi-sector mechanism, such as a load-based cap and trade program by August 2008. In addition, a multi-state registry will track, manage, and credit entities that reduce GHG emissions. California is also exploring the possibility of cap and trade systems for greenhouse gases. The Market Advisory Committee to CARB published draft recommendations for designing a greenhouse gas cap and trade system for California.⁴²

In December 2007, the CEC adopted requirements that new residential construction be designed to meet zero net energy by 2020 with commercial construction meeting this requirement by 2030.⁴³

■ Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is a special district created by state law to enforce local, state, and federal air pollution regulations. The SMAQMD's overall mission is to achieve clean air goals by leading the Sacramento region in protecting public health and the environment through effective programs, community involvement, and public education. The SMAQMD interacts with local,

42 Recommendations of the Market Advisory Committee to the California Air Resources Board, *Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California*, June 30, 2007, p. iii.

43 Keith Roberts, Greenhouse Gas Coordinator, City of Sacramento, written communication, May 2008.

state, and federal government agencies, the business community, environmental groups, and private citizens to achieve these goals. The District can regulate air pollutant emissions from stationary sources by establishing permit limitations and inspection programs. The District also adopts a number of rules and regulations as necessary to meet state and federal mandates. Mobile source emissions are also regulated indirectly by the SMAQMD supporting alternative and clean fuel vehicles with planning and transportation entities.

SMAQMD also establishes air quality standards that apply to development projects in Sacramento County. These thresholds were developed by the SMAQMD to quantify and evaluate project air quality impacts. To date, neither local jurisdictions, the state, the federal government, nor SMAQMD have developed specific greenhouse gas thresholds of significance for analyzing projects under CEQA. Despite lack of a greenhouse gas threshold, the District recommends that CEQA documents include a discussion of anticipated greenhouse gas emissions during both construction and operational phases of the project.⁴⁴

City of Sacramento

In 2001, the City amended its General Plan to incorporate Smart Growth Principles. These principles, which informed the development of guiding principles for the 2030 General Plan, are intended to change urban development patterns so that development, through density and mix of land uses, transportation management, and infrastructure design and construction, would discourage urban sprawl, promote infill development, reduce vehicle miles traveled, and minimize air pollutant emissions.

The City has adopted a Sustainability Master Plan “Creating A Sustainable City – A Master Plan to Move the City of Sacramento Towards Sustainability” - which provides targets and goals a broader range of categories (focus areas) related to sustainability. These focus areas are 1) energy independence; 2) climate protection; 3) air quality; 4) material resources; 5) public health and nutrition; 6) urban design, land use, green building and transportation; and 7) parks, open space and habitat protection; 8) water resources and flood protection; 9) public involvement and personal responsibility. A large proportion of the goals and targets in the Sustainability Master Plan apply to the City’s internal operations. The Sustainability Master Plan was followed by the adoption of a Sustainability Implementation Plan (2008) containing short, medium, and long-term implementation measures for the Sustainability Master Plan.

The Sustainability Master Plan includes the following Goals and Targets pertinent to this discussion as follows:

Goals:

- *Meet the intent of the Global Warming Solutions Act (AB32) (or subsequent laws) for:*

44 Larry Greene, Air Pollution Control Officer, Sacramento Metropolitan Air Quality Management District, Memorandum, *Addressing Climate Change in CEQA Documents*, September 6, 2007.

- *City operations.*
- *The community of Sacramento.*
- *The SACOG region by working with community partners.*
- *Develop a climate adaptation plan for the region by working with community partners.*

Targets (Selected)

- *By 2015, the SACOG region will have a climate adaptation plan in place.*
- *By 2020, the SACOG planning region will have reduced carbon dioxide emissions to 1990 levels.*
- *By 2050, the SACOG planning region will have reduced carbon dioxide emissions by 80% relative to 1990 level emissions (or per subsequent State law)."*

CLIMATE CHANGE EVALUATION

Methods of Analysis

Currently no state or regional regulatory agency has issued guidance regarding the analysis of GHG emissions in environmental documents prepared under the California Environmental Quality Act (CEQA). The State Office of Planning and Research (OPR) has been directed to develop guidelines for the mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009 under Senate Bill 97. However, SB 97 does not require OPR to establish any thresholds of significance for determining GHG emission impacts in a CEQA document.

The California Air Pollution Control Officers Association prepared a white paper, *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (January 2008), which evaluates a variety of analytical methods and modeling tools to estimate GHG emissions from a project. The white paper examines methodologies local jurisdictions may use to determine a project's contribution to the cumulative impact of global climate change. The white paper identifies three approaches to GHG significance criteria in a CEQA analysis: (1) no significance threshold for GHG emissions; (2) GHG emissions threshold set at zero; or (3) GHG threshold set at a non-zero level. Although the white paper explores the advantages and disadvantages of each method, the white paper states that it is not intended as a directive, but rather that it should be used to serve as a resource until statewide guidance is established.⁴⁵

Nevertheless, the state must achieve compliance with the requirement of AB 32 to reduce GHG emissions to 1990 levels by 2020. As discussed in the Environmental Setting above, the state has estimated that its annual GHG emissions in 1990 were approximately 427 MMTCO₂e. For

⁴⁵ California Air Pollution Control Officers Association, *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.

purposes of comparison, the 2004 state emissions were 497 MMTCO₂e, and the “business as usual” estimate for 2020 is 600 MMTCO₂e. However, different regions and jurisdictions within the state have contributed to GHG emissions at different rates and levels, and it is unlikely that a single statewide reduction rate will be identified. The City of Sacramento is currently working with Sacramento County and the other cities within the county to develop a county-wide, 1990 inventory of GHG emissions, but that work is not yet completed.⁴⁶ Completion of the inventory is expected by December 2008. Therefore, it is difficult to determine at this time what the City of Sacramento’s responsibility will be to reduce statewide GHG emissions to meet the AB 32 reduction targets.

Given these limitations, the impact analysis of GHG emissions for the 2030 General Plan will use both a quantitative approach to estimate the net greenhouse gas emissions from anticipated development under the 2030 General Plan and a qualitative analysis of the greenhouse gas reduction potential of the General Plan goals and policies, implementation programs, and the mitigation measures identified in this EIR by a comparison of these goals, policies, programs, and mitigation measures to the statewide reduction strategies identified in the 2006 CAT Report and by the State Attorney General. In the absence of a 1990 Sacramento county-wide emissions baseline, however, no firm conclusions can be drawn regarding how adoption and implementation of the 2030 General Plan will contribute to achieving the GHG emission reduction requirements under AB 32 in the long term.

■ Greenhouse Gas Emissions Analysis – Overview of Methodology

The following methods are used to assess the significance of the 2030 General Plan’s cumulative contribution to global climate change:

1. **Quantitative Analysis - Project Inventory of Greenhouse Gases:** In California, fossil fuel consumption in the transportation sector is the single largest source of GHG emissions (41 percent). The industrial sector is the second largest source at 23 percent. Electricity production from both in-state and out-of-state sources contributes approximately 20 percent of California’s GHG emissions. The remainder of GHG emissions is attributed to agriculture, forestry, commercial, and residential activities.⁴⁷ Approximately 81 percent of GHG emissions are made up of CO₂ from fossil fuel combustion. The remainder of anthropogenic GHG emissions consist of non-fossil fuel

46 The City of Sacramento is currently working with Sacramento County and the other incorporated cities within the county to develop a countywide, 1990 inventory of GHG emissions. Because local GHG emission data for 1990 is not readily available, it is anticipated that 2005 data will be established as the baseline, and the City, the County, the other six incorporated cities in the county, and ICLEI, Local Governments for Sustainability, will collaborate to develop a formula for determining the 1990 levels from the 2005 data. ICLEI is an international association of local governments which provides technical consulting, training, and information services so jurisdictions can achieve their sustainability objectives, such as developing inventories of GHG emissions to reduce their impact on global climate change.

47 State of California, Environmental Protection Agency, Climate Action Team, March 2006, Climate Action Team Report to Governor Schwarzenegger and the California Legislature, pp. 9 and 10.

CO₂ (2.3 percent), methane (6.4 percent), nitrous oxide (6.8 percent), and other high global warming potential gases (3.5 percent).⁴⁸

The amount of CO₂ that would be generated by all mobile sources in the Policy Area under existing conditions (2005 baseline year) and proposed General Plan at the 2030 buildout year were calculated using the URBEMIS 2007 model 2030 VMT projections for the City of Sacramento transportation model (see Appendix C). Area-wide emissions, which includes emissions from hearths/stoves, landscaping equipment, and natural gas (used for heating and cooking), were calculated using the URBEMIS 2007 model. To determine area-wide emissions, the URBEMIS model associates a per-unit or per-square-foot area source emissions factor with each type of land use. CO₂ emissions from the six-county region, the Sacramento Area Council of Governments (SACOG) regional planning area which includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba were estimated by applying the ratio of the area wide-to-mobile source categories from CARB's California Emission Forecasting System (CEFS) inventory. Table 8-3 shows the total CO_{2e} emissions from area-wide and mobile sources in the year 2030 from all land uses in the Policy Area and the six-county region under both existing conditions and the proposed 2030 General Plan, and the net change in emissions with the proposed General Plan. Indirect emissions from electricity generated to supply land uses in the General Plan area are based on Statewide emissions data and energy use factors provided by the California Energy Commission for the proposed land use types (see Table 8-3 footnotes).

Emissions of methane are estimated based on the solid waste generation rates provided in section 6.11, Public Utilities of this Draft MEIR. It should be noted here that, given the global nature of greenhouse gas emissions and its relationship to climate change, there are significant limitations inherent in any methodology attempting to quantify the greenhouse gas emissions from land development and urbanization within the Policy Area and its predicted environmental impact on climate change. These limitations are discussed in the analysis.

- 2. Qualitative Analysis - Comparison with Statewide Greenhouse Gas Reduction Strategies:** The 2030 General Plan's goals, policies, and implementation measures are compared to the GHG reduction strategies already adopted or under consideration for adoption under AB 32 or other state agencies. All circumstances where the 2030 General Plan incorporates feasible GHG reduction policies and mitigations are identified.

48 Ibid, p. 11.

TABLE 8-3						
2030 GENERAL PLAN CO ₂ e EMISSIONS – YEAR 2030 (TONS/DAY)						
Source	Existing Conditions		Under 2030 General Plan		Net Emissions	
	General Plan Area	Six-County Region ⁸	General Plan Area	Six-County Region	General Plan Area	Six-County Region
Operation						
Area-wide ¹	457	1,777	841	2,723	384	946
Mobile ²	9,135	24,118	12,704	36,961	3,569	12,843
Electricity ³	1,641	12,518	2,335	19,184	694	6,666
Solid Waste ⁴	4,467	N/A	4,541	N/A	74	N/A
Wastewater Treatment ⁵	21	N/A	29	N/A	8	N/A
Municipal ⁶	184	N/A	287	N/A	103	N/A
TOTAL	15,905	38,413	20,737	58,868	4,832	20,455
Construction						
Equipment and Trips ⁷	N/A	N/A	27	N/A	27	N/A
Notes:						
Emissions for the General Plan Area were calculated as follows:						
<ol style="list-style-type: none"> Area sources were calculated by inputting the floor areas provided in Revised Appendix C into URBEMIS 2007. Outputs are provided in Revised Appendix C. Area-wide emissions include emissions from hearths/stoves, landscaping equipment, architectural coatings (paint), and natural gas (generally used for heating and cooking). Mobile sources for 2005 were based on floor areas for 2005, while mobile sources for 2030 were based on an adjusted VMT provided by Fehr and Peers, Associates. Both floor area and VMT were inputted into URBEMIS 2007. Mobile sources only include automobiles, light trucks, heavy trucks, and on-road vehicles. Mobile sources not included in this table include airplanes, trains, boats, or other off-road vehicles. Outputs are provided in Revised Appendix C. Electricity sources were calculated by estimating energy use for each land use. Energy factors for non-residential uses are from CEC, 2006. Commercial End Use Study, Table 8-1. Energy factors for residential uses are from CEC, 2004. California Statewide Residential Appliance Saturation Study, Table 2-3. Emissions factors from the CCAR 2007 protocol were then applied. Landfill gas emissions = Tons landfilled x.22x.77x.67. Estimates were obtained by multiplying the tons of solid waste landfilled annually (provided in Section 6.11, Public Utilities on page 6.11-66 of the Draft EIR) by the percent of degradable material they contain, by the percent dissimilated and by the pounds of gas produced per pound of biomass. Fugitive emissions from the Regional Waste Water Treatment Plant were calculated according to the EPA's protocol for fugitive emissions, outlined in the text. These emissions do not include sewage transfer emissions, which are reported under municipal emissions. Municipal emissions include emissions from City operated vehicles, facilities and infrastructure. Emissions associated with the municipal water supply, and well as emissions associated with sewage collection, are included in this category. Source: Energy and Climate Working Group of the Sustainability Advisory Committee, City of Sacramento, Draft Climate Action Plan, June 29, 2007. Total emissions were converted from tons to metric tons using a factor of 1.102 tons/metric ton. Annual construction emissions were calculated by inputting the floor areas provided in Revised Appendix C into URBEMIS 2007, then dividing by 22 years, the buildout time frame. Daily construction emissions were estimated by dividing annual emissions by 365. Outputs are provided in Revised Appendix C. The Six-County Region refers to the Sacramento Area Council of Governments (SACOG) regional planning area which includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. No floor area data was available for this region. Emissions for the Six-County Region were calculated as follows: <ol style="list-style-type: none"> Area sources were calculated by adjusting the URBEMIS 2007 values for mobile sources by the ratio of the area wide-to-mobile source categories from CARB's California Emission Forecasting System inventory. Mobile sources were calculated using the URBEMIS 2007 model with VMT inputs for 2005 and 2030 provided by Fehr and Peers, 2008. Electricity sources were calculated by linear regression based on Statewide emissions data from transportation and electric power plants given in <i>Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004</i>, California Energy Commission, December 2006. 						
4,5,6. Because no floor area, solid waste volumes, municipal inventories or wastewater volumes are available for the Six-County Region, emissions from these sources could not be included in the regional inventory.						
Source: PBS&J, 2008.						

- a. Compliance with AB 32: Project compliance with the emission reduction strategies of the California Climate Action Team's (CAT) Report to the Governor is assessed. The CAT report proposes a path to achieve the Governor's greenhouse gas reduction targets contained in Executive Order S-3-05. While the CAT report and Executive Order S-3-05 do not specifically mention CEQA, they do include a list of various measures that can be employed to achieve the GHG reduction targets. Similar to Executive Order S-3-05, AB 32 also contains the same reduction target for the year 2020 (i.e., reduction of 2020 greenhouse

gas emissions to 1990 levels). Executive Order S-3-05 includes the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.

- b. Incorporation of Office of the Attorney General's Recommendations: The Office of the Attorney General has published recommended measures for addressing global climate change impacts in general plans. These Recommendations for Addressing Global Warming in General Plans are listed with the associated 2030 General Plan policies that address each recommendation.

Analysis

■ Inventory of Greenhouse Gases

AB 32 requires that the state reduce California GHG emissions to 1990 levels by 2020. Reducing GHG emissions to 1990 levels will require a 28 to 33 percent reduction in “business as usual” GHG emissions for the entire state. To determine what emission reductions are required for development within a particular jurisdiction, a 1990 GHG emissions inventory for that jurisdiction must be developed.

As noted above, the City of Sacramento is currently working with Sacramento County and other incorporated cities within the county to develop a Sacramento countywide 1990 inventory of GHG emissions, but no results are currently available. The discussion below quantifies the GHG emissions anticipated to result from buildout under the 2030 General Plan, but does not establish any specific reduction targets because that information is not yet available. The 28 to 33 percent statewide reduction mentioned above may be used as a reference.

Construction Emissions

Construction of future greenfield and infill projects will result in GHG emissions from the use of construction equipment. The details of these construction activities are unknown at this time; however, an estimate of annual construction emissions, based on projected General Plan land uses, is provided in Table 8-3. This estimate is provided for informational purposes and is subject to change based on project-level construction phasing and equipment. An estimate of all construction emissions associated with the proposed development levels was generated using the URBEMIS 2007 software; this estimate was then divided by the time horizon for the proposed General Plan (+/-22 years) for an estimate of average annual emissions. No existing baseline data is available for construction emissions, as such emissions vary substantially from year to year. General Plan policies and mitigation measures (see, for example, section 6.1, Air Quality) will operate to reduce construction-related emissions to a level below “business as usual.”

Operational Emissions

Operational emissions include both direct sources such as vehicles, natural gas consumption for heating/cooling buildings, hearths and landscaping equipment, and indirect sources, such as power plants outside the Policy Area that would supply the city's electricity. GHG emissions from area sources combustion of natural gas for heating/cooling, operation of facility maintenance and landscaping equipment, and hearth/fireplace operation – were estimated using the URBEMIS 2007 model. The URBEMIS 2007 model⁴⁹ was used to estimate vehicle emissions. Indirect emissions from electricity generation were estimated by applying electricity generation factors from the California Energy Commission to proposed land uses, then applying CCAR emissions factors. Fugitive emissions associated with solid waste, water supply, and wastewater treatment were estimated using guidelines produced by the U.S. Environmental Protection Agency. The estimated annual GHG emissions associated with implementation of the 2030 General Plan are identified in Table 8-3. Table 8-3 shows the total direct and indirect operational CO₂e emissions under existing 2005 conditions, total direct and indirect GHG operational emissions under the proposed 2030 General Plan, and the net change in emissions comparing the 2030 General Plan to existing conditions. The GHG emission effects of each of the proposed 2030 General Plan policies are not individually quantifiable and so are not shown in Table 8-3.

It is important to note that the City is currently working with its regional partners to develop a communitywide (emissions associated with all public and private development within the city limits) inventory for 1990 emissions and 2005 emissions, in compliance with AB 32. This inventory would be comprehensive and include estimates of 1990 and 2005 emissions for all public and private sources. For purposes of this discussion, this detailed inventory is referred to as the “communitywide inventory.” The 2005 communitywide baseline developed from this comprehensive inventory will be used to determine the City's Climate Action Plan (CAP) that is currently in the development stages.

At the time of publication of the Draft MEIR, the communitywide inventory was not available. Therefore, the analysis in the Draft MEIR evaluates potential GHG emissions from municipal sources, private and public vehicle trips, and statewide estimates of private and public electricity usage. The inventory shown in Table 8-3 is a conservative estimate and does not consider GHG emissions reductions that may occur after implementation of 2030 General Plan policies and programs. Detailed and accurate information regarding private and public emissions is still being compiled by the regional partners at this time.

The “municipal inventory” identified in Table 8-3 only considers emissions generated by City entities and service providers and City-operated vehicles, facilities, and infrastructure (i.e., City operated-buildings, City-operated water supply pumps, City-operated sewage collection facilities). It is estimated that the City's municipal inventory emissions represent approximately

49 The URBEMIS model is based on the EMFAC model.

67,241 tons (approximately 184 tons/day).⁵⁰ For the purposes of this MEIR, the data included in Table 8-3 is the best available baseline estimate available at this time for an assessment of greenhouse gas emissions.

It is anticipated that the City's portion of the 1990 and 2005 communitywide inventories will take into consideration the data included in Table 8-3 of the Draft MEIR as well as more detailed emissions information that is currently not available. This citywide inventory, for example, could refine the generalized statewide electricity emissions factors used in the Draft MEIR to reflect local conditions and energy consumption patterns.

The amount of CO₂ that would be generated by all mobile sources in the Policy Area under existing conditions (2005 baseline year) and proposed General Plan at the 2030 buildout year were calculated using the URBEMIS 2007 model for the 2005 and 2030 VMT projections for the City of Sacramento transportation model (see Appendix C). Area-wide emissions, which include emissions from hearth/stoves, landscaping equipment, and natural gas (used for heating and cooking), were calculated using the URBEMIS 2007 model. To determine area-wide emissions, the URBEMIS model associates a per-unit or per-square-foot area source emissions factor with each type of land use. CO₂ emissions from the six-county region, the Sacramento Area Council of Governments (SACOG) regional planning area which includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba were estimated by applying the ratio of the area wide-to-mobile source categories from CARB's California Emission Forecasting System (CEFS) inventory. Table 8-3 shows the total CO₂ emissions from area wide and mobile sources in the year 2030 from all land uses in the Policy Area and the six-county region under both existing conditions and the proposed 2030 General Plan, and the net change in emissions with the proposed General Plan. Indirect emissions from electricity generated to supply land uses in the Policy Area are based on statewide emissions and energy use factors provided by the California Energy Commission for the proposed land use types (see Table 8-3 footnotes). Both in-state and out-of-state electricity sources are included in GHG emissions associated with the Policy Area. This is due to the difficulty inherent in separating the electricity that originates from an in-state source or an out-of-state source. The in-state and out-of-state sources could be split by the percentages they contribute in California, but this percentage would vary by region, time of year, and energy demand. Thus, this percentage would be difficult to validate because each energy provider must supplement what it cannot obtain from in-state with sources from out-of-state and the percentage of in-state and out-of-state sources fluctuates depending on the market in a given period of time. In addition, the electricity demand of a project is not affected by where the electricity may be generated in order to meet the demand of a project. Whether in-state or out-of-state, electricity must be generated to meet the demand of a project; and its generation, whether in-state or out-of-state, would generate GHG emissions. Thus, for a

50 Energy and Climate Working Group of the Sustainability Advisory Committee, City of Sacramento, Draft Climate Action Plan, June 29, 2007. Total emissions were converted from tons to metric tons using a factor of 1.102 tons/metric ton.

conservative analysis, both in-state and out-of-state sources are considered, but ultimately, it is still only the electricity demand of the project that is analyzed.

Water Supply Emissions

Greenhouse gas emissions would be generated by the infrastructure used to distribute and treat the domestic water that would supply development under the proposed General Plan. It is not anticipated that the emissions attributable to the project associated with water demand would be substantial relative to other project emissions. According to the California Air Resource Board's *Inventory of California Greenhouse Gas Emissions and Sinks* (Table A-4),⁵¹ water supply emissions represent approximately 0.04 percent of total statewide emissions. The project would result in 369 tons of CO₂e/day at 2030 buildout associated with water supply.

Wastewater Treatment Emissions

Wastewater treatment would be an additional source of greenhouse gas emissions associated with the project. According to the U.S. Environmental Protection Agency (EPA) emissions reporting protocol, emissions of CO₂ from wastewater treatment are considered to be biogenic GHGs and part of the carbon cycle, and as such, are typically not included in GHG emission inventories. However, this MEIR includes fugitive CH₄ emissions in the GHG emissions inventory.

To estimate fugitive CH₄ emissions from the wastewater treatment plant that serves the Policy Area, the Sacramento Regional Wastewater Treatment Plant, the following equation from the EPA's *Compilation of Air Pollutant Emission Factors* was used.⁵²

$$(P) * \left(\frac{\text{lb BOD}_5}{\text{capita/day}} \right) * \left(\frac{365 \text{ days}}{\text{yr}} \right) * \left(\frac{0.22 \text{ lb CH}_4}{\text{lb BOD}_5} \right) * \left(\frac{\text{Fraction Anaerobically Digested}}{\text{Digested}} \right) = \frac{\text{lb CH}_4}{\text{yr}}$$

Where "P" is the population of the community served by the wastewater treatment plant.

BOD₅ is a 5-day measure of the "strength" of wastewater. A typical value is 0.13 lb BOD₅/capita/day.⁵³

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- 51 California Air Resource Board, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990-2004*, Table A-4.
- 52 EPA, 1995. AP 42, Fifth Edition. *Compilation of Air Pollutant Emission Factors*, Volume 1: Stationary Point and Area Sources, Chapter 4.3. Last updated 2000. Accessed online September 5, 2008 at: <www.epa.gov/ttn/chief/ap42/>. Note: CARB's Local Government Protocols for greenhouse gas reporting include wastewater treatment modeling parameters; however, these parameters are still under development and have not yet been released to the public. Nor do other California models recommended by the OPR, such as CCAR or URBEMIS, include modeling parameters for water and wastewater treatment emissions. The federal emissions factors have been used in place of state factors.
- 53 Viessman, Jr. and M.J. Hammer. 1985. *Water Supply And Pollution Control*. Harper & Row Publishers, New York, NY.
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Fraction Anaerobically Digested refers to the percent of the waste generated that is treated anaerobically. This value depends on the treatment processes used and the operating conditions of the plant. However, the International Panel on Climate Change recommends a default value of 15 percent of domestic water when plant-specific information cannot be easily determined.

The project emissions inventory uses the default/typical values for BOD₅ and Fraction Anaerobically Digested. This results in the following simplified formula:

$$(P) * \left(1.56 \frac{\text{lb CH}_4}{\text{capita/yr}} \right) = \text{lb} \frac{\text{CH}_4}{\text{yr}}$$

Revised Table 8-3 (see Response to Comment 2-3) shows the annual emissions (in tons/day) associated with wastewater treatment based on population estimates and projections from Chapter 5, Population, Employment and Housing. As shown, the 2030 General Plan would result in approximately 39,832 tons of CO₂e/day at 2030 buildout.

Solid Waste Greenhouse Gas Emissions

Solid waste would continue to be generated by existing uses upon implementation of the proposed project. In addition, the 2030 General Plan would allow for the operation of a wide variety of new land uses which would contribute an additional volume of solid waste to nearby landfills. Solid waste generated within the city is currently transferred to the Lockwood, Kiefer, L and D, Yolo County or Florin-Perkins landfills and would contribute to GHG emissions through the off-gassing of CH₄. Treatment and disposal of municipal, industrial, and other solid waste produces significant amounts of CH₄. In addition to CH₄, solid waste disposal sites also produce biogenic CO₂e and non-methane volatile organic compounds (NMVOCs) as well as smaller amounts of N₂O, NO_x and CO. CH₄ produced at solid waste sites worldwide contributes approximately 3 to 4 percent to the annual global anthropogenic greenhouse gas emissions.⁵⁴

In many industrialized countries, waste management has changed much over the last decade. Waste minimization and recycling/reuse policies have been introduced to reduce the amount of waste generated, and increasingly, alternative waste management practices to solid waste disposal on land have been implemented to reduce the environmental impacts of waste management. Also, landfill gas recovery has become more common as a measure to reduce CH₄ emissions from solid waste disposal sites. N₂O emissions from landfills are considered negligible (because the microbial environment in landfills is not very conducive to the nitrification and denitrification processes that result in N₂O emissions) and are, therefore, not explicitly modeled as part of greenhouse gas emissions generated through solid waste.

54 Intergovernmental Panel on Climate Change, *2006 IPCC Guidelines for National Greenhouse Gas Inventories*, 2006, Chapter 3, Solid Waste Disposal, p. 3.6.

Ozone

Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and therefore is not global in nature. According to CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and ROGs) to climate change. Therefore, it is assumed that project emissions of ozone precursors would not significantly contribute to global climate change. At present, there is a federal ban on chlorofluorocarbons; therefore, it is assumed the project would not generate emissions of these greenhouse gases. The project may emit a small amount of hydrofluorocarbon emissions from leakage and service of refrigeration and air conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used in the project and the capacity of these are unknown at this time. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated the project would contribute significant emissions of these additional greenhouse gases.

Limitations on Inventory Calculations

The analysis methodology used for the emissions estimate conservatively assumes that all emissions sources are new sources and that emissions from these sources are 100 percent additive to existing conditions. This is a standard approach taken for air quality analyses. In that context, such an assumption is appropriate, because it is impossible to determine whether emissions sources associated with a project move from outside the air basin and are in effect new emissions sources in that basin, or whether they are sources that were already in the air basin and just shifted to a new location. Assuming that they are new emission ensures against under-reporting.

Numerous factors that can substantially affect a project's CO_{2e} emissions (including structural design, type of building occupants, hours of operation) would not be fully known until buildout under the General Plan is complete.

The emissions calculations described above do not take into account reductions in GHG emissions resulting from implementation of applicable policies. For example, stationary emissions sources that serve the Policy Area (e.g., power plants) would be subject to emissions reductions requirements of AB 32, SB 1078, and SB 1368. The extent of these reductions has not yet been quantified by CARB. At the time of buildout of the 2030 General Plan, overall CO_{2e} emissions attributable to the Policy Area could be substantially less than current emissions assumptions might indicate. Similarly, if GHG emissions reductions for vehicles are enacted, through either the requirements of AB 1493 or AB 32 or a federal regulation, CO_{2e} emissions from the project would be further reduced. Because the federal EPA denied California's request for the necessary waiver to implement AB 1493, the state is now pursuing a lawsuit against the federal EPA. If the state is granted a waiver to implement AB 1493, by project buildout CO_{2e} emissions from vehicles associated with future development could be 20 percent to 30 percent

less than under current conditions. If AB 1493 is repealed, it is unclear what vehicle emissions limits might be adopted as part of AB 32.

Emissions reduction requirements associated with AB 1493 and AB 32, SB 1368, and Executive Order S-3-5 would apply throughout California. Therefore, in addition to the fact that their effect on the project is unclear, their effect on the overall cumulative context relative to all GHG emissions in California is unknown. Even if California meets its emissions reductions targets, such progress will not by itself significantly alter the current worldwide phenomenon of climate change, as worldwide cooperation will be necessary to achieve real progress. Although a daunting challenge, California has taken a leadership role in the nation and in the world absent federal guidance or regulations relating to reducing GHG emissions to stabilize climate change. Historically, California has influenced other states and the federal government to adopt regulations, particularly in the environmental realm. California has taken the lead with efforts to stop climate change by passing AB 32 and AB 1493. Many states are already looking to adopt legislation similar to AB 32. In addition, Arizona, Colorado, Connecticut, Florida, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, and Washington are also interested in adopting California's automobile emissions standards contained in AB 1493.

The models and methodologies used in this analysis evaluate and model aggregate emissions. With respect to the global impact of climate change, however, these models do not demonstrate how much these aggregate emissions relating to a particular project are “new” emissions specifically attributable to development pursuant to the proposed plan. Therefore, in evaluating the project's contribution to GHG emissions, these aggregate emission figures are disclosed, but the determination of the project's contribution is based upon how well the project meets AB 32 requirements, measures that have been recommended by the California Climate Action Team, and recommendations from the Attorney General's Office.

■ Incorporation of Greenhouse Gas Reduction Measures

Reductions through Compliance with AB 32

Under AB 32, CARB has the primary responsibility for reducing greenhouse gas emissions. However, the 2006 CAT Report contains strategies that many other California agencies can implement. The CAT published a public review draft of *Proposed Early Actions to Mitigate Climate Change in California* in 2007.⁵⁵ Most of the strategies contained in the 2007 Report were also in the 2006 CAT Report or are similar to the 2006 CAT strategies. As the 2007 report is only a draft and is not the final, this analysis will assess project compliance with the 2006 CAT Report strategies. The 2006 CAT Report strategies that apply to the project are contained in

55 State of California, Environmental Protection Agency, Climate Action Team, *Climate Action Team Proposed Early Actions to Mitigate Climate Change in California - Draft for Public Review*, April 20, 2007.

Table K-1 included in Appendix K. As shown in the table, the project complies with all feasible and applicable measures to bring California to the emission reduction targets.

Reductions through Compliance with the Office of the Attorney General's Recommendations

The City is aware of several recent letters from the Attorney General's Office stating the need to address the issues of climate change in CEQA documents. The Office of the Attorney General has published recommended measures for addressing global climate change impacts in general plans and can be found at http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf. These Recommendations for Addressing Global Warming in General Plans are listed in Table 8-4 and are shown with the related 2030 General Plan policies that address the recommendation (Appendix K includes all of the referenced policies). Several policies in the 2030 General Plan directly address GHG emissions.

Policy ER 6.1.3 requires the City to comply with statewide GHG goals as established in the Global Warming Solutions Act for the years 2012 and 2020 and any subsequent targets; Policy ER 6.1.4 requires the City to comply with pertinent local and state regulations to assess city wide greenhouse gas emissions for existing land uses and the adopted General Plan buildout; and Policy ER 6.1.5, which requires the City to reduce greenhouse gas emissions from new development by discouraging auto-dependant sprawl and dependence on the private automobile; promoting development that is compact, mixed-use, pedestrian friendly, and transit-oriented; promoting energy-efficient building design and site planning, and improving the jobs/housing ratio of each community. Land use policies in the 2030 General Plan also address the Attorney General's concerns about climate change by encouraging a mix of land uses and alternative modes of transportation which reduces the number of trips in single occupancy vehicles and reduces GHG emissions.

Reductions through Compliance with SACOG 2035 MTP

The City is a member of the Sacramento Area Council of Governments (SACOG), which covers a six-county area. SACOG adopted a Metropolitan Transportation Plan (MTP) to provide a regional vision for all modes of surface transportation and a guide for regional transportation investments. The MTP uses state and federal funds for programs designed to meet goals which include: clean air; design of communities to encourage walking, bicycle, and transit travel; and for improvements to main routes that serve longer distance travel around the region - specifically freeways, rail lines, major roadways and streets that serve regional traffic. The programs contained with the 2035 MTP must be designed to meet the air quality requirements of the California Clean Air Act in order to achieve air quality attainment of criteria air pollutants. Reductions achieved for emissions of criteria air pollutants equate to reductions in emissions of greenhouse gases.

TABLE 8-4	
NOTE: REFERENCES TO SPECIFIC GENERAL PLAN POLICIES INCLUDED IN THIS TABLE HAVE CHANGED BASED ON THE FINAL GENERAL PLAN. PLEASE REFER TO THE ADOPTED 2030 GENERAL PLAN OR INFORMATION CONTAINED IN THE BACK OF THIS EIR FOR MORE INFORMATION. ALSO, THIS TABLE INCLUDES RECOMMENDATIONS SET FORTH BY THE ATTORNEY GENERAL'S OFFICE AS OF JUNE 2008.	
OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS	
Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Conservation Element	
Housing: Improve the jobs-housing balance and promote a range of affordable housing choices near jobs, services and transit to reduce vehicle miles traveled. (01/07/2008)	LU 2.8.5; ER 6.1.5; ER Program 11
Climate Action Plan Implementation Program: Include mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan, report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management. Allocate funding to implement the plan. Fund staff to oversee implementation of the plan. (02/14/2008)	ER Program 11, ER Program 12
Strengthen local building codes for new construction and renovation to require a higher level of energy efficiency. (02/14/2008)	LU 2.6.3; LU 2.6.5; LU 2.6.6; LU 2.6.7; U 6.1.3; U 6.1.4; U 6.1.11; U 6.1.12; U 6.1.13; EC Program 2; U Program 11
Require that all new government buildings, and all major renovations and additions, meet identified green building standards. (01/07/2008)	LU 8.1.5
Adopt a "Green Building Program" to require or encourage green building practices and materials. The program could be implemented through, e.g., a set of green building ordinances. (01/07/2008)	LU 2.6.5; LU 2.6.6; LU 4.5.3; LU 8.1.5; LU Program 7; the City reviewed a Green Building Program in December 2007. No decision has been made regarding this program at this time.
Require orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Orientation should optimize opportunities for on-site solar generation. (01/07/2008)	LU 2.6.3; LU 2.7.7; U 6.1.6; U 6.1.7; U 6.1.8; ER 3.1.5
Provide permitting-related and other incentives for energy efficient building projects, e.g., by giving green projects priority in plan review, processing and field inspection services. (02/14/2008)	LU 1.1.6; LU 2.6.2; LU 5.2.1; U 6.1.11; U 6.1.13
Conduct energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization. Offer financial incentives for adoption of identified efficiency measures. (02/14/2008)	U 6.1.11; U 6.1.12
Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization, for low income residents. (02/14/2008)	LU 2.6.2; U 6.1.6; U 6.1.10; U 6.1.11; U 6.1.14; LU Program 5 The Housing Element includes polices that address providing financial incentives to builders to exceed energy efficiency standards. In addition, the Housing Element includes a policy to support SMUD and PG&E retrofit programs.

TABLE 8-4

NOTE: REFERENCES TO SPECIFIC GENERAL PLAN POLICIES INCLUDED IN THIS TABLE HAVE CHANGED BASED ON THE FINAL GENERAL PLAN. PLEASE REFER TO THE ADOPTED 2030 GENERAL PLAN OR INFORMATION CONTAINED IN THE BACK OF THIS EIR FOR MORE INFORMATION. ALSO, THIS TABLE INCLUDES RECOMMENDATIONS SET FORTH BY THE ATTORNEY GENERAL'S OFFICE AS OF JUNE 2008.

OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS

Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Target local funds, including redevelopment and Community Development Block Grant resources, to assist affordable housing developers in incorporating energy efficient designs and features. (02/14/2008)	LU 2.7.6; LU 5.2.2; U 6.1.4; U 6.1.5; U 6.1.10; LU Program 5 The Housing Element includes a policy that multi-family housing projects funded by SHRA would require energy efficiency standards above the Title 24 requirements.
Provide innovative, low-interest financing for energy efficiency and alternative energy projects. For example, allow property owners to pay for energy efficiency improvements and solar system installation through long-term assessments on individual property tax bills. (02/14/2008)	Partially addresses measure. U 6.1.10
Fund incentives to encourage the use of energy efficient vehicles, equipment and lighting. Provide financial incentives for adoption of identified efficiency measures. (01/07/2008)	U 6.1.10; U 6.1.11; U 6.1.13
Require environmentally responsible government purchasing. Require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, e.g., by giving preference to recycled products over those made from virgin materials. (01/07/2008)	U 6.1.2; U6.1.3; ER 6.1.11; ER 6.1.13; ER 6.1.14
Require that government contractors take action to minimize greenhouse gas emissions by, for example, using low or zero-emission vehicles and equipment. (01/07/2008)	ER 6.1.13
Adopt a "heat island" mitigation plan that requires cool roofs, cool pavements, and strategically placed shade trees. (Darker colored roofs, pavement, and lack of trees may cause temperatures in urban environments to increase by as much as 6-8 degrees Fahrenheit as compared to surrounding areas. Adopt a program of building permit enforcement for re-roofing to ensure compliance with existing state building requirements for cool roofs on non-residential buildings. (01/07/2008)	LU 2.6.7; ER 3.1.6; ER 4.1.2; LU Program 13
Adopt a comprehensive water conservation strategy. The strategy may include, but not be limited to, imposing restrictions on the time of watering, requiring water-efficient irrigation equipment, and requiring new construction to offset demand so that there is no net increase in water use. (01/07/2008)	LU 1.1.1; LU 2.6.3; U 2.1.1; U 2.1.9; U 2.1.10; U Program 9
Adopt water conservation pricing, e.g., tiered rate structures, to encourage efficient water use. (01/07/2008)	The Sacramento 2030 General Plan does not require water conservation pricing; however, this is a Water Demand Management Measure in the City's Urban Water Management Plan and is currently being implemented.
Adopt water-efficient landscape ordinances. (01/07/2008)	U 2.1.10; U Program 13; the City also has a water-efficient landscape ordinance.
Strengthen local building codes for new construction and implement a program to renovate existing buildings to require a higher level of water efficiency. (02/14/2008)	U Program 10; U Program 11
Adopt energy and water efficiency retrofit ordinances that require upgrades as a condition of issuing permits for renovations or additions, and on the sale of residences and buildings. (01/07/2008)	LU 2.6.3; LU 2.6.5; LU 2.6.6; U 6.1.6; U 6.1.8; U 6.1.11; U Program 10, U Program 11

TABLE 8-4

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OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS

Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Provide individualized water audits to identify conservation opportunities. Provide financial incentives for adopting identified efficiency measures. (02/14/2008)	The Sacramento 2030 General Plan does not require water audits or provision of financial incentives. However, individual water audits are being conducted by the City on a voluntary basis, and conducting system-wide water audits is required as a Water Demand Management Measure in the City's Urban Water Management Plan - need to discuss with AG's Office if this will suffice. The provision of financial incentives is only required for large landscapes.
Provide water audits for large landscape accounts. Provide financial incentives for efficient irrigation controls and other efficiency measures. (02/14/2008)	The Sacramento 2030 General Plan does not require water audits; however, this is required under the City's Urban Water Management Plan.
Require water efficiency training and certification for irrigation designers and installers, and property managers. (01/07/2008)	U Program 13
Implement or expand city or county-wide recycling and composting programs for residents and businesses. Require commercial and industrial recycling. (01/07/2008)	U 5.1.4 through U 5.1.17; U Program 19; U Program 20
Extend the types of recycling services offered (e.g., to include food and green waste recycling). (02/14/2008)	U 5.1.5; U 5.1.9; U 5.1.10; U Program 20
Establish methane recovery in local landfills and wastewater treatment plants to generate electricity. (01/07/2008)	U 5.1.13; U Program 21
Preserve existing conservation areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits. (02/14/2008)	LU 9.1.1; LU 9.1.4; ER 2.1.2 through ER 2.1.9; ER 4.2.1; ER 4.2.2; ER 4.2.3
Establish a mitigation program for development of conservation areas. Impose mitigation fees on development of such lands and use funds generated to protect existing, or create replacement, conservation areas. (02/14/2008)	ER 2.1.5 - ER 2.1.8
Provide public education and information about options for reducing greenhouse gas emissions through responsible purchasing, conservation, and recycling. (02/14/2008)	Utilities Program 25
Land Use Element	
Adopt land use designations to carry out policies designed to reduce greenhouse gas emissions, e.g., policies to reduce vehicle miles traveled, encourage development near existing public transportation corridors, encourage alternative modes of transportation, and promote infill, mixed use, and higher density development. (01/07/2008)	Land Use Diagram and Designations
Identify and facilitate the development of land uses not already present in local districts – such as supermarkets, parks, and schools in neighborhoods; or residential uses in business districts – to reduce vehicle miles traveled and encourage bicycling and walking. (01/07/2008)	LU 1.1.6; LU 2.1.3; LU 2.1.4; LU 2.1.5; LU 2.6.2; LU 4.1.1; LU 4.1.2; LU 4.1.5; LU 6.1.2; LU 6.1.3; LU 6.1.5; LU 6.1.7; LU Programs 2, 5, 21

TABLE 8-4

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OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS

Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Prohibit projects that impede bicycle and walking access, e.g., large parking areas that cannot be crossed by non-motorized vehicles, and new residential communities that block through access on existing or potential bicycle and pedestrian routes. (02/14/2008)	LU 2.1.3; LU 2.5.1; LU 2.5.2; LU 2.7.6; LU 4.1.3; LU 4.1.5; LU 4.2.1; LU 4.5.2; LU 4.5.4; M 1.3.3; M 2.1.2; M 2.1.3; M 2.1.5; M 2.1.8; M 2.1.10
Require bike lanes and bicycle/pedestrian paths. (01/07/2008)	LU 2.7.6; LU 6.1.11; LU 6.1.8; LU 6.1.3, M 1.3.3; M 2.1.2; M 2.1.3; M 2.1.6; M 2.1.8; M 5.1.2; M 5.1.6; M 5.1.7; M 5.1.8; ERC 2.1.2, ERC 2.2.3
Site schools to increase the potential for students to walk and bike to school. (01/07/2008)	ERC 1.1.1; ERC 1.1.2; ERC 1.1.3; ERC 1.1.5
Enact policies to limit or discourage low density development that segregates employment, services, and residential areas. (02/14/2008)	LU 1.1.1; LU 2.1.3; LU 2.1.4; LU 2.5.1; LU 2.5.2; LU 2.8.1; LU 2.8.5; LU 4.1.1; LU 4.1.2; LU 4.1.5; LU 4.4.6; LU 5.1.1; LU 5.1.5; LU 5.2.1; LU 5.4.1; LU 7.1.2
Where there are growth boundaries, adopt policies providing certainty for infill development. (02/14/2008)	LU 1.1.5; LU 1.1.6; LU 1.1.10; LU 2.1.5; LU 4.2.3; LU 5.2.2; U 1.1.8; Land Use Program 2; the Land Use and Urban Form Diagram designates little area beyond the existing City limits for future growth.
Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar. (01/07/2008)	Not Applicable to Sacramento.
Circulation Element	
In conjunction with measures that encourage public transit, ride sharing, bicycling and walking, implement circulation improvements that reduce vehicle idling. For example, coordinate controlled intersections so that traffic passes more efficiently through congested areas. (01/07/2008)	ER 6.1.10; M 1.2.2; M 1.3.3; M 1.4.1; M 3.1.7
Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, bicycling and walking. Before funding transportation improvements that increase vehicle miles traveled, consider alternatives such as increasing public transit or improving bicycle or pedestrian travel routes. (01/07/2008)	LU 2.6.1; M 1.2.1; M 1.2.2; M 1.2.3; M 1.3.3; M 1.3.4; M 1.4.1; M 1.4.2; M 1.5.1; M 1.5.3; M 1.5.5; M 2.1.1; M 2.1.2; M 2.1.3; M 3.1.1; M 3.1.3; M 3.1.4; M 3.1.8; M 3.1.10; M 3.1.13 through M 3.1.15; M 5.1.2; M 5.1.9
Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic. (01/07/2008)	This is addressed indirectly in Mobility Section (M) policies: M 3.1.1 through M 3.1.17, M 3.2.1 through 3.2.5, M 3.3.1 through 3.3.3
Include safe and convenient bicycle and pedestrian access in all transportation improvement projects. Ensure that non-motorized transportation systems are connected and not interrupted by impassable barriers, such as freeways and include amenities such as secure bicycle parking. (01/07/2008)	M 1.1.2; M 1.3.1; M 1.3.2; M 1.3.3; M 1.3.4; M 2.1.3; M 2.1.8; M 2.1.9; M 2.1.10; M 5.1.4; M 5.1.6; M 5.1.8; M 5.1.10
Provide adequate and affordable public transportation choices including expanded bus routes and service and other transit choices such as shuttles, light rail, and rail where feasible. (01/07/2008)	M 3.1.1 through M 3.3.3

TABLE 8-4

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OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS

Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Assess transportation impact fees on new development in order to maintain and increase public transit service. (01/07/2008)	M 3.1.16; M 9.1.1; M 9.1.2; M 9.1.3; Mobility Program 8, Mobility Program 24
Provide public transit incentives, including free or reduced fare areas. (01/07/2008)	The City is not a transit provider; however, M 3.1.4 requires the City to continue to work with RT to identify areas (e.g., higher density/intensity) for reduced fares.
Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation. For example, reduce parking for private vehicles while increasing options for alternative transportation; eliminate minimum parking requirements for new buildings; "unbundle" parking (require that parking is paid for separately and is not included in rent for residential or commercial space); and set appropriate pricing for on-street parking. (01/07/2008)	M 1.4.1; M 1.4.2; M 6.1.2; M 6.1.4; M 6.1.5; M 6.1.7; M 6.1.8
Develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20-25% of the morning commute.) Plans may address, e.g., necessary infrastructure improvements and potential funding sources; replacing older diesel buses with low or zero-emission vehicles; mitigation fees to expand school bus service; and Safe Routes to School programs and other formal efforts to increase walking and biking by students. (02/14/2008)	Partially addresses measure. ERC 1.1.1; ERC 1.1.2; ERC 1.1.3; ERC 1.1.5
Create financing programs for the purchase or lease of vehicles used in employer ride sharing programs. (02/14/2008)	Partially addresses measure. M 1.4.1; M 1.4.2; M 1.4.3
Enter into partnerships to create and expand polluting vehicle buy-back programs to include vehicles with high greenhouse gas emissions. (02/14/2008)	M 1.5.4
Provide public education and information about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; public transit; biking and walking; vehicle performance and efficiency (e.g., keeping tires inflated); low or zero-emission vehicles; and car and ride sharing. (02/14/2008)	M 2.1.7; ER 6.1.16; ER 6.1.17; M 1.4.2; Mobility Program 12; ER Program 14
Housing Element	
Improve the jobs-housing balance and promote a range of affordable housing choices near jobs, services and transit. (02/14/2008)	LU 2.8.1; LU 2.8.5; LU 4.1.1; LU 6.1.2; LU 6.1.7;
Concentrate mixed use, and medium to higher density residential development in areas near jobs, transit routes, schools, shopping areas and recreation. (01/07/2008)	Land Use Diagram and Designations; LU 1.1.1; LU 2.1.4; LU 2.6.1; LU 4.1.1; LU 4.1.2; LU 4.5.6; LU 5.1.1; LU 5.4.1; LU 6.1.1; LU 6.1.2; LU 7.1.2;
Increase density in single family residential areas located near transit routes or commercial areas. For example, promote duplexes in residential areas and increased height limits of multi-unit buildings on main arterial streets, under specified conditions. (01/07/2008)	Land Use Diagram and Designations; LU 1.1.1; LU 1.1.6; LU 4.2.3; LU 5.2.1; LU 6.1.2; LU 6.1.7

TABLE 8-4	
NOTE: REFERENCES TO SPECIFIC GENERAL PLAN POLICIES INCLUDED IN THIS TABLE HAVE CHANGED BASED ON THE FINAL GENERAL PLAN. PLEASE REFER TO THE ADOPTED 2030 GENERAL PLAN OR INFORMATION CONTAINED IN THE BACK OF THIS EIR FOR MORE INFORMATION. ALSO, THIS TABLE INCLUDES RECOMMENDATIONS SET FORTH BY THE ATTORNEY GENERAL'S OFFICE AS OF JUNE 2008.	
OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS	
Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Encourage transit-oriented developments. (02/14/2008)	Land Use Diagram and Land Use Designations; LU 4.5.6; LU 5.1.2; LU 5.5.2; LU 6.1.10; ER 6.1.5
Impose minimum residential densities in areas designated for transit-oriented, mixed use development to ensure higher density in these areas. (01/07/2008)	Land Use Diagram Land Use Designations
Designate mixed use areas where housing is one of the required uses. (02/14/2008)	Not addressed in Land Use policies; however, existing Zoning Code already requires housing in a mixed use zone (Residential Mixed Use Zone - RMX)
In areas designated for mixed use, adopt incentives for the concurrent development of different land uses (e.g., retail with residential). (01/07/2008)	Partially addressed by LU 5.2.1; however, existing Zoning Code requires concurrent development of different land uses in Transit Overlay and Residential Mixed Use Zones.
Promote infill, mixed use, and higher density development by, for example, reducing developer fees; providing fast-track permit processing; reducing processing fees; funding infrastructure loans; and giving preference for infrastructure improvements in these areas. (01/07/2008)	Land Use Diagram and Designations; LU 1.1.1; LU 1.1.5; LU 1.1.6; LU 2.6.1; ED 3.1.7; LU 4.2.3; LU 4.4; LU 5.1.1; LU 5.2.1; LU 5.4.1; LU 5.5.1; LU 6.1.2; LU 6.1.3; LU 6.1.5; LU 6.1.6; ED 3.1.8; ED 3.1.1; Administration Implementation Program 11; LU Program 2; LU Program 5; ERC Program 2; ER Program 7
Open Space Element	
Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits. (01/07/2008)	LU 9.1.1; LU 9.1.4; ER 2.1.2 through ER 2.1.9; ER 4.2.1; ER 4.2.2; ER 4.2.3, ER 4.2.4
Establish a mitigation program for development of those types of open space that provide carbon sequestration benefits. Require like-kind replacement for, or impose mitigation fees on development of such lands. Use funds generated to protect existing, or create replacement, open space. (02/14/2008)	ER 2.1.2 through ER 2.1.9; ER 4.2.1; ER Program 6; ER Program 8; the Natomas Joint Vision Area Memorandum of Understanding between the City and County establishes a mitigation program for loss of open space, and requires a 1:1 replacement.
Allow alternative energy projects in areas zoned for open space where consistent with other uses and values. (01/07/2008)	None - The designated open space areas in the City are unsuitable for this use.
Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio. (01/07/08)	LU 2.3.1; LU 2.6.7; LU 4.1.3; LU 4.1.8; LU 4.2.1; LU 4.2.2; LU 5.2.3; LU 6.1.11; LU 6.1.12; M 4.2.3; ER 2.1.8; ER 3.1.2; ER 3.1.5; ER 3.1.6; ER 3.1.7; ER Programs 4, 6, 7
Connect parks and publicly accessible open space through shared pedestrian/bike paths and trails to encourage walking and bicycling. (01/07/08)	LU 2.3.1; LU 4.1.5; ERC 2.1.2; ERC 2.2.3; ERC 2.4.3; PHS 5.1.9; Mobility Program 4
Safety Element	
Address expected effects of climate change that may impact public safety, including increased risk of wildfires, flooding and sea level rise, salt water intrusion; and health effects of increased heat and ozone, through appropriate policies and programs. (01/07/2008)	All policies listed in Table 8-5 address expected effects of climate change.

TABLE 8-4

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OFFICE OF THE ATTORNEY GENERAL - RECOMMENDATIONS FOR ADDRESSING GLOBAL WARMING IN GENERAL PLANS

Office of the Attorney General - Recommended Measures	Sacramento 2030 GP Policy or Program that Addresses Measure
Adopt land use designations that restrict or prohibit development in areas that may be more severely impacted by climate change, e.g., areas that are at high risk of wildfire, sea level rise, or flooding. (01/07/2008)	EC 2.1.5; Land Use Diagram; in addition, the Land Use and Urban Form diagram designates very little area beyond the existing City limits for future growth.
Monitor the impacts of climate change. Use adaptive management to develop new strategies, and modify existing strategies, to respond to the impacts of climate change. (01/07/2008)	ER Program 11
Energy Element	
Many of the goals, policies, or programs set forth above may be contained in an optional energy element. The resources set forth below may be useful to local agencies in developing an energy element or an energy conservation plan. (02/14/2008)	The Sacramento 2030 General Plan doesn't contain an Energy Element. Policies related to sustainability and energy efficiency are incorporated throughout the Plan; LU 1.1.1; LU 2.6.1; LU 2.6.3; LU 2.6.5; LU 2.6.6; LU 4.5.3; LU 8.1.5; U 6.1.1 through 6.1.4; U 6.1.6 through 6.1.14

The Draft EIR for the 2035 MTP was completed in October 2007 and addressed GHG emissions of the 2035 MTP compared with a "No Project scenario".⁵⁶ Assuming that the Sacramento region grows without implementation of the 2035 MTP, daily CO₂ emissions would be approximately 55,280 tons. These emissions are based on the SACMET model which helps to estimate the impacts of smart growth land use variables on travel behavior, and thus CO₂ emissions. The estimates for CO_{2e} emissions in the No Project scenario (1988 General Plan) are based on estimated growth for the region by 2035 without incorporation of smart growth land use principles. With implementation of the 2035 MTP, CO₂ emissions would be approximately 50,200 tons per day. This is a savings of 5,080 tons of CO₂ every day.

Under AB 32, the California Climate Action Team has assigned a set of CO_{2e} savings to various sectors. The SACOG region, as part of the "regional transportation/smart growth land use measures" sector, was assigned a savings of approximately 1 million metric tons of CO_{2e} equivalents (MMTCO_{2e}). This equates to a daily savings goal of 3,076 fewer tons of CO_{2e} per day by 2020.⁵⁷ A savings of 1 MMTCO_{2e} is equivalent to 179,000 passenger car and light trucks not driven for one year (based on 2005 emission factors), replacing 1.5 million inefficient refrigerators with Energy Star refrigerators, or the energy savings in one year from replacing 13 million standard light bulbs with compact fluorescent lamps. Implementation of the 2035 MTP,

56 Sacramento Area Council of Governments, Draft Environmental Impact Report for the Metropolitan Transportation Plan for 2035, State Clearinghouse #2007012050, October 2007.

57 Ibid., p. 9-15.

therefore, would meet or exceed the projected CO_{2e} savings target for 2020 as required under AB 32.⁵⁸

It is important to note that the MTP deals primarily with the reduction of transportation related GHG emissions, and not reductions of GHG emissions through land use planning. While the Policy Area would benefit from the emissions reductions that can be achieved through implementation of the 2035 MTP, the City would still need to reduce its emissions from other contributing sectors.

Related to the 2035 MTP, the SACOG Preferred Blueprint Scenario (or Blueprint), is a transportation and land use analysis suggesting how cities and counties should grow based on smart growth principles. Although the Blueprint is not intended to be applied or implemented in a literal, parcel-level manner, the Blueprint is intended to provide guidance as to how each jurisdiction can make land use decisions based on smart growth principles and how these decisions would impact the greater Sacramento region.

As discussed in Chapter 4.0, Land Use Consistency and Compatibility, land use policies adopted by SACOG as the Blueprint for regional growth would guide regional development in Sacramento to mitigate for regional transportation congestion as a result of modeled future growth without the Blueprint. The proposed 2030 General Plan incorporates the following principles that reflect the Blueprint adopted by SACOG: 1) making great places, 2) emphasis on smart growth with infill development and deferring expansion into Special Studies Areas until appropriate, 3) maintaining a vibrant economy, 4) creating a healthy city, 5) living lightly by creating pedestrian, bicycle, and transit oriented development and, thus, reducing the carbon footprint, and 6) developing a sustainable future. Incorporation of the Blueprint principles would help mitigate for potential traffic congestion in the region, which will also mitigate GHG emissions associated with increased VMT.

Reductions through Current City of Sacramento Initiatives

The City of Sacramento has also implemented a number of measures that are currently in place that help reduce the City's emissions of GHG. The following is a partial list of current city programs.

- The City is participating in the countywide GHG inventory for the incorporated cities within Sacramento County using ICLEI's software; the City has already certified its 2004 and 2005 GHG emissions for internal operations.
- Five municipal buildings either in the design phase or under construction are registered for LEED certification.
- The City has already implemented: 1) a parking lot shading ordinance and 2) a requirement for cool roofs on all new City owned construction of flat roofs.

58 *Ibid.*, p. 9-32.

- The City captures methane from landfills. The Sutters Landing recovery site provides methane to the Blue Diamond Almond Factory (60%; the remaining 40% is flared).
- The City has adopted a Sustainability Master Plan (2007) and a Sustainability Implementation Plan (2008), both of which address public involvement and education.
- A six-county elected officials discussion on climate change was held in January 2008.
- The City has created mixed-use land use and zoning designations, planned for urban development at light rail stations and adopted a city wide commercial corridor revitalization strategy.
- The City has created and is in the process of designing more transit village plans and mixed use corridors throughout the city.
- The City has adopted both a Bikeway Master Plan and a Pedestrian Master Plan.
- The City has adopted an Urban Forest Management Program and has a designated Urban Forester to manage this program.

Addressing Climate Change through 2030 General Plan Policies

The 2030 General Plan recognizes global climate change as a legitimate issue and substantial challenge for the community. The General Plan addresses the issue in two ways. In the first case, the General Plan recognizes that climate change could affect the community, and the General Plan establishes policies that are intended to prepare for climate change and reduce the effects of climate change on the community, such as urban heat island minimization. In the second case, the General Plan includes policies addressing climate change through greenhouse gas emission reduction, such as open space and agricultural land preservation, energy efficiency, waste management and recycling, and water management and supply.

The following summarizes how the 2030 General Plan addresses climate change, both directly and indirectly:

Land Use and Urban Design

- **Sustainable Development Patterns:** Land use designations, urban form guidelines, and development standards promote more compact, mixed-use, and higher intensity development patterns. These patterns use land more efficiently, conserve energy, reduce GHG emissions and air pollution, and reduce expansion of the urban footprint.
- **Sustainable Building Practices:** City wide land use and urban design policy promotes sustainable building practices that consume less energy, water, and other resources and use building materials more efficiently and sustainably; is healthier, safer, more durable and more comfortable.
- **Green Infrastructure:** Policies to promote and maintain a comprehensive network of parks, open spaces and urban forests including both urban and non-urban open space.

Mobility

- **Reduced Dependence on the Automobile:** Provides for a decrease in single-occupant vehicle use through Transportation Demand Management, parking supply disincentives, and changes in LOS standards.
- **Viability of Pedestrian, Bicycle, and Public Transit Modes:** Improves modal choices by providing for better system connectivity, complete streets, pedestrian safety, and public transit connections and support.
- **Increased Transit Ridership:** Flexible level of service standards allow for increased density and intensity in multi-modal districts.

Utilities

- **Water Conservation:** Advances water conservation through conservation programs and landscaping requirements.
- **Reduced Waste to Landfills:** Continues improvements in recycling, composting and diversion of solid waste from landfills.
- **Energy Conservation:** Reduces consumption of non-renewable energy through policies, programs, and standards that encourage renewable energy, energy conservation, energy efficient technology, and education.

Public Health & Human Services

- **Healthy Community Design:** Encourages new development and revitalization that is more walkable, reduces air pollution, and reduces our collective carbon footprint.

Environmental Resources

- **Protection of Resources:** Contains policies to protect important environmental resources such as air quality, wildlife habitat, open space corridors, and agricultural lands.
- **Urban Forest:** Provides policies for the management of our urban forest, which helps to mitigate the urban heat island effect, and absorb pollution and GHGs.

A more complete list of 2030 General Plan goals and policies as well as implementation programs that address climate change and GHG emissions are listed in Tables 8-4 and 8-5 and in Appendix K.

TABLE 8-5

NOTE: REFERENCES TO SPECIFIC GENERAL PLAN POLICIES INCLUDED IN THIS TABLE HAVE CHANGED BASED ON THE FINAL GENERAL PLAN. FOR THE MOST UP-TO-DATE GENERAL PLAN POLICIES THAT ADDRESS CLIMATE CHANGE, PLEASE SEE THE MITIGATION MONITORING PLAN ATTACHMENT NO. 1 AT THE END OF THIS DOCUMENT.

GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE

2030 City of Sacramento General Plan				
	Part 2 Element	Section	Policy	
Greenhouse Gas Emission Reduction				
Regulation Compliance and Development Review	Environmental Resources	Air Quality	6.1.1 Maintain Standards, 6.1.2 Emission Reduction, 6.1.3 Greenhouse Gas Reduction Goal, 6.1.4 Citywide Greenhouse Gas Assessment, 6.1.5 Greenhouse Gas Reduction in New Development, 6.1.6 New Development, 6.1.9 Coordination with SMAQMD	
Built Form	Land Use and Urban Design	Growth and Change	1.1.1 Compact Development, 1.1.5 Leading Infill Growth, 1.1.6 Infill Development, 1.1.10 Balancing Infill and New Growth	
		Citywide Land Use and Urban Design	2.1.2 Protect Established Neighborhoods, 2.1.3 Complete and Well-structured Neighborhoods, 2.3.1 Multi-functional Green Infrastructure, 2.4.2 Responsiveness to Context, 2.5.1 Connected Neighborhoods, Corridors, and Centers, 2.5.2 Overcoming Barriers to Accessibility, 2.6.1 Sustainable Development Patterns, 2.6.2 Redevelopment and Revitalization Strategies, 2.6.3 Sustainable Building Practices, 2.7.6 Walkable Blocks, 2.7.7 Buildings that Engage the Street, 2.8.1 Equitable Distribution of Uses and Amenities, 2.8.5 Jobs Housing Balance	
		Neighborhoods	4.1.1 Mixed-use Neighborhoods, 4.1.2 Neighborhood Amenities, 4.1.3 Walkable Neighborhoods, 4.2.3 Suburban Infill and Secondary Units, 4.4.6 Mix of Uses, 4.5.2 Compact Neighborhoods, 4.5.3 Green Neighborhoods, 4.5.5 Traditional Grid	
		Centers	5.1.1 Diverse Centers, 5.1.5 Vertical and Horizontal Mixed-use, 5.2.2 Enhanced Design Character, 5.2.3 Public Space, 5.4.2 Enhanced Design Character	
		Corridors	6.1.1 Mixed-use Corridors, 6.1.2 Transformed Corridors, 6.1.3 Redeveloping Automobile-oriented Corridors, 6.1.5 Corridor Uses, 6.1.7 Conversion to Residential	
		Employment	7.1.4 Urban Design	
		Open Space, Parks, and Recreation	9.1.4 Open Space Buffers	
		Special Study Areas and Planned Development	10.1.3 Regional and Community Benefits	
		Mobility	Walkable Communities	2.1.4 Building Design
		Economic Development	Place	3.1.1 Land Supply Inventory, 3.1.7 Infrastructure and Public Facilities, 3.1.8 Infrastructure Investments

TABLE 8-5

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GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE

2030 City of Sacramento General Plan			
	Part 2 Element	Section	Policy
	Public Health and Safety	Public Health and Human Services	5.1.7 Healthy Communities, 5.1.9 Active Living
	Education, Recreation, and Culture	Parks	2.2.3 Service Level Goals, 2.2.4 Meeting Service Level Goals
	Environmental Resources	Agriculture	4.2.1 Protect Agricultural Lands
		Air Quality	6.1.5 Greenhouse Gas Reduction in New Development, 6.1.6 New Development, 6.1.9 Coordination with SMAQMD
	Economic Development	Business Climate	1.1.7 Sustainable Businesses
Fuel Efficiency and Alternative Modes of Transportation	Land Use and Urban Design	Growth and Change	1.1.6 Infill Development
		Citywide Land Use and Urban Design	2.1.4 Neighborhood Centers, 2.5.1 Connected Neighborhoods, Corridors, and Centers, 2.6.4 Reduced Automobile Dependence
		Neighborhoods	4.1.5 Connecting Key Designations, 4.2.1 Enhanced Walking and Biking, 4.5.4 New Neighborhood Core, 4.5.6 Connections to Transit
		Centers	5.1.2 Centers Served by Transit, 5.2.1 Suburban Centers and Destinations, 5.4.1 Incorporating Mixed-use Development, 5.4.3 Neighborhood Centers and Destinations, 5.5.2 Transit-oriented Development
		Corridors	6.1.8 Sidewalks and Pedestrian Amenities, 6.1.10 Corridor Transit, 6.1.11 Enhanced Pedestrian Environment,
		Employment	7.1.2 Housing in Employment Centers, 7.1.3 Accessory Support Uses
		Public/Quasi Public and Special Uses	8.2.7 Farmers/Public Markets
		Special Study Areas and Planned Development	10.1.3 Regional and Community Benefits
	Mobility	Circulation System	1.1.2 Travel System, 1.2.1 Multimodal Choices, 1.2.2 LOS Standard, 1.2.3 Multimodal Access, 1.3.1 Grid Network, 1.3.2 Complete Streets, 1.3.3 Eliminate Gaps, 1.3.4 Connections to Transit Stations, 1.4.1 Increase Vehicle Occupancy, 1.4.2 Commute Trip Reduction, 1.4.3 Transportation Management Associations, 1.5.1 Facilities for Emerging Technologies, 1.5.2 Use of Public Rights-of-Way, 1.5.3 Public-Private Transportation Partnerships, 1.5.4 High Emission Vehicle Buy-back, 1.5.5 Neighborhood Electric Vehicles

TABLE 8-5

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GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE

2030 City of Sacramento General Plan			
	Part 2 Element	Section	Policy
		Walkable Communities	2.1.1 Pedestrian Master Plan, 2.1.2 Cohesive Network, 2.1.3 Continuous Network, 2.1.5 Parking Facility Design, 2.1.6 Housing and Destination Connections, 2.1.7 Pedestrian Awareness Education, 2.1.8 Safe Pedestrian Crossings, 2.1.9 Speed Management Policies, 2.1.10 Safe Sidewalks
		Public Transit	3.1.1 Transit for All, 3.1.2 Maintain Services, 3.1.3 Variety of Transit Types, 3.1.4 Reduced Transit Fares, 3.1.5 Unified Traveler Information System, 3.1.6 Safe System, 3.1.7 Transit Amenities, 3.1.8 Light Rail and Bus Service, 3.1.9 Demand-Responsive Service, 3.1.10 New Facilities, 3.1.11 Rights-of-Way Preservation, 3.1.12 Direct Access to Stations, 3.1.13 Light Rail Extension to Airport and South Sacramento, 3.1.14 Streetcar Facilities, 3.1.15 Dedicated Bus Facilities, 3.1.16 Developer Contributions, 3.1.17 Transit Extension Studies, 3.2.1 Passenger Rail Service, 3.2.2 Sacramento Intermodal Transportation Facility, 3.2.3 Transcontinental Passenger Rail Service, 3.2.4 Capitol Corridor, 3.2.5 High Speed Rail Service, 3.3.1 Inter-City Bus Service, 3.3.2 Taxi Service, 3.3.3 Private Water Transportation Services
		Roadways	4.2.1 Adequate Rights-of-Way, 4.2.2 Pedestrian Facilities, 4.2.4 Pedestrian and Bicycle Facilities on Bridges, 4.2.5 Multi-Modal Corridors, 4.2.6 Identify Gaps in Complete Streets
		Bikeways	5.1.1 Bikeway Master Plan, 5.1.2 Appropriate Bikeway Facilities, 5.1.4 Motorists, Bicyclists and Pedestrian Conflicts, 5.1.6 Connections Between New Development and Bicycle Facilities, 5.1.7 Class II Bike Lane Requirements, 5.1.8 Connections Between New Development and Bikeways, 5.1.9 Conversion of Underused Facilities, 5.1.10 Bike Safety for Children, 5.1.11 Bike Facilities in New Developments, 5.1.12 Bicycle Parking at Transit Facilities, 5.1.14 Encourage Bicycle Use
		Parking	6.1.1 Appropriate Parking, 6.1.2 Reduce Minimum Parking Standards, 6.1.4 Reduction of Parking Areas, 6.1.5 Maximize On-Street Parking Turnover, 6.1.7 Disincentives for Single-Occupant Vehicle Trips, 6.1.8 Separate Parking Costs
		Transportation Funding	9.1.1 New Development Fees, 9.1.2 New Funding for Facility Maintenance, 9.1.3 Dedicated Funding Sources
	Utilities	Citywide Utilities	1.1.8 Infill Areas
		Energy Resources	6.1.2 City Fleet Fuel Consumption Reduction, 6.1.9 Green Businesses

TABLE 8-5

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GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE

2030 City of Sacramento General Plan				
	Part 2 Element	Section	Policy	
	Education, Recreation, and Culture	Education	1.1.1 School Locations, 1.1.2 Locational Criteria, 1.1.3 Schools in Urban Areas, 1.1.5 School Transit Plans	
		Parks and Recreation	2.1.2 Connected Network, 2.4.3 Connections to Other Trails	
		Libraries	3.1.2 Library Siting	
		Arts and Culture	4.1.2 Accessible Facilities and Programs	
	Public Health and Safety	Public Health and Human Services	5.1.7 Healthy Communities, 5.1.9 Active Living	
	Environmental Resources	Water Resources	1.1.1 Conservation of Open Space Areas	
		Agriculture	4.1.1 Locally-Grown and Organic Foods, 4.1.2 Community and Rooftop Gardens	
		Air Quality	6.1.5 Greenhouse Gas Reduction in New Development, 6.1.10 Reduced Emissions, 6.1.11 Fleet Operations, 6.1.12 Zero Emissions and Low-Emission Vehicle Used, 6.1.13 Preference for Reduced-Emission Equipment, 6.1.14 Transportation Systems Management and Trip Reduction, 6.1.15 Wood Stove/fireplace Replacement, 6.1.16 Employer Education Programs, 6.1.17 Air Quality Education	
	Open Space and Agricultural Land Preservation			
		Land Use and Urban Design	Open Space, Parks, and Recreation	9.1.1 Open Space Preservation
	Environmental Resources	Biological Resources	2.1.1 Resource Preservation, 2.1.2 Conservation of Open Space, 2.1.3 Natural Lands Management, 2.1.4 Retain Habitat areas, 2.1.5 Riparian Habitat Integrity, 2.1.6 Wetland Protection, 2.1.7 Annual Grasslands, 2.1.8 Oak Woodlands, 2.1.9 Wildlife Corridors	
		Agriculture	4.2.1 Protect Agricultural Lands, 4.2.2 Permanent Preservation, 4.2.3 Coordinate to Protect Farmland, 4.2.4 Development Adjacent to Agriculture	
Energy Efficiency				
	Land Use and Urban Design	Citywide Land Use and Urban Design	2.1.5 Neighborhood Enhancement, 2.6.3 Sustainable Building Practices, 2.6.5 Existing Structure Reuse, 2.6.6 Green Building Retrofit	
		Neighborhoods	4.5.3 Green Neighborhoods	
		Public/Quasi-Public	8.1.5 LEED Standard for City-Owned Buildings	
	Historic and Cultural Resources	Historic and Cultural Resources	2.1.13 Adaptive Reuse	
	Utilities	Citywide Utilities	1.1.3 Sustainable Facilities and Services	
		Solid Waste	5.1.13 Waste for Energy Generation	

TABLE 8-5

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GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE

2030 City of Sacramento General Plan			
	Part 2 Element	Section	Policy
		Energy Resources	6.1.1 Peak electric Load Reduction of City Facilities, 6.1.3 Energy Efficiency of City Facilities, 6.1.4 Energy Consumption Per Capita, 6.1.6 Renewable Energy, 6.1.7 Solar Access, 6.1.8 Other Energy Generation Systems, 6.1.10 Energy Rebate Programs, 6.1.11 Energy Efficiency Improvements, 6.1.12 energy Efficiency Audits, 6.1.13 Energy Efficient Incentives, 6.1.14 Sustainable Development and Resource Conservation Education
	Environmental Resources	Urban Forest	3.1.5 Solar Access
Urban Heat Island Effect Minimization			
	Land Use and Urban Design	Citywide Land Use and Urban Design	2.3.1 Multi-functional Green Infrastructure, 2.6.6 Green Building Retrofit, 2.6.7 Heat Island Effect
		Neighborhoods	4.1.8 Neighborhood Street Trees, 4.2.2 Enhanced Urban Forest, 4.5.3 Green Neighborhoods
		Centers	5.2.3 Public Spaces
		Corridors	6.1.12 Visual and Physical Character
	Environmental Resources	Urban Forest	3.1.2 Manage and Enhance, 3.1.6 Urban Heat Island Effects, 3.1.7 Shade Tree Planting Program, 3.1.8 Public Education
		Agriculture	4.1.2 Community and Rooftop Gardens
	Mobility	Roadways	4.2.3 Adequate Street Tree Canopy
Waste Management and Recycling			
	Utilities	Solid Waste	5.1.4 Residential and Commercial Waste Disposal, 5.1.5 Yard Waste and Street Sweeping, 5.1.6 Neighborhood Clean Up Program, 5.1.7 Diversion of Waste, 5.1.8 Electronic Waste Recycling, 5.1.9 Composting and Grasscycling Programs, 5.1.10 Food Waste Recycling, 5.1.11 Recycled Materials in New Construction, 5.1.12 Recycling and Reuse of Construction Wastes, 5.1.13 Waste for Energy Generation, 5.1.14 Disposable, Toxic, and Non-renewable Products, 5.1.15 Sacramento Regional Recycling Market Development Zone, 5.1.16 Waste Composting and Recycling for Landscapes 5.1.17 Educational Programs
	Land Use and Urban Design	Citywide Land Use and Urban Design	2.6.5 Existing Structure Reuse, 2.6.6 Green Building Retrofit
		Neighborhoods	4.5.3 Green Neighborhoods
Water Management and Supply			
	Land Use and Urban Design	Citywide Land Use and Urban Design	2.6.3 Sustainable Building Practices, 2.6.5 Existing Structure Reuse, 2.6.6 Green Building Retrofit
		Neighborhoods	4.5.3 Green Neighborhoods

TABLE 8-5			
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GENERAL PLAN POLICIES ADDRESSING CLIMATE CHANGE			
2030 City of Sacramento General Plan			
	Part 2 Element	Section	Policy
	Utilities	Water Systems	2.1.2 Optimize Capacity, 2.1.5 Comprehensive Water Supply Plans, 2.1.9 Conservation Programs, 2.1.10 Landscaping
Addresses Expected Effects of Climate Change			
	Public Health and Safety	Emergency Response and Disaster Preparedness	4.1.1 Multi-Hazard Emergency Plan, 4.1.3 Emergency Operations Center, 4.1.4 Emergency and Disaster Preparedness Exercises, 4.1.5 Mutual Aid Agreements, 4.1.6 Education Programs
	Environmental Constraints	Flooding	2.1.2 Interagency Levee Management, 2.1.5 Floodplain Requirements

Source: City of Sacramento 2030 General Plan, 2008.

■ Conclusion

Although the extent and magnitude of global climate change is uncertain, experts agree that climate change would have significant and adverse cumulative impacts on the environment. Some of these impacts would affect the city directly, while other impacts would be felt more strongly in other parts of the world. Implementation of the 2030 General Plan would generate GHGs during future construction and operation, and GHGs emitted by new residents and businesses would contribute to climate change effects. At the same time, development under the 2030 General Plan, with its emphasis on dense infill growth, alternative modes of transportation, mixed use, and energy efficiency, coupled with implementation of statewide strategies, will offset both new and existing GHG emissions.

The 2030 General Plan contains a number of goals and policies and implementation programs designed to reduce emissions through land use and transportation planning, energy efficiency measures, air quality emission standards, and water conservation programs (see Tables 8-4 and 8-5) and incorporates many of the statewide reduction strategies identified in the 2006 CAT Report and by the State Attorney General. However, it cannot be known to what extent GHG emissions associated with the buildout of the General Plan would be reduced, and it cannot be determined whether a project's contribution to climate change would be significant in the absence of state guidance, thresholds, or methodologies.

California's current emissions reduction goals, as specified in AB 32, apply to the state as a whole and are not specific to local regions or individual development projects. Thus, even though the state had annual emissions of 427 MMTCO₂e in 1990, different regions and jurisdictions have contributed to GHG emissions of the state at different rates and levels, it is not

clear at this time whether the state will impose a single statewide reduction rate or different levels of reduction requirements. The City of Sacramento's requirement for reducing GHG emissions under AB 32 cannot be determined without an inventory of GHG emissions specific to the city in 1990. The City of Sacramento is currently developing a 1990 inventory of GHG emissions. However, in the absence of this data, it is not known what the specific GHG reduction targets would be for implementation of the 2030 General Plan. Therefore, it cannot be determined whether or not the project's cumulative contribution to GHG emissions, as measured by the AB 32 targets, would be considerable.

Some studies have indicated that the potential impacts of climate change will lead to a decrease in the volumes of snowpack in the western United States, which could lead to impacts on future water availability.^{59,60} There have been numerous studies prepared that provide evidence that changes in the climate will lead to impacts on California's water resources. In the study, *Climate Warming and California's Water Future*, prepared by the Center for Environmental and Water Resources Engineering Dept. of Civil and Environmental Engineering, University of California, Davis, it is reported that different climate warming scenarios indicate a significant increase in wet season flows as well as a decrease in spring runoff from snowmelt. The scenarios show that California's water system would be adequate and could adapt to the growing population demands for water and would not threaten the overall economic prosperity of the state. The state's water system could adapt to the various climate scenarios through the use of new technology for supplying and treating water, water transfers, conjunctive use, and through the cooperation of local, regional, state and federal government. The study found that the users that would be most impacted would be the agricultural sector.

It is anticipated, based on the literature that the impacts on California's water supply and availability, including the Sacramento and American river supply, that over the next 20 years the effect in urban areas will be less than significant. As the literature indicates, a change in climate is anticipated to have a greater impact on agricultural users as well as in Southern California. For example, under 2020 conditions, water scarcities are about 2% of statewide water demands and scarcity is essentially zero in the Sacramento Valley.⁶¹ Water scarcity was generally small for agriculture and zero for urban users in the San Joaquin and Tulare Basins. Scarcity was estimated to be a few percent for Southern California urban users (up to 17% for Coachella urban users) and about 20% for Southern California agricultural users (who have sold their supplies to Southern California urban users). Based upon this information, in the short term, although some areas would experience reductions in water supply, the Sacramento Valley,

59 Barnett, T.P., J.C. Adam, and D.P. Lettenmaier. 2005. Potential Impacts of a Warming Climate on Water Availability in Snow-dominated regions. *Nature* 438:303-309.

60 Kiparsky, M. and P.H. Gleick. 2003. Climate Change and California Resources: A Survey and Summary of the Literature. The California Water Plan, Volume 4 – Reference Guide. Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security.

61 Medellin, J., J. Harou, M. Olivares, J. Lund, R Howitt, S. Tanaka, M. Jenkins, K. Madani. Climate Warming and Water Supply Management in California. California Climate Change Center, White Paper CEC-500-2005-195-SF, March.

including the city of Sacramento is not anticipated to experience substantial reductions in water supply or availability.

In the absence of an established methodological approach for evaluating impacts associated with climate change, it is anticipated that due to the net increase in VMTs and the overall growth of the city that the proposed project would result in a cumulative contribution to GHG emissions and potentially contribute to global climate change. However, because it is likely that much of the net increase in GHG emissions could be transferred from somewhere else (and may actually result in a decrease in per capita GHG emissions as discussed under “Limitations on Inventory Calculations” pages 8-29 and 8-31), it is not possible to determine the precise cumulative contribution to GHG emissions or effects on climate.

STAFF NOTE REGARDING CLIMATE CHANGE AND SIGNIFICANCE CONCLUSION:

Review of the climate change issue continued during the City Council discussions regarding the 2030 General Plan and Master EIR. As a result of these deliberations, Errata No. 2 to the Final Master EIR included a discussion of the significance of the impact, and concluded that the cumulative effect of greenhouse gas emissions that could be generated by development consistent with the 2030 General Plan was significant and unavoidable. The full text of the discussion in Errata No. 2 is included here:

During the hearings on the 2030 General Plan and the Master EIR, the State Office of the Attorney General, the Sacramento Metropolitan Air Quality Management District (SMAQMD), and others urged the City to make a finding of significance on the cumulative impact of greenhouse gas emissions on global climate change, based on the information contained in the draft and final MEIR, and to strengthen certain 2030 General Plan policies and implementation programs related to reducing greenhouse gas emissions.

*A determination of significance for greenhouse gas emissions and climate change would provide a base for enforceable mitigation under the California Environmental Quality Act (CEQA). Based on the views presented at the Planning Commission and City Council, the City has determined that greenhouse gas emissions that could be generated by development consistent with the 2030 General Plan would be a cumulatively considerable contribution to climate change, and the impact is, therefore, a **significant cumulative impact**.*

In addition, the City has reviewed the various policies and implementation programs in the 2030 General Plan that could mitigate greenhouse gas emissions, and has determined that a number of these policies should be revised. A list of such policies, and the changes that have been made to respond to the continuing discussion of climate change, has been included as part of the Mitigation Monitoring Plan that implements mitigation identified in the Master EIR.

The 2030 General Plan calls for land use patterns that focus on infill and mixed use development that support public transit and increase opportunities for pedestrians and bicycle use; quality design guidelines and “complete” neighborhoods and streets to enhance neighborhood livability and the pedestrian experience; “green building” practices including the adoption of a green building rating program and ordinance and the use of recycled construction materials and alternative energy systems; and adaptation to climate change, such as reducing the impacts from the urban heat island effect, managing water use, and increasing flood protection. Specific goals, policies, and programs targeting greenhouse gas reductions commit the City to AB 32 reduction targets, preparation of a greenhouse gas emissions inventory for existing land uses and 2030 General Plan build-out, reductions in greenhouse gas emission from new development, and adoption of a climate action and adaptation plan by 2010 with on-going monitoring and reporting.

The effects of the 2030 General Plan promote denser urban development within the current City territorial limits to accommodate population growth, which will reduce growth pressures and sprawl in outlying areas. While total greenhouse gas emissions within the General Plan policy area may increase over time due to growth in population in the region, this increase is less than what would have occurred if the 2030 General Plan were not adopted and development of more land in outlying areas was permitted under the current 1988 General Plan. Adoption of the 2030 General Plan will put these key strategies in place immediately and begin to shape development as well as the activities of day-to-day living and move the City and the region toward a more sustainable future.

*However, because the actual effectiveness of all the feasible policies and programs included in the 2030 General Plan that avoid, minimize, or reduce greenhouse gas emissions is unknown, the impact remains a **significant and unavoidable cumulative impact**.*

For a more detailed discussion of climate change and additional climate related analysis, please see the information included at the end of this EIR. Specifically, please see the City’s Master Response to Climate Change, Final Master EIR including the Climate Change Master Response and comment letters from the California State Attorney General (Letter #2) and the Sacramento Metropolitan Air Quality Management District (Letter #6), the City’s responses to each letter, the Findings of Fact and Statement of Overriding Considerations; Errata No. 1 and No. 2; and the Mitigation Monitoring Plan and Attachment 1.

9.0 Alternatives to the Proposed Project



ALTERNATIVES TO THE PROPOSED PROJECT

INTRODUCTION

The purpose of this chapter is to identify and describe alternatives to the proposed project. Project alternatives are developed to reduce or eliminate the significant or potentially significant adverse environmental effects identified as a result of the proposed project, while still meeting most if not all of the basic project objectives.

California Environmental Quality Act Requirements

An EIR must evaluate the comparative merits of a reasonable range of alternatives to the proposed project, or to the location of the proposed project that could feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of the significant effects of the project (CEQA Guidelines, section 15126.6). An EIR need not evaluate the environmental effects of alternatives at the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. The CEQA Guidelines provide the following language for discussing alternatives to a proposed project:

The specific alternative of the “no project” shall also be evaluated along with its impacts....If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines, Section 15126.6 subd.(e)(2)).

The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the proposed objectives, or would be more costly (CEQA Guidelines, Section 15126.6 subd.(b)).

If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines, Section 15126.6 subd.(d)).

The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice....The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making....An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (CEQA Guidelines, Section 15126.6 subd.(f)).

The requirement that an EIR evaluate alternatives to the proposed project or alternatives that address the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. The EIR need examine in detail only the alternatives that could feasibly attain most of the basic objectives of the project. The Public Resources Code and the CEQA Guidelines direct that the EIR need “set forth only those alternatives necessary to permit a reasoned choice.” The CEQA

Guidelines provide a definition for “a range of reasonable alternatives” and, thus, limit the number and type of alternatives that need to be evaluated in a given EIR. According to the CEQA Guidelines (section 15126.6 (b)):

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (CEQA Guidelines, section 15126.6 (f)(1)).

Finally, an EIR is not required to analyze alternatives when the effects of the alternative “cannot be reasonably ascertained and whose implementation is remote and speculative” (section 15126.6 (f)(2)(3)).”

The selection of alternatives takes into account the project objectives provided in Chapter 3, Project Description. The project objectives are listed below.

- **Character of Place.** Preserve and enhance Sacramento’s quality of life and character as a city with diverse residential neighborhoods, an extensive urban forest, and role as the center of California’s governance.
- **Smart Growth.** Encourage future growth in the city inward into existing urbanized areas and the central business district to foster infill development, as well as encourage density of development and integration of housing with commercial, office, and entertainment uses that fosters increased walking and reduced automobile use.
- **Live More Lightly.** Strive to meet to the intent of Assembly Bill 32, California Global Warming Solutions Act of 2006, by reducing carbon emissions that contribute to global warming by encouraging “green” building practices, use of solar energy systems, and developing a land use pattern that supports walking, biking, and public transit.
- **Maintain a Vibrant Economy.** Support a diversity of business and employment opportunities by retaining existing and attraction of new businesses; maintain and expand recreational, arts, and cultural facilities; and nurture diverse community events and celebrations.
- **Healthy Cities.** Preserve and enhance land use patterns and densities that foster pedestrian and bicycle use and recreation through expanded parklands, sports, and athletic programming as well as provide incentives for expanding the availability of organic foods, and protecting residents from crime and natural or terrorist acts.
- **Sustainable Future.** Accommodate growth that protects important environmental resources as well as ensures long-term economic sustainability and health, and equity or social well being for the entire community.

Equally important to attaining the project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a level below the threshold of significance. The project-specific and cumulative significant and unavoidable impacts of the proposed project, after mitigation, are identified below.

Project-Specific Significant and Unavoidable Impacts

- 6.1-2 Implementation of the proposed 2030 General Plan could result in construction activities that would increase NO_x levels above 85 pounds per day.
- 6.1-3 Implementation of the proposed 2030 General Plan would result in operational emissions that would increase either of the ozone precursors, NO_x or reactive organic gases (ROG), above 65 pounds per day.
- 6.1-4 Implementation of the proposed 2030 General Plan would result in PM₁₀ concentrations due to the emission of particulate matter associated with construction activities at a level equal to or greater than five percent of the state ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours).
- 6.3-2 Implementation of the proposed 2030 General Plan could adversely affect special-status plant species due to the substantial degradation of the quality of the environment or reduction of population or habitat below self-sustaining levels.
- 6.3-3 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status invertebrates.
- 6.3-4 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.
- 6.3-5 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status amphibians and reptiles.
- 6.3-6 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status mammals.
- 6.3-7 Implementation of the proposed 2030 General Plan could result in substantial degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status fish.

- 6.3-8 Implementation of the proposed 2030 General Plan could result in the loss or modification of riparian habitat, resulting in a substantial adverse effect.
- 6.3-9 Implementation of the proposed 2030 General Plan could result in a substantial adverse effect on state or federally protected wetlands and/or waters of the United States through direct removal, filling, or hydrological interruption.
- 6.3-10 Implementation of the 2030 General Plan could result in the loss of CDFG defined sensitive natural communities such as elderberry savanna, northern claypan vernal pool and northern hardpan vernal pool resulting in a substantial adverse effect.
- 6.4-1 Implementation of the 2030 General Plan could cause a substantial change in the significance of historical resources as defined in CEQA Guidelines section 15064.5.
- 6.4-2 Implementation of the 2030 General Plan could cause a substantial change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5.
- 6.8-1 Implementation of the 2030 General Plan could result in exterior noise levels in the Policy Area that are above the upper value of the normally acceptable category for various land uses (per Table EC-1) due to an increase in noise levels.
- 6.8-2 Implementation of the 2030 General Plan would result in residential interior noise levels of L_{dn} 45 dB or greater caused by an increase in noise levels.
- 6.8-4 Implementation of the 2030 General Plan could permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction.
- 6.11-2 Implementation of the proposed 2030 General Plan would result in an increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and could require the construction of new water supply facilities.
- 6.11-4 Implementation of the proposed 2030 General Plan would require the need for expansion of wastewater treatment facilities, which could cause significant environmental effects.
- 6.12-1 Implementation of the proposed 2030 General Plan could result in roadway segments located within the Policy Area that do not meet the City's current LOS C standard or the proposed LOS D-E goal.
- 6.12-2 Implementation of the proposed 2030 General Plan could result in roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.

- 6.12-3 Implementation of the proposed 2030 General Plan could result in freeway segments that do not meet the jurisdiction's minimum acceptable level of service threshold.

Cumulative Significant and Unavoidable Impacts

- 6.1-7 Implementation of the proposed 2030 General Plan, in conjunction with other construction activities in the SVAB, would increase cumulative construction-generated NO_x levels above 85 pounds per day.
- 6.1-8 Implementation of the proposed 2030 General Plan, in conjunction with other development in the SVAB, would increase cumulative operational levels of either ozone precursors, NO_x or reactive organic gases (ROG), above 65 pounds per day.
- 6.1-9 Implementation of the proposed 2030 General Plan, in conjunction with other development in the SVAB, would emit particulate pollutants associated with construction activities at a cumulative level equal to, or greater than, five percent of the CAAQS (50 micrograms/cubic meter for 24 hours).
- 6.4-3 Implementation of the 2030 General Plan, in conjunction with other development within the county, could cause a substantial change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5.
- 6.4-4 Implementation of the 2030 General Plan, in conjunction with other development within the Central Valley, could cause a substantial change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5.
- 6.8-7 Implementation of the 2030 General Plan along with other development in the region could result in an increase in interior and exterior noise levels in the Policy Area that are above acceptable levels.
- 6.8-9 Implementation of the 2030 General Plan could result in cumulative construction vibration levels that exceed the vibration-peak-particle velocities greater than 0.5 inches per second.
- 6.11-5 Implementation of the proposed 2030 General Plan, in combination with future development in the SRCSD Service Area, would require expansion of wastewater conveyance and treatment capacity to serve the project's sewer needs in addition to existing commitments.
- 6.12-8 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that would adversely impact the existing LOS for city roadways.

- 6.12-9 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic on roadway segments located in adjacent jurisdictions that do not meet the jurisdiction's minimum acceptable level of service threshold.
- 6.12-10 Implementation of the proposed 2030 General Plan could result in a cumulative increase in traffic that could exceed the LOS along some freeway segments.

ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER CONSIDERATION

Consistent with the CEQA Guidelines, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the project objectives. Those alternatives that would have impacts identical to or more severe than the proposed project, or that would not meet most of the project objectives, were rejected from further consideration. The significant impacts identified for the proposed project are related to air emissions exceeding SMAQMD standards, loss of biological resources, loss of cultural (including archeological) resources, increase in interior and exterior noise levels at existing residences, decrease in the level of service for traffic, and an increase in demand for wastewater treatment. Alternatives that would exceed the significance thresholds for the aforementioned issue areas would not substantially lessen any significant environmental impacts identified in Chapter 6.0 of this Draft MEIR and were rejected from further analysis. The following alternatives were considered but rejected from further analysis because they were determined to be infeasible.

Less Dense Development. If the City were to develop the Policy Area with less dense development, or enlarge the size of the Policy Area, it is likely that population, dwelling units, and employment opportunities would locate outward from the downtown area. As a result, development could be pushed to surrounding areas including the Natomas Joint Vision Area (NJVA), unincorporated Sacramento County, and surrounding suburbs to the east. This alternative was rejected because the environmental impacts would be greater than under the proposed 2030 General Plan. It is anticipated that there would be increased traffic, air emissions (including greenhouse gas emissions) and noise impacts attributed to longer commutes and increased regional traffic congestion. It is also anticipated that transit would not be as readily accessible in outlying areas contributing to increased auto dependency. Accommodation of development in the NJVA under this alternative would result in the potential loss of agricultural land, loss of critical plant and wildlife habitat, increased exposure to flood hazards, and loss of open space. This alternative could necessitate modification of the existing Natomas Basin Habitat Conservation Plan (HCP) or preparation of a new HCP. Such processes are lengthy and complex, and require close coordination among a multitude of local, state and federal agencies, as well as special interest groups. There would also be an increased demand for public services and utilities to be delivered to outlying areas where limited (if any) infrastructure exists with less dense development responsible to primarily finance that infrastructure. Infrastructure costs associated with providing interior drainage for flood

protection in the NJVA could be substantial. Therefore, the Less Dense Development alternative was rejected from further consideration.

Growth Limited by Water Supply. This alternative responds to the potential for significant impacts related to water demands in excess of the infrastructure delivery capacity. By 2030, it is anticipated that a water diversion shortage would occur without a new Sacramento River diversion and water treatment plant (WTP), based on the estimated maximum day water demand. This alternative would allow only enough growth that could be accommodated under current water supplies, without a new Sacramento River diversion and WTP, or alternate water supply. The existing facilities can accommodate over 23 percent of projected demand. This alternative would significantly reduce the availability of water supply available in the city when compared to the 2030 General Plan. No development beyond the existing city limits, including Panhandle, and Camino Norte, would occur (the Greenbriar project was recently approved by the City and annexation was approved by both the City and LAFCO). However, it is anticipated that in the near future the city would construct a new Sacramento River diversion and WTP or exercise other water rights so that the city and surrounding jurisdictions would be adequately served. Although there currently is not a timeline for these infrastructure improvements to occur, the City has indicated that adequate water would be available to serve the city's population and has proposed policies in the 2030 General Plan to address this concern. Therefore, water supply issues would not limit the city's growth and this alternative was dismissed from further consideration.

Higher Density. This alternative would implement a higher density alternative, much like the SACOG Blueprint Alternative D. This alternative would result in higher densities throughout the city than are proposed under the 2030 General Plan. This alternative was thoroughly analyzed as part of the Blueprint process and through this process it was determined that, due to the intense densification of the city, especially in the core areas (e.g., Central City), the resulting high population growth would result in impacts on quality of life, as well as other impacts. It was determined this alternative would result in greater impacts than the proposed 2030 General Plan; therefore, this alternative was not considered for further analysis.

Expanded City Limits. This alternative would assume the same number of dwelling units and jobs as under the 2030 General Plan, but extend the city limits beyond the existing city boundary to the north and east (beyond the Policy Area boundary). The Sacramento River and the city of West Sacramento limit development to the west and the city of Elk Grove limit development to the south. This alternative would reduce development densities throughout the city and spread it over a larger area. However, the City is not currently considering annexation of lands beyond the existing city limits except for the recently annexed Greenbriar site, and the adjacent Panhandle, and Camino Norte parcels. This alternative would result in a greater conversion of undeveloped land, which includes agricultural land, and would result in the loss of more biological and cultural resources as well as the potential for increased hazards associated with flooding, air emissions (including greenhouse gas), and regional traffic congestion than the

proposed Sacramento 2030 General Plan; therefore, this alternative was not considered for further analysis.

ALTERNATIVES CONSIDERED IN THIS DRAFT MEIR

Although a number of alternatives could be designed that could result in the reduction or elimination of project impacts, a total of three representative alternatives are evaluated in this Draft MEIR. The alternatives are described below.

- **Alternative 1:** No Project/1988 General Plan – Under this alternative, development for the proposed Sacramento 2030 General Plan would not occur. Development would be guided by continued implementation of the existing General Plan.
- **Alternative 2:** SACOG Blueprint Preferred Scenario – This alternative would follow the principles of the SACOG Blueprint Preferred Scenario and implement the recommended land uses and land use densities within and immediately north and east of the city limits.
- **Alternative 3:** Reduced Footprint – Under this alternative, the Policy Area would be limited to that of the existing General Plan boundaries, with the development intensity being equal to that of the proposed Sacramento 2030 General Plan.

Each of the alternatives is described in more detail, below, followed by an assessment of the alternative's impacts relative to the proposed project. The focus of this analysis is the difference between the alternative and the proposed project, with an emphasis on addressing the significant impacts identified under the proposed project. For each issue area, the analysis indicates which mitigation measures would be required of the alternative and which significant and unavoidable impacts would be avoided. If necessary, the analysis indicates what additional mitigation measures, would be required for the alternative being discussed, and what significant impacts would be less (or more) severe. Unless otherwise indicated, the level of significance and required mitigation would be the same for the alternative as for the proposed project and no further statement of the level of significance is made. Table 9-1 provides a summary comparison of the severity of impacts for each alternative by topic.

TABLE 9-1				
ALTERNATIVE IMPACT DISCUSSION				
Issue Area	Proposed Project	No Project/1988 General Plan	SACOG Blueprint Preferred Scenario	Reduced Footprint
Air Quality	SU	Greater	Greater	Reduced
Agricultural Resources	LS	Reduced	Greater	Reduced
Biological Resources	SU	Reduced	Greater	Reduced
Cultural Resources	SU	Reduced	Greater	Reduced
Geology, Soils, and Mineral Resources	LS	Reduced	Greater	Reduced
Hazards and Hazardous Materials	SU	Reduced	Greater	Reduced
Hydrology and Water Quality	LS	Equal	Greater	Reduced
Noise and Vibration	SU	Greater	Equal	Equal
Parks and Open Space	LS	Reduced	Reduced	Equal
Public Services	LS	Reduced	Reduced	Equal
Public Utilities	SU	Reduced	Greater	Equal
Transportation and Circulation	SU	Greater	Equal	Equal
Urban Design and Visual Resources	LS	Reduced	Greater	Reduced
Notes: SU = Significant and Unavoidable – if any impact was identified as significant and unavoidable in the technical analysis. LS = Less than Significant – if all impacts were identified as less than significant in the technical analysis. NI = No impact would occur when compared to the proposed project. Equal = Level of significance is equal to the proposed project. Greater = Level of significance is greater than the proposed project. Reduced = Level of significance is reduced compared to the proposed project, but not necessarily to a less-than-significant level. Source: PBS&J, 2008.				

No Project/1988 General Plan Alternative

Under CEQA, the No Project Alternative must consider the effects of forgoing the project. The purpose of analyzing the No Project Alternative is to allow decision-makers to compare the impacts of the proposed project versus no project. The No Project Alternative can consist of either a No Development Alternative, in which no development occurs in the project area, or an Existing Designation Alternative, in which development is assumed to occur consistent with the existing land use designations.

The No Project/No Development Alternative describes the environmental conditions that exist at the time that the environmental analysis commences (CEQA Guidelines, section 15126.6 (e) (2)). This alternative would halt all development within the city, regardless of the status of entitlements. By stopping all future development, this alternative would reduce the demand for public infrastructure and services, reduce impacts on environmental resources, such as air quality, noise, biological, and cultural resources, and dramatically reduce traffic impacts relative to the proposed project as well as the contribution to greenhouse gas (GHG) emissions. However, while a No Development Alternative could be an option for an individual development project, eliminating all future development in the entire city would not be a realistic alternative for this project. Therefore, the No Project/No Development Alternative is not analyzed, but the No

Project/Existing Designation Alternative or 1988 General Plan is addressed and discussed below.

Therefore, this Draft MEIR analyzes the No Project alternative that assumes development would occur consistent with the existing land use designations in the city, or those of the existing 1988 General Plan. Under the No Project/1988 General Plan Alternative, the Policy Area would be developed consistent with currently allowable land uses and development intensities. It is assumed that the existing General Plan policies would remain in place under this alternative. Development under this alternative would result in more suburban development, with residential units and employment sources located further from downtown. However, the population generated by the existing General Plan would result in approximately 110,000 fewer residents than the proposed Sacramento 2030 General Plan.¹

■ Comparative Environmental Effects

Under this alternative, it is assumed no new land use designations would be created. Current land use densities and intensities would remain and typical suburban development would continue to occur on the city's outer edges. While development in the downtown and midtown areas would continue to occur, there likely would not be a substantial reinvestment in those areas or in other neighborhoods such as Oak Park, or under utilized areas in south Sacramento. In addition, the City would not annex any lands outside of the existing city limits, including Panhandle or Camino Norte. The City would continue to focus development efforts in the southern portion of the city (Delta Shores) and in North Natomas where there continues to be vacant land available for development.

Because this alternative would not include development in the Panhandle or Camino Norte areas, which together constitute over 1,500 acres (1,430 acres, and 390 acres, respectively), this alternative would result in fewer acres developed than the proposed Sacramento 2030 General Plan. Therefore, impacts related to footprint, including agricultural resources, biological resources, cultural resources, and hazards related to location (e.g., flooding and existing hazardous materials), would be less severe under this alternative. However, these impacts would also be significant and unavoidable, like the proposed project, even with implementation of mitigation identified for the proposed project.

Development associated with the No Project/1988 General Plan Alternative would generate the primary ozone precursors, reactive organic gases (ROG) and oxides of nitrogen (NO_x), in addition to emissions of these pollutants from existing land uses. The Sacramento Valley Air Basin, in which the city is located, is in non-attainment for ozone precursors, so the emissions from development under the proposed Sacramento 2030 General Plan was found to result in a significant and unavoidable impact. Because the No Project/1988 General Plan Alternative would result in less development than the proposed Sacramento 2030 General Plan, emissions

¹ Based upon SACOG 2025 development assumptions for by Plan Area within the city.

from future development in the city of Sacramento would be less and would, thus, be less severe than the proposed Sacramento 2030 General Plan. It should be noted, however, that if growth in the area occurs as projected, the growth not accommodated in the city under this alternative would have to relocate – likely to another area within the air basin (i.e., neighboring jurisdictions or in the unincorporated county). Therefore, while the emissions from the city itself could be reduced, the emissions in the air basin could be the same or more, if vehicle trips are increased as residents travel greater distances between their homes and areas of employment. It is assumed under this alternative that the contribution to GHG emissions would be roughly the same as the project. It is not anticipated that under this alternative the amount of carbon dioxide would be reduced relative to the project due to the reliance on the automobile attributed to a more suburban land use plan as well as the potential increase in longer and more vehicle trips from people accessing the city from areas outside of the Policy Area.

Development under the No Project/1988 General Plan Alternative would result in the addition of new structures and infrastructure throughout the city that could potentially be exposed to the effects of geological hazards associated with unstable soil conditions, such as expansive soils and subsidence. However, because fewer people are anticipated there would be a reduction in the total number of houses constructed. Like with the proposed Sacramento 2030 General Plan, adherence to the California Building Code (CBC) and City policies would ensure the maximum practicable protection available for users of buildings and infrastructure. Like the proposed project, this would be a less-than-significant impact.

This alternative would require land-disturbing construction activities, such as grading, excavation, and trenching, which could result in the potential for soil erosion and sedimentation in runoff. Development under this alternative would increase stormwater and non-stormwater runoff entering local streams, the Sacramento and American rivers, and vegetated pervious ground-cover could be converted to impervious surfaces that increase runoff rates. These actions could negatively affect water quality. Any development under this alternative would be required to comply with requirements in applicable permits and regulations, such as the National Pollutant Discharge Elimination System (NPDES) Permit. Therefore, this impact would be similar to that of the proposed project and would be less than significant and possibly less severe.

The increase in population associated with the No Project/1988 General Plan Alternative could increase demand on area parks or recreational facilities, resulting in deterioration of these facilities. However, the existing General Plan requires 2.5 acres of neighborhood parks and 2.5 acres of community parks for each 1,000 residents. Each development project would be required to provide park acreage on-site or pay in-lieu fees toward the provision of parks to serve any new population. Adherence to these policies would ensure that sufficient parkland would be available to residents; therefore, this would be a less-than-significant impact, like the proposed 2030 General Plan. However, because this alternative would result in a smaller population than the proposed 2030 General Plan, fewer parks would be required. Therefore, this impact would be less severe than that of the proposed Sacramento 2030 General Plan.

The No Project/1988 General Plan Alternative would increase the population in the city, thereby increasing demand for public services, such as police, fire, schools, libraries, and emergency services. The City currently requires payment of development fees along with some funds coming from the City's General Fund to finance required services to ensure adequate service levels are provided. The revenues from development associated with this alternative would continue to be used for services and would ensure adequate levels of service for new development under this alternative. This would be a less-than-significant impact. Because this alternative would result in a smaller population growth than the proposed 2030 General Plan, the impact on services would be less severe compared to the proposed project.

The No Project/1988 General Plan Alternative would result in a reduced population compared to the proposed Sacramento 2030 General Plan, so water and energy demand, wastewater and solid waste generation, and other utilities demands for this alternative would be reduced. Individual development under this alternative would be required to construct necessary infrastructure needed to serve that development and would be required to fund its fair share of other system-wide improvements to infrastructure needed for cumulative demand on those utilities. Therefore, this alternative would result in a less-than-significant impact due to demand on public utilities. Because the demand for utilities under this alternative would be less than that of the proposed 2030 General Plan, its impact would be less severe compared to the proposed plan.

While the No Project/1988 General Plan Alternative would result in a reduced population compared to the proposed 2030 General Plan, it could also potentially result in more vehicle trips associated with people commuting in from areas outside of the city and an increase in vehicle miles traveled per person. The No Project/1988 General Plan Alternative does not emphasize the use of alternative transportation modes including transit, pedestrian, and bicycle travel when compared to the 2030 General Plan. In addition, the 2030 General Plan would yield significant impacts on 48 city roadway segments, for the 2030 horizon year, based on the proposed LOS thresholds. Of those 48 segments, one-third currently exceeds the LOS C threshold. As the 2030 General Plan does not propose to widen these facilities, the No Project/1988 General Plan Alternative would not alleviate impacts for these roadway segments. The No Project/1988 General Plan Alternative does not emphasize or promote alternative forms of transportation therefore under this plan it is anticipated that the LOS on several roadway segments would not improve. Therefore, impacts would remain significant and unavoidable under this alternative.

Noise levels along several roadway segments would be greater under the No Project/1988 General Plan than under the proposed 2030 General Plan. Interior noise levels within many existing residential structures would exceed the daily average acceptable interior levels. Interior noise levels for institutional land uses would exceed hourly average acceptable levels. Interior noise levels within existing noise-sensitive uses that are located in areas influenced by flight operations from area airports or along busy rail or truck routes are likely to exceed the limits on single-event levels. Although interior noise impacts to existing uses would be the same as

under the proposed 2030 General Plan, the increased noise levels along several city roadway segments would be greater under the No Project/1988 General Plan Alternative because there would be more people commuting in from outside of the city limits. Therefore, the impact could be slightly greater than under the proposed 2030 General Plan.

This alternative would not include development on approximately 2,000 acres that would be developed under the proposed 2030 General Plan. While the aesthetic impact of the proposed 2030 General Plan was found to be less than significant, because this large portion of land would be left in its natural state under this alternative, the impact would be less severe than that of the proposed Sacramento 2030 General Plan because overall slightly less land would be developed.

■ Mitigation That Would No Longer Be Required

Because the No Project/1988 General Plan Alternative would involve development of a substantial amount of land within the current city boundaries it is anticipated that all of the mitigation measures identified for the proposed 2030 General Plan would still be required for this alternative.

■ Significant and Unavoidable Impacts That Would No Longer Occur

The No Project/1988 General Plan Alternative would involve development of a substantial amount of land. While some impacts associated with this alternative would be reduced compared to the proposed 2030 General Plan, none would be reduced to a level that would be considered less than significant.

■ Relationship of the No Project/1988 General Plan Alternative to the Project Objectives

This alternative would be a continuation of the type of development included in the 1988 General Plan. The result would be an expansion of typical suburban development on the city's outer edges with less diverse residential neighborhoods and little reinvestment in existing developed areas (infill) including the downtown and other core areas. Typical suburban growth is less efficient with regard to traffic and circulation and, thus, would be less consistent with the objective to "live more lightly" and would not support an economy that could develop with more dense development. This type of development would not encourage the inward growth envisioned in the proposed 2030 General Plan, so it would not fulfill the smart growth objective. This alternative, therefore, would be generally inconsistent with the project objectives.

SACOG Blueprint Preferred Scenario Alternative

This alternative would follow the principles of the SACOG Blueprint Preferred Scenario (SACOG Blueprint Alternative) and implement the recommended land uses and land use densities within and immediately north and east of the city limits. Development would extend beyond the current city limits and into the NJVA and eastern portions of the unincorporated county. To be consistent with the 2030 General Plan growth, Blueprint projections for this alternative have been adjusted to reflect employment and housing units through 2030.² Under this alternative, there would be 360,844 jobs and 246,497 housing units in the city of Sacramento and NJVA in 2030. Based upon persons per household assumptions used for the proposed 2030 General Plan (see Table 5-7 in Chapter 5.0, Population, Employment, and Housing), the buildout population under this alternative would be approximately 572,000, which is less than that of the proposed 2030 General Plan (641,000).

■ Comparative Environmental Effects

The SACOG Blueprint Alternative would include development of the approximately 25,000-acre NJVA as well as areas to the east, which is not envisioned for development in the proposed 2030 General Plan; therefore, the physical disturbance would be greater than that of the proposed plan. Consequently, impacts related to footprint, including agricultural resources, biological resources, cultural resources, and hazards related to location (e.g., flooding and existing hazardous materials), would be more severe under this alternative. These impacts would be significant and unavoidable, like the proposed project, even with implementation of mitigation identified for the proposed project.

Development associated with the SACOG Blueprint Alternative would generate ozone precursors. Although the SACOG Blueprint Alternative would result in overall less development than the proposed project, emissions from this alternative would be significant and unavoidable for the same reasons as the proposed project. Because development assumed in the NJVA for the Blueprint is not included within the city under the proposed 2030 General Plan, the air basin would likely not benefit from the decrease in density in the city and potentially would result in an increase in per capita emissions. Under this alternative because development is pushed to the north and east densities within the Policy Area would be reduced relative to the project. With a reduction in density it is more likely that people would continue to live a distance from where they work resulting in a decrease in the use of mass transit. Therefore, it is anticipated that the generation of GHG would increase under this alternative compared to the project, which is a more dense plan focused on a land use pattern that supports and encourages alternative modes of transportation. Like the No Project/1988 General Plan Alternative; however, if growth in the area occurs as projected, the growth not accommodated in the city under this alternative would likely relocate to another area within the air basin. Therefore, while the emissions from

2 The SACOG projections included growth through year 2050. The projections were adjusted to reflect development through 2030 to be consistent with the proposed 2030 General Plan assumptions.

the city itself could be reduced, the emissions in the air basin could be the same or more, if vehicle trips are increased as residents travel between their homes and areas of employment.

Development under the SACOG Blueprint Alternative would result in the addition of new structures and infrastructure throughout the city and undeveloped areas that could potentially be exposed to the effects of geological hazards associated with unstable soil conditions, such as expansive soils and subsidence. Like with the proposed 2030 General Plan, adherence to the California Building Code (CBC) and City policies would ensure the maximum practicable protection available for users of buildings and infrastructure. Like the proposed project, this would be a less-than-significant impact. Since there are slightly fewer people anticipated under this alternative it is assumed this impact would also be slightly less severe than the project.

The SACOG Blueprint Alternative would require land-disturbing activities, such as grading, excavation, and trenching, which could result in the potential for soil erosion and sedimentation in runoff. Development under this alternative would increase stormwater and non-stormwater runoff entering local streams, the Sacramento and American rivers, and vegetated pervious ground-cover could be converted to impervious surfaces that increase runoff rates. These actions could negatively affect water quality. This alternative would include development of the undeveloped NJVA, which would substantially increase the area of development compared to the proposed 2030 General Plan, and thus increase the amount of impervious surfaces and corresponding runoff. Any development under this alternative would be required to comply with requirements in applicable permits and regulations, such as the National Pollutant Discharge Elimination System (NPDES) Permit. Therefore, this impact would be less than significant, but the effects of the increased impervious surfaces would be more severe than proposed project.

Traffic volumes are anticipated to increase under this alternative because more land has the potential to be developed generating more vehicles. As indicated under the 2030 General Plan, noise from traffic has the potential to affect existing residences more than not-yet-constructed or new residences. In many instances the acceptable interior and exterior noise levels could be exceeded in existing areas resulting in a significant and unavoidable impact. Under the SACOG Blueprint Alternative it is anticipated that the same impacts could occur and that noise levels would be exceeded, the same as the project. Under this alternative the population would be slightly less; however, because traffic could be increased due to greater distances people would have to travel to get into downtown and because it maybe more difficult to extend mass transit options to these areas people may be more inclined to drive.

The increase in population associated with the SACOG Blueprint Alternative would increase demand on parks, public services and public utilities the same as the project. The City currently requires payment of development fees to fund required services and infrastructure, including parks. Tax revenues from development also funds services to ensure adequate service levels are provided. Consumers pay for utilities based upon use and current utility fee rates. Adherence to existing policies would ensure that sufficient parkland would be available to residents; therefore, this would be a less-than-significant impact, like the proposed 2030

General Plan. However, because this alternative would result in a slightly smaller population than the proposed 2030 General Plan, the corresponding amount of services required would be less. Similarly, because the population would be less under this alternative, there would be a reduced demand on utilities. However, because this alternative would include development in an area not considered for development under the proposed 2030 General Plan, infrastructure demand (such as construction of new roads, water and wastewater facilities, and electric and gas lines) would be more severe under this alternative.

The SACOG Blueprint Alternative would not significantly reduce impacts to the transportation facilities that were evaluated. For some facilities, the SACOG Blueprint Alternative could potentially generate additional impacts. This would occur because housing units and jobs would be redistributed over a larger geographic area than the 2030 General Plan Policy Area. Many of the trips generated by households constructed to the north or east of the city would use city roadways to reach jobs and services located within the city. Although there would be an overall reduction in population, housing units, and jobs compared to the 2030 General Plan, commutes could be longer than under the 2030 General Plan due to the reduction in density and reduced potential for mixed use areas that incorporate housing and employment opportunities. As such, the SACOG Blueprint Alternative could result in a reduction in volumes on a limited number of roadways in the immediate areas where reduced development is assumed, but could increase traffic volumes on other city roadways. In addition, the 2030 General Plan is projected to generate higher levels of transit, pedestrian, and bicycle travel when compared to the SACOG Blueprint Alternative. Reductions in the level and mix of land use types, which may occur with a less dense scenario like the SACOG Blueprint Alternative, would reduce the projected increase in use of these modes. The 2030 General Plan would yield significant impacts on 48 city roadway segments (and two bridges), for the 2030 horizon year, based on the proposed LOS thresholds. Of those 48 segments, one-third currently exceeds the LOS D-E threshold. As the 2030 General Plan does not propose to widen these facilities, the SACOG Blueprint Alternative would not alleviate impacts for these 16 roadway segments. Under the SACOG Blueprint Alternative it is anticipated that the same impacts could occur and that traffic levels of service would be exceeded, the same as the project.

This alternative would include development on 25,000 acres that would not be developed under the proposed 2030 General Plan. The aesthetic impact of the proposed 2030 General Plan was found to be less than significant. However, because a large portion of land would be converted from its natural state under this alternative, the impact would be greater than that of the proposed 2030 General Plan.

■ Mitigation That Would No Longer Be Required

Because the SACOG Blueprint Alternative would involve development of the NJVA, which is not envisioned in the proposed Sacramento 2030 General Plan, the physical disturbance would be greater than that of the proposed plan. Therefore, all the mitigation measures identified for the proposed 2030 General Plan would still be required for this alternative.

■ Significant and Unavoidable Impacts That Would No Longer Occur

All of the significant and unavoidable impacts identified for the proposed 2030 General Plan would occur under the SACOG Blueprint Alternative. This alternative could also include additional impacts, such as flooding hazards, loss of agricultural land, and loss of habitat and species, associated with development in the NJVA.

■ Relationship of the SACOG Blueprint Preferred Scenario Alternative to the Project Objectives

The SACOG Blueprint Alternative includes smart growth development that would encourage walking and decrease automobile use. This alternative also has the ability to reduce the emissions of greenhouse gases that could affect global warming, thus supporting a healthier city. The SACOG Blueprint Alternative would support a diversity of business and housing types to maintain a vibrant economy and allow for economic sustainability. However, the proposed 2030 General Plan includes development densities that are greater than those in the SACOG Blueprint Alternative and would not require development in the 25,000-acre NJVA. Development in this area would increase the physical impacts of this alternative, relative to the proposed general plan, which would make it less compatible with smart growth principles. Therefore, while this alternative would be generally consistent with the project objectives; however, the addition of development in the NJVA and the overall reduced density of this alternative make it substantially less consistent than the proposed 2030 General Plan.

Reduced Footprint Alternative

As discussed above in the No Project/1988 General Plan Alternative, the significant effects on biological resources, cultural resources, and hazards can be substantially reduced by reducing the footprint of development compared to that of the existing 1988 General Plan boundaries. The Reduced Footprint Alternative, therefore, assumes that Panhandle and Camino Norte areas would not be included within the Policy Area boundaries and would not be developed. This alternative assumes the boundaries would remain the same as the existing city boundaries. This alternative also assumes that the population projected for the proposed 2030 General Plan would still be accommodated within these boundaries. Because there are a limited number of undeveloped areas available for development remaining in the existing city limits, those remaining areas would have to be developed more densely than is anticipated in the proposed 2030 General Plan. In addition, because the increase in density in currently undeveloped areas could not accommodate the growth planned in the proposed 2030 General Plan, a substantial amount of redevelopment would have to occur in the city to maximize density on underutilized parcels.

■ Comparative Environmental Effects

As stated above, because the Reduced Footprint Alternative would not include development in the Panhandle or Camino Norte areas, this alternative would result in approximately 2,000 fewer acres disturbed than under the proposed 2030 General Plan. Therefore, impacts related to footprint, including biological resources, cultural resources, and hazards related to location (e.g., existing hazardous materials) would be less severe under this alternative. Because the population would be the same as that assumed for the proposed 2030 General Plan, the impacts of providing services, such as police and fire services, would be the same as the proposed project. Since the population would be the same the amount of traffic generated would be the same as what was analyzed under the 2030 General Plan, although impacts to specific roadway segments could occur in different places. The significant and unavoidable impacts identified for traffic as well as noise would remain the same under this alternative. It should be noted that while demand for utilities would be the same under this alternative, the cost of construction and maintenance of conveyance facilities would be less, because they would not have to be extended as far as under the proposed project. The generation of GHG emissions would be essentially the same under this alternative as the proposed 2030 general plan because the same population is anticipated in roughly the same areas of the city. It is anticipated that under this alternative the densities would increase slightly compared to the project; however, this increase in density would not significantly affect the use of mass transit or other transportation modes compared to what was assumed under the project.

Although the Reduced Footprint Alternative would accommodate the same population as the proposed 2030 General Plan, the amount of development would not necessarily be the same. The increased density required in currently undeveloped areas could result in fewer construction emissions per capita. However, for redevelopment, demolition would be required, which would result in additional emissions and contribute demolition debris to landfills. Nonetheless, because this alternative would result in more dense development than the proposed 2030 General Plan, operational emissions would generally be reduced due to the ability to take advantage of non-automobile travel. Therefore, this alternative could, in the long term, result in a less severe impact related to air emissions.

■ Mitigation That Would No Longer Be Required

Because the Reduced Footprint Alternative would involve development of a substantial amount of land, all the mitigation measures identified for the proposed 2030 General Plan would still be required for this alternative.

■ Significant and Unavoidable Impacts That Would No Longer Occur

The Reduced Footprint Alternative would require development of a substantial amount of land. While some impacts of this alternative would be reduced compared to the proposed 2030 General Plan, none would be reduced to a level that would be considered less than significant.

■ Relationship of the Reduced Footprint Alternative to the Project Objectives

The Reduced Footprint Alternative includes dense development that would be considered smart growth, thereby encouraging walking and decreasing automobile use (similar to the proposed project). This alternative also has the ability to reduce the emissions of greenhouse gases that could affect global warming, thus supporting a healthier city. The Reduced Footprint Alternative would support a diversity of business and housing types to maintain a vibrant economy and allow for economic sustainability. Therefore, this alternative would be generally consistent with the project objectives.

Environmentally Superior Alternative

The environmentally superior alternative would be the No Project/1988 General Plan Alternative because it would eliminate and/or reduce the significant impacts identified for the proposed project. However the No Project/1988 General Plan Alternative does not achieve any of the project's objectives. CEQA Guidelines section 15126.6(e)(2) states that when the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. The Reduced Footprint Alternative would reduce impacts on biological resources, cultural resources, and hazards related to location (e.g., existing hazardous materials) and would be generally consistent with the project objectives. Therefore, the Reduced Footprint Alternative would be considered the environmentally superior alternative. As described above, this alternative would reduce impacts on biological resources, cultural resources, and hazards related to location, relative to the proposed project.

10.0 List of Acronyms and Abbreviations



LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADWF	average dry weather flow
AFA	acre-feet annually
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
AQMP	Air Quality Mitigation Plan
ASTM	American Society for Testing and Materials
BACT	best available control technology
Basin Plan	water quality plan
BAT	best available technology
BMP	Best Management Practices
BMR	Basin Management Report
CAA	Clean Air Act
Cal EPA	California Environmental Protection Agency
Cal OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CALVENO	California Vehicle Noise
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
Carl Moyer Program	Carl Moyer Memorial Air Quality Standards Attainment Program
CAT	Climate Action Team
CAT Report	California Climate Action Team Report
CBC	California Building Code

10. LIST OF ACRONYMS AND ABBREVIATIONS

CBD	Central Business District
CCAA	California Clean Air Act
CCCP	Central City Community Plan
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geology Survey (formerly Division of Mines and Geology)
CH ₄	methane gas
CHP	California Highway Patrol
CII	commercial, industrial, and institutional
CIWMB	California Integrated Waste Management Board
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
COC	constituents of concern
Corps	U.S. Army Corps of Engineers
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources

CRT	cathode ray tube
CRV	California Refund Value
CSCGF	Central Sacramento County Groundwater Forum
CSCGMP	Central Sacramento County Groundwater Management Plan
CSD	County Services District
CSLC	California State Lands Commission
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CSUS	California State University, Sacramento
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CUWCC	California Urban Water Conservation Council
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
CWTP	Combined Wastewater Treatment Plant
dB	decibel
dBA	A-weighted decibel
De-con	Decontamination Teams
Delta	Sacramento-San Joaquin Delta
DHS	California Department of Health Services
DMM	Demand Management Measure
DNA	Downtown-Natomas-Airport
DOF	California Department of Finance
DOT	Department of Transportation
DPH	Department of Public Health
DPM	diesel particulate matter

DTSC	California Department of Toxic Substances Control
du	dwelling units
DWR	Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESD	equivalent single-family dwelling unit
E-waste	electronic waste
FAR	floor area ratio
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FMP	Facilities Master Plan
FTA	Federal Transit Administration
FWTP	E.A. Fairbairn Water Treatment Plant
GHG	greenhouse gases
GMP	groundwater management plan
gpd	gallons per day
Gt	gigaton
GWP	global warming potential
HAP	hazardous air pollutants
HazMat	Hazardous Materials Program

10. LIST OF ACRONYMS AND ABBREVIATIONS

HCD	State of California, Department of Housing and Community Development
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HMRTs	Hazardous Materials Response Teams
HRA	Health Risk Assessment
HSWA	Hazardous and Solid Waste Amendments Act
HWMP	Hazardous Waste Management Plan
I-5	Interstate 5
I-80	Interstate 80
ICLEI	Local Governments for Sustainability
IPCC	Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ITS	Intelligent Transportation Systems
kV	Kilovolt
kWh	kilowatt-hours
LAFCo	Local Agency Formation Commission
Ldn	day-night average noise level
LEED	Leadership in Energy and Environmental Design
Leq	equivalent energy noise level
LNWI	Lower Northwest Interceptor
LOS	level of service
Low-E	low emission
LUST	leaking underground storage tank
M	Richter Magnitude scale
MACT	maximum available control technology
MBTA	Migratory Bird Treaty Act

MCE	Maximum Credible Earthquake
MCL	maximum contaminant levels
MEP	maximum extent practicable
mg	million gallons
mgd	million gallons per day
MMI	Modified Mercalli Intensity Scale
MMRP	Mitigation Monitoring and Reporting Program
MMTCO ₂ e	one million metric tons of carbon dioxide equivalent
MOU	memorandum of understanding
MPE	Maximum Probable Earthquake
mpg	miles per gallon
MRZ	Mineral Resource Zone
msf	million square feet
MTP	Metropolitan Transportation Plan
MW	Megawatts
Mw	Moment Magnitude scale
N ₂ O	nitrous oxide
NARS	North Area Recovery Station
NCIC	North Central Information Center
NFIP	National Flood Insurance Program
NIE	Newspaper in Education
NMFS	National Marine Fisheries Service
NMVOG	non-methane volatile organic compound
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of Determination

NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service (formerly the Soil Conservation Service)
NRHP	National Register of Historic Places
O ₃	ozone
OES	State Office of Emergency Services
OPR	State of California Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Parks Department	City of Sacramento Department of Parks and Recreation
Parks Plan	City of Sacramento Master Plan for Park Facilities and Recreation Services
PCWA	Placer County Water Agency
PFC	perfluorocarbon
PG&E	Pacific Gas & Electric
PIER	Public Interest Energy Research
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
POP	Problem Oriented Patrol
Porter-Cologne Act	Porter-Cologne Water Quality Control
PPM	parts per million
PPMRP	pollution prevention, monitoring, and reporting program
PRMP	City of Sacramento Parks and Recreation Master Plan
PUC	Public Utilities Commission

10. LIST OF ACRONYMS AND ABBREVIATIONS

RCRA	Resource Conservation and Recovery Act
RECO	Residential Energy Conservation Ordinance
Regional Board	Regional Water Quality Control Board
REOC	Regional Emergency Operations Center
ROG	reactive organic gases
RPS	renewable portfolio standard
RWA	Regional Water Authority
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SACP	South Area Community Plan
Sacramento PD	Sacramento Police Department
SAFCA	Sacramento Area Flood Control Agency
SB	Senate Bill
SCEMD	Sacramento County Environmental Management Department
SCGF	Sacramento County Groundwater Forum
SCGMP	Sacramento County Groundwater Management Plan
SCH	State Clearinghouse
SCRSD	Sacramento County Regional Sanitation District
SCUSD	Sacramento City Unified School District
SEER	Seasonal Energy Efficiency Rating
SEL	Single Event Noise Level
SEMS	Standardized Emergency Management System
sf	square feet
SF ₆	sulfur hexafluoride
SFD	Sacramento Fire Department
SGA	Sacramento Groundwater Authority

SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SLIC Program	Spills, Leaks, Investigation and Cleanup Program
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMUD	Sacramento Municipal Utility District
SO ₂	sulfur dioxide
SOP	Standing Operating Procedures
SQIP	City of Sacramento Stormwater Quality Improvement Program
SRCSD	Sacramento Regional County Sanitation District
SRCSWA	Sacramento Regional County Solid Waste Authority
SRES	Special Report on Emissions Scenarios
SRRE	Source Reduction and Recycling Element
SRWRS	Sacramento River Water Reliability Study
SRWT	Sacramento Regional Wastewater Treatment
SRWTP	Sacramento River Water Treatment Plant
SSWD	Sacramento Suburban Water District
SVAB	Sacramento Valley Air Basin
SWA	Sacramento Regional Solid Waste Authority
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDM	Transportation Demand Management
TMDL	total maximum daily load
TSD	treatment, storage, and disposal facility

10. LIST OF ACRONYMS AND ABBREVIATIONS

U.S. EPA	U.S. Environmental Protection Agency
UARP	Upper American River Project
UBC	Uniform Building Code
UFC	Uniform Fire Code
ULFT	ultra-low flow toilet
UMWP	Urban Water Management Plan
UNFCCC	<i>United Nations Framework Convention on Climate Change</i>
UNWI	Upper Northwest Interceptor
UP Railyards	Union Pacific Railyards
UPRR	Union Pacific Railroad
URBEMIS	Urban Emissions
USBR	United States Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	Volatile Organic Compound
Water Code	California Water Code
WDR	waste discharge requirement
WFA	Water Forum Agreement
WSA	Water Supply Assessment
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

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3.0 PROJECT DESCRIPTION

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12.0 Report Preparation



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Appendices



APPENDICES

The appendices for the Sacramento 2030 General Plan Master Environmental Impact Report can be found on CD-ROM at the back of this document. Those appendices include:

- A. Notice of Preparation
- B. NOP Comment Letters
- C. Air Quality Model Outputs
- D. Agency Species Lists
- E. Historic Resources Inventory
- F. Noise Data
- G. Traffic Data
- H. Utilities Memorandums
- I. Hazardous Materials Lists
- J. Hydrology Data
- K. Climate Change Policies
- L. Sacramento General Plan Buildout Methodology
- M. Water Supply Analysis and Additional Water Information

